HALL COUNTY BOARD OF COMMISSIONERS
WORK SESSION AGENDA

Hall County Government Center 2nd Floor
2875 Browns Bridge Road
Gainesville, GA 30504
Streamed Live on Hall County Government's Website - www.hallcounty.org
Monday, January 09, 2023 - 03:00 PM

Call to Order

Administration

1 Approve the annual re-adoption of Robert's Rules of Order with an exception to allow for the Chairman to vote.

2 Approve the annual re-adoption of Hall County's Code of Ethics.

3 Approve the award of RFQ/P #43-017 Magazine Printing, Graphic Design and Related Services for Administration to Forum Communications, Inc. of Gainesville, GA. The estimated cost is not to exceed $50,000.00.

4 Approve the purchase of furniture, fixtures, and equipment for the Pre-Trial Accountability Services Facility Renovation Project to Impact Office Interiors of Griffin, GA, in the amount of $71,878.30.

Appointments for Consideration

5 Approve the appointment of Commissioner Billy Powell to serve as the 2023 Board of Commissioners Vice-Chairman.

6 Appointment to the Hall-Gainesville Land Bank to serve a term from January 31, 2023 to January 30, 2027. Commission Districts 1, 2, 3, & 4.

7 Appointment to the Planning Commission to serve a term from February 1, 2023 to January 31, 2025. Chairman's Appointment.

8 Appointment to the Planning Commission to serve an unexpired term to January 31, 2023 and a new term from February 1, 2023 to January 31, 2025. Commission District 1.

9 Appointment to the Planning Commission to serve a term from February 1, 2023 to January 31, 2025. Commission District 2.

10 Appointment to the Planning Commission to serve a term from February 1, 2023 to January 31, 2025. Commission District 3.

11 Appointment to the Planning Commission to serve a term from February 1, 2023 to January 31, 2025. Commission District 4.

Corrections and Maintenance

12 Approve the annual contract for RFQ/P #43-013 County Facilities Grounds Keeping and Lawn Maintenance Services for Building Maintenance to BrightView Landscape Services, Inc. of Lawrenceville, GA. The annual cost is $146,196.00.

13 Approve the purchase of five (5) Sno-Way 32 Contractor Series Snow Plows with Attachments to Interstate Truck Equipment, Inc. of College Park, GA, in the amount of $54,208.05.

County Attorney

14 Approve the First Amendment to the Sublease Agreement with Sunrise Cove SMI Westrec, LLC so as to extend the Sunrise Cove Marina lease until July 31, 2036; and approve the Consent of Lessor so as to allow Sunrise Cove SMI Westrec, LLC to sublease a small portion of the Marina to its subsidiary for tax purposes, subject to the express approval of both items by the Army Corps of Engineers, and subject to the review and approval of the County Attorney; and allow the Chairman to execute all documents necessary to complete both transactions.

Financial Services

15 Approve the award of RFQ/P #43-018 Professional General Contracting Services for the Georgia Mountain Food Bank Capital Improvements Project to Scroggs & Grizzel Contracting, Inc. of Clermont, GA, in the amount of $3,632,415.00.

Fire Rescue

16 Approve the contract for RFQ/P #43-015 EMS Billing and Collection Services for Fire Rescue to Digitech Computer, LLC, of Chappaqua, NY.

17 Approve the sole source purchase of one (1) underwater remotely operated vehicle (ROV) for Fire Rescue to RJE Oceanbotics, LLC, of Irvine, CA, in the amount of $101,870.00.

18 Approve the Task Order 2023-016 for asphalt repair paving services at Fire Stations 10, 11, 12, and 13 for Fire Rescue to Allied Paving Contractors, Inc. of Pendergrass, GA, in the amount of $227,148.75.

Human Resources

19 Approve the renewal of the Third Party Administrator and Excess Workers Compensation for plan year 2023 with Arthur J. Gallagher Risk Management Services Inc. of Atlanta, GA and Gallagher Bassett Services, Inc. of Rolling Meadows, IL. The estimated cost of this renewal is $363,347.00; authorization for the Chairman to execute all related documents, subject to review and approval by the County Attorney.

20 Approve the Employment Agreement for the Assistant Chief Appraiser.

21 Approve the Employment Agreement for the County Administrator.

Planning and Development

22 **Section 17.20.300 | Text Amendment, Official Code of Hall County, GA | Amend the Definition of Community Residence |** 17.20.300, ("pregnant or parenting youth who are displaced and /or in State custody.") by amending the definition of a Community Residence. The intent of the proposed change is to expand the type of care facility allowed as a Community Residence. | All Districts | **Crystal F. Toombs, applicant.**

23 **4336 Cornelia Highway | Variance** | for a sign variance on sign design and dimensions with an Amendment to Planned Commercial Development conditions on a 14.09± acre tract located on the south side of Cornelia Highway approximately 1,497 feet from its intersection with Lula Road | Zoned PCD; Tax Parcel 09085 000008 | **Proposed use: new monument sign** | Commission District 3 | **Sophie Le Tily (Big Mouth Signs), applicant.**

24 **0, 490, 496, 508 & 536 Crescent Drive | Amend Conditions/Revise site plan** | of a Planned Residential Development (PRD) on a 32.67± acre tract located on the east side of Crescent Drive approximately 253 feet from its intersection with White Sulphur Road| Zoned PRD; Tax Parcels 15033D000010F, -000014, -000015, -000010C, -000010B, -000009, & -000008 | **Proposed Use: revise the site plan of the previously approved 143-unit townhome development** | Commission District 3 | **Williams Brothers Development LLC, applicant.**

25 **4139 Cagle Road | Use subject to County Commission Approval** | on a 7.43± acre tract located on the north side of Cagle Road approximately 1,637 feet from its intersection with Eli Jackson Road | Zoned AR-III & V-C; Tax Parcel 09099 000008 | **Proposed use: 2-lot subdivision** | Commission District 3 | **Robert & Valerie DeLeon, applicant.**

26 **3519 White Sulphur Road | Use subject to County Commission Approval** | on a 5.45± acre tract located on the east side of White Sulphur Road at its intersection with Cornelia Highway | Zoned I-II; Tax Parcel 15020A000030 | **Proposed use: trailer storage** | Commission District 3 | **Reynolds-Hemmer Properties, LP, applicant.**

27 **4053 Cleveland Highway | Rezone** | from Agriculture-Residential-III (AR-III) to Suburban-Shopping (SS) on a 6.34± acre tract located on the west side of Cleveland Highway at its intersection with Jim Hood Road | Zoned AR-III; Tax Parcel 12025 000036 | **Proposed use: grocery store, convenience store with gas & restaurant** | Commission District 3 | **Reginald Crayton, P.E., applicant.**

28 **5871 McEver Road | Rezone** | from Agricultural-Residential-III (AR-III) to Highway-Business (H-B) on a 9.06± acre tract located on the east side of McEver Road at its intersection with Silverthorn Drive | Zoned AR-III; Tax Parcel 08119 000233 | **Proposed use: RV & boat storage** | Commission District 2 | **Anchor Inn RV & Boat Storage, applicant.**

29 **5871 McEver Road | Use Subject to County Commission Approval** | on a 9.06± acre tract located on the east side of McEver Road at its intersection with Silverthorn Drive | Zoned AR-III; Tax Parcel 08119 000233 | **Proposed use: RV & boat storage** | Commission District 2 | **Anchor Inn RV & Boat Storage, applicant.**

30 **6541 Henry Smith Road | Appeal a Planning Commission Decision** | for a Use Subject to Planning Commission approval on a 5.65± acre tract located on the west side of Henry Smith Road at its intersection with Edwards Road | Zoned AR-IV; Tax Parcel 11023 000024 | **Proposed use: rural business** | Commission District 3 | **Gary Copeland, applicant.**

Public Works and Utilities

31 Public Hearing to abandon a section of public road between the cul-de-sac at the end of Kubota Way and the intersection of Kubota Way and Gateway Centre Parkway; and authorize the Chairman to execute any and all documents necessary to convey the property, subject to review and approval by the County Attorney. Commission District 3.

32 Public Hearing to abandon +/- 573' of public road on Old Cornelia Highway formerly known as Old Sulphur Spring Road and authorize the Chairman to execute any and all documents necessary to convey the property, subject to review and approval by the County Attorney. Commission District 3.

33 Approval and authorization for the Chairman to execute a Notice of Intent for Phase II Municipal Separate Storm Sewer Systems (MS4), subject to the review and approval by County Attorney.

34 Approval and authorization for the Chairman to execute a resolution to ratify closed negotiated settlements and affirm all actions taken relating to the Friendship Road Sewer Project, and authorize the execution of any and all additional documents necessary to effectuate the ratification and affirmation, subject to approval by the County Attorney. Commission District 1.

35 Approve the release of $354,230.00 Irrevocable Letter of Credit for Streets and Stormwater Management Facilities in the Shores at Lynncliff Subdivision. Commission District 2.

Sheriff's Office

36 Approve the application of the U.S. Bureau of Justice Assistance's State Criminal Alien Assistance Program (SCAAP) for the Sheriff's Office to reimburse housing of alien prisoners and personnel in the amount of $126,711.00, and if awarded, appoint the Grants Manager as the Program Designee and authorize the Chairman to execute all related application and award documents. No match is required.

County Administrator

Public Comments (PUBLIC HEARING ITEMS (i.e. ZONINGS, ORDINANCE CHANGES, ETC.) WILL ONLY BE RECEIVED AT THE REGULAR SCHEDULED VOTING MEETING IN WHICH THE ITEM IS TO BE HEARD) 2 minutes per speaker/20 minutes

Commission Time

Adjourn

request reasonable accommodations please contact Maria Tuck, Compliance Specialist at 770-531-6712 48 hours prior to the event or as soon as possible.

AGENDA ITEM

Administration

REPORT TO: **Work Session (01/09/23)**

REPORT TO: **Voting Meeting (01/12/23)**

ITEM NO: 474/2022

SUBJECT: Approve the annual re-adoption of Robert's Rules of Order with an exception to allow for the Chairman to vote.

Meetings:

Work Session Date: 01/09/23 **Voting Meeting Date:** 01/12/23

Executive Summary:

Presenter: JC

Recommendation:
Approval

Purpose of Request:
Approve the annual re-adoption of Robert's Rules of Order with an exception to allow for the Chairman to vote.

History:

Facts and Issues:

Options:

Funding Requested	$ 0.00
Are funds within current budget?	No
Source of Funds	
Does the action involve a Resolution, Ordinance, Contract, Agreement, etc.?	No
Has it been reviewed by the County Attorney?	Yes
Is there a deadline for this item?	

Approvals:

Approve	Attorney	Administration	Clerk
JR	WLI	LJ	JR

Attachments:

AGENDA ITEM

Administration

REPORT TO: **Work Session (01/09/23)**

REPORT TO: **Voting Meeting (01/12/23)**

ITEM NO: 678/2022

SUBJECT: Approve the annual re-adoption of Hall County's Code of Ethics.

Meetings:

Work Session Date: 01/09/23 **Voting Meeting Date:** 01/12/23

Executive Summary:

Presenter: A

Recommendation:
Approval

Purpose of Request:
Approve the annual re-adoption of Hall County's Code of Ethics.

History:
This is an annual item. The original adoption was on March 25, 2010.

Facts and Issues:

Options:

Funding Requested	$ 0.00
Are funds within current budget?	No
Source of Funds	
Does the action involve a Resolution, Ordinance, Contract, Agreement, etc.?	Yes
Has it been reviewed by the County Attorney?	Yes
Is there a deadline for this item?	

Approvals:

Approve	Attorney	Administration	Clerk
JR	WLI	LJ	JR

Attachments:

STATE OF GEORGIA

COUNTY OF HALL

A RESOLUTION TO AMEND THE CODE OF ORDINANCES OF HALL COUNTY WITH REGARD TO THE CODE OF ETHICS

WHEREAS, Hall County has enacted an ordinance entitled "Code of Ethics" found in Chapter 2.110 of The Official Code of Hall County, Georgia; and

WHEREAS, the County has conducted a review and analysis of said Chapter 2.110 of its Official Code and determined that revisions to said Chapter are warranted; and

WHEREAS, the warranted changes include changes to the Code of Ethics to clarify and modernize the County's entire system of addressing ethical issues, and to bring the County's system into line with systems in other jurisdictions that have withstood legal challenge; and

WHEREAS, the changes to said Chapter 2.110 of the Official Code of Hall County are attached hereto as Exhibit A; and

WHEREAS, the Board of Commissioners has determined that the revisions to Chapter 2.110 of The Official Code of Hall County, Georgia attached hereto as Exhibit A are in the best interest of the residents of Hall County, and will promote the health, safety, and general welfare of the residents and businesses in Hall County.

NOW, THEREFORE, the Board of Commissioners does hereby amend The Official Code of Hall County, Georgia as follows:

1.

Chapter 2.110 of The Official Code of Hall County is hereby amended by deleting Chapter 2.110 in its entirety and by inserting in lieu thereof a new Chapter 2.110 which provides exactly as described in Exhibit A attached hereto.

2.

The remaining provisions of The Official Code of Hall County shall remain as they were, unchanged by this amendment.

SO RESOLVED, this the 26th day of April, 2022.

HALL COUNTY BOARD OF COMMISSIONERS

By: _____
Richard Higgins, Chairman

ATTEST:

Jennifer Rivera (SEAL)
Jennifer Rivera, County Clerk

APPROVED AS TO FORM:

Van Stephens
Van Stephens, County Attorney

BOARD OF COMMISSIONERS HALL COUNTY GA DEC. 15, 1818

CHAPTER 2.110. – CODE OF ETHICS

PART I. – GENERAL PROVISIONS

2.110.1.1. – Purpose.

The purpose of this chapter is to establish and enforce ethical standards of conduct for all county commissioners, county officials, and county employees by setting forth those actions or omissions that are incompatible with the best interests of the operation of county government, by directing disclosure of incompatible interests where necessary, and by providing a procedure for addressing complaints filed by Hall County citizens. By providing such standards and procedures, Hall County seeks to ensure that decisions made by county commissioners, officials, and employees are impartial and independent, that public office not be used for personal gain, that governmental decisions are as free as possible from any appearance of impropriety, and that the public has confidence in the integrity of its government.

2.110.1.2 – Georgia Constitution and Code Reference.

Hall County acknowledges the provisions of Article I, Section 2, Paragraph I of the Georgia Constitution which reads as follows:

> All government, of right, originates with the people, is founded upon their will only, and is instituted solely for the good of the whole. Public officers are the trustees and servants of the people and are at all times amenable to them.

Hall County further acknowledges the provisions of O.C.G.A. Section 45-10-1, which form excellent general guidelines for conduct by public officers and employees.

2.110.1.3 – Interpretation and Severability.

(a) This chapter shall be construed broadly when necessary to effectuate its purposes and policies and to supplement such other existing laws and ordinances as may relate to the conduct of county officials or employees.

(b) The provisions of this chapter are severable, and if any of its provisions shall be held invalid by a court of law, the decision of the court shall not affect or impair any of the remaining provisions.

2.110.1.4 – Definitions.

The following words, terms, and phrases, when used in this chapter, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

Business Entity means any business, proprietorship, firm, partnership, association, venture, trust, or corporation, and includes persons acting in a representative or fiduciary capacity.

Business Relationship means a verbal or written agreement between parties designed to result in an enterprise of profit to one or more of the parties. A business relationship shall not include a transaction undertaken by an employee on behalf of an employer or a lawful campaign contribution.

Confidential Information means any information which, by law, is not available to the public, including information exempt from disclosure under Georgia's Open Meetings and Open Records Acts.

County official or *official* means the individual members of the county board of commissioners, county administrator, county attorney and his or her deputies/assistants, county clerk, and any county employee exempt from civil service regulations who has been appointed to the position by either the county administrator or the board of commissioners acting independently or jointly and any member of any other county board or authority who has been appointed to his or her position by the board of commissioners or the county administrator. For the purposes of this chapter, the term shall not include any other elected county or state official or employees of their individual offices, unless that elected official agrees in writing that his or her office will be subject to coverage under this chapter during his or her term of service in such office.

Employee means all those persons employed on a regular or part-time basis by the county including, but not limited to, those covered by the county's civil service system, and also includes those persons whose services are retained under the terms of a contractual agreement with the county. Such term will only include the employees of any other individual office of elected county or state officials if that elected official agrees in writing that his or her office will be subject to coverage under this chapter during his or her term of service in such office, and then only for said term of office.

Hearing officer means a person admitted to the Georgia Bar of suitable legal experience who shall screen complaints to ensure that they meet the technical requirements of this chapter and who shall perform all other duties set forth herein. Hearing officers shall be appointed on an individual case basis.

Immediate family means an official or employee and the spouse of an official or employee, their parents, children, brothers and sisters related by blood, marriage, or adoption.

Interest means direct or indirect pecuniary or material benefit accruing to a county official or employee as a result of a contract or transaction which is or may be the subject of an official action by or with the county except for such contracts or transactions which, by their terms and by the substance of their provisions, confer the opportunity and right to realize the accrual of similar benefits to all other persons and/or property similarly situated. An interest shall not include a remote interest.

For purposes of this chapter, a county official or employee shall be deemed to have an interest in the affairs of:

(1) His immediate family;
(2) Any person or business entity with whom a contractual relationship exists with the county official or employee;
(3) Any business entity in which the county official or employee is an officer, director, or member having a financial interest in the business entity; or
(4) Any business entity as to which the stock, legal ownership, or beneficial ownership of a county official or employee is in excess of five percent of the total stock or total legal and beneficial ownership, or as to which in excess of five percent of the stock, legal ownership, or beneficial ownership is controlled or owned directly or indirectly by the county official or employee.

Legislative action means any legislative, appointive, administrative, discretionary, quasi-judicial, or other official action requiring an affirmative vote by a quorum of the county board of commissioners.

Official act or *action* means any legislative, appointive, administrative, discretionary, or quasi-judicial act of any official or employee of the county or any agency, board, committee, authority, or commission thereof.

Remote interest means any interest which is incidental to the contract or transaction and shall include:

(1) A position as a non-salaried director, officer, or employee of a nonprofit corporation or organization;
(2) A holder of less than five percent of the total stock or total legal and beneficial ownership in a business entity;
(3) A position of employment held by an immediate family member which is not a director, officer, manager, or supervisor in a business entity;
(4) A position of employment held by an immediate family member who does not directly exercise decision-making authority affecting the contract or transaction;
(5) A position in a representative capacity such as a receiver, trustee, executor, or administrator;
(6) Any position or interest determined to be remote or incidental to the contract or transaction by the county's ethics board.

PART II. – ETHICAL STANDARDS

2.110.2.1 – General Ethical Standards.

(a) *Interest in contract or transaction.* No county official or employee having the power or duty to perform an official act or action related to a contract or transaction which is or may be the subject of an official act or action of the county shall have:
  (1) An interest in such contract or transaction or thereafter acquire an interest in such contract or transaction;
  (2) An interest in any business entity representing, advising, or appearing on behalf of, whether paid or unpaid, any person involved in such contract or transaction;
  (3) Solicited or accepted present or future employment with a person or business entity involved in such contract or transaction; or
  (4) Solicited, accepted, or granted a present or future gift, favor, service, or thing of value from or to a person involved in such contract or transaction, except as provided in Section 2.110.2.3.
(b) *Pre-acquisition of interest.* No county official or employee shall acquire an interest in or be affected by a contract or transaction which is or may be the subject of an official act or action of the county at a time when the official or employee believes or has reason to believe that such contract or transaction will be directly or indirectly affected by an official act or action of the county.
(c) *Disclosure of information.* To the extent permitted by law and the provisions of this chapter, no official or employee shall disclose or use confidential information concerning any official action, property, purchase, bid, proposal, or offer of the county to advance his or her own financial or private interests, those of an immediate family member, or those of any person or party other than the county. Unless disclosure is required by law or by a court, no official or employee shall

disclose information concerning any discussions or presentations occurring in executive session of the county except to appropriate persons employed by the county such as members of the board of commissioners, the county administrator, department directors, or legal counsel.

(d) *Incompatible service.* No county official or employee shall engage in or accept private employment or render service for any private entity, when such employment or service is incompatible with the proper discharge of his or her official duties or would tend to impair his or her independence of judgment or action in the performance of his or her official duties, unless otherwise permitted by law and unless disclosure is made as provided in this chapter.

(e) *Appearance.* No county official or employee shall appear on behalf of any private person other than himself or herself and/or his or her spouse or minor children, before any county agency, authority, or board. However, a member of the board of commissioners may appear before such groups on behalf of his or her constituents in the course of his or her duties as a representative of the electorate or in the performance of public or civic obligations.

(f) *Public property.* No county official or employee shall request or permit the unauthorized use of county-owned vehicles, equipment, materials, or property for personal convenience, pleasure, or profit.

(g) *Special treatment.* No county official or employee shall grant any special consideration, treatment, or advantage to any citizen beyond that which is available to every other citizen in the same or similar circumstances.

(h) *Later case interest.* No county official or employee shall, after the termination of his or her service or employment with the county, accept remuneration of any kind for any appearance before any board, commission, committee, agency, or authority of the county on behalf of any adverse party in relation to any case, proceeding, or application in which he or she personally participated during the period of his service or employment, which was under his active consideration during the period of his service or employment, or as to which he could have acquired knowledge or information during the period of his service or employment.

(i) *Political recrimination.* No county official or employee, whether elected or appointed, shall promise an appointment or threaten the dismissal from or discipline as to any county position as a reward or punishment for any political activity.

(j) *Withholding of information.* No county official or employee shall knowingly withhold any information so as to impair the proper decision-making of any of the county's boards, authorities, agencies, commissions, or officials.

(k) *Payment of debts.* All county officials and employees shall settle all accounts between them and the county, including the payment of taxes, in a timely fashion.

(l) *Organizational integrity.* County commissioners, as policy makers, shall refrain from unduly interfering in the daily administrative affairs of department supervisors. Commissioners shall not, acting alone, make suggestions to the department supervisors or other employees, except the county administrator, regarding the hiring, firing, or disciplining of county employees unless specifically requested to do so by the department director in conjunction with the county administrator.

(m) *Adverse actions—official duties.* No county official or employee shall intimidate, threaten, coerce, take action against, or attempt any such actions against any other county official or employee for the purpose of interfering with or influencing that person's discretion in the regular discharge of his or her official duties.

(n) *Improper influence.* No county official or employee shall influence or attempt to influence any other county official or employee to violate the ethical standards or provisions set forth in this chapter.

(o) *Personal gain.* No county official or employee shall use the power of his office, his position, or official authority for his own personal gain or that of another. The performance of usual and customary constituent services, without additional compensation, does not constitute the misuse of the power of office by a commissioner as otherwise prohibited by this section.

2.110.2.2 – Abstention to avoid conflicts of interest.

(a) Except as otherwise provided by law, including provisions of this chapter, no county official or employee shall participate in the discussion, deliberation, vote, or otherwise take part in the decision-making process on any item before him or her in which the county official or employee has a conflict of interest as set forth in this chapter.

(b) In the event of a conflict of interest, the county official or employee shall announce his intent to abstain prior to the beginning of the discussion, debate, deliberation, or vote, and shall abstain from casting a vote.

2.110.2.3 – Exceptions.

(a) It shall not be deemed a violation of the standards of this chapter if the interest of a county official or employee in a person or business entity is a contractual obligation of less than $500.00 which has not been preceded by any other obligation, discharged or existing, between the same parties, and which is not the first in a series of two or more loans or debts which either of the parties is under any obligation to make or incur.

(b) The following shall not be deemed to be a violation of the standards of this chapter:
   (1) Legitimate salary, benefits, fees, commissions, or expense reimbursements associated with an official's or employee's nonpublic business;
   (2) Awards, plaques, certificates, mementos, or similar items given in recognitions of the official's or employee's civic, charitable, political, professional, or public service;
   (3) Food, beverages, and registration at group events to which all similarly situated employees or officials are invited;
   (4) Reimbursement of actual and reasonable expenses for food, beverages, travel, lodging, and registration for meetings which are provided to officials or employees so that they may participate in or speak at the meeting;
   (5) Commercially reasonable loans made in the ordinary course of business;
   (6) Gifts with a total value of less than $500.00 in any calendar year;
   (7) Promotional items generally distributed to public officials;
   (8) Gifts from members of the county official's immediate family;
   (9) Food, beverages, or expense reimbursement afforded public officials or employees, and members of their immediate families, or others that are associated with normal and customary business or social functions or activities;
   (10) Reimbursement of tournament fees for participating in charitable golf tournaments or similar sporting events; or

(11) Reimbursement of expenses for food, beverages, travel, lodging, and other related expenses associated with official county functions.

(c) It shall not be deemed a conflict of interest nor a violation of the standards of this article if a county official or employee, in his capacity as such official or employee, participates in the making of a contract even if such official or employee has a private pecuniary interest or performs in regard to that contract some function requiring the exercise of discretion on his or her part, if:
   (1) The contract is awarded through a process of public notice and competitive bidding; or
   (2) The board of commissioners at regular meeting, after determining that it is in the best interest of the county to do so, authorizes the participation.

2.110.2.4 – Disclosure of spending on county officials by individuals and firms.

(a) Any individual or business entity who provides anything of monetary value singularly or in an aggregate amount greater than $500.00 in a calendar year to a member of the board of commissioners or to any other county official and meets any of the criteria listed below shall file a disclosure of such expenditures.
   (1) The individual or business entity does business or is a party to a contract with the county during the calendar year;
   (2) The individual or business entity seeks to do business or enter into a contract with the county during the calendar year;
   (3) The individual or business entity is regulated in any fashion by the county during the calendar year; or
   (4) The individual or business entity seeks to influence any official action by the board of commissioners during the calendar year.

(b) This section shall apply to individuals and business entities that represent any individual or entity meeting any of the criteria listed above.

(c) Expenditures occurring on or after January 1, 2022 shall be reported to the clerk of the board of commissioners on a form provided by the county and shall be filed annually by February 28 of each year for the previous calendar year.

(d) Reports submitted to the county shall be posted on the county website.

(e) Failure to comply with this reporting requirement shall constitute a violation of this article and shall be punished by a fine not to exceed $500.00.

2.110.2.5 – Disclosure of interest in legislative action.

(a) Any member of the board of commissioners of the county who has a financial or personal interest in any proposed legislative action before the commission shall immediately disclose on the record the nature and extent of such interest. This disclosure shall be made in writing to the clerk of the board of commissioners.

(b) Any other official or employee who has a financial or personal interest in any proposed legislative action of the board of commissioners, and who participates in discussion with or gives an official opinion or recommendation to the commission, shall disclose on the record the nature and extent of such interest.

2.110.2.6 – Disclosure of business relationships.

(a) Any member of the board of commissioners of the county who is a party to a business relationship with any person or business entity appearing before the board of commissioners to advocate or oppose any action by the board of commissioners or who is a party to a business relationship with any person or business entity which is the subject of action by the board of commissioners shall immediately disclose that interest on the record.
(b) Within five business days after a meeting at which such disclosure is made, the member shall file with the clerk to the board of commissioners written verification of that disclosure.

2.110.2.7 – Disclosure by bidders and proposers.

(a) Any business entity that makes a bid or proposal to provide goods or services to the county shall disclose under oath on a form provided by the county's department of financial services purchasing division the name of all elected officials whom it employs or who have a direct or indirect pecuniary interest in the business entity, its affiliates, or its subcontractors. It shall be the duty of the financial services director to promptly transmit any such disclosure to the clerk to the board of commissioners. Failure to submit this disclosure during the bid or proposal process shall render the bid or proposal non-responsive to the invitation for bid or request for proposal. This section shall not apply to bids or proposals for which the resulting contract would have a total contract value of less than $10,000.00 or other threshold designated by the county's contracting/purchasing ordinance.
(b) Where it appears a bidder or proposer has submitted false information on or has omitted material information from the disclosure form referred to in this section, the matter shall be referred to the financial services director for possible action. The matter may also be referred to the solicitor or district attorney for action.
(c) Any business entity holding a contract with the county that subsequent to execution of the contract or issuance of the purchase order employs, subcontracts with, or transfers a direct or indirect pecuniary interest in the business entity to an elected officials shall within five business days disclose such fact in writing under oath to the clerk to the board of commissioners. It shall be the duty of the financial services director to place language imposing the requirement in every contract issued by the county. The business entity's failure to submit this disclosure in a timely manner shall be referred to the financial services director for possible action. The matter may also be referred to the solicitor or district attorney for action.

2.110.2.8 – Disclosure of interest in real property.

Any real estate purchase and sale contract offered by the county to any property owner shall require that person to disclose any direct or indirect property or pecuniary interest in the real estate held by a county elected official. This disclosure shall be a mandatory precondition to closing. It shall be the duty of the county attorney to promptly transmit any such disclosure to the clerk to the board of commissioners.

2.110.2.9 – Disclosures to be placed on county website; referral to grand jury.

It shall be the duty of the clerk to the board of commissioners to post any disclosure pursuant to sections 2.110.2.4 through 2.110.2.8 to the county website within five business days of receipt of same. It shall also be the duty of the clerk to the board of commissioners to forward all such disclosures to the district attorney for review and comment by the grand jury.

2.110.2.10 – Abstentions.

A county official or employee who has an interest that he or she has reason to believe may be affected by an official act or action shall abstain from any participation in said official act or action.

2.110.2.4 – Compliance with applicable laws.

No officer, official, or employee shall engage in any activity or transaction that is prohibited by any law which is applicable to him or her by virtue of his or her office or employment, including laws that exist as of the enactment of this chapter or any such laws that may be enacted hereafter.

PART III. – ETHICS BOARD

2.110.3.1 – Ethics Board Initial Procedure and Appointment.

(a) Any resident of Hall County may initiate a complaint of a violation of this chapter by submitting a written, verified, and sworn complaint under penalty of perjury or false swearing to the county attorney. The complaint shall specifically identify all provisions of the county's code of ethics which the subject of the complaint is alleged to have violated, set forth facts as would be admissible in evidence in an administrative proceeding, and show affirmatively that the complainant or affiant (if in addition to or different from the complainant) is competent to testify to the matters set forth therein. All documents referenced in the complaint and all supporting affidavits shall be attached to the complaint.

(b) The complaint must be filed within 90 days from the date that the alleged violation occurred, or in the case of concealment within 90 days from the date the alleged violation should have been discovered after due diligence. A complaint filed more than 90 days after the alleged violation occurred or was discovered shall not be considered under any circumstances. However, no complaint may be filed against a candidate between the qualifying date for election of such candidate and the date of the candidate's general election, or runoff election if a runoff is held, and all complaints filed during such a time period will be returned to the complainant by the County Attorney. Complaints alleging violations during this period may be filed commencing upon the date immediately following the general election or runoff election if held, and the 90 day period shall be tolled during the period from the qualifying date for election of such candidate and the date of the candidate's general election or runoff election if held.

(c) Upon receipt of the complaint, the county attorney shall immediately deliver the complaint to the hearing officer who shall review the complaint to determine if it meets the technical requirements set forth in subsections (a)(1) and (a)(2) of this section, including whether the complaint states a

viable complaint for a violation of this ordinance. If the complaint fails to meet these requirements, the hearing officer shall notify the person who filed the complaint and he or she shall have ten days from the date of notice to correct and re-file the same directly with the hearing officer. A complaint that fails to satisfy the technical requirements of this section following one amendment shall be dismissed with prejudice.

(d) If the complaint meets all of the technical requirements of this section, the hearing officer shall forward the complaint back to the county attorney within five days of his decision or as soon thereafter as practicable.

(e) Within five days after receiving the complaint back from the hearing officer, the county attorney shall forward the complaint to the board of commissioners and to the official or employee who is the subject of the ethics complaint. Together with the complaint, the county attorney shall forward a copy of the Hall County Ethics Ordinance to the official or employee who is the subject of the ethics complaint. Within 30 days of receipt of the ethics complaint from the county attorney, or as soon thereafter as practicable, the board of commissioners shall appoint all of the members of the ethics board which is to hear the ethics complaint.

(f) The ethics board shall consist of five members appointed by the board of commissioners at their sole discretion with each member of the board of commissioners entitled to select one member. If the official who is subject to the ethics complaint is a member of the board of commissioners, that board member shall not be entitled to participate in the selection of the ethics board members, and only board of commissioners members who are not subject to the ethics complaint may select a member. In appointing the members of the ethics board, the board of commissioners shall seek to appoint individuals with local government experience, members of the Georgia Bar in good standing, and/or members with sufficient discretion, maturity, and experience to provide the ethics board with appropriate skills to perform its functions in a fair and impartial manner. The five appointees shall constitute the ethics board empaneled to investigate the subject complaint and, when appropriate, to make recommendations to the board of commissioners. The ethics board shall establish its own procedural rules consistent with the provisions of this ordinance, and select a chairman and vice-chairman.

(g) On the date that the complaint is initially filed with the county attorney, the complaining party shall serve a complete copy of the complaint, together with all attached and referenced documents and affidavits, upon the county official or employee who is the subject of the complaint. Service shall be complete upon personal delivery or deposit in a U.S. Mail or express delivery depository.

(h) Once empaneled, the ethics board shall notify the subject of the complaint that he or she may file a response to the complaint within 30 days unless such time for response is extended by the ethics board upon a showing of good cause.

2.110.3.2 – Ethics Board Hearing Procedures.

(a) The ethics board shall meet, receive evidence, deliberate, and vote in accordance with O.C.G.A. § 50-14-1 et seq., and all parties shall have the opportunity to be heard, to present testimony via witnesses, to cross-examine witnesses presented, and to present documentary, tangible, and demonstrative evidence to the ethics board. Any person alleged to have violated this ethics ordinance shall have the right to be represented by counsel at their own expense.

(b) On its own initiative, the ethics board may utilize the Georgia Open and Public Records Act found at O.C.G.A. § 50-18-70 et seq. so as to properly investigate the complaint.
(c) The chairman of the ethics board shall determine, after consulting with each of the ethics board members and the parties, when the ethics board shall meet and the number of meetings and hearings necessary to properly investigate the complaint.
(d) Three members of the board of ethics shall constitute a quorum for the transaction of business and for voting purposes. The chairman shall be entitled to the same voting rights as other members.
(e) The burden of proof before the ethics board shall be on the complainant to demonstrate, by clear and convincing evidence, that a violation of the Hall County Ethics Ordinance has been committed by the official or employee at issue.
(f) At the conclusion of its investigation, the ethics board shall deliberate upon the evidence gathered and presented and shall determine its findings by majority vote. The ethics board shall find that each alleged violation is either "sustained" or "not sustained." A finding that a violation of this chapter has occurred shall be based upon clear and convincing evidence, and the board of ethics' findings shall be reduced to writing and provided to the parties, to the board of commissioners, and to the county attorney. In addition, if the ethics board finds evidence of one or more possible criminal violations, it shall forward its findings to the appropriate prosecutorial agency. In addition to its findings, the ethics board shall make non-binding recommendations to the board of commissioners as to the appropriate penalties to be administered under Section 2.110.3.5 for any sustained violations of this chapter and for other appropriate operational or remedial measures which would, consistent with Georgia law, prevent further violations of a like nature.

2.110.3.3 – Enforcement.

In the event that the ethics board finds that one or more violations of the Hall County Ethics Ordinance has occurred, the board of commissioners, at a public hearing within 30 days of the rendering of the board's findings and recommendations, may, by a majority vote, decide that no action is to be taken, or may decide to take any action consistent with Georgia law including those set forth in Section 2.110.3.5. In the event that a member of the board of commissioners is the subject of the ethics complaint and investigation, such commissioner shall not participate in any such decision.

2.110.3.4 – Qualifications of members of the board of ethics.

(a) In addition to the provisions of Section 2.110.3.1 (f) above, a person is eligible to be appointed as a member of the board of ethics if the person:
  (1) Is a current resident of Hall County;
  (2) Has resided in Hall County for 30 consecutive months prior to the date of appointment;
  (3) Is a registered voter in Hall County;
  (4) Is not an employee or official of the county or any municipality within the county and has not been an employee or official of the county during the three years immediately preceding his or her appointment, and is not the spouse, parent, child, or sibling of any current employee, official, or county commissioner of the county;
  (5) Is not an employee of any political party; and

(6) Does not hold any elected or appointed office and is not a candidate for office of the United States, Georgia, Hall County, or any municipality in Hall County and has not held any elected or appointed office during the three years immediately preceding his or her appointment. This subsection shall not apply to part-time federal or state appointed positions.

(b) If at any time during his or her service on the board of ethics a member becomes ineligible to serve on said board, he or she shall automatically be removed and the board of commissioners shall appoint a new member in accordance with the provisions for original appointment.

(c) The ethics board shall be a temporary board for the specific purpose of investigating a complaint which has been approved by the hearing officer and all other like complaints which may have been filed which involve a common nucleus of operative facts. In the case of multiple complaints filed which arise out of a common nucleus of operative facts, the ethics board should endeavor to consolidate for a single hearing all such ethics complaints filed contemporaneously against the same official or employee. The ethics board shall expire upon disposition of the complaint or complaints for which it was created or which it was otherwise authorized to hear.

(d) Subject to budgetary constraints, the ethics board shall be provided by the county governing authority with sufficient meeting space and other reasonable supportive services to allow it to perform its duties and functions under this chapter, including access to legal counsel when necessary. The county attorney may appoint an administrative employee to assist the ethics board and to publish notices of all meetings as required by O.C.G.A. § 50-14-1 et seq. upon request of the chairman of the ethics board. The board of commissioners shall ensure that adequate funding is provided for this purpose.

(e) Each member appointed to the board of ethics shall be paid the sum of $200.00 for each day that the ethics board meets to consider an ethics complaint, but shall not be otherwise compensated, except that the county may choose to reimburse members of the ethics board for reasonable and legitimate expenses incurred in serving on the board and carrying out its duties and functions.

2.110.3.5 – Penalties.

(a) Employees are subject to the following penalties and actions for a violation of this chapter:
  (1) Written warning or reprimand;
  (2) Suspension without pay;
  (3) Demotion or change of position;
  (4) Termination of employment;
  (5) Restitution/recovery by the county of the value of any money, property, or tangible items appropriated;
  (6) Cancellation of the contract or rejection of the bid or offer; and/or
  (7) Referral to appropriate prosecuting criminal authorities.

(b) County officials are subject to the following penalties and actions for a violation of this chapter:
  (1) Written warning, censure, or reprimand to be issued in public;
  (2) Removal from office, but only if allowed by state law;
  (3) Cancellation of the contract or rejection of the bid or offer;
  (4) Restitution/recovery by the county of the value of any money, property, or tangible items appropriated;
  (5) Referral to appropriate prosecuting criminal authorities.

(c) Private firms and organizations are subject to the following penalties and actions for a violation of this chapter:
  (1) Cancellation of the contract or rejection of the bid or offer;
  (2) Suspension from award of county contracts for a period of up to three years;
  (3) Restitution/recovery by the county of the value of any money, property, or tangible items appropriated;
  (4) Referral to appropriate prosecuting criminal authorities.

2.110.3.6 – Distribution.

This chapter shall be distributed to every official and employee of the county by a means deemed appropriate by county officials within 90 days after its effective date. Within 90 days of its effective date, this chapter shall also thereafter be furnished to all persons beginning duties as officials or employees of Hall County during the county's orientation process, or via such other process as is deemed appropriate by county officials.

2.110.3.7 – Training.

The county may elect to provide training concerning the provisions and requirements of this chapter to officials and employees on a regular schedule (such as every two years) through the county's Human Resources Department.

AGENDA ITEM

Administration

REPORT TO: **Work Session (01/09/23)**

REPORT TO: **Voting Meeting (01/12/23)**

ITEM NO: 676/2022

SUBJECT: Approve the award of RFQ/P #43-017 Magazine Printing, Graphic Design and Related Services for Administration to Forum Communications, Inc. of Gainesville, GA. The estimated cost is not to exceed $50,000.00.

Meetings:

Work Session Date: 01/09/23 **Voting Meeting Date:** 01/12/23

Executive Summary:

Presenter: KCACA

Recommendation:

Approve the award of RFQ/P #43-017 Magazine Printing, Graphic Design and Related Services for Administration Communications and Strategic Engagement to Forum Communications, Inc. of Gainesville, Georgia, in the Estimated Amount of $50,000.

Purpose of Request:

The Magazine will be the County's premier printed communication with the public and the expectation is for a high quality, professional designed, newsstand quality, printed product.

History:

This would be the first issue of the County Magazine.

Facts and Issues:

The award to Forum Communications, Inc. of Gainesville, Georgia, resulted from a competitive bid issued on October 26, 2022. Forum was the only responsible and responsive bidder to produce a bidder's response.

Options:

Funding Requested	$ 50,000.00
Are funds within current budget?	No
Source of Funds	General Fund
Does the action involve a Resolution, Ordinance, Contract, Agreement, etc.?	Yes
Has it been reviewed by the County Attorney?	Yes
Is there a deadline for this item?	2022-12-27

Approvals:

Buyer	Approve	Purchasing	Budget
AP	JR	AP	TS
Finance	**Attorney**	**Administration**	**Clerk**
WG	WLI	CR	JR

Attachments:
Financial Supplement
BID TAB
Contract RFQ-P #43-017 Magazine Printing

HALL COUNTY BOARD OF COMMISSIONERS
FINANCIAL SUPPLEMENT REPORT

AGENDA ITEM 676/2022

Funds Requested: $ 50,000.00

Request Budgeted: No

Proposed Source of Funding:

General Fund

Budget Transfer Requested:

Yes

Funding Source Items:

Fiscal Year	Fund	Division	Account	Amount
2023	001 - GENERAL	101 - ADMINISTRATION	4440 - ADVERTISING	$50,000.00

Budget Transfer Items:

Fiscal Year	Fund	Division	Account	Amount
2023	001 - GENERAL	184 - GENERAL SERVICES	4711A - CONTINGENCY-GENERAL	$-50,000.00
2023	001 - GENERAL	101 - ADMINISTRATION	4440 - ADVERTISING	$50,000.00

Additional Information/Comments:

This budget adjustment will move the necessary funding from general fund contingency into administration's advertising budget.

Contact for Questions: KC

Phone: 770-257-5504 / 678-478-7605

RFQ-P #43-017 MAZAINE FOR COMMUNICATIONS	
Requested Bid Packet	**Response**
Forum Communications	Submitted Bid on Time with all mandatory documents
The Times	Submitted Bid on Time, failed to include cost
Neon Lizard	Missed deadline
Fort Orange Press	Missed deadline
PWXPress	Failed to upload bid
Leocap Solutions LLC	Failed to upload bid
AF Mainlin	Failed to upload bid
Minute Man Press	Failed to upload bid

BID SUMMARY	
Bid packet request	8
Bid responses	2
Hall County businesses	2
Award	Forum Communications of Gainesville, Georgia

12/19/2022

HALL COUNTY
GEORGIA
We have it all in Hall

POST OFFICE DRAWER 1435
GAINESVILLE, GA 30503

t: 770.535.8270 | f: 770.531.6711

DIRECTOR
Wesley Geddings

Hall County Government
FINANCIAL SERVICES

Notice of Intent to Award

RFQ/P #43-017

MAGAZINE PRINTING, GRAPHIC DESIGN AND RELATED SERVICES

December 14, 2022

Hall County, Georgia, hereby gives notice that it intends to award Forum Communications, Inc., of 1090 Dixon Drive, Gainesville, GA 30501, a contract for RFQ/P #43-017 Magazine Printing, Graphic Design and Related Services.

Please sign, notarize and return the attached Contract document to me at apenick@hallcounty.org, no later than COB Wednesday, December 21, 2022. Electronic receipts are acceptable.

Purchasing will issue you a PO and then the Communications and Strategic Engagement department will reach out to you to begin the services.

Sincerely;

Andy Penick
Issuing Officer
Hall County, Georgia

Cc: Contract

STATE OF GEORGIA
COUNTY OF HALL

CONTRACT RFQ/P #43-017

MAGAZINE PRINTING, GRAPHIC DESIGN AND RELATED SERVICES

This agreement made and entered into December 15, 2022 by and between Hall County, Georgia, (Hereinafter "County") and Forum Communications, Inc., of 1090 Dixon Drive, Gainesville, GA 30501, hereafter referred to as "Contractor").

Witnessed:

Whereas, the County intends to contract for the provision of Magazine Printing, Graphic Design and Related Services, herein referred to as "Services" and has entered into an agreement for the desired services provided by the Contractor and,

Whereas, the Contractor desires to perform the services for the contract costs as defined on the following Bidder's Mandatory Cost Worksheet as compensation

This Contract comprises Hall County's RFQ/P #43-017 Solicitation for the provision of Magazine, Printing, Graphic Design and Related Services of October 26, 2022, including all Exhibits and Attachments, and the Bidder's response, and are incorporated into, and made a part of this agreement by reference.

If any paragraph, sub-paragraph, sentence, clause, phrase or any portion of this agreement shall be declared invalid or unconstitutional by any Court of competent jurisdiction or if the provisions of any part of this agreement as applied to any particular situation or set of circumstances shall be declared invalid or unconstitutional, such invalidity shall not be constructed to affect the portions of this agreement not so held to be invalid or the application of this agreement to other circumstances not so held to be invalid. The intent of the parties to this agreement is to provide for separate and divisible parts, and to adopt any-and-all parts hereof, as may not-be-held invalid for any reason.

[Signature Page Follows]

IN WITNESS WHEREOF, said Parties have hereunto affixed their signature and seal on the day, month, and year below written:

Forum Communications, Inc.

By: _____

Title: Chief Engagement Officer

Print Name: Matt Dubnik

Sworn to and subscribed before me this

15 Day of December, 2022

Notary Public: _____

Notary commission expires: 4-23-23

[Locus Sigilli]

BROOKE L ARROWOOD
NOTARY
My Comm. Expires
April 23, 2023
PUBLIC
HALL COUNTY, GEORGIA

HALL COUNTY, GEORGIA

By: _____
Richard Higgins, Chairman
Hall County Board of Commissioners

Attestment: _____
County Clerk

Sworn to and subscribed before me this

_____ Day of _____, 2022

Notary Public: _____

Notary commission expires: _____

[Locus Sigilli]

APPROVED AS TO FORM:

_____
Van Stephens, County Attorney,
William Linkous, Deputy County Attorney,
Justin Lawhon, Deputy County Attorney, or
designee

AGENDA ITEM

Administration

REPORT TO: **Work Session (01/09/23)**

REPORT TO: **Voting Meeting (01/12/23)**

ITEM NO: 737/2022

SUBJECT: Approve the purchase of furniture, fixtures, and equipment for the Pre-Trial Accountability Services Facility Renovation Project to Impact Office Interiors of Griffin, GA, in the amount of $71,878.30.

Meetings:

Work Session Date: 01/09/23

Voting Meeting Date: 01/12/23

Executive Summary:

Presenter: KC

Recommendation:
Administration recommends approval.

Purpose of Request:

The purpose of this request is to receive Board approval to purchase all of the furniture needed to outfit the Pre-Trial Accountability Services (PAS) Building on Jesse Jewell Parkway for use by Courts system staff beginning July 1, 2023.

History:
In 2022, Hall County purchased the vacant Georgia Department of Agriculture building on Jesse Jewell Parkway in order to meet future space needs of the organization. The Courts System's Pre-Trial Services division was identified as an occupant for the facility, as well as the state's Conflict Defender's Office, who will be renting a portion of the facility from the County for their use.

Facts and Issues:
All of this furniture is on state contract and is the same furniture purchased for the 4th floor government center renovation. This is another step in standardizing purchases, branding, etc. countywide, an initiative tied closely to Hall County's Strategic Plan. Additionally, although furniture is not needed until mid-year, a purchase is required at this time due to continued long lead times for this industry.

Options:

Funding Requested $ 71,878.30

Are funds within current budget?	Yes
Source of Funds	SPLOST VIII
Does the action involve a Resolution, Ordinance, Contract, Agreement, etc.?	No
Has it been reviewed by the County Attorney?	Yes
Is there a deadline for this item?	

Approvals:

Buyer	Approve	Purchasing	Budget
AP	JR	AP	TS
Finance	**Attorney**	**Administration**	**Clerk**
WG	WLI	CR	JR

Attachments:

Financial Supplement
FF&E Proposal for PAS Building

HALL COUNTY BOARD OF COMMISSIONERS
FINANCIAL SUPPLEMENT REPORT

AGENDA ITEM 737/2022

Funds Requested: $ 71,878.30

Request Budgeted: Yes

Proposed Source of Funding:

SPLOST VIII

Budget Transfer Requested:

No

Funding Source Items:

Fiscal Year	Fund	Division	Account	Amount
FY 23	028 - SPLOST VIII	1869 - SP-VIII BLDG CONST PROJ.	5002 - BUILDING/CONSTRUCTION	$71,878.30

Budget Transfer Items:

Additional Information/Comments:

Contact for Questions: KC

Phone: 7702975504

Customer: Hall County

Sales Rep: Benjamin Frank
bfrank@impactofficeinteriors.com

Proposal

2022-1907
12/19/2022

Propose To:

Hall County
2875 Browns Bridge Rd
Gainesville, GA 30504

Shipping Location:

Southern Office Installation
4301 Pleasantdale Rd
Suite A
Doraville, GA 30340

Installation Location:

Pre Trial
1195 Jesse Jewell Pkwy
Gainesville, GA 30501

Attention: Katie Crumley
770.297.5504 (phone)
Kcrumley@hallcounty.org

Pre Trial Building

Item No.	Item Description	Qty	Item Sell	Ext Sell
Line: 1 01-CVAULTG2A	Indiana Furniture Conference Table Power & Data Vault Tag1: CONFERENCE 101	2	$660.82	$1,321.64
Line: 2 01-1220RBD	Indiana Furniture Rectangular Box Base with Door Tag1: CONFERENCE 101 Item Finishes & Options: : Studio Teak (TK)	3	$223.72	$671.16
Line: 3 94-48168RT	Indiana Furniture Rectangular Top Tag1: CONFERENCE 101 Item Finishes & Options: : Studio Teak (TK) : Square (Y)	1	$1,517.16	$1,517.16
Line: 4 94-2472BF	Indiana Furniture Buffet 4dr, 2drw Tag1: CONFERENCE 101 Item Finishes & Options: : Studio Teak (TK) : Square (Y) : Studio Teak (TK) : Studio Teak (TK) : Aluminum Beam Pull (ABM)	1	$2,001.73	$2,001.73

Item No.	Item Description	Qty	Item Sell	Ext Sell
Line: 5 410-1818ET	Indiana Furniture 18x18x20h Square End Table Tag1: LOBBY 118 Item Finishes & Options: : Laminate Top (T) : Studio Teak (TK) : Aluminum Powder Coat (A)	1	$406.08	$406.08
Line: 6 410-2248MT	Indiana Furniture 22x48x15h Rectangular Cocktail Table Tag1: LOBBY 118 Item Finishes & Options: : Laminate Top (T) : Studio Teak (TK) : Aluminum Powder Coat (A)	1	$496.79	$496.79
Line: 7 377	Indiana Furniture Bliss Guest Chair w/ Task Arm Tag1: LOBBY 118 Item Finishes & Options: : One Upholstery ((ONE)) : Grade 6 ((GRD6)) : Enter Approved Fabric Selection (OTHER) : ARC COM APOLLO- ICE BLUE #6 (TOR) : No Power Port (NONE) : No Writing Tablet (~) : Wood Arm Cap (WCAP) : Studio Teak (TK) : Chrome Leg (CLEG)	4	$1,400.13	$5,600.52
Line: 8 3773	Indiana Furniture Bliss Sofa w/ Task Arm Tag1: LOBBY 118 Item Finishes & Options: : One Upholstery ((ONE)) : Grade 6 ((GRD6)) : Enter Approved Fabric Selection (OTHER)	1	$2,176.57	$2,176.57

Item No.	Item Description	Qty	Item Sell	Ext Sell
	: ARC COM APOLLO- ICE BLUE #6 (TOR) : No Power Port (NONE) : No Writing Tablet (~) : Wood Arm Cap (WCAP) : Studio Teak (TK) : Chrome Leg (CLEG)			
Line: 9 66-2448UFSTS	Indiana Furniture 24"Dx48"W Height Adjustable Bridge Unit Tag1: OFFICE 104 Item Finishes & Options: : HIGH PRESSURE LAMINATE (P) : STUDIO TEAK (TK) : SQUARE (Y) : STUDIO TEAK (TK) : STANDARD SWITCH, DPG1K (SWCH) : NO GROMMET/PORT SPECIFIED (NO WM) : NO GROMMET IN BACK PANEL (NO) : BLACK GROMMET (GMBBL)	1	$1,640.77	$1,640.77
Line: 10 68-3072RP	Indiana Furniture Right Ped Desk, 30D x 72W Tag1: OFFICE 104 Item Finishes & Options: : High Pressure Laminate (P) : Studio Teak (TK) : Square (Y) : Studio Teak (TK) : Studio Teak (TK) : Vertical Grain Direction Drawer Fronts (VERTICAL) : Wood Dovetail Drawer Box Construction (WOOD) : Standard Drawer Tracks (STD) : Aluminum Beam (ABM) : No Selection Grommet Options (~)	1	$985.59	$985.59
Line: 11 68-2472LC2	Indiana Furniture Single Left Ped Credenza, 24D x 72W Tag1: OFFICE 104 Item Finishes & Options: : High Pressure Laminate (P) : Studio Teak (TK) : Square (Y)	1	$815.45	$815.45

Item No.	Item Description	Qty	Item Sell	Ext Sell
	: Studio Teak (TK) : Studio Teak (TK) : Vertical Grain Direction Drawer Fronts (VERTICAL) : Wood Dovetail Drawer Box Construction (WOOD) : Standard Drawer Tracks (STD) : Aluminum Beam (ABM) : No Worksurface Grommet Selection (~) : Standard Grommet in Back Panel/Modesty (MOD-GRMT) : Black Grommet (BLK)			
Line: 12 66-2448UFSTS	Indiana Furniture 24"Dx48"W Height Adjustable Bridge Unit Tag1: OFFICE 105 Item Finishes & Options: : High Pressure Laminate (P) : Studio Teak (TK) : Square (Y) : Studio Teak (TK) : Standard Switch, DPG1K (SWCH) : No Grommet/Port Specified (NO WM) : No Grommet in Back Panel (NO) : Black Grommet (GMBBL)	1	$1,640.77	$1,640.77
Line: 13 68-3072RP	Indiana Furniture Right Ped Desk, 30D x 72W Tag1: OFFICE 105 Item Finishes & Options: : High Pressure Laminate (P) : Studio Teak (TK) : Square (Y) : Studio Teak (TK) : Studio Teak (TK) : Vertical Grain Direction Drawer Fronts (VERTICAL) : Wood Dovetail Drawer Box Construction (WOOD) : Standard Drawer Tracks (STD) : Aluminum Beam (ABM) : No Selection Grommet Options (~)	1	$985.59	$985.59
Line: 14 68-2472LC2	Indiana Furniture Single Left Ped Credenza, 24D x 72W Tag1: OFFICE 105 Item Finishes & Options:	1	$815.45	$815.45

Item No.	Item Description	Qty	Item Sell	Ext Sell
	: High Pressure Laminate (P) : Studio Teak (TK) : Square (Y) : Studio Teak (TK) : Studio Teak (TK) : Vertical Grain Direction Drawer Fronts (VERTICAL) : Wood Dovetail Drawer Box Construction (WOOD) : Standard Drawer Tracks (STD) : Aluminum Beam (ABM) : No Worksurface Grommet Selection (~) : Standard Grommet in Back Panel/Modesty (MOD-GRMT) : Black Grommet (BLK)			
Line: 15 66-2448UFSTS	Indiana Furniture 24"Dx48"W Height Adjustable Bridge Unit Tag1: OFFICE 106 Item Finishes & Options: : High Pressure Laminate (P) : Studio Teak (TK) : Square (Y) : Studio Teak (TK) : Standard Switch, DPG1K (SWCH) : No Grommet/Port Specified (NO WM) : No Grommet in Back Panel (NO) : Black Grommet (GMBBL)	1	$1,640.77	$1,640.77
Line: 16 68-3072LP	Indiana Furniture Left Ped Desk, 30D x 72W Tag1: OFFICE 106 Item Finishes & Options: : High Pressure Laminate (P) : Studio Teak (TK) : Square (Y) : Studio Teak (TK) : Studio Teak (TK) : Vertical Grain Direction Drawer Fronts (VERTICAL) : Wood Dovetail Drawer Box Construction (WOOD) : Standard Drawer Tracks (STD) : Aluminum Beam (ABM) : No Selection Grommet Options (~)	1	$985.59	$985.59
Line: 17 68-2472RC2	Indiana Furniture Single Right Ped Credenza, 24D x 72W	1	$815.45	$815.45

Item No.	Item Description	Qty	Item Sell	Ext Sell
	Tag1: OFFICE 106 Item Finishes & Options: : High Pressure Laminate (P) : Studio Teak (TK) : Square (Y) : Studio Teak (TK) : Studio Teak (TK) : Vertical Grain Direction Drawer Fronts (VERTICAL) : Wood Dovetail Drawer Box Construction (WOOD) : Standard Drawer Tracks (STD) : Aluminum Beam (ABM) : No Worksurface Grommet Selection (~) : Standard Grommet in Back Panel/Modesty (MOD-GRMT) : Black Grommet (BLK)			
Line: 18 66-2442UFSTS	Indiana Furniture 24"Dx42"W Height Adjustable Bridge Unit Tag1: OFFICE 111 Item Finishes & Options: : High Pressure Laminate (P) : Studio Teak (TK) : Square (Y) : Studio Teak (TK) : Standard Switch, DPG1K (SWCH) : No Grommet/Port Specified (NO WM) : No Grommet in Back Panel (NO) : Black Grommet (GMBBL)	1	$1,625.26	$1,625.26
Line: 19 68-3072LP	Indiana Furniture Left Ped Desk, 30D x 72W Tag1: OFFICE 111 Item Finishes & Options: : High Pressure Laminate (P) : Studio Teak (TK) : Square (Y) : Studio Teak (TK) : Studio Teak (TK) : Vertical Grain Direction Drawer Fronts (VERTICAL) : Wood Dovetail Drawer Box Construction (WOOD) : Standard Drawer Tracks (STD) : Aluminum Beam (ABM) : No Selection Grommet Options (~)	1	$985.59	$985.59
Line: 20	Indiana Furniture	1	$815.45	$815.45

Item No.	Item Description	Qty	Item Sell	Ext Sell
68-2472RC2	Single Right Ped Credenza, 24D x 72W Tag1: OFFICE 111 Item Finishes & Options: : High Pressure Laminate (P) : Studio Teak (TK) : Square (Y) : Studio Teak (TK) : Studio Teak (TK) : Vertical Grain Direction Drawer Fronts (VERTICAL) : Wood Dovetail Drawer Box Construction (WOOD) : Standard Drawer Tracks (STD) : Aluminum Beam (ABM) : No Worksurface Grommet Selection (~) : Standard Grommet in Back Panel/Modesty (MOD-GRMT) : Black Grommet (BLK)			
Line: 21 66-2448UFSTS	Indiana Furniture 24"Dx48"W Height Adjustable Bridge Unit Tag1: OFFICE 112 Item Finishes & Options: : High Pressure Laminate (P) : Studio Teak (TK) : Square (Y) : Studio Teak (TK) : Standard Switch, DPG1K (SWCH) : No Grommet/Port Specified (NO WM) : No Grommet in Back Panel (NO) : Black Grommet (GMBBL)	1	$1,640.77	$1,640.77
Line: 22 68-3072RP	Indiana Furniture Right Ped Desk, 30D x 72W Tag1: OFFICE 112 Item Finishes & Options: : High Pressure Laminate (P) : Studio Teak (TK) : Square (Y) : Studio Teak (TK) : Studio Teak (TK) : Vertical Grain Direction Drawer Fronts (VERTICAL) : Wood Dovetail Drawer Box Construction (WOOD) : Standard Drawer Tracks (STD) : Aluminum Beam (ABM) : No Selection Grommet Options (~)	1	$985.59	$985.59

Item No.	Item Description	Qty	Item Sell	Ext Sell
Line: 23 68-2472LC2	Indiana Furniture Single Left Ped Credenza, 24D x 72W Tag1: OFFICE 112 Item Finishes & Options: : High Pressure Laminate (P) : Studio Teak (TK) : Square (Y) : Studio Teak (TK) : Studio Teak (TK) : Vertical Grain Direction Drawer Fronts (VERTICAL) : Wood Dovetail Drawer Box Construction (WOOD) : Standard Drawer Tracks (STD) : Aluminum Beam (ABM) : No Worksurface Grommet Selection (~) : Standard Grommet in Back Panel/Modesty (MOD-GRMT) : Black Grommet (BLK)	1	$815.45	$815.45
Line: 24 66-2448UFSTS	Indiana Furniture 24"Dx48"W Height Adjustable Bridge Unit Tag1: OFFICE 113 Item Finishes & Options: : High Pressure Laminate (P) : Studio Teak (TK) : Square (Y) : Studio Teak (TK) : Standard Switch, DPG1K (SWCH) : No Grommet/Port Specified (NO WM) : No Grommet in Back Panel (NO) : Black Grommet (GMBBL)	1	$1,640.77	$1,640.77
Line: 25 68-3072LP	Indiana Furniture Left Ped Desk, 30D x 72W Tag1: OFFICE 113 Item Finishes & Options: : High Pressure Laminate (P) : Studio Teak (TK) : Square (Y) : Studio Teak (TK) : Studio Teak (TK) : Vertical Grain Direction Drawer Fronts (VERTICAL) : Wood Dovetail Drawer Box Construction (WOOD)	1	$985.59	$985.59

Item No.	Item Description	Qty	Item Sell	Ext Sell
	: Standard Drawer Tracks (STD) : Aluminum Beam (ABM) : No Selection Grommet Options (~)			
Line: 26 68-2472RC2	Indiana Furniture Single Right Ped Credenza, 24D x 72W Tag1: OFFICE 113 Item Finishes & Options: : High Pressure Laminate (P) : Studio Teak (TK) : Square (Y) : Studio Teak (TK) : Studio Teak (TK) : Vertical Grain Direction Drawer Fronts (VERTICAL) : Wood Dovetail Drawer Box Construction (WOOD) : Standard Drawer Tracks (STD) : Aluminum Beam (ABM) : No Worksurface Grommet Selection (~) : Standard Grommet in Back Panel/Modesty (MOD-GRMT) : Black Grommet (BLK)	1	$815.45	$815.45
Line: 27 66-2448UFSTS	Indiana Furniture 24"Dx48"W Height Adjustable Bridge Unit Tag1: OFFICE 114 Item Finishes & Options: : High Pressure Laminate (P) : Studio Teak (TK) : Square (Y) : Studio Teak (TK) : Standard Switch, DPG1K (SWCH) : No Grommet/Port Specified (NO WM) : No Grommet in Back Panel (NO) : Black Grommet (GMBBL)	1	$1,640.77	$1,640.77
Line: 28 68-3072LP	Indiana Furniture Left Ped Desk, 30D x 72W Tag1: OFFICE 114 Item Finishes & Options: : High Pressure Laminate (P) : Studio Teak (TK) : Square (Y) : Studio Teak (TK)	1	$985.59	$985.59

Item No.	Item Description	Qty	Item Sell	Ext Sell
	: Studio Teak (TK) : Vertical Grain Direction Drawer Fronts (VERTICAL) : Wood Dovetail Drawer Box Construction (WOOD) : Standard Drawer Tracks (STD) : Aluminum Beam (ABM) : No Selection Grommet Options (~)			
Line: 29 68-2472RC2	Indiana Furniture Single Right Ped Credenza, 24D x 72W Tag1: OFFICE 114 Item Finishes & Options: : High Pressure Laminate (P) : Studio Teak (TK) : Square (Y) : Studio Teak (TK) : Studio Teak (TK) : Vertical Grain Direction Drawer Fronts (VERTICAL) : Wood Dovetail Drawer Box Construction (WOOD) : Standard Drawer Tracks (STD) : Aluminum Beam (ABM) : No Worksurface Grommet Selection (~) : Standard Grommet in Back Panel/Modesty (MOD-GRMT) : Black Grommet (BLK)	1	$815.45	$815.45
Line: 30 66-2448UFSTS	Indiana Furniture 24"Dx48"W Height Adjustable Bridge Unit Tag1: OFFICE 115 Item Finishes & Options: : High Pressure Laminate (P) : Studio Teak (TK) : Square (Y) : Studio Teak (TK) : Standard Switch, DPG1K (SWCH) : No Grommet/Port Specified (NO WM) : No Grommet in Back Panel (NO) : Black Grommet (GMBBL)	1	$1,640.77	$1,640.77
Line: 31 68-3072LP	Indiana Furniture Left Ped Desk, 30D x 72W Tag1: OFFICE 115 Item Finishes & Options: : High Pressure Laminate (P)	1	$985.59	$985.59

Item No.	Item Description	Qty	Item Sell	Ext Sell
	: Studio Teak (TK) : Square (Y) : Studio Teak (TK) : Studio Teak (TK) : Vertical Grain Direction Drawer Fronts (VERTICAL) : Wood Dovetail Drawer Box Construction (WOOD) : Standard Drawer Tracks (STD) : Aluminum Beam (ABM) : No Selection Grommet Options (~)			
Line: 32 68-2472RC2	Indiana Furniture Single Right Ped Credenza, 24D x 72W Tag1: OFFICE 115 Item Finishes & Options: : High Pressure Laminate (P) : Studio Teak (TK) : Square (Y) : Studio Teak (TK) : Studio Teak (TK) : Vertical Grain Direction Drawer Fronts (VERTICAL) : Wood Dovetail Drawer Box Construction (WOOD) : Standard Drawer Tracks (STD) : Aluminum Beam (ABM) : No Worksurface Grommet Selection (~) : Standard Grommet in Back Panel/Modesty (MOD-GRMT) : Black Grommet (BLK)	1	$815.45	$815.45
Line: 33 BU7511D	JSI Bourne Bourne Guest Chair - Single Textile Tag1: (2) PER OFFICE Item Finishes & Options: Fabric Grade Selection : Grade F (F) Grade F Fabric Manufacturer Selection : ArcCom Fabric (ArcCom) Arc Com Grade F Fabrics : Apollo (Apollo) User specified entry : 6 (63355 Ice Blue #) Wood Species : Maple Wood Species (Standard) (M) Maple Wood Finish Selection : Studio Teak Coordinate (CST) Glides : Metal Leveling Glides (Standard) (MTG)	16	$864.00	$13,824.00
Line: 34 OTG11734B	Offices to Go Luxhide Uph. w/ Mock Leather Trim,Mid Back, Single Position Tilt Lock w/ Tilt Tension Adj.,Fixed Height Arms (Polished Alum),Pneu Seat Height Adj.,Chrome Plated Steel Base,Dual	12	$387.04	$4,644.48

Item No.	Item Description	Qty	Item Sell	Ext Sell
	Wheel Carpet Tag1: CONF CHAIRS Item Finishes & Options: ^Luxhide + Fabric Seating Textiles : Stocked Luxhide Textile (PU30/BL20 - Black) (~STO) Stocked Black Luxhide Textile : 1-Black (PU30/BL20) (PU30/BL20)			
Line: 35 1073.BK2.MB.Y/E3.AR6	Sit On It Seating Vectra Highback Mesh with Adjustable Lumbar Support, Enhanced Synchro w/ Seat Depth, Height/Width Adjustable Tag1: (1) PER OFFICE Tag2: 2 for receptions Item Finishes & Options: Accent Color Selection : Fog (LA4) Cylinder Height Option : Standard Cylinder (CH1) Frame Colors : Fog Frame (FC13) Base Selection : Fog Nylon Base (B21) Caster Selecton : Carpet Casters (CS5) Vectra Mesh Back Colors : Nickel Mesh (MC6) Fabric or Leather Upholstery Selection : Fabric Grade Selections (FABRIC) Fabric Grade Selections : Fabric Grade 3 (FG3) Fabric Grade 3 Selection : Affinity Standard Color Selection (AFFINITY) Affinity Color Selections : Affinity Stone (STONE) Packaging Options : Knocked Down (KD)	10	$439.04	$4,390.40
Line: 36 PSLAT436W	Trendway Pack Files & Storage PACK LAT FILE 4-HIGH W/TOP & CNTR BALANCE WGHT, 36W Tag1: (1) PER OFFICE Item Finishes & Options: PULL STYLE : BEVEL PULL (.B) TRIM COLOR GROUP : TEXTURED TRIM COLORS (.T2) TEXTURED TRIM COLOR : TEXTURED SAND (.TY) LOCK OPTION - SILVER LOCK : RANDOM (.R)	8	$913.60	$7,308.80

Misc Items..... .....$71,878.30

Subtotal	$71,878.30
Total Amount	$71,878.30

Please issue purchase order #1, in the amount of $41,710.62 to:
Indiana Furniture
C/O Impact Office Interiors, Inc.
1224 Mill Street
P.O. Box 270
Jasper, IN 47547-0270
800-422-5727 (phone)
812-482-9035 (fax)

Please issue purchase order #2, in the amount of $13,824.00 to:
JSI
C/O Impact Office Interiors, Inc.
225 S. Clay Street
Jasper, IN 47546
800-457-4511 (phone)
812-482-1548 (fax)

Please issue purchase order #3, in the amount of $4,644.48 to:
Global Furniture Group
C/O Impact Office Interiors, Inc.
P.O. Box 970
Marlton, NJ 08053
678-602-4130 (phone)
678-602-4136 (fax)

Please issue purchase order #4, in the amount of $4,390.40 to:
Sit On It
C/O Impact Office Interiors, Inc.
25090 Network Place
Chicago, IL 60673-1250

Please issue purchase order #5, in the amount of $7,308.80 to:
Trendway
C/O Impact Office Interiors, Inc.
P.O. Box 776195
Chicago, IL 60677-6195
800-748-0234 (phone)

I agree to purchase all items listed on these pages. I certify that all finishes, fabrics and/or materials specified are correct and the prices listed are agreed upon.

I understand that orders may not be canceled or changed after 3 business days. All furniture items are considered "special order" and are non-returnable and non-refundable.

Credit Card Payments are subject to a 3% surcharge.

A deposit of 50.00% ($35,939.15) is required to place an order for this proposal.

Accepted by: _____ Date: _____

Impact office interiors
WE FIT
...Your Budget
...Your Office
...Your Image
...Your Schedule

Customer: Hall County
Sales Rep: Benjamin Frank
bfrank@impactofficeinteriors.com

Proposal

2022-1907
12/19/2022

Propose To:

Hall County
2875 Browns Bridge Rd
Gainesville, GA 30504

Shipping Location:

Southern Office Installation
4301 Pleasantdale Rd
Suite A
Doraville, GA 30340

Installation Location:

Pre Trial
1195 Jesse Jewell Pkwy
Gainesville, GA 30501

Attention: Katie Crumley
770.297.5504 (phone)
Kcrumley@hallcounty.org

Pre Trial Building

Item No.	Item Description	Qty	Item Sell	Ext Sell
Line: 1 01-CVAULTG2A	Indiana Furniture Conference Table Power & Data Vault Tag1: CONFERENCE 101	2	$660.82	$1,321.64
Line: 2 01-1220RBD	Indiana Furniture Rectangular Box Base with Door Tag1: CONFERENCE 101 Item Finishes & Options: : Studio Teak (TK)	3	$223.72	$671.16
Line: 3 94-48168RT	Indiana Furniture Rectangular Top Tag1: CONFERENCE 101 Item Finishes & Options: : Studio Teak (TK) : Square (Y)	1	$1,517.16	$1,517.16
Line: 4 94-2472BF	Indiana Furniture Buffet 4dr, 2drw Tag1: CONFERENCE 101 Item Finishes & Options: : Studio Teak (TK) : Square (Y) : Studio Teak (TK) : Studio Teak (TK) : Aluminum Beam Pull (ABM)	1	$2,001.73	$2,001.73

Item No.	Item Description	Qty	Item Sell	Ext Sell
Line: 5 410-1818ET	Indiana Furniture 18x18x20h Square End Table Tag1: LOBBY 118 Item Finishes & Options: : Laminate Top (T) : Studio Teak (TK) : Aluminum Powder Coat (A)	1	$406.08	$406.08
Line: 6 410-2248MT	Indiana Furniture 22x48x15h Rectangular Cocktail Table Tag1: LOBBY 118 Item Finishes & Options: : Laminate Top (T) : Studio Teak (TK) : Aluminum Powder Coat (A)	1	$496.79	$496.79
Line: 7 377	Indiana Furniture Bliss Guest Chair w/ Task Arm Tag1: LOBBY 118 Item Finishes & Options: : One Upholstery ((ONE)) : Grade 6 ((GRD6)) : Enter Approved Fabric Selection (OTHER) : ARC COM APOLLO- ICE BLUE #6 (TOR) : No Power Port (NONE) : No Writing Tablet (~) : Wood Arm Cap (WCAP) : Studio Teak (TK) : Chrome Leg (CLEG)	4	$1,400.13	$5,600.52
Line: 8 3773	Indiana Furniture Bliss Sofa w/ Task Arm Tag1: LOBBY 118 Item Finishes & Options: : One Upholstery ((ONE)) : Grade 6 ((GRD6)) : Enter Approved Fabric Selection (OTHER)	1	$2,176.57	$2,176.57

Item No.	Item Description	Qty	Item Sell	Ext Sell
	: ARC COM APOLLO- ICE BLUE #6 (TOR) : No Power Port (NONE) : No Writing Tablet (~) : Wood Arm Cap (WCAP) : Studio Teak (TK) : Chrome Leg (CLEG)			
Line: 9 66-2448UFSTS	Indiana Furniture 24"Dx48"W Height Adjustable Bridge Unit Tag1: OFFICE 104 Item Finishes & Options: : HIGH PRESSURE LAMINATE (P) : STUDIO TEAK (TK) : SQUARE (Y) : STUDIO TEAK (TK) : STANDARD SWITCH, DPG1K (SWCH) : NO GROMMET/PORT SPECIFIED (NO WM) : NO GROMMET IN BACK PANEL (NO) : BLACK GROMMET (GMBBL)	1	$1,640.77	$1,640.77
Line: 10 68-3072RP	Indiana Furniture Right Ped Desk, 30D x 72W Tag1: OFFICE 104 Item Finishes & Options: : High Pressure Laminate (P) : Studio Teak (TK) : Square (Y) : Studio Teak (TK) : Studio Teak (TK) : Vertical Grain Direction Drawer Fronts (VERTICAL) : Wood Dovetail Drawer Box Construction (WOOD) : Standard Drawer Tracks (STD) : Aluminum Beam (ABM) : No Selection Grommet Options (~)	1	$985.59	$985.59
Line: 11 68-2472LC2	Indiana Furniture Single Left Ped Credenza, 24D x 72W Tag1: OFFICE 104 Item Finishes & Options: : High Pressure Laminate (P) : Studio Teak (TK) : Square (Y)	1	$815.45	$815.45

Item No.	Item Description	Qty	Item Sell	Ext Sell
	: Studio Teak (TK) : Studio Teak (TK) : Vertical Grain Direction Drawer Fronts (VERTICAL) : Wood Dovetail Drawer Box Construction (WOOD) : Standard Drawer Tracks (STD) : Aluminum Beam (ABM) : No Worksurface Grommet Selection (~) : Standard Grommet in Back Panel/Modesty (MOD-GRMT) : Black Grommet (BLK)			
Line: 12 66-2448UFSTS	Indiana Furniture 24"Dx48"W Height Adjustable Bridge Unit Tag1: OFFICE 105 Item Finishes & Options: : High Pressure Laminate (P) : Studio Teak (TK) : Square (Y) : Studio Teak (TK) : Standard Switch, DPG1K (SWCH) : No Grommet/Port Specified (NO WM) : No Grommet in Back Panel (NO) : Black Grommet (GMBBL)	1	$1,640.77	$1,640.77
Line: 13 68-3072RP	Indiana Furniture Right Ped Desk, 30D x 72W Tag1: OFFICE 105 Item Finishes & Options: : High Pressure Laminate (P) : Studio Teak (TK) : Square (Y) : Studio Teak (TK) : Studio Teak (TK) : Vertical Grain Direction Drawer Fronts (VERTICAL) : Wood Dovetail Drawer Box Construction (WOOD) : Standard Drawer Tracks (STD) : Aluminum Beam (ABM) : No Selection Grommet Options (~)	1	$985.59	$985.59
Line: 14 68-2472LC2	Indiana Furniture Single Left Ped Credenza, 24D x 72W Tag1: OFFICE 105 Item Finishes & Options:	1	$815.45	$815.45

Item No.	Item Description	Qty	Item Sell	Ext Sell
	: High Pressure Laminate (P) : Studio Teak (TK) : Square (Y) : Studio Teak (TK) : Studio Teak (TK) : Vertical Grain Direction Drawer Fronts (VERTICAL) : Wood Dovetail Drawer Box Construction (WOOD) : Standard Drawer Tracks (STD) : Aluminum Beam (ABM) : No Worksurface Grommet Selection (~) : Standard Grommet in Back Panel/Modesty (MOD-GRMT) : Black Grommet (BLK)			
Line: 15 66-2448UFSTS	Indiana Furniture 24"Dx48"W Height Adjustable Bridge Unit Tag1: OFFICE 106 Item Finishes & Options: : High Pressure Laminate (P) : Studio Teak (TK) : Square (Y) : Studio Teak (TK) : Standard Switch, DPG1K (SWCH) : No Grommet/Port Specified (NO WM) : No Grommet in Back Panel (NO) : Black Grommet (GMBBL)	1	$1,640.77	$1,640.77
Line: 16 68-3072LP	Indiana Furniture Left Ped Desk, 30D x 72W Tag1: OFFICE 106 Item Finishes & Options: : High Pressure Laminate (P) : Studio Teak (TK) : Square (Y) : Studio Teak (TK) : Studio Teak (TK) : Vertical Grain Direction Drawer Fronts (VERTICAL) : Wood Dovetail Drawer Box Construction (WOOD) : Standard Drawer Tracks (STD) : Aluminum Beam (ABM) : No Selection Grommet Options (~)	1	$985.59	$985.59
Line: 17 68-2472RC2	Indiana Furniture Single Right Ped Credenza, 24D x 72W	1	$815.45	$815.45

Item No.	Item Description	Qty	Item Sell	Ext Sell
	Tag1: OFFICE 106 Item Finishes & Options: : High Pressure Laminate (P) : Studio Teak (TK) : Square (Y) : Studio Teak (TK) : Studio Teak (TK) : Vertical Grain Direction Drawer Fronts (VERTICAL) : Wood Dovetail Drawer Box Construction (WOOD) : Standard Drawer Tracks (STD) : Aluminum Beam (ABM) : No Worksurface Grommet Selection (~) : Standard Grommet in Back Panel/Modesty (MOD-GRMT) : Black Grommet (BLK)			
Line: 18 66-2442UFSTS	Indiana Furniture 24"Dx42"W Height Adjustable Bridge Unit Tag1: OFFICE 111 Item Finishes & Options: : High Pressure Laminate (P) : Studio Teak (TK) : Square (Y) : Studio Teak (TK) : Standard Switch, DPG1K (SWCH) : No Grommet/Port Specified (NO WM) : No Grommet in Back Panel (NO) : Black Grommet (GMBBL)	1	$1,625.26	$1,625.26
Line: 19 68-3072LP	Indiana Furniture Left Ped Desk, 30D x 72W Tag1: OFFICE 111 Item Finishes & Options: : High Pressure Laminate (P) : Studio Teak (TK) : Square (Y) : Studio Teak (TK) : Studio Teak (TK) : Vertical Grain Direction Drawer Fronts (VERTICAL) : Wood Dovetail Drawer Box Construction (WOOD) : Standard Drawer Tracks (STD) : Aluminum Beam (ABM) : No Selection Grommet Options (~)	1	$985.59	$985.59
Line: 20	Indiana Furniture	1	$815.45	$815.45

Item No.	Item Description	Qty	Item Sell	Ext Sell
68-2472RC2	Single Right Ped Credenza, 24D x 72W Tag1: OFFICE 111 Item Finishes & Options: : High Pressure Laminate (P) : Studio Teak (TK) : Square (Y) : Studio Teak (TK) : Studio Teak (TK) : Vertical Grain Direction Drawer Fronts (VERTICAL) : Wood Dovetail Drawer Box Construction (WOOD) : Standard Drawer Tracks (STD) : Aluminum Beam (ABM) : No Worksurface Grommet Selection (~) : Standard Grommet in Back Panel/Modesty (MOD-GRMT) : Black Grommet (BLK)			
Line: 21 66-2448UFSTS	Indiana Furniture 24"Dx48"W Height Adjustable Bridge Unit Tag1: OFFICE 112 Item Finishes & Options: : High Pressure Laminate (P) : Studio Teak (TK) : Square (Y) : Studio Teak (TK) : Standard Switch, DPG1K (SWCH) : No Grommet/Port Specified (NO WM) : No Grommet in Back Panel (NO) : Black Grommet (GMBBL)	1	$1,640.77	$1,640.77
Line: 22 68-3072RP	Indiana Furniture Right Ped Desk, 30D x 72W Tag1: OFFICE 112 Item Finishes & Options: : High Pressure Laminate (P) : Studio Teak (TK) : Square (Y) : Studio Teak (TK) : Studio Teak (TK) : Vertical Grain Direction Drawer Fronts (VERTICAL) : Wood Dovetail Drawer Box Construction (WOOD) : Standard Drawer Tracks (STD) : Aluminum Beam (ABM) : No Selection Grommet Options (~)	1	$985.59	$985.59

Item No.	Item Description	Qty	Item Sell	Ext Sell
Line: 23 68-2472LC2	Indiana Furniture Single Left Ped Credenza, 24D x 72W Tag1: OFFICE 112 Item Finishes & Options: : High Pressure Laminate (P) : Studio Teak (TK) : Square (Y) : Studio Teak (TK) : Studio Teak (TK) : Vertical Grain Direction Drawer Fronts (VERTICAL) : Wood Dovetail Drawer Box Construction (WOOD) : Standard Drawer Tracks (STD) : Aluminum Beam (ABM) : No Worksurface Grommet Selection (~) : Standard Grommet in Back Panel/Modesty (MOD-GRMT) : Black Grommet (BLK)	1	$815.45	$815.45
Line: 24 66-2448UFSTS	Indiana Furniture 24"Dx48"W Height Adjustable Bridge Unit Tag1: OFFICE 113 Item Finishes & Options: : High Pressure Laminate (P) : Studio Teak (TK) : Square (Y) : Studio Teak (TK) : Standard Switch, DPG1K (SWCH) : No Grommet/Port Specified (NO WM) : No Grommet in Back Panel (NO) : Black Grommet (GMBBL)	1	$1,640.77	$1,640.77
Line: 25 68-3072LP	Indiana Furniture Left Ped Desk, 30D x 72W Tag1: OFFICE 113 Item Finishes & Options: : High Pressure Laminate (P) : Studio Teak (TK) : Square (Y) : Studio Teak (TK) : Studio Teak (TK) : Vertical Grain Direction Drawer Fronts (VERTICAL) : Wood Dovetail Drawer Box Construction (WOOD)	1	$985.59	$985.59

Item No.	Item Description	Qty	Item Sell	Ext Sell
	: Standard Drawer Tracks (STD) : Aluminum Beam (ABM) : No Selection Grommet Options (~)			
Line: 26 68-2472RC2	Indiana Furniture Single Right Ped Credenza, 24D x 72W Tag1: OFFICE 113 Item Finishes & Options: : High Pressure Laminate (P) : Studio Teak (TK) : Square (Y) : Studio Teak (TK) : Studio Teak (TK) : Vertical Grain Direction Drawer Fronts (VERTICAL) : Wood Dovetail Drawer Box Construction (WOOD) : Standard Drawer Tracks (STD) : Aluminum Beam (ABM) : No Worksurface Grommet Selection (~) : Standard Grommet in Back Panel/Modesty (MOD-GRMT) : Black Grommet (BLK)	1	$815.45	$815.45
Line: 27 66-2448UFSTS	Indiana Furniture 24"Dx48"W Height Adjustable Bridge Unit Tag1: OFFICE 114 Item Finishes & Options: : High Pressure Laminate (P) : Studio Teak (TK) : Square (Y) : Studio Teak (TK) : Standard Switch, DPG1K (SWCH) : No Grommet/Port Specified (NO WM) : No Grommet in Back Panel (NO) : Black Grommet (GMBBL)	1	$1,640.77	$1,640.77
Line: 28 68-3072LP	Indiana Furniture Left Ped Desk, 30D x 72W Tag1: OFFICE 114 Item Finishes & Options: : High Pressure Laminate (P) : Studio Teak (TK) : Square (Y) : Studio Teak (TK)	1	$985.59	$985.59

Item No.	Item Description	Qty	Item Sell	Ext Sell
	: Studio Teak (TK) : Vertical Grain Direction Drawer Fronts (VERTICAL) : Wood Dovetail Drawer Box Construction (WOOD) : Standard Drawer Tracks (STD) : Aluminum Beam (ABM) : No Selection Grommet Options (~)			
Line: 29 68-2472RC2	Indiana Furniture Single Right Ped Credenza, 24D x 72W Tag1: OFFICE 114 Item Finishes & Options: : High Pressure Laminate (P) : Studio Teak (TK) : Square (Y) : Studio Teak (TK) : Studio Teak (TK) : Vertical Grain Direction Drawer Fronts (VERTICAL) : Wood Dovetail Drawer Box Construction (WOOD) : Standard Drawer Tracks (STD) : Aluminum Beam (ABM) : No Worksurface Grommet Selection (~) : Standard Grommet in Back Panel/Modesty (MOD-GRMT) : Black Grommet (BLK)	1	$815.45	$815.45
Line: 30 66-2448UFSTS	Indiana Furniture 24"Dx48"W Height Adjustable Bridge Unit Tag1: OFFICE 115 Item Finishes & Options: : High Pressure Laminate (P) : Studio Teak (TK) : Square (Y) : Studio Teak (TK) : Standard Switch, DPG1K (SWCH) : No Grommet/Port Specified (NO WM) : No Grommet in Back Panel (NO) : Black Grommet (GMBBL)	1	$1,640.77	$1,640.77
Line: 31 68-3072LP	Indiana Furniture Left Ped Desk, 30D x 72W Tag1: OFFICE 115 Item Finishes & Options: : High Pressure Laminate (P)	1	$985.59	$985.59

Item No.	Item Description	Qty	Item Sell	Ext Sell
	: Studio Teak (TK) : Square (Y) : Studio Teak (TK) : Studio Teak (TK) : Vertical Grain Direction Drawer Fronts (VERTICAL) : Wood Dovetail Drawer Box Construction (WOOD) : Standard Drawer Tracks (STD) : Aluminum Beam (ABM) : No Selection Grommet Options (~)			
Line: 32 68-2472RC2	Indiana Furniture Single Right Ped Credenza, 24D x 72W Tag1: OFFICE 115 Item Finishes & Options: : High Pressure Laminate (P) : Studio Teak (TK) : Square (Y) : Studio Teak (TK) : Studio Teak (TK) : Vertical Grain Direction Drawer Fronts (VERTICAL) : Wood Dovetail Drawer Box Construction (WOOD) : Standard Drawer Tracks (STD) : Aluminum Beam (ABM) : No Worksurface Grommet Selection (~) : Standard Grommet in Back Panel/Modesty (MOD-GRMT) : Black Grommet (BLK)	1	$815.45	$815.45
Line: 33 BU7511D	JSI Bourne Bourne Guest Chair - Single Textile Tag1: (2) PER OFFICE Item Finishes & Options: Fabric Grade Selection : Grade F (F) Grade F Fabric Manufacturer Selection : ArcCom Fabric (ArcCom) Arc Com Grade F Fabrics : Apollo (Apollo) User specified entry : 6 (63355 Ice Blue #) Wood Species : Maple Wood Species (Standard) (M) Maple Wood Finish Selection : Studio Teak Coordinate (CST) Glides : Metal Leveling Glides (Standard) (MTG)	16	$864.00	$13,824.00
Line: 34 OTG11734B	Offices to Go Luxhide Uph. w/ Mock Leather Trim,Mid Back, Single Position Tilt Lock w/ Tilt Tension Adj.,Fixed Height Arms (Polished Alum),Pneu Seat Height Adj.,Chrome Plated Steel Base,Dual	12	$387.04	$4,644.48

Item No.	Item Description	Qty	Item Sell	Ext Sell
	Wheel Carpet Tag1: CONF CHAIRS Item Finishes & Options: ^Luxhide + Fabric Seating Textiles : Stocked Luxhide Textile (PU30/BL20 - Black) (~STO) Stocked Black Luxhide Textile : 1-Black (PU30/BL20) (PU30/BL20)			
Line: 35 1073.BK2.MB.Y/E3.AR6	Sit On It Seating Vectra Highback Mesh with Adjustable Lumbar Support, Enhanced Synchro w/ Seat Depth, Height/Width Adjustable Tag1: (1) PER OFFICE Tag2: 2 for receptions Item Finishes & Options: Accent Color Selection : Fog (LA4) Cylinder Height Option : Standard Cylinder (CH1) Frame Colors : Fog Frame (FC13) Base Selection : Fog Nylon Base (B21) Caster Selecton : Carpet Casters (CS5) Vectra Mesh Back Colors : Nickel Mesh (MC6) Fabric or Leather Upholstery Selection : Fabric Grade Selections (FABRIC) Fabric Grade Selections : Fabric Grade 3 (FG3) Fabric Grade 3 Selection : Affinity Standard Color Selection (AFFINITY) Affinity Color Selections : Affinity Stone (STONE) Packaging Options : Knocked Down (KD)	10	$439.04	$4,390.40
Line: 36 PSLAT436W	Trendway Pack Files & Storage PACK LAT FILE 4-HIGH W/TOP & CNTR BALANCE WGHT, 36W Tag1: (1) PER OFFICE Item Finishes & Options: PULL STYLE : BEVEL PULL (.B) TRIM COLOR GROUP : TEXTURED TRIM COLORS (.T2) TEXTURED TRIM COLOR : TEXTURED SAND (.TY) LOCK OPTION - SILVER LOCK : RANDOM (.R)	8	$913.60	$7,308.80

Misc Items..... .....$71,878.30

Subtotal	$71,878.30
Total Amount	$71,878.30

Please issue purchase order #1, in the amount of $41,710.62 to:
Indiana Furniture
C/O Impact Office Interiors, Inc.
1224 Mill Street
P.O. Box 270
Jasper, IN 47547-0270
800-422-5727 (phone)
812-482-9035 (fax)

Please issue purchase order #2, in the amount of $13,824.00 to:
JSI
C/O Impact Office Interiors, Inc.
225 S. Clay Street
Jasper, IN 47546
800-457-4511 (phone)
812-482-1548 (fax)

Please issue purchase order #3, in the amount of $4,644.48 to:
Global Furniture Group
C/O Impact Office Interiors, Inc.
P.O. Box 970
Marlton, NJ 08053
678-602-4130 (phone)
678-602-4136 (fax)

Please issue purchase order #4, in the amount of $4,390.40 to:
Sit On It
C/O Impact Office Interiors, Inc.
25090 Network Place
Chicago, IL 60673-1250

Please issue purchase order #5, in the amount of $7,308.80 to:
Trendway
C/O Impact Office Interiors, Inc.
P.O. Box 776195
Chicago, IL 60677-6195
800-748-0234 (phone)

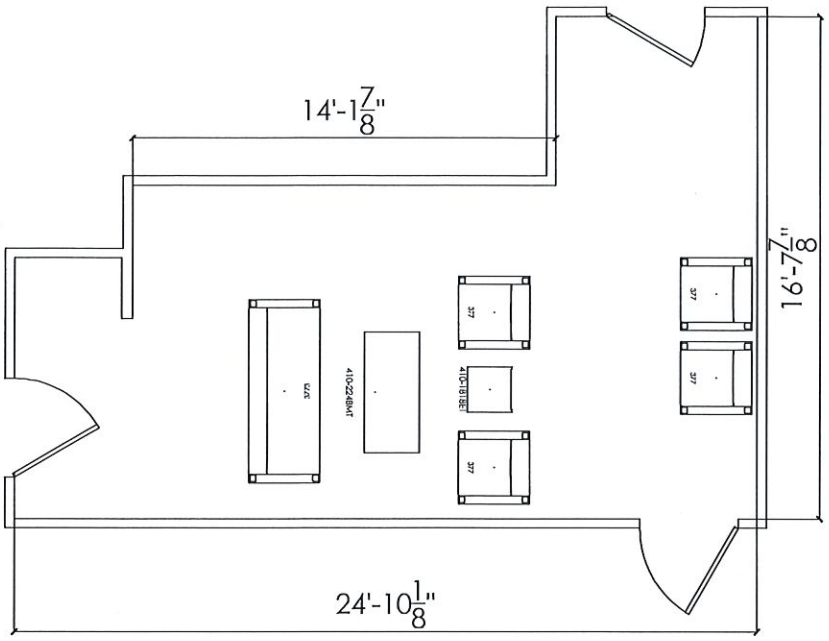
I agree to purchase all items listed on these pages. I certify that all finishes, fabrics and/or materials specified are correct and the prices listed are agreed upon.

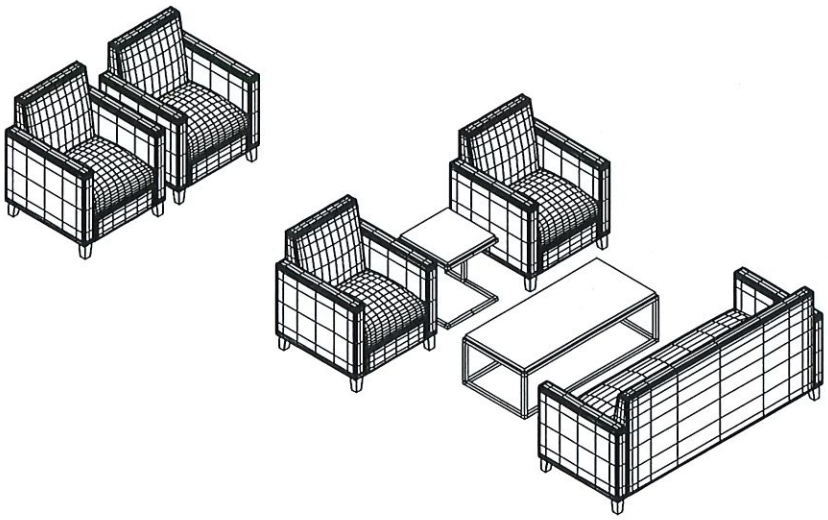
I understand that orders may not be canceled or changed after 3 business days. All furniture items are considered "special order" and are non-returnable and non-refundable.

Credit Card Payments are subject to a 3% surcharge.

A deposit of 50.00% ($35,939.15) is required to place an order for this proposal.

Accepted by: _____ Date: _____





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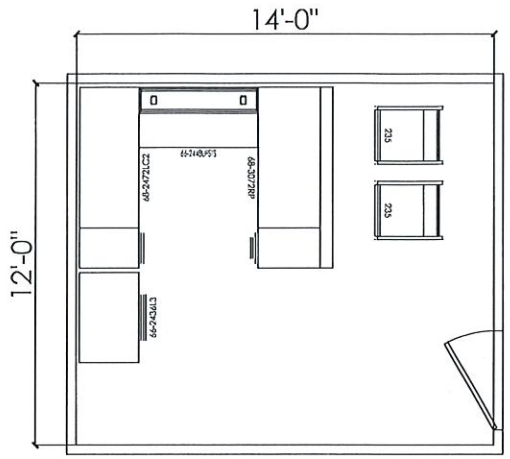
SCALE:	1/4"=1'-0"
DATE:	12/12/2022
DRAWN BY:	A.DUNN
OED REP:	M.GALUNKE
PROJECT #:	SP-430-MG22D
SHEET NO.	2 OF 4

Project
IMPACT OFFICE INTERIORS
HALL COUNTY PRE TRIAL BLDG
INDIANA CANVAS, BLISS, BRITTA, AND JOY

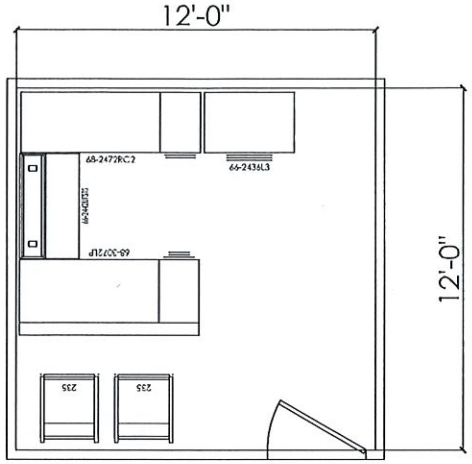
OED MARKETING
1700 Commerce Drive, NW
Suite 200
Atlanta, Georgia 30318
Phone - (770) 984-9047
Fax - (770) 984-8918

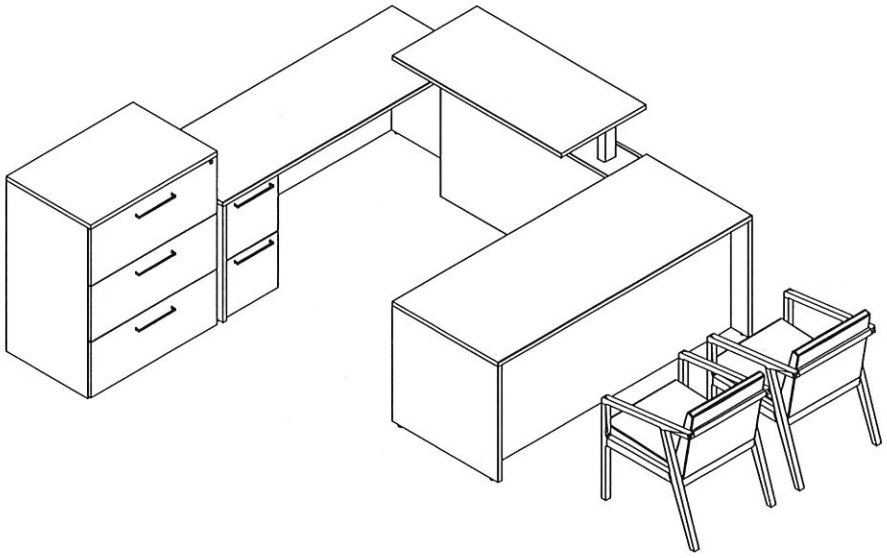
OED

ROOM 105



ROOM 111





NOTE: ALL OFFICES HAVE A 48"W HAT BRIDGE, EXCEPT FOR ROOM 111 HAS A 42"W BRIDGE.

NOTE: 5 LEFT HANDS AND 3 RIGHT HANDS HAVE BEEN SPECIFIED.

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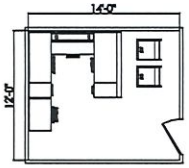
SCALE:	1/4"=1'-0"
DATE:	12/12/2022
DRAWN BY:	A.DUNN
OED REP:	M.GALUNKE
PROJECT #:	SP-430-MG22D
SHEET NO.	4 OF 4

Project
IMPACT OFFICE INTERIORS
HALL COUNTY PRE TRIAL BLDG
INDIANA CANVAS, BLISS, BRITTA, AND JOY

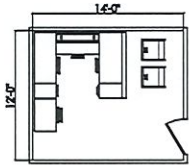
OED MARKETING
1700 Commerce Drive, NW
Suite 200
Atlanta, Georgia 30318
Phone - (770) 984-9047
Fax - (770) 984-8918

OED

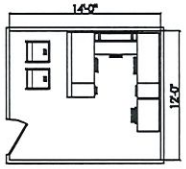
OFFICE 104



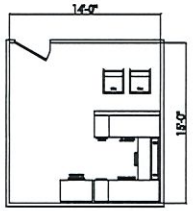
OFFICE 105



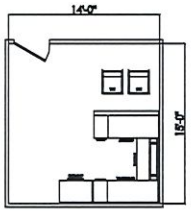
OFFICE 106



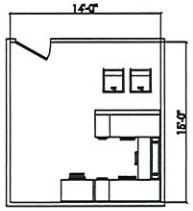
OFFICE 113



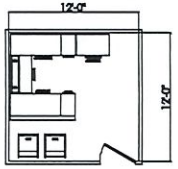
OFFICE 114



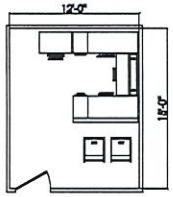
OFFICE 115



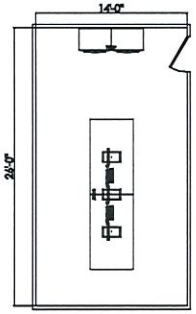
OFFICE 111



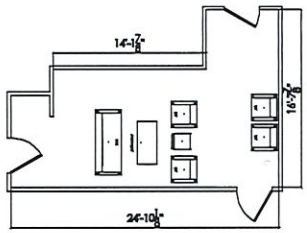
OFFICE 112



CONFERENCE 101



LOBBY 118



OED

OED MARKETING
1700 Commerce Drive, NW
Suite 200
Atlanta, Georgia 30318
Phone - (770) 984-9047
Fax - (770) 984-8918

Project
IMPACT OFFICE INTERIORS
HALL COUNTY PRE TRIAL BLDG
INDIANA CANVAS, BLISS, BRITTA, AND JOY

SCALE:	1/4"-1'-0"
DATE:	12/12/2022
DRAWN BY:	A.DUNN
OED REP:	M.GALUNKE
PROJECT #:	SP-430-MG22D

SHEET NO.

1 OF 4

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Project
IMPACT OFFICE INTERIORS
HALL COUNTY PRE TRIAL BLDG
INDIANA CANVAS, BRITTA, BLISS, AND JOY

OED MARKETING
1700 Commerce Drive, NW
Suite 200
Atlanta, Georgia 30318
Phone - (770) 984-9047
Fax - (770) 984-8918

OED

SCALE:	1/4"=1'-0"
DATE:	12/12/2022
DRAWN BY:	A.DUNN
CSD REP:	M.GALUNKE
PROJECT #:	SP-JOI-MG225
SHEET NO.	3 OF 4

AGENDA ITEM

Appointments for Consideration

REPORT TO: **Work Session (01/09/23)**

REPORT TO: **Voting Meeting (01/12/23)**

ITEM NO: 475/2022

SUBJECT: Approve the appointment of Commissioner Billy Powell to serve as the 2023 Board of Commissioners Vice-Chairman.

Meetings:

Work Session Date: 01/09/23 **Voting Meeting Date:** 01/12/23

Executive Summary:

Presenter: BoC

Recommendation:
N/A

Purpose of Request:
Approve the appointment of Commissioner Billy Powell to serve as the 2023 Board of Commissioners Vice-Chairman.

History:
Vice-Chairman History: 2021 - Commissioner Stowe 2020 - Commissioner Echols 2019 - Commissioner Powell 2022 - Commissioner Cooper

Facts and Issues:

Options:

Funding Requested	$ 0.00
Are funds within current budget?	No
Source of Funds	
Does the action involve a Resolution, Ordinance, Contract, Agreement, etc.?	No
Has it been reviewed by the County Attorney?	Yes
Is there a deadline for this item?	

Approvals:

Approve	Attorney	Administration	Clerk
JR	WLI	LJ	JR

Attachments:

AGENDA ITEM

Appointments for Consideration

REPORT TO: **Work Session (01/09/23)**

REPORT TO: **Voting Meeting (01/12/23)**

ITEM NO: 668/2022

SUBJECT: Appointment to the Hall-Gainesville Land Bank to serve a term from January 31, 2023 to January 30, 2027. Commission Districts 1, 2, 3, & 4.

Meetings:

Work Session Date: 01/09/23 **Voting Meeting Date:** 01/12/23

Executive Summary:

Presenter: BoC

Recommendation:
N/A

Purpose of Request:
Appointment to the Hall-Gainesville Land Bank to serve a term from January 31, 2023 to January 30, 2027. Commission Districts 1, 2, 3, & 4.

History:
Tate O'Rouke is the current appointment.

Facts and Issues:
Tate O'Rouke is eligible and willing to serve another term.

Options:

Funding Requested	$ 0.00
Are funds within current budget?	No
Source of Funds	
Does the action involve a Resolution, Ordinance, Contract, Agreement, etc.?	No
Has it been reviewed by the County Attorney?	Yes
Is there a deadline for this item?	

Approvals:

Approve	Attorney	Administration	Clerk
JR	WLI	LJ	JR

Attachments:

AGENDA ITEM

Appointments for Consideration

REPORT TO: **Work Session (01/09/23)**

REPORT TO: **Voting Meeting (01/12/23)**

ITEM NO: 669/2022

SUBJECT: Appointment to the Planning Commission to serve a term from February 1, 2023 to January 31, 2025. Chairman's Appointment.

Meetings:

Work Session Date: 01/09/23 **Voting Meeting Date:** 01/12/23

Executive Summary:

Presenter: BoC

Recommendation:
N/A

Purpose of Request:
Appointment to the Planning Commission to serve a term from February 1, 2023 to January 31, 2025. Chairman's Appointment.

History:
Gina Pilcher is the current appointment.

Facts and Issues:
Gina Pilcher is eligible and willing to serve another term.

Options:

Funding Requested	$ 0.00
Are funds within current budget?	No
Source of Funds	
Does the action involve a Resolution, Ordinance, Contract, Agreement, etc.?	No
Has it been reviewed by the County Attorney?	Yes
Is there a deadline for this item?	

Approvals:

Approve	Attorney	Administration	Clerk
JR	WLI	LJ	JR

Attachments:

AGENDA ITEM

Appointments for Consideration

REPORT TO: **Work Session (01/09/23)**

REPORT TO: **Voting Meeting (01/12/23)**

ITEM NO: 670/2022

SUBJECT: Appointment to the Planning Commission to serve an unexpired term to January 31, 2023 and a new term from February 1, 2023 to January 31, 2025. Commission District 1.

Meetings:

Work Session Date: 01/09/23 **Voting Meeting Date:** 01/12/23

Executive Summary:

Presenter: BoC

Recommendation:
n/a

Purpose of Request:
Appointment to the Planning Commission to serve a term from February 1, 2023 to January 31, 2025. Commission District 1.

History:
Trey Bell is the current appointment.

Facts and Issues:
Trey Bell does not wish to serve another term.

Options:

Funding Requested	$ 0.00
Are funds within current budget?	No
Source of Funds	
Does the action involve a Resolution, Ordinance, Contract, Agreement, etc.?	No
Has it been reviewed by the County Attorney?	Yes
Is there a deadline for this item?	

Approvals:

Approve	Attorney	Administration	Clerk
JR	WLI	LJ	JR

Attachments:

AGENDA ITEM

Appointments for Consideration

REPORT TO: **Work Session (01/09/23)**

REPORT TO: **Voting Meeting (01/12/23)**

ITEM NO: 671/2022

SUBJECT: Appointment to the Planning Commission to serve a term from February 1, 2023 to January 31, 2025. Commission District 2.

Meetings:

Work Session Date: 01/09/23 **Voting Meeting Date:** 01/12/23

Executive Summary:

Presenter: BoC

Recommendation:
n/a

Purpose of Request:
Appointment to the Planning Commission to serve a term from February 1, 2023 to January 31, 2025. Commission District 2.

History:
Chris Braswell is the current appointment.

Facts and Issues:
Chris Braswell is eligible and willing to serve another term.

Options:

Funding Requested	$ 0.00
Are funds within current budget?	No
Source of Funds	
Does the action involve a Resolution, Ordinance, Contract, Agreement, etc.?	No
Has it been reviewed by the County Attorney?	Yes
Is there a deadline for this item?	

Approvals:

Approve	Attorney	Administration	Clerk
JR	WLI	LJ	JR

Attachments:

AGENDA ITEM

Appointments for Consideration

REPORT TO: **Work Session (01/09/23)**

REPORT TO: **Voting Meeting (01/12/23)**

ITEM NO: 672/2022

SUBJECT: Appointment to the Planning Commission to serve a term from February 1, 2023 to January 31, 2025. Commission District 3.

Meetings:

Work Session Date: 01/09/23 **Voting Meeting Date:** 01/12/23

Executive Summary:

Presenter: BoC

Recommendation:
n/a

Purpose of Request:
Appointment to the Planning Commission to serve a term from February 1, 2023 to January 31, 2025. Commission District 3.

History:
Stan Hunt is the current appointment.

Facts and Issues:
Stan Hunt is eligible and willing to serve another term.

Options:

Funding Requested	$ 0.00
Are funds within current budget?	No
Source of Funds	
Does the action involve a Resolution, Ordinance, Contract, Agreement, etc.?	No
Has it been reviewed by the County Attorney?	Yes
Is there a deadline for this item?	

Approvals:

Approve	Attorney	Administration	Clerk
JR	WLI	LJ	JR

Attachments:

AGENDA ITEM

Appointments for Consideration

REPORT TO: **Work Session (01/09/23)**

REPORT TO: **Voting Meeting (01/12/23)**

ITEM NO: 673/2022

SUBJECT: Appointment to the Planning Commission to serve a term from February 1, 2023 to January 31, 2025. Commission District 4.

Meetings:

Work Session Date: 01/09/23 **Voting Meeting Date:** 01/12/23

Executive Summary:

Presenter: BoC

Recommendation:
n/a

Purpose of Request:
Appointment to the Planning Commission to serve a term from February 1, 2023 to January 31, 2025. Commission District 4.

History:
Johnny Varner is the current appointment.

Facts and Issues:
Johnny Varner is eligible and willing to serve another term.

Options:

Funding Requested	$ 0.00
Are funds within current budget?	No
Source of Funds	
Does the action involve a Resolution, Ordinance, Contract, Agreement, etc.?	No
Has it been reviewed by the County Attorney?	Yes
Is there a deadline for this item?	

Approvals:

Approve	Attorney	Administration	Clerk
JR	WLI	LJ	JR

Attachments:

AGENDA ITEM

Corrections and Maintenance

REPORT TO: **Work Session (01/09/23)**

REPORT TO: **Voting Meeting (01/12/23)**

ITEM NO: 562/2022

SUBJECT: Approve the annual contract for RFQ/P #43-013 County Facilities Grounds Keeping and Lawn Maintenance Services for Building Maintenance to BrightView Landscape Services, Inc. of Lawrenceville, GA. The annual cost is $146,196.00.

Meetings:

Work Session Date: 01/09/23 **Voting Meeting Date:** 01/12/23

Executive Summary:

Presenter: WD

Recommendation:
Approve the purchase of County Facilities Grounds Keeping & Lawn Maintenance Services for Building and Maintenance to BrightView Landscape Services located at 1571 Buford Drive, Lawrenceville, GA 30043 in the annual amount of $146,196.00, billed monthly in arrears The Services are for six (6) County Facilities as shown on the three (3) attached Service Area Maps.

Purpose of Request:
To consolidate six (6) County facility complexes into one (1) multi-year Grounds Keeping and Lawn Maintenance Services contract awarded to one (1) contractor to maintain a consistent and uniform look across all County owned facilities.

History:
This is a new contract as this service was formerly conducted using inmate labor. There are two (2) facilities at the Hall County Government Center, and two (2) facilities at the Courthouse and two (2) facilities at the Health Department.

Facts and Issues:
This was a competitively bid Request for Qualifications and Cost Proposal #43-013 Facilities Grounds Keeping & Lawn Maintenance with nine (9) responses and BrightView having the highest score, 830 out of 1,000 available points, of the proposals received.

Options:

Funding Requested $ 146,196.00

Are funds within current budget? Yes

Source of Funds General Fund

Does the action involve a Resolution, Ordinance, Contract, Agreement, etc.?	Yes
Has it been reviewed by the County Attorney?	Yes
Is there a deadline for this item?	2022-11-21

Approvals:

Submit	Purchasing	Budget	Finance
WD	AP	TS	WG

Attorney	Administration	Clerk
WLI	CR	JR

Attachments:

Financial Supplement
Amendment for Service Schedule
CONTRACT
BID TAB
GOVERNMENT CENTER SERVICE AREA
HEALTH DEPARTMENT SERVICE AREA
COURTHOUSE SERVICE AREA

HALL COUNTY BOARD OF COMMISSIONERS
FINANCIAL SUPPLEMENT REPORT

AGENDA ITEM 562/2022

Funds Requested: $ 146,196.00

Request Budgeted: Yes

Proposed Source of Funding:

General Fund

Budget Transfer Requested:

No

Funding Source Items:

Fiscal Year	Fund	Division	Account	Amount
2023	001 - GENERAL	113 - BUILDINGS	4485 - GROUNDS MAINTENANCE	$48,732.00
2024	001 - GENERAL	113 - BUILDINGS	4485 - GROUNDS MAINTENANCE	$97,464.00

Budget Transfer Items:

Additional Information/Comments:

Walt Davis, Warden, Director Corrections, wdavis@hallcounty.org

Contact for Questions: DTB&M **Phone:** 678-852-1849

RFQP #43-013

Facilities Grounds Keeping

EXHIBIT C

MANDATORY COST PROPOSAL WORKSHEET

Company Name: BrightView Landscape Services, Inc.

Bidder's Name: Bart Parker

Amended schedule on 12/13/2022 for a start date of March 1, 2023.

Month	Calendar Year	Frequency of Services	Monthly Cost
March	2023	Weekly	$12,183.00
April	2023	Weekly	$12,183.00
May	2023	Weekly	$12,183.00
June	2023	Weekly	$12,183.00
July	2023	Weekly	$12,183.00
August	2023	Weekly	$12,183.00
September	2023	Weekly	$12,183.00
October	2023	Weekly	$12,183.00
November	2023	Bi-Weekly	$12,183.00
December	2023	Bi-Weekly	$12,183.00
January	2024	Bi-Weekly	$12,183.00
February	2024	Bi-Weekly	$12,183.00

Total Annual Cost: $146,196.00

Andy Penick 12/13/2022 Bart Parker

HALL COUNTY
GEORGIA
We have it all in Hall

POST OFFICE DRAWER 1435
GAINESVILLE, GA 30503

t: 770.535.8270 | f: 770.531.6711

DIRECTOR
Wesley Geddings

Hall County Government
FINANCIAL SERVICES

CONTRACT #43-013

For the provision of

FACILITIES GROUNDS KEEPING & LAWN MAINTENANCE SERVICES

ARTICLE #101 - INTRODUCTION

This Contract for Facilities Grounds Keeping & Lawn Maintenance Services, (hereinafter "Services") as entered into on _____ and with an Effective Date of March 1, 2023, is by and between; Hall County, Georgia (hereinafter "County") located at 2875 Browns Bridge Rd, Gainesville, Georgia 30504, and BrightView Landscape Services, located at 1571 Buford Dr. Lawrenceville, GA 30043 (hereinafter "Contractor"). Contractor is an entity that is legally registered and qualified, and holding any such licenses and certifications as may be required to render Services to do business in the State of Georgia. County and Contractor are known individually as a "Party" and collectively as the "Parties".

Whereas, the parties due mutually desire to enter into this Contract to document the provision of Services or other valuable consideration by the Contractor to the County in exchange for payment as compensation.

The Contract is a result of the competitively bid **RFQ/P # 43-013**, and the Contractor's response thereof, the Scope of Work, Exhibits, Attachments and references, to The County, in consideration of the terms and conditions contained herein and the receipt and sufficiency of which are hereby acknowledged by both parties, the parties hereto agree as follows:

ARTICLE #102 – CONTRACT

A. Contractor agrees to provide the Services to the County as detailed herein and in the Scope of Work, and for locations and services as described in the RFQ/P #43-013 and the bidder's response.

B. County hereby agrees to the compensation as provided in the bidder's response entitled **Exhibit C – Mandatory Cost Proposal,** which is attached and herein included by reference, for the annual cost of one-hundred forty-six thousand, one-hundred ninety-six dollars and 00/100 cents ($146,196.00), billed monthly ad further described in Exhibit C. All payments are in arrears.

C. **Price Escalation Clause**. Contractor may request up to, but no more than, a four-percent (4%) price escalation adjustment to this contract at each time of contract renewal

ARTICLE #103 - NOTICES:

To the extent that either party to this Contract is required to provide notice(s) to the other party in compliance herewith, then the party shall direct notice(s) to the following persons:

COUNTY PROJECT MANAGER
Danny Thomason
Grounds Maintenance Supervisor
Hall Co. Building Maintenance
1694 Barber Rd
Gainesville, GA 30507
dthomason@hallcounty.org
Cell: 678-852-1849

COUNTY ISSUING OFFICER
Andy Penick, CPSM, GCPM, GCPA, MBA
Purchasing Manager
Hall County Finance Department
2875 Browns Bridge Rd
Gainesville, GA 30504
apenick@hallcounty.org
Office (770) 531-4939

CONTRACTOR'S CONTACT INFO
Bart Parker
BrightView Landscape Services
1571 Buford Drive
Lawrenceville, GA 30043
Cell: 678 449 4170
bart.parker@brightview.com

REMIT-TO ADDRESS
Company's FEIN # 58-1993662
PO BOX/DRAWER
Address___PO Box 40483_____
___Atlanta, GA 30384-4083___
_____

ARTICLE #104 – NON-EXCLUSIVE RIGHTS:

The Contract is not exclusive. The County reserves the right to select other Contractors to provide the Services similar to those described in this Contract, during the term of the Contract should the need to arise or the contractor fails to perform.

ARTICLE #105 – CONTRACT TERM:

A. **Initial Contract Term**. This Contract is effective on the date of signature shown in *ARTICLE #101* by all parties unless a future date is so noted on this contract. The term will last for **Twelve (12) months** from the date of execution or the anniversary of the beginning date of work, unless terminated by the parties pursuant to *ARTICLE #107 – REMEDIES AND CONTRACT PERFORMANCE*, thereof.

B. **Contract Renewal.** The County shall have the option, in its sole discretion, to renew the Contract for up to **Four (4), One (1) Year Renewals**. The price, terms, and conditions in effect at the time of each renewal(s) shall remain the same unless the Contract is amended by mutual agreement. Renewal(s) will depend upon the best interests of the County, available funding, and Contractor's performance. Renewal(s) will be accomplished through the issuance of a Contract Renewal Document that must be evidenced in writing by both Parties. The County does not accept nor acknowledge automatic renewals and shall have no obligations, payment or otherwise, associated therewith.

C. **Contract Extension.** In the event that this Contract shall terminate or be likely to terminate prior to the making of an award for a new Contract for the identified Services, the County may, with the written consent of Contractor, extend this Contract for such period as may be necessary to afford the County a continuous supply of the identified Services for up to one (1) year.

ARTICLE #106 - CONTRACT AMENDMENTS AND MODIFICATION:

This Contract may not be modified, amended, or added to, except in writing fully executed by both parties hereto. This Contract document constitutes the sole and entire Contract and understanding between the parties as to the subject matter hereof, and no verbal promises have been made by either party in relation hereto.

ARTICLE # 107 – REMEDIES AND CONTRACT PERFORMANCE:

In the event that either party to this Contract breaches this Contract, including by failure to meet the timetables set forth herein, the non-breaching party shall provide written notice to the breaching party which describes the breach of this Contract. The party whose breach is alleged shall have thirty (30) days from the date of receipt of the written notice to cure the breach or to otherwise negotiate a resolution of the breach.

If the breach has not been cured and the parties hereto have not resolved the issue described in the notice letter by thirty (30) days after receipt of the notice letter, the party authoring the letter shall be entitled to seek any and all remedies allowed by Georgia law, including damages, equitable relief, declaratory relief, specific performance, and/or seeking relief as to any bonds issued hereon. Additional provisions are;

A. **Delay or Impossibility of Performance**. Any failure or delay must be beyond the control of and without the fault or negligence of the Contractor. If the Services to be provided to the County are interrupted by a Force Majeure Event, as defined below, the County will be entitled to an equitable adjustment to the fees and other payments due to the Contractor under this Contract. If delay results from a

subcontractor's negligent conduct or failure to perform, the Contractor shall not be excused from compliance with the terms and obligations of the Contract. Epidemics and pandemics are not considered Force Majeure events by the County.

Neither party shall be held liable or responsible to the other party nor be deemed to have defaulted under or breached this Agreement for failure or delay in fulfilling or performing any obligation under this Agreement when such failure or delay is caused by or results from causes beyond the reasonable control of the affected party, including but not limited to fire, floods, embargoes, war, acts of war, insurrections, riots, strikes, lockouts or other labor disturbances, or acts of God; provided, however, that the party so affected shall use reasonable commercial efforts to avoid or remove such causes of nonperformance, and shall continue performance hereunder with reasonable dispatch whenever such causes are removed. Either party shall provide the other party with prompt written notice of any delay or failure to perform that occurs by reason of Force Majeure.

Definition: The term 'force majeure' as defined in Black's Law Dictionary, is 'an event or effect that can be neither anticipated nor controlled. It is a contractual provision allocating the risk of loss if performance becomes impossible or impracticable, especially as a result of an event that the parties could not have anticipated or controlled."

B. Obligations beyond Contract Term. The Contract shall remain in full force and effect to the end of the specified term or until terminated or canceled pursuant to the Contract.

C. Transition Cooperation with the County and Cooperation with other Contractors. Contractor agrees that upon termination of this Contract for any reason, it shall provide sufficient efforts and reasonable cooperation and assistance to the County to ensure an orderly and efficient transition to the County or an alternative Contractor. Further, in the event that the County has entered into or enters into contracts with other Contractors related to the Services, Contractor agrees to cooperate fully with such other Contractors. Contractor shall not engage in any act that will interfere with the performance of work by any other Contractor.

ARTICLE # 108 - TERMINATION:

Either party may terminate this Contract by providing thirty (30) days written notice to the other party at any time. Should either party terminate this Contract prior to the date of automatic termination pursuant to section 4 above, Contractor shall provide the County with all deliverables up to the date of termination (30 days after the notice is provided), and the County shall pay the Contractor for all work properly performed in compliance with the terms of the Contract up to the date of termination.

A. **Termination for Convenience**. Following thirty (30) days written notice, either party may terminate the Contract in whole or in part for any reason without the payment of any penalty or incurring any further obligation to the Contractor.

B. **Termination for Cause**. The occurrence of any one or more of the following events shall constitute cause for the County to declare the Contractor in default of its obligations under the Contract:

1. The Contractor fails to deliver or has delivered nonconforming Services or fails to perform, to the County's satisfaction, any material requirement of the Contract or is in violation of a material provision of the Contract, including, but without limitation, the express warranties made by the Contractor.

2. The County determines that satisfactory performance of the Contract is substantially endangered or that a default is likely to occur.

3. The Contractor fails to make substantial and timely progress toward performance of the Contract.

4. The Contractor becomes subject to any bankruptcy or insolvency proceeding under federal or state law to the extent allowed by applicable federal or state law including bankruptcy laws; the Contractor terminates or suspends its business; or the County reasonably believes that the Contractor has become insolvent or unable to pay its obligations as they accrue consistent with applicable federal or state law.

5. The Contractor has failed to comply with applicable federal, state and local laws, rules, County ordinances, regulations and orders when performing within the scope of the Contract.

6. The Contractor has engaged in conduct that has or may expose the County or the State to liability, as determined in the County's sole discretion; or a material breach of the terms of the Contract by County upon County's failure to cure such material breach after written notice thereof has been delivered in accordance with ARTICLE #108.C. below constitutes cause for the Contractor to declare that the County is in default of its obligations under the Contract.

C. Notice of Default. If either party causes one or more of the default events set out in ARTICLE #108.B. of the Contract, either party shall issue a written Notice of Default to the party that causes one or more of the default events set out in ARTICLE #108.B requesting that the breach or noncompliance be remedied within the period of time specified in the party's Notice of Default to the Contractor.

If the breach or noncompliance is not remedied within the period of time specified in the written notice, the non-breaching party may:

1. Immediately terminate the Contract for default without additional written notice;

2. In the event of a breach by the Contractor, the County may procure substitute Services from another source and charge the difference between the Contract and the substitute Contract to the defaulting Contractor; and/or,

3. Enforce the terms and conditions of the Contract and seek any legal or equitable remedies.

C. **Termination Due to Non-Availability of Funds.**
This Contract will terminate immediately and absolutely if the County determines that adequate funds are de-appropriated such that the County cannot fulfill its obligations under the Contract, such determination being at the County's sole discretion and conclusive. County agrees to provide prompt written notice to Contractor in the event of any de-appropriation.

D. **Termination due to Failure of Contractor to Act.**
The County may terminate the Contract for any one or more of the following reasons effective immediately without advance notice:

1. In the event that the Contractor must be certified or licensed as a condition precedent to providing the Services, the revocation or loss of such license or certification may result in immediate termination of the Contract effective as of the date on which the license or certification is no longer in effect.

2. The County determines that the actions, or failure to act, of the Contractor, its agents, employees or sub-Contractors have caused, or reasonably could cause, life, health or safety to be jeopardized.

3. The Contractor furnished any statement, representation, or certification in connection with the Contract or the bidding process, which is materially false, deceptive, criminal activity, incorrect or incomplete.

4. Failure of the Contractor to obtain, provide, maintain, and deliver the Performance and Payment Bonds (if required) as and when required under this Contract, or failure to comply with any requirement pertaining to the appropriate amounts thereof as set forth in ARTICLE #123 - PERFORMANCE AND PAYMENT BOND REQUIREMENT.

E. Payment Limitation in Event of Termination. In the event of termination of the Contract for any reason by either party, the County shall pay only those amounts,

if any, due and owing to the Contractor for Services actually received and accepted by the County up to and including the date of termination of the Contract and for which the County is obligated to pay pursuant to the Contract.

F. The Contractor's Termination Duties. Upon receipt of notice of termination, the Contractor shall:

1. Cease work under the Contract and take all necessary or appropriate steps to limit disbursements and minimize costs and furnish a report within thirty (30) days of the date of notice of termination, describing the status of all work under the Contract, including, without limitation, results accomplished, conclusions resulting therefrom, and any other matters the County may require.

2. Immediately cease using and return to the County, any personal property or materials, whether tangible or intangible, provided by the County to the Contractor.

3. Comply with the County's instructions for the timely transfer of any active files and work product produced by the Contractor under the Contract.

4. Cooperate in good faith with the County, its employees, agents, and Contractors during the transition period between the notification of termination and the substitution of any replacement Contractor; and

5. Immediately return to the County any payments made by the County for goods and services that were not delivered by the Contractor.

ARTICLE # 109 – NO DEFENSE OR INDEMNIFICATION BY COUNTY:

The parties agree that the County shall not be responsible for defending or indemnifying any Contractor from any claim brought by any third party against the Contractor.

ARTICLE #110 - ASSIGNMENT AND DELEGATION BY CONTRACTOR:

The Contractor shall not assign or delegate this Contract, or any performance required by it, in whole or in part, without the prior express written consent of the County.

ARTICLE #111 – USE OF THIRD-PARTIES (Sub-Contractors):

This Contract is for the benefit of the parties hereto only and is not intended to benefit any third-party or give rise to any duty or causes of action for any third party. All restrictions, obligations and responsibilities of the Contractor under the Contract shall

also apply to third parties such as sub-Contractors, if allowed in writing by the County. Any Contract with a subcontractor must also preserve the rights of the County.

ARTICLE #112 – SUPERSEDES FORMER CONTRACTS

Unless otherwise specified in the Contract, this Contract supersedes all prior Contracts or Agreements between the County and the Contractor for the Services provided in connection with the Contract.

ARTICLE #113 - SEVERABILITY:

If any paragraph, sub-paragraph, sentence, clause, phrase, or portion of this Contract is declared invalid or unconstitutional by any Court of competent jurisdiction or if the provisions of any part of this Contract as applied to any particular situation or set of circumstances shall be declared invalid or unconstitutional, such invalidity shall not be construed to affect the remaining portions of this Contract not so held to be invalid or the application of this Contract to other circumstances not so held to be invalid.

ARTICLE # 114 - RECORDS:

A. **Public Records Request**. The Georgia Open Records Act, as provided in O.C.G.A. § 50-18-70 et seq, requires procurement records and all other records received by or prepared or maintained on behalf of the County, shall be made open to public inspection, unless otherwise provided by law.

B. **Record Retention and Access**. The Contractor shall maintain books, records, and documents in accordance with generally accepted accounting principles and procedures and which sufficiently and properly document and calculate all charges billed to the County throughout the term of the Contract for a period of at least five (5) years following the date of final payment or completion of any required audit, whichever is later. Records to be maintained include both financial records and service records.

ARTICLE # 115 - ADDITIONAL TERMS:

A. The County shall not be bound by any terms and conditions included in any Contractor's literature, packaging, invoice, catalog, brochure, technical data sheet, on-line representation, warranties or service level agreement or other document which attempts to impose any condition in variance with or in addition to the terms and conditions contained herein.

B. The County shall not be bound to any Terms and Conditions of the Contractor that are only accessible by hyper-link. All Terms and Conditions must be printed and approved by the County.

ARTICLE # 116 - WAIVER:

The failure of any party hereto to seek a remedy for any alleged breach of this Contract shall not constitute a waiver of any claim, cause of action, or remedy allowed by Georgia law for breach thereof.

ARTICLE # 117 - CONTRACTOR AND COUNTY RIGHTS AND OBLIGATIONS:

A. The County has the right at any time to require the Contractor to put an immediate stop to any procedure, or the use of any equipment (chemical, material, etc., if applicable) considered by the County to be hazardous (or toxic) to persons, buildings, or surfaces. The Contractor will utilize acceptable substitutes as quickly as possible. In the event of such replacement, Contractor shall notify County of any resulting replacement, (ii) introduce the individual serving as the replacement to County, and (iii) provide County with a résumé and any other information regarding the individual that may be reasonably requested by County.

B. The County has the right to require the Contractor to reassign or remove any employee or subcontractor's employee from the premises temporarily or permanently when, in the County's sole opinion, the employee is not suitable. The County's decision on this matter shall be final, and Contractor will remove this employee immediately and replace with a person of at least equivalent training, experience and requisite qualifications as quickly as possible, subject to the County's prior approval.

C. Contractor agrees to obtain prior written approval from the County for the use of sub-Contractors to provide the Services described in *ARTICLE #103 - DESCRIPTION OF SERVICES* prior to subcontractor's performance of work.

ARTICLE # 118– INSURANCE REQUIREMENT:

A. **Insurance Requirements.** The Contractor must maintain insurance policies at the Contractor's own expense and must furnish the County with a Certificate of Insurance (COI) providing evidence of proof of coverage at least in the amounts indicated in this subsection. The insurance certificate must list County as the certificate holder and as an additional insured under the commercial general, automobile and umbrella liability policies as follows**:** "Hall County Government, its Board of Commissioners, its officers, employees and agents, 2875 Browns Bridge Rd, Gainesville, GA 30504".

   The policy must protect the Contractor and the County (as a Certificate Holder and Additional Insured) from any claims for bodily injury, property damage, or personal injury covered by the indemnification obligations set forth herein throughout the duration of the Contract.

The Contractor must maintain the following insurance coverage during the term of the Contract, in at least the minimum amounts set forth below, to cover all loss and liability for damages on account of bodily injury, including death therefrom, and injury to or destruction of property caused by or arising from any and all services carried on and any and all work performed by the Contractor pursuant to this Contract:

1. Workers Compensation Insurance (Occurrence) in the amounts of the statutory limits established by the General Assembly of the State of Georgia (A self-insurer must submit a certificate from the Georgia Board of Workers Compensation stating that the Contractor qualifies to pay its own workers compensation claims.). In addition, the Contractor must require all sub-Contractors occupying the premises or performing work under the Contract to obtain an insurance certificate showing proof of Workers Compensation Coverage with the following minimum coverage:

a.	Bodily injury by accident - per employee	$ 100,000
b.	Bodily injury by disease - per employee	$ 100,000
c.	Bodily injury by disease – policy limit	$ 500,000

2. Commercial General Liability Policy with at least the following minimum coverage:

a.	Each Occurrence Limit	$1,000,000
b.	Personal & Advertising Injury Limit	$1,000,000
c.	General Aggregate Limit	$3,000,000
d.	Products/Completed Ops. Aggregate Limit	$2,000,000

Automobile Liability with at least the minimum coverage: $1,000,000
Combined Single Limit to cover Any Vehicle, leased or rented by the Contractor

3. Umbrella Liability, Excess Liability per Occurrence $1,000,000
Aggregate $1,000,000

It shall be the responsibility of the Contractor to require all of its sub-Contractors to maintain Commercial General Liability insurance with business automobile liability coverage with companies and limits as stated above, and to provide a certificate evidencing that such insurance is in effect upon request. Endorsement must be provided with the insurance certificate.

B. **Insurance Certificates and General Requirements.** No Contract performance shall occur unless and until the County receives required insurance certificates.

The insurance certificate must reference the Contract number assigned by the County and document that the liability coverage purchased by the Contractor includes contractual liability coverage to insure the indemnity agreement as stated herein.

C. The Contractor understands and agrees that the foregoing policies will not be canceled, or not renewed or allowed to lapse for any reason until at least thirty (30) days prior written notice has been given to the County, or until such time as other valid and effective insurance coverage acceptable in every respect to the County and providing protection equal to protection called for in the policies referenced in this ARTICLE #118 shall have been received, accepted, and acknowledged by the County. Certificates of insurance showing such coverage to be in force shall be filed with the County prior to commencement of any work under the Contract. The foregoing policies shall be obtained from insurance companies licensed to do business in Georgia and, unless waived or modified in writing by the County, shall be an insurer with a minimum A.M. Best Rating of "A-". All such coverage shall remain in full force and effect during the term and any renewal or extension thereof. The insurance certificate must be submitted with this Contract.

D. **Waiver of Subrogation.** There is no waiver of subrogation rights by either Party with respect to insurance.

ARTICLE # 119 – NO WAIVER:

A. **Authority to Enter into Contract.** The Contractor represents and warrants that it has full authority to enter into and perform its obligations under the Contract and that the Contract constitutes a legal, valid, and binding obligation upon the Contractor in accordance with its terms. The representatives of the parties hereto also represent and warrant that they are authorized to sign this Contract on behalf of each party hereto."

B. **Solicitation**. The Contractor warrants that no person or selling agency (except bona fide employees or selling agents maintained for the purpose of securing business) has been employed or retained to solicit and secure the Contract upon an agreement or understanding for commission, percentage, brokerage or contingency.

C. **Vehicles and Equipment.** Contractor warrants that no County owned vehicles or equipment will be used in the performance of this Contract. Contractor shall be responsible for providing all transportation necessary to deliver Services under the Contract.

ARTICLE # 120 – INTELLECTUAL PROPERTY RIGHTS & OWNERSHIP:

Contractor agrees it will not use the name or any intellectual property, including but not limited to, County trademarks or logos in any manner, including commercial

advertising or as a business reference, without the expressed prior written consent of the County.

ARTICLE # 121 - COMPENSATION:

A. The County will pay the Contractor for the Services provided pursuant to this Contract and in accordance with the prices quoted and conditions set forth in the Bidder's response **on Exhibit C – Mandatory Cost Proposal Worksheet,** which is attached hereto and incorporated into this Contract as if fully set forth herein. Payments will be made monthly in arrears to the Contractor after acceptance of the Contractor's delivered Services by the County, and after receipt of undisputed invoice to the County.

B. Prices quoted shall be firm and fixed throughout the term of this Contract, unless otherwise Amended or Modified by mutual agreement.

C. Cost may be prorated for Services added or removed under this Contract to align cost with the remaining term of Contract.

D. It is understood that this bid or proposal is made without collusion or fraud. Contractor understands and acknowledges that collusive bidding is a violation of state and federal law and may result in the cancellation of the Contract.

ARTICLE # 122 - COUNTY PAYMENT TO CONTRACTOR:

A. The County will issue a Notice to Proceed to the Contractor, and Purchase Order(s) (herein after 'PO'). The terms of this Contract shall be incorporated by reference into any and all PO(s) issued prior to the expiration or termination of this Contract. The PO will be issued by electronic mail (e-mail) to the Contractor's representative in *ARTICLE #102*. A PO is considered "issued" when the e-mail containing the PO is sent by the County to the Contractor.

   The Contractor shall not deliver any Services, equipment, devices, or components thereof until authorized in writing by the County through issuance of a PO, which shall provide a commencement Notice-to-Proceed date. Any work, including but not limited to travel, preliminary meetings, planning, etc., performed outside of the terms and conditions of and before the issuance of the PO will not be considered for payment. Contractors are not to begin work or ship any product on any verbal communication from within the County. The County will not be liable for payment for any work or product with the issuance of a verbal communication.

The Scope of Work shall remain in effect from the Notice to Proceed to completion of the project. The Parties agree that the County will not pay or otherwise compensate the Contractor for any Services, materials, equipment, devices or components thereof outside of the Scope of Work and/or beyond the term of this Contract, unless specifically authorized in writing as evidenced by an amendment (see *ARTICLE #106 - CONTRACT AMENDMENTS &, MODIFICATION*), a time extension letter, or as otherwise authorized by the County.

B. **Invoice/Payment.**

1. Contractor shall invoice the County via email **each month** solely to accountspayable@hallcounty.org and only after the County inspects and accepts the Services provided. Receipt of the Services does not constitute acceptance. Invoice amounts shall not exceed the Contractor's pricing set forth in *ARTICLE #102.*
2. Each invoice shall include the Contractor's current "Remit to" address; a description of the Services provided; the invoice amount; the Contract number; and the associated PO number issued. Each properly prepared invoice must be sent in accordance with the instructions listed on the PO. Standard payment terms are net 30 days (N30) in arrears from the date the invoice is accepted, following delivery of the Services.
3. The County does not pay for services not yet received but only in arrears.
4. The Contractor shall be solely responsible for paying all costs, expenses and charges it incurs in connection with its performance under the Contract.

C. **Unsatisfactory Performance; Delay of Payment.**

1. If the County determines that the quality of the Services provided are deficient, unacceptable, or unsatisfactory, the County's Project Manager identified in *ARTICLE #103* shall issue a written notice to Contractor. Contractor agrees that upon receipt of the written notice, it shall make every effort to correct the deficiency (ies) within the timeframe prescribed therein. If the Contractor fails to timely correct the deficiencies, the County reserves the right to delay payment pursuant to this *ARTICLE #122* or terminate the Contract (*ARTICLE #108 – TERMINATION PROVISIONS*).
2. **Delay of Payment Due to Contractor's Failure.** If the County determines that the Contractor has failed to perform or deliver any Services as required by the Contract, the Contractor shall not be entitled to any compensation under the Contract until such Services are delivered and accepted. In this event, the County may withhold that portion of the Contractor's compensation, which represents payment for Services that were not delivered. To the extent that the Contractor's failure to perform or deliver in a timely manner causes the County to incur costs, the County may deduct the amount of such incurred costs from any amounts payable to Contractor.

The County's authority to deduct such incurred costs shall not in any way affect the County's authority to terminate the Contract.

D. **Set-Off Against Sums Owed by the Contractor**. In the event that the Contractor owes the County any sum under the terms of the Contract, pursuant to any judgment, or pursuant to any law, the County may set off the sum owed by the Contractor against any sum owed to the Contractor, in the County's sole discretion.

E. **Final Payment.** Contractor shall issue an invoice for final payment to the County no later than thirty (30) days following the expiration or termination date of the Contract.

F. The Contractor must not "Factor or Assign Payments" to another or a financial institution. The County will only pay the party to whom it is contracted with. The County will not in any circumstances pay a third-party.

ARTICLE #123 – PERFORMANCE AND PAYMENT BONDS

The Contractor must furnish to the County a **performance bond** equal to one-hundred percent (100%) of the total initial year's contract dollar amount, and additionally a **payment bond** equal to one-hundred percent (100%) of the total initial year's contract dollar amount. After receipt of the bonds, the County will issue a Notice-to-Proceed. Only surety companies licensed to do business in the State of Georgia are acceptable. The Contractor is required to provide new bonds at the issuance of each Renewal Option Term(s) or Extension(s) that follow.

The County must receive all bonding instruments prior to the commencement of any work.

ARTICLE #124 – RETAINAGE (not applicable on this contract)

Retainage (if required) will be withheld by Hall County may hold up to ten-percent (10%) retainage throughout the entire project and will release retainage at the point of final completion and final acceptance by The County. in compliance with Georgia law.

ARTICLE #125 – VENUE AND GOVERNING LAW

The parties agree that this Contract shall be interpreted, construed, and enforced in accordance with the laws of the State of Georgia. To the extent that either party brings suit to enforce the terms of this Contract, including suit in equity, the parties agree and consent to file any such suit in the Superior Court of Hall County, Georgia.

ARTICLE # 126 - NOTICE OF INTENT TO LITIGATE

Contractor hereby agrees not to file any civil action of disputes or claims relating to the Contract except after first giving Thirty days (30) written notice to the County of the claim and the intent to initiate a civil action.

ARTICLE # 127- GEORGIA SECURITY AND IMMIGRATION COMPLIANCE ACT:

A. By signing this Contract, the Contractor certifies that prior to and throughout the performance of all applicable work under this Contract it will remain in full compliance with all federal and state immigration laws, including but not limited to 8 U.S.C. § 1324a and the Georgia Security and Immigration Compliance Act (O.C.G.A. §13-10-90 et seq.), as amended by the Illegal Immigration Reform and Enforcement Act of 2011, regarding the verification of employment eligibility of employees under the Immigration Reform and Control Act of 1986. Contractor will ensure that only persons who are citizens or nationals of the United States or non-citizens authorized under federal immigration laws are employed to perform services under this Contract or any subcontract or sub-subcontract hereunder.

B. Contractor further certifies its compliance with the aforementioned federal and state immigration laws set forth by signing a sworn affidavit, the Georgia Security and Immigration Compliance Act Affidavit, notarized by an Official Notary Public, and obtaining the same affidavits from any sub-contractor providing services pursuant to this Contract.

ARTICLE # 128 – ORDER OF PRECEDENCE:

In the event of any inconsistency, ambiguity, or conflict among the specific provisions of the Contract and the Contractor's Response, the order of precedence shall be as follows:

A. First, any amendments to the Contract, including all Exhibits thereto.
B. Second, the Contract itself, including all Exhibits thereto.
C. Third, Attachments appended to the Contract.

ARTICLE # 129– CONTRACT EXHIBITS AND ATTACHMENTS:

The Parties mutually acknowledge that any following Exhibits and Attachments listed below made a part of this Contract, as though expressly written in RFQ/P documents and the bidder's response, are incorporate herein to this contract by reference.

EXHIBIT C: Mandatory Cost Proposal

ARTICLE # 130 - ENTIRE CONTRACT:

This Contract, as executed and approved, shall constitute the entire agreement between the Parties and supersedes all other prior and contemporaneous statements, agreements, and understandings between the Parties. No written or oral statements, agreements, or understandings that are not set out, referenced, or specifically incorporated in this Contract shall in any way be binding or of effect between the Parties.

ARTICLE # 131– VALIDITY

If any paragraph, sub-paragraph, sentence, clause, phrase or any portion of this agreement shall be declared invalid or unconstitutional by any Court of competent jurisdiction or if the provisions of any part of this agreement as applied to any particular situation or set of circumstances shall be declared invalid or unconstitutional, such invalidity shall not be constructed to affect the portions of this agreement not so held to be invalid or the application of this agreement to other circumstances not so held to be invalid. The parties hereby declare that this is the intent of the parties to this agreement is to provide for separate and divisible parts.

ARTICLE #132 – SALES TAX EXEMPTION STATUS

The County is exempt from Federal Excise Taxes and from Georgia State and Local Sales and Use Taxes on the Services. The Contractor may request a copy of the County's Georgia Sales and Use Tax Exemption Certificate.

ARTICLE # 132 – CONTRACT TERMS AND CONDITIONS

1. All purchases must comply with The Official Code of Hall County Sections 3.10.010 – 3.10.190.
2. If any conflict or ambiguity arise between these Terms and Conditions herein and The Official Code of Hall County, the latter will govern.
3. The Terms and Conditions set herein shall supersede and govern over all Contractor's Terms and Conditions or Service Level Agreements.
4. Hall County, Georgia, herein referred to as 'The County', retains the right to 'red-line' sections of the Supplier's Terms and Conditions if such are in conflict with the best interest of the County.
5. Acceptance of a Purchase Order (PO) and delivery of Goods or Services shall be deem as the Supplier's full and complete acceptance of The County's Terms and Conditions.
6. The terms; supplier, vendor, bidder, offeror, Contractor, Contractor, designer, distributor, dealer or manufacturer or otherwise purveyor or source of supply or performance of service shall mean one-and-the-same, herein denoted as 'Supplier' for goods and 'Contractor' for services.
7. Furthermore, the terms; goods, materials, commodities, components, drawings, drafts, renderings, plans, physical or digital, software, SaaS, Engineering, Architectural, capital asset equipment, vehicles, heavy earth-moving or other equipment, purchased or leased, or other such deliverables are herein denoted as 'Goods' and shall mean one-and-the-same.

8. ‘Services’ shall mean all services, either financial, advisory, consultative, labor, staff augmentation, construction, rehabilitation, restoration, repair, support or maintenance, communication, telephony, internet, TV or streaming, pest control, grounds maintenance, custodial and janitorial, street or paved surfaces cleaning, drain cleaning or otherwise where services are offered for consideration.
9. The County’s payment terms are Net 30 days. The County may consider Prompt Pay Terms if offered at least five percent (5%) of the total and not less than fifteen (15) days terms. A supplier simply offering such a discount does not constitute the County’s acceptance of such, and the County shall not be bound to the offer.
10. The Supplier shall transfer and deliver all goods or services described on the attached PO for the consideration set forth herein.
11. The Supplier shall only deliver goods and services as described on the PO and within the Scope of Work and the Supplier’s Bid Response.
12. The County holds no obligation to goods delivered or services rendered that were not ordered and specified in writing.
13. The Supplier shall not construe any verbal consent to purchase goods or services as valid.
14. The County does not accept substitutions of services or goods that do not comply with the Scope of Work or Specifications set forth in the Purchase Order, Contract or Agreement, unless mutually agreed in writing by both parties.
15. The County does not accept automatic renewals with the exception of monthly subscription services.
16. The County only pays for services rendered in arrears. The County does not pay for services not yet rendered.
17. The County does not pay deposits towards goods ordered. Exception may be given to custom cut (such as window coverings and blinds, or carpet, tile etc.), fabrication, decoration, or otherwise custom designed specifically for the County.
18. The County will accept backorders only if goods are out of stock and with prior written notice. Supplier’s shall ship all quantities that it has in stock and hold orders for backorders.
19. The County participates in Cooperative Purchasing Agreements, State of Georgia Statewide Contracts, and other state, local, Intergovernmental Agreements, Memorandums-of-Understanding and other such Agreements.
20. In all cases, the jurisdiction shall be the State of Georgia, County of Hall, for arbitration or other legalities
21. Delivery shall be made to the ship-to address(s) listed on the PO and within the time specified. The Supplier must note if multiple ship-to address are used and deliver goods to the appropriate ship-to address.
22. Risk of loss of the goods shall pass to The County upon inspection and acceptance only.
23. Receipt of goods or services does not constitute acceptance.
24. Title to the goods shall remain with the Supplier until acceptance by The County.
25. The Supplier warrants that the goods are merchantable and that the Supplier has a legal right to deliver the goods and services and as described herein.
26. The County shall have the right to inspect all goods or services at the time and place of delivery.
27. No right or interest in the contract shall be assigned by the Supplier without written permission of The County, and no delegation of any obligation owed or of the performance of any obligation by the Supplier shall be made without the written permission of the County. Any attempted assignment or delegation shall be wholly void and totally ineffective for all purposes unless made in conformity with this paragraph.

28. The County is exempt from Federal Excise Tax and Georgia Sales and Use Tax.
29. This issuance of this PO shall not violate the Code of Ethics and Conflicts of Interest for Public Officers and Employees for Government Service set forth in the 2020 Section 45-1020 *et seq.* of the Official Code of Georgia Annotated and the Official Code of Hall County Section 3.10.070 governing Ethics.
30. All goods and services supplied pursuant to this PO shall, unless otherwise noted, conform exactly to all of the descriptions, specifications, and attachments contained in the Bid Solicitation, Request for Proposals, Invitation for Bid, or other advertisements, upon which this order is based; and the terms, conditions, and specifications of the Bid Solicitation are incorporated herein by reference and made a part hereof.
31. Any and all media production, recordings, videos, photo negatives, positives, artwork, plates, engravings, and other printed media materials owned by The County shall become and remain County property and shall be delivered to The County upon request.
32. Invoices should be submitted to The County as described on the PO, and each PO Number and/or Contract Number must be shown on each invoice submitted.
33. In the event that this PO is issued with an attached Contract or Agreement, the terms and conditions of the latter shall govern in the event of any conflict with these terms and conditions.
34. The Supplier may be suspended, terminated, or debarred if it is determined that the Supplier has made false certification(s) or has violated such certification(s) by failure to carry out the requirements herein.
35. The Supplier certifies that the Supplier and/or any of its subcontractors have not been debarred, suspended, or declared ineligible by any agency of the County, or State of Georgia or as defined in the Federal Acquisition Regulation (FAR) 48 C.F.R. Ch. 1 Subpart 9.4.
36. The Supplier certifies that the Supplier is not currently engaged in an active or pending lawsuit or other grievance, injunction, or levy against the County.
37. Goods are Free-On-Board (F.O.B.) destination unless otherwise denoted, freight, shipping and delivery shall be pre-paid and added to the invoice as a separate line item.
38. The County does not pay late fees nor interest charges.
39. The Supplier shall charge the County the exact amount of freight, delivery, handling and insurance charges.
40. The County is not bound to any minimum or maximum quantity or dollar amount set by the Supplier
41. In the event there is a discrepancy between the unit price and extended price, the unit price shall govern.

[Signature Page Follows]

IN WITNESS WHEREOF, said Parties have hereunto affixed their signature and seal on the day, month, and year first above written:

BrightView Landscape Services, Inc.

By: Todd Chesnut

Title: Senior Vice President

Print Name: Todd Chesnut

Sworn to and subscribed before me this

14th Day of December, 2022

2022

Notary Public: Patricia Loudy

Notary commission expires: 12/04/2025

[Locus Sigilli]

Notary Public State of Florida
Patricia Loudy
My Commission
HH 132303
Exp. 12/04/2025

HALL COUNTY, GEORGIA

By: _____
Richard Higgins, Chairman
Hall County Board of Commissioners

Attestment: _____
County Clerk

Sworn to and subscribed before me this

_____ Day of _____,

Notary Public: _____

Notary commission expires: _____

[Locus Sigilli]

APPROVED AS TO FORM:

_____

Van Stephens, County Attorney, William Linkous, Deputy County Attorney, Justin Lawhon, Deputy County Attorney, or designee

#43-013 BID TAB & SCORING METHODOLOGY

Maximum Available Technical Score Points:	800
Plus Maximum Available Score Points:	200
Total Maximum Available Score Points:	1000

BrightView has the highest score points with 830 out of a possible 1,000.

Scores	BrightView	TriScapes, Inc	Russel Landscape	ACS Landscape	Yellowstone
Average Technical Scores	680.0052	511.1168	555.5587	671.111	542.2117
Add Average Cost Scores	150	100	150	150	50
Total Scores	**830.0052**	**611.1168**	**705.5587**	**821.111**	**592.2117**

Technical Scores	Evaluator 1	Evaluator 2	Evaluator 3	Totals	Average
BrightView	720.005	706.673	613.3375	2040.0155	680.0051667
TriScapes, Inc	560.0025	426.678	546.67	1533.3505	511.1168333
Russel Landscape	599.988	466.688	600	1666.676	555.5586667
ACS Landscape	720.005	693.328	600	2013.333	671.111
Yellowstone	666.6625	453.3	506.6725	1626.635	542.2116667

Schedule amended 12/15/2022

COST PER MONTH FOR SERVICES

Month	Calendar Year	Service Frequency	BrightView	TriScapes, Inc	Russel Landscape	ACS Landscape	Yellowstone
March	2023	Weekly	$ 12,183.00	$ 14,165.00	$ 11,935.00	$ 12,923.50	$ 14,545.00
April	2023	Weekly	$ 12,183.00	$ 14,165.00	$ 11,935.00	$ 12,923.50	$ 14,545.00
May	2023	Weekly	$ 12,183.00	$ 14,165.00	$ 11,935.00	$ 12,923.50	$ 14,545.00
June	2023	Weekly	$ 12,183.00	$ 14,165.00	$ 11,935.00	$ 12,923.50	$ 14,545.00
July	2023	Weekly	$ 12,183.00	$ 14,165.00	$ 11,935.00	$ 12,923.50	$ 14,545.00
August	2023	Weekly	$ 12,183.00	$ 14,165.00	$ 11,935.00	$ 12,923.50	$ 14,545.00
September	2023	Weekly	$ 12,183.00	$ 14,165.00	$ 11,935.00	$ 12,923.50	$ 14,545.00
October	2023	Weekly	$ 12,183.00	$ 14,165.00	$ 11,935.00	$ 12,923.50	$ 14,545.00
November	2023	Bi-Weekly	$ 12,183.00	$ 14,165.00	$ 11,935.00	$ 12,923.50	$ 14,545.00
December	2023	Bi-Weekly	$ 12,183.00	$ 14,165.00	$ 11,935.00	$ 12,923.50	$ 14,545.00
January	2024	Bi-Weekly	$ 12,183.00	$ 14,165.00	$ 11,935.00	$ 12,923.50	$ 14,545.00
February	2024	Bi-Weekly	$ 12,183.00	$ 14,165.00	$ 11,935.00	$ 12,923.50	$ 14,545.00
			$ 146,196.00	**$ 169,980.00**	**$ 143,220.00**	**$ 155,082.00**	**$174,540.00**

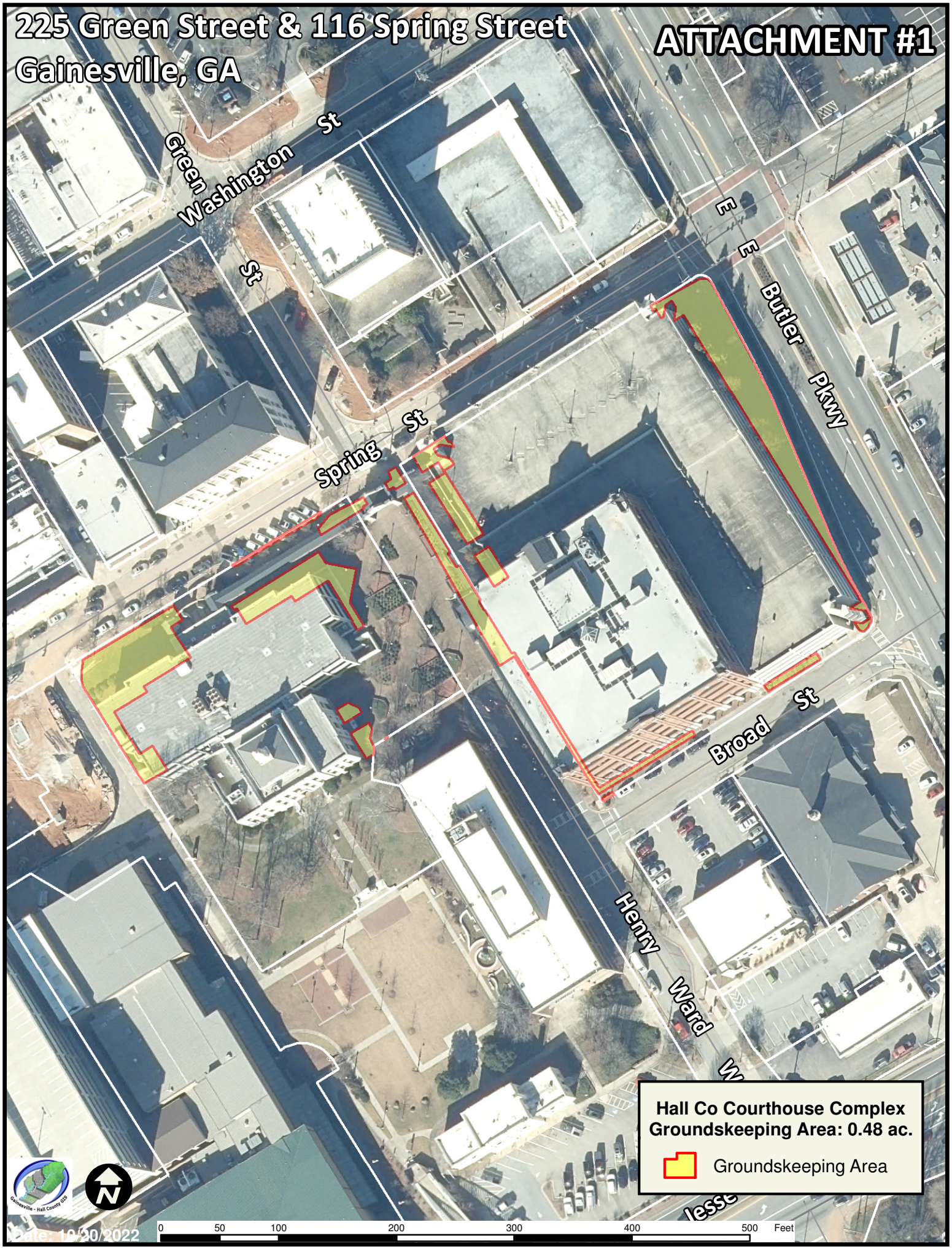
COST SCORES

BrightView	TriScapes, Inc	Russel Landscape	ACS Landscape	Yellowstone
RATING	**RATING**	**RATING**	**RATING**	**RATING**
GOOD = 75%	ADEQUATE = 50%	GOOD = 75%	GOOD = 75%	MARGINAL = 25%
SCORE	**SCORE**	**SCORE**	**SCORE**	**SCORE**
150	100	150	150	50

Request for Bid Packets	9
Bidder's from Hall County	3
Total Cost	**$ 146,196.00**


2859 & 2875 Browns Bridge Road
Gainesville, GA
ATTACHMENT #3
Saint Charles Ave
Browns Bridge Rd
Mcever Rd
Florence Dr
Hall Co Government Center
Groundskeeping Area: 16.4 ac.
Groundskeeping Area
Date: 10/20/2022
0 50 100 200 300 400 500 Feet


1280 & 1290 Athens Street
Gainesville, GA
ATTACHMENT #2
Lanier Pkwy
Athens St
Health Department Complex
Groundskeeping Area: 3.9 ac.
Groundskeeping Area
Date: 10/20/2022
0 50 100 200 300 400 500 Feet


225 Green Street & 116 Spring Street
Gainesville, GA
ATTACHMENT #1
Green St
Washington St
E E Butler Pkwy
Spring St
Broad St
Henry Ward
Hall Co Courthouse Complex
Groundskeeping Area: 0.48 ac.
Groundskeeping Area
Date: 10/20/2022
0 50 100 200 300 400 500 Feet

AGENDA ITEM

Corrections and Maintenance

REPORT TO: **Work Session (01/09/23)**

REPORT TO: **Voting Meeting (01/12/23)**

ITEM NO: 738/2022

SUBJECT: Approve the purchase of five (5) Sno-Way 32 Contractor Series Snow Plows with Attachments to Interstate Truck Equipment, Inc. of College Park, GA, in the amount of $54,208.05.

Meetings:

Work Session Date: 01/09/23

Voting Meeting Date: 01/12/23

Executive Summary:

Presenter: WD

Recommendation:
Approve

Purpose of Request:
To purchase five (5) snow plow attachments, Sno way 32 Contractor Series 8'6.

History:
Regular equipment replacement item.

Facts and Issues:
Michael Johnson, Fleet Maintenance, contacted various vendors for quotes for these snow plow attachments. The only vendor to return any quote for these was Interstate Truck Equipment, Inc., College Park, GA. Road Maintenance is requesting these.

Options:

Funding Requested	$ 54,208.05
Are funds within current budget?	Yes
Source of Funds	Capital Projects Fund
Does the action involve a Resolution, Ordinance, Contract, Agreement, etc.?	Yes
Has it been reviewed by the County Attorney?	Yes
Is there a deadline for this item?	

Approvals:

Buyer	Submit	Purchasing	Budget
DH	WD	AP	TS
Finance	**Attorney**	**Administration**	**Clerk**
WG	WLI	CR	JR

Attachments:

Financial Supplement
Interstate Truck Equipment, Inc. quote and requisition

HALL COUNTY BOARD OF COMMISSIONERS
FINANCIAL SUPPLEMENT REPORT

AGENDA ITEM 738/2022

Funds Requested: $ 54,208.05

Request Budgeted: Yes

Proposed Source of Funding:

Capital Projects Fund

Budget Transfer Requested:

No

Funding Source Items:

Fiscal Year	Fund	Division	Account	Amount
2023	005 - CAPITAL PROJECTS	531 - ROAD MAINTENANCE	6007 - OTHER EQUIPMENT	$54,208.05

Budget Transfer Items:

Additional Information/Comments:

Contact for Questions: WD

Phone: 678-989-8540

REQUISITION 25423

REQUESTED	REQUIRED	*APPROVAL GRP* 531	BUYER
12/06/22	12/07/22	ROAD MAINT - CAPITAL	DEBRA HOWINGTON

SHIP TO 131
HALL COUNTY ROAD MAINTENANCE
1670 BARBER ROAD
GAINESVILLE, GEORGIA 30507
ATTN: JIMMY HIGHTOWER/LADETTE SMITH

VENDOR 00014917
INTERSTATE TRUCK EQUIPMEN
2740 SULLIVAN ROAD
P.O. BOX 87457
COLLEGE PARK GA 30337

CAPITAL PURCHASE OF 5 F-250 SNOW PLOWS ATTACHMENTS

FREIGHT

LN/ST	COMMODITY	STOCK NO	QUANTITY	UOM	UNIT PRICE	EXTENSION/ TAX/TRADE-IN
01			5.00	EA	10,841.6100	54,208.05
A	CAPITAL PURCHASE OF 5 F-250 SNOW PLOWS ATTACHMENTS - SNOWAY 32 CONTRACTOR SERIES 8'6					0.00
						0.00
					TOTAL PRICE	54,208.05

DEPARTMENT	ACCOUNT	PROJECT	ACCOUNT	CHARGE AMOUNT
531	6007			54,208.05

REQUISITION TOTAL 54,208.05

PAGE TOTAL 54,208.05

Interstate Truck Equipment, Inc.

2740 Sullivan Rd. • P. O. Box 87457 • College Park, Georgia 30337
(404) 763-3411 • Fax (404) 763-3447 • www.interstatetruck.com

August 31, 2022

Mr. Dusty Hall
Hall County

Dear Mr. Hall:

The following is a confirmation of our telephone conversation concerning:

TGSO5B Salt Dog Controller kit
Kit Power Cable Replaces 3008615
Wire Harness w/Vibrator Connection
Controller, TGS W/Vibrator Switch 09/10

Price: $ 479.61 each
Price does not include state sales tax or FET.

Thank you for this opportunity to quote this equipment. I look forward to hearing from you soon.

Sincerely,

Dean Whitwood
Vice President

DW:mw

Interstate Truck Equipment, Inc.

2740 Sullivan Rd. • P. O. Box 87457 • College Park, Georgia 30337
(404) 763-3411 • Fax (404) 763-3447 • www.interstatetruck.com

August 31, 2022

Mr. Dusty Hall
Hall County

Dear Mr. Hall:

The following is a confirmation of our telephone conversation concerning:

Snoway 32 Contractor Series 8'6	
Uninstalled Price:	$ 9,562.00 each
Freight Price:	$ 600.00 each
This freight price is if delivered to our location.	
Additional freight will be added if shipped to Hall County	
Option:	
Wireless controller, add	$ 200.00 each

This price is good for 2020, 2022 and 2023 models

Thank you for the opportunity to quote this equipment. I look forward to hearing from you soon.

Sincerely,

Dean Whitwood
Vice President

DW:mw

AGENDA ITEM

County Attorney

REPORT TO: **Work Session (01/09/23)**

REPORT TO: **Voting Meeting (01/12/23)**

ITEM NO: 742/2022

SUBJECT: Approve the First Amendment to the Sublease Agreement with Sunrise Cove SMI Westrec, LLC so as to extend the Sunrise Cove Marina lease until July 31, 2036; and approve the Consent of Lessor so as to allow Sunrise Cove SMI Westrec, LLC to sublease a small portion of the Marina to its subsidiary for tax purposes, subject to the express approval of both items by the Army Corps of Engineers, and subject to the review and approval of the County Attorney; and allow the Chairman to execute all documents necessary to complete both transactions.

Meetings:

Work Session Date: 01/09/23 **Voting Meeting Date:** 01/12/23

Executive Summary:

Presenter: WJLI-DCA

Recommendation:
Approval

Purpose of Request:
To approve the First Amendment to Sublease Agreement with Sunrise Cove SMI Westrec, LLC so as to extend the Sunrise Cove Marina lease until July 31, 2036, and approve the Consent of Lessor so as to allow Sunrise Cove SMI Westrec, LLC to sublease a small portion of the Marina to its subsidiary for tax purposes, subject to the express approval of both items by the Army Corps of Engineers, and subject to the review and approval of the County Attorney, and allow the Chairman to execute all documents necessary to complete both transactions.

History:

The Army Corps of Engineers leased the Sunrise Cove Marina Property to the County on July 31, 1998, and that lease (as extended) will expire on July 31, 2036. The County leased the Marina property to PS Marinas 3, LP on February 12, 1999. With the County's approval, PS Marinas 3, LP assigned its rights under the lease to Sunrise Cove SMI Westrec, LLC effective February 1, 2022. On January 13, 2022 the County extended the lease of the Marina property until July 31, 2029.

Facts and Issues:

Options:

The County's lease of the Sunrise Marina property expires on July 31, 2036. The County's sublease of the Marina to Sunrise Cove SMI Westrec, LLC currently expires on July 31, 2029. Sunrise Cove SMI Westrec, LLC requests that the sublease be extended until July 31, 2036 so as to be co-terminus with the County's underlying lease. In addition, Sunrise Cove SMI Westrec, LLC wishes to sublease one dock and one other floating platform to its subsidiary corporation so as to allow the subsidiary to operate in such a manner that its income and assets will satisfy the REIT income and assets tests of the I.R.S. Code. Both transactions are subject to the express approval of the Army Corps of Engineers.

Approve or deny the First Amendment to Sublease Agreement containing the lease extension. Approve or deny the Consent of Lessor so as to allow the partial sublease of the Marina property.

Funding Requested	$ 0.00
Are funds within current budget?	No
Source of Funds	N/A
Does the action involve a Resolution, Ordinance, Contract, Agreement, etc.?	Yes
Has it been reviewed by the County Attorney?	Yes
Is there a deadline for this item?	2023-01-31

Approvals:

Submit	Budget	Finance	Attorney
WLI	TS	WG	WLI
Administration		**Clerk**	
CR		JR	

Attachments:

Subsublease of 2-1-2022
Consent of Lessor Cover Letter
Consent of Lessor Final
First Amendment to Sublease Final

HALL COUNTY BOARD OF COMMISSIONERS
FINANCIAL SUPPLEMENT REPORT

AGENDA ITEM 742/2022

Funds Requested: $ 0.00

Request Budgeted: No

Proposed Source of Funding:

N/A

Budget Transfer Requested:

No

Funding Source Items:

Budget Transfer Items:

Additional Information/Comments:

Contact for Questions: WJLI-CA

Phone: 770-297-2686

FACILITIES LEASE AGREEMENT

FOR SUNRISE COVE MARINA

DATED AS OF

FEBRUARY 1, 2022

BETWEEN

SUNRISE COVE SMI WESTREC, LLC,
a Delaware limited liability company

AS LESSOR

AND

SUNRISE SMI OPCO, LLC,
a Delaware limited liability company

AS LESSEE

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Appendix A - Definitions

FACILITIES LEASE AGREEMENT

This **FACILITIES LEASE AGREEMENT** (hereinafter called "**Lease**"), made as of the 1st day of February 2022 (the "**Effective Date**"), by and between SUNRISE COVE SMI WESTREC, LLC, a Delaware limited liability company (hereinafter called "**Lessor**"), and SUNRISE SMI OPCO, LLC, a Delaware limited liability company (hereinafter called "**Lessee**"), provides as follows.

W I T N E S S E T H :

Lessor has a leasehold interest under the Master Lease (as defined below) in the Leased Property (as defined below) and desires to lease to Lessee, and Lessee desires to lease from Lessor, the Leased Property on the terms set forth herein.

NOW, THEREFORE, Lessor and Lessee, intending to be legally bound, agree that Lessor, in consideration of the payment of rent by Lessee to Lessor, the covenants and agreements to be performed by Lessee, and upon the terms and conditions hereinafter stated, does hereby rent and lease unto Lessee, and Lessee does hereby rent and lease from Lessor, the Leased Property (as defined below).

Article I.

1.1 **Leased Property.** The Leased Property (herein so called) is comprised of Lessor's right, title and interest (whether fee or leasehold) in and to the following:

(a) a designated portion of the parcel or parcels of real property leased under the Master Lease with the applicable subleased portion thereof specifically depicted on the shaded area of the diagram attached hereto as Exhibit A (as specifically depicted the "**Land**");

(b) all buildings, structures, fixtures and other improvements of every kind including, but not limited to, alleyways, driveways, drive aisles, access areas, connecting tunnels, sidewalks, utility pipes, conduits and lines (on-site and offsite), parking areas, parking rights and roadways appurtenant to such buildings and structures presently situated upon the Land (collectively, the "**Leased Improvements**"); and

(c) all easements, rights and appurtenances relating to the Land and the Leased Improvements.

THE LEASED PROPERTY IS DEMISED IN ITS PRESENT CONDITION WITHOUT REPRESENTATION OR WARRANTY (EXPRESSED OR IMPLIED) BY LESSOR AND SUBJECT TO ALL THE RIGHTS OF PARTIES IN POSSESSION, AND TO THE EXISTING STATE OF TITLE INCLUDING ALL COVENANTS, CONDITIONS, RESTRICTIONS, EASEMENTS AND OTHER MATTERS OF RECORD INCLUDING ALL APPLICABLE LEGAL REQUIREMENTS, THE LIEN OF FINANCING INSTRUMENTS, MORTGAGES, DEEDS OF TRUST AND SECURITY DEEDS, AND INCLUDING OTHER MATTERS WHICH WOULD BE DISCLOSED BY AN INSPECTION OF THE LEASED PROPERTY OR BY AN ACCURATE SURVEY THEREOF.

1.2 **Term.** The term of the Lease (the "**Term**") is set forth on Exhibit B attached hereto.

Article II.

2.1 **Definitions.** For all purposes of this Lease, except as otherwise expressly provided or unless the context otherwise requires, the terms defined in this Article have the meanings assigned to them in Appendix A.

Article III.

3.1 **Rent.** Lessee will pay, without offset or deduction, to Lessor in lawful money of the United States of America which shall be legal tender for the payment of public and private debts, in immediately available funds, at Lessor's address set forth in Article XXXII hereof or at such other place or to such other Person, as Lessor from time to time may designate in a Notice, all Base Rent, Percentage Rent and Additional Charges, during the Term, as follows:

(a) Base Rent: Lessee shall pay a monthly sum in the amounts set forth on Exhibit C-1 hereto as the "**Base Rent**" for the Leased Property, payable in advance in equal, consecutive monthly installments, on or before the first day of each calendar month during the Term; provided, however, that the first and last monthly payments of Base Rent shall be prorated daily as to any partial month;

(b) Percentage Rent: If applicable, Lessee shall pay percentage rent ("**Percentage Rent**") in accordance with the terms and conditions of the Master Lease;

(c) Master Lease Expenses. If the Leased Property (or any portion thereof) is subject to a Master Lease, Lessee shall pay to Lessor any payments required to be made by Lessor under the Master Lease to the extent that such payments are attributable to the Leased Premises, including, without limitation, any percentage rent based on gross receipts from the Leased Premises (the "**Ground Lease Expenses**");

(d) Additional Charges. In addition to the Base Rent, Percentage Rent, and Ground Lease Expenses (if applicable) (i) Lessee also will pay and discharge as and when due and payable all other amounts, liabilities, obligations and Impositions that Lessee assumes or agrees to pay under this Lease, including any and all common area and maintenance expenses associated with the Leased Property in accordance with Lessee's Allocable Share (as applicable) and (ii) in the event of any failure on the part of Lessee to pay any of those items referred to in the preceding clause (i), Lessee also will promptly pay and discharge every fine, penalty, interest and cost that may be added for non-payment or late payment of such items (the items referred to in the foregoing clauses (i) and (ii) being additional rent hereunder and being referred to herein collectively as the "**Additional Charges**"). Lessor shall have all legal, equitable and contractual rights, powers and remedies provided either in this Lease or by statute or otherwise in the case of non-payment of the Additional Charges as in the case of non-payment of the Base Rent. If any installment of Base Rent, Percentage Rent or Additional Charges (but only as to those Additional Charges that are payable directly to Lessor) shall not be paid on its due date (with respect to regular payments of Base Rent and Percentage Rent) or within ten (10) days after receipt of written notice thereof (with respect to any Additional Charges), Lessee will pay Lessor

on demand, as Additional Charges, a late charge (to the extent permitted by law) computed at the Overdue Rate on the amount of such installment, from the due date of such installment to the date of payment thereof. To the extent that Lessee pays any Additional Charges to Lessor pursuant to any requirement of this Lease, Lessee shall be relieved of its obligation to pay such Additional Charges to the entity to which they would otherwise be due, and Lessor shall pay same from monies received from Lessee;

(e) Notwithstanding the foregoing, it is acknowledged by Lessor and Lessee that Lessor shall continue to be obligated to pay percentage rent to the Master Lessor on all adjusted gross sales and revenues earned by Lessee or Lessor on the Leased Property as required under the Master Lease irrespective of the amount of Rent collected by Lessor under this Lease; provided, however, that in order to avoid duplication, the Rent paid by Lessee to Lessor under this Lease shall not be included in gross receipts and thus will have no effect on the amount of rent payable to Master Lessor under the Master Lease. Lessee specifically agrees to comply with all obligations set forth in the Master Lease regarding keeping financial records and making its financial records available to representatives of the Master Lessor for inspection or audit.

3.2 **Rent Payable Without Deduction.** The Rent shall be paid so that this Lease shall yield to Lessor the full amount of the installments of Base Rent, Percentage Rent and Additional Charges throughout the Term, as applicable, and all as more fully set forth in Article V, but subject to any other provisions of this Lease that expressly provide for adjustment or abatement of Rent or other charges to be paid or performed by Lessor.

3.3 **Books and Records.** Lessee shall keep full and adequate books of account and other records reflecting the results of operation of the Leased Property on an accrual basis, all in accordance with generally accepted accounting principles to the extent applicable and the obligations of Lessee under this Lease. The books of account and all other records relating to or reflecting the operation of the Leased Property shall be kept either at Lessee's executive offices for at least four (4) years and shall be available to Lessor and its representatives and its auditors or accountants, at all reasonable times for copying, examination, audit, inspection, and transcription. In addition, Lessee shall comply with any requirements under the Master Lease relating to financial records and accounting to the full extent that such requirements apply to the Leased Property, or the business conducted by Lessee on the Leased Property.

3.4 **Confirmation of Percentage Rent.**

(a) Officer's Certificate. If this Lease requires that Percentage Rent be paid, Lessee shall submit to Lessor, concurrently with each payment of Percentage Rent, an Officer's Certificate (herein so called) setting forth the calculation of such payment of Percentage Rent.

(b) Records Supporting Percentage Rent. If this Lease requires the payment of Percentage Rent, Lessee shall utilize, or cause to be utilized, an accounting system for the Leased Property in accordance with generally accepted accounting principles, that will accurately record all data necessary to compute Percentage Rent, and Lessee shall retain, for at least four (4) years after the expiration of each Fiscal Year, reasonably adequate

records conforming to such accounting system showing all data necessary to compute Percentage Rent for the applicable Fiscal Years. Lessor, at its expense (except as provided herein below), shall have the right from time to time by its accountants or representatives to audit the information that formed the basis for the data set forth in any Officer's Certificate provided during the preceding four (4) Fiscal Years under Section 3.4(a) and, in connection with such audits, to examine all Lessee's records (including supporting data and sales and excise tax returns) reasonably required to verify Percentage Rent (and for no other purpose), subject to any prohibitions or limitations on disclosure of any such data under Legal Requirements. If any such audit discloses a deficiency in the payment of Percentage Rent, and either Lessee agrees with the result of such audit or the matter is otherwise determined or compromised, Lessee shall forthwith pay to Lessor the amount of the deficiency, as finally agreed or determined, together with interest at the Overdue Rate from the date when said payment should have been made to the date of payment thereof; provided, however, that as to any audit that is commenced more than one (1) year after the date Percentage Rent for any Fiscal Year is reported by Lessee to Lessor, the deficiency, if any, with respect to such Percentage Rent shall bear interest at the Overdue Rate only from the date such determination of deficiency is made unless such deficiency is the result of gross negligence or willful misconduct on the part of Lessee, in which case interest at the Overdue Rate will accrue from the date such payment should have been made to the date of payment thereof. If any such audit discloses that the Percentage Rent actually due from Lessee for any Fiscal Year exceeds that reported by Lessee by more than four percent (4%), Lessee shall pay the cost of such audit and examination. Any proprietary information obtained by Lessor pursuant to the provisions of this Section shall be treated as confidential, except that such information may be used, subject to appropriate confidentiality safeguards, in any litigation between the parties and except further that Lessor may disclose such information to prospective lenders. The obligations of Lessor and Lessee contained in this Section shall survive the expiration or earlier termination of this Lease.

3.5 **Capital Projects.** The selection of all design professionals and contractors for capital projects performed on the Leased Property shall be subject to the approval of Lessor.

Article IV.

4.1 **Payment of Impositions.** Subject to Article XII relating to permitted contests (a) Lessee will pay, or cause to be paid, either Lessee's Allocable Share of or all Impositions (including Capital Impositions), as applicable, before any fine, penalty, interest or cost may be added for non-payment, such payments to be made directly to the taxing or other authorities where feasible, and will promptly furnish to Lessor copies of official receipts or other satisfactory proof evidencing such payments and (b) Lessee's obligation to pay such Impositions shall be deemed absolutely fixed upon the date such Impositions become a lien upon the Leased Property or any part thereof. If any such Imposition may, at the option of the taxpayer, lawfully be paid in installments (whether or not interest shall accrue on the unpaid balance of such Imposition), Lessee may exercise the option to pay the same (and any accrued interest on the unpaid balance of such Imposition) in installments and in such event, shall pay such installments during the Term (subject to Lessee's right of contest pursuant to the provisions of Article XII) as the same respectively become due and before any fine, penalty, premium, further interest or cost may be added thereto.

Lessor, at its expense, shall, to the extent required or permitted by applicable law, prepare and file all tax returns in respect of Lessor's net income, gross receipts, sales and use, single business, transaction privilege, rent, ad valorem, and taxes on its capital stock, and Lessee, at its expense, shall, to the extent required or permitted by applicable laws and regulations, prepare and file all other tax returns and reports in respect of any Imposition as may be required by governmental authorities. If any refund shall be due from any taxing authority in respect of any Imposition paid by Lessee, the same shall be paid over to or retained by Lessee if no Event of Default shall have occurred hereunder and be continuing. If an Event of Default shall have occurred and be continuing, any such refund shall be paid over to or retained by Lessor. Any such funds retained by Lessor due to an Event of Default shall be applied as provided in Article XVI. Lessor and Lessee shall, upon request of the other, provide such data as is maintained by the party to whom the request is made with respect to the Leased Property as may be necessary to prepare any required returns and reports. Lessee shall file all personal property tax returns in such jurisdictions where it is legally required to so file. Lessor, to the extent it possesses the same, and Lessee, to the extent it possesses the same, will provide the other party, upon request, with cost and depreciation records necessary for filing returns for any property classified as personal property. Where Lessor is legally required to file personal property tax returns, Lessee shall provide Lessor with copies of assessment Notices in sufficient time for Lessor to file a protest. Notwithstanding anything to the contrary contained herein, if Lessor so elects in its sole discretion, it may directly pay either Lessee's Allocable Share of or all Impositions (including Capital Impositions), as applicable, before any fine, penalty, interest or cost may be added for non-payment and then seek reimbursement thereafter from Lessee.

4.2 **Notice of Impositions.** Lessor shall give prompt Notice to Lessee of all Impositions payable by Lessee hereunder of which Lessor at any time has knowledge, provided that Lessor's failure to give any such Notice shall in no way diminish Lessee's obligations hereunder to pay such Impositions, but such failure shall obviate any default hereunder for a reasonable time after Lessee receives Notice of any Imposition which it is obligated to pay during the first taxing period applicable thereto.

4.3 **Adjustment of Impositions.** Impositions payable by Lessee imposed in respect of the tax-fiscal period during which the Term terminates shall be adjusted and prorated between Lessor and Lessee, whether or not such Imposition is imposed before or after such termination, and Lessee's obligation to pay its prorated share thereof after termination shall survive such termination.

4.4 **Utility Charges.** Lessee will be solely responsible for obtaining and maintaining utility services to the Leased Property and will pay or cause to be paid all charges for electricity, gas, oil, water, sewer and other utilities used in the Leased Property during the Term and shall, as Additional Charges, pay to Lessor Lessee's Allocable Share of such costs to the extent such charges are billed to or paid by Lessor.

4.5 **Insurance Premiums.** To the extent provided in Section 13.1, Lessee will pay or cause to be paid in a timely manner all premiums for the insurance coverages required to be maintained by Lessee under Articles VIII and XIII and shall, as Additional Charges, pay to Lessor Lessee's Allocable Share of such costs to the extent such charges are billed to or paid by Lessor.

Article V.

5.1 **No Termination, Abatement, etc.** Except as otherwise specifically provided in this Lease, Lessee, to the extent permitted by law, shall remain bound by this Lease in accordance with its terms and shall neither take any action without the written consent of Lessor to modify, surrender or terminate the same, nor seek nor be entitled to any abatement, deduction, defendant or reduction of the Rent, or setoff against the Rent, nor shall the obligations of Lessee be otherwise affected by reason of (a) any damage to, or destruction of, the Leased Property or any portion thereof from whatever cause or any Taking of the Leased Property or any portion thereof, (b) any claim which Lessee has or might have against Lessor by reason of any default or breach of any warranty by Lessor under this Lease or any other agreement between Lessor and Lessee, or to which Lessor and Lessee are parties, (c) any bankruptcy, insolvency, reorganization, composition, readjustment, liquidation, dissolution, winding up or other proceedings affecting Lessor or any assignee or transferee of Lessor, or (d) for any other cause whether similar or dissimilar to any of the foregoing other than a discharge of Lessee from any such obligations as a matter of law. Except in the event of a constructive eviction of Lessee from the Leased Property for any reason other than an Event of Default, Lessee hereby specifically waives all rights, arising from any occurrence whatsoever, which may now or hereafter be conferred upon it by law to (1) modify, surrender or terminate this Lease or quit or surrender the Leased Property or any portion thereof, or (2) entitle Lessee to any abatement, reduction, suspension or defendant of the Rent or other sums payable by Lessee hereunder, except as otherwise specifically provided in this Lease. The obligations of Lessee hereunder shall be separate and independent covenants and agreements and the Rent and all other sums payable by Lessee hereunder shall continue to be payable in all events unless the obligations to pay the same shall be terminated pursuant to the express provisions of this Lease or by termination of this Lease other than by reason of an Event of Default.

5.2 **Abatement Procedures.** In the event of a partial Taking of the Leased Property as described in Section 15.4, the Lease shall not terminate with respect to the affected Leased Property, but the Base Rent shall be abated in the manner and to the extent that is fair, just and equitable to both Lessee and Lessor, taking into consideration, among other relevant factors, the number of usable units, the amount of square footage, or the revenues affected by such partial Taking.

Article VI.

6.1 **Ownership of the Leased Property.** Lessee acknowledges that the Leased Property (including improvements or alterations incorporated into the Leased Property after the Effective Date) is the property of Lessor either in fee or by leasehold interest and that Lessee has only the right to the possession and use of the Leased Property upon the terms and conditions of this Lease.

6.2 **Lessee's Personal Property.** Lessee will acquire, own, maintain and replace, at Lessee's cost and expense, throughout the Term such Inventory as is required to operate the Leased Property in the manner contemplated by this Lease. Lessee may (and shall as provided herein below), at its expense, install, affix or assemble or place on any parcels of the Land or in any of the Leased Improvements, any items of personal property (including Inventory) owned by Lessee. Lessee shall provide Lessor with an accurate list of all such items of Lessee's personal property

(collectively, including Inventory, the "**Lessee's Personal Property**") on an annual basis beginning with the first anniversary of the Effective Date (and on each anniversary thereafter) and upon expiration or termination of this Lease. Lessee may, subject to the first sentence of this Section 6.2 and the conditions set forth below, remove any of Lessee's Personal Property set forth on such list at any time during the Term or upon the expiration or any prior termination of the Term. All of Lessee's Personal Property, other than Inventory, not removed by Lessee within sixty (60) days following the expiration or earlier termination of the Term shall be considered abandoned by Lessee and may be appropriated, sold, destroyed or otherwise disposed of by Lessor without first giving Notice thereof to Lessee, without any payment to Lessee and without any obligation to account therefor. Lessee will, at its expense, restore the Leased Property to the condition required by Section 9.1 (d), including repair of all damage to the Leased Property caused by the removal of Lessee's Personal Property, whether effected by Lessee or Lessor. Notwithstanding anything to the contrary contained herein, Inventory may be appropriated, sold, destroyed or otherwise disposed of by Lessor at any time by Lessor following the expiration or earlier termination of the Term but only after three (3) Business Days' prior notice is delivered to Lessee.

Upon the expiration or earlier termination of the Term, Lessor shall have the option to purchase all (but not less than all) of Lessee's Personal Property on hand at the Leased Property at the time of such expiration or termination for a sale price (payable in cash on the expiration date of this Lease) equal to the fair market value thereof (or cost, in the case of Inventory).

Except as hereinafter set forth, Lessee may make such financing arrangements, title retention agreements, leases or other agreements with respect to Lessee's Personal Property as is customary and commercially reasonable provided that Lessee first advises Lessor of any such arrangement and such arrangement expressly provides that in the event of Lessee's default thereunder, Lessor (or its designee) may assume Lessee's obligations and rights under such arrangement.

6.3 **Lessor's Lien.** To the fullest extent permitted by applicable law, Lessor is granted a lien and security interest on all Lessee's Personal Property now or hereinafter placed in or upon the Leased Property, and such lien and security interest shall remain attached to such Lessee's Personal Property until payment in full of all Rent and satisfaction of all of Lessee's obligations hereunder that are outstanding on such date; provided, however, Lessor shall subordinate its lien and security interest to that of any non-Affiliate of Lessee which finances such Lessee's Personal Property or any non-Affiliate conditional seller of such Lessee's Personal Property, the terms and conditions of such subordination to be satisfactory to Lessor in the exercise of reasonable discretion. Lessee shall, upon the request of Lessor, execute such financing statements or other documents or instruments reasonably requested by Lessor to perfect the lien and security interests herein granted.

Article VII.

7.1 **Leased Property.** Lessee acknowledges receipt and delivery of possession of the Leased Property as of the Commencement Date and that Lessee has examined and otherwise has knowledge of the condition of the Leased Property and has found the same to be satisfactory for its purposes hereunder. Lessee is leasing the Leased Property "as is" in its present condition.

Lessee waives any claim or action against Lessor in respect of the condition of the Leased Property. EXCEPT AS OTHERWISE SPECIFICALLY PROVIDED HEREIN TO THE CONTRARY, LESSOR MAKES NO WARRANTY OR REPRESENTATION, EXPRESS OR IMPLIED, IN RESPECT OF THE LEASED PROPERTY, OR ANY PART THEREOF, EITHER AS TO ITS FITNESS FOR USE, DESIGN OR CONDITION FOR ANY PARTICULAR USE OR PURPOSE OR OTHERWISE, AS TO THE QUALITY OF THE MATERIAL OR WORKMANSHIP THEREIN, LATENT OR PATENT, IT BEING AGREED THAT LESSEE TAKES THE LEASED PROPERTY SUBJECT TO ALL SUCH RISKS. LESSEE ACKNOWLEDGES THAT THE LEASED PROPERTY HAS BEEN INSPECTED BY LESSEE AND IS SATISFACTORY TO IT.

7.2 **Use of the Leased Property.**

(a) Lessee covenants that it will (with Lessor's commercially reasonable cooperation to the extent necessary and required) proceed with all due diligence and will exercise its commercially reasonable efforts to obtain and to maintain all approvals needed to use and operate the Leased Property under applicable local, state and federal law.

(b) Lessee shall use, or cause to be used, the Leased Property only for such uses outlined on Exhibit B, and for such other uses as may be necessary or incidental to such use or such other use as otherwise approved by Lessor (collectively, the "**Permitted Uses**"). Lessee shall not use the Leased Property or any portion thereof for any other use without the prior written consent of Lessor, which consent may be granted, denied or conditioned in Lessor's sole and absolute discretion. No use shall be made or permitted to be made of the Leased Property, and no acts shall be done, which will cause the cancellation or increase the premium of any insurance policy covering the Leased Property or any part thereof (unless another adequate policy satisfactory to Lessor is available and Lessee pays any premium increase), nor shall Lessee sell or permit to be kept, used or sold in or about the Leased Property any article which may be prohibited by law or fire underwriter's regulations. Lessee shall, at its sole cost, comply with all of the requirements pertaining to the Leased Property of any insurance board, association, organization or company necessary for the maintenance of insurance, as herein provided, and covering the Leased Property and Lessee's Personal Property.

(c) Lessee covenants and agrees that during the Term it will (1) operate continuously the Leased Property for the Permitted Uses subject to Unavoidable Occurrences, (2) maintain appropriate certifications and licenses for such use, subject to Unavoidable Occurrences and (3) seek to maximize the Gross Revenues generated therefrom consistent with sound business practices and Lessee's concurrent goal of maximizing its net operating income therefrom subject to Unavoidable Occurrences.

(d) Lessee shall neither suffer nor permit the Leased Property or any portion thereof to be used in such a manner as (1) materially impairs Lessor's title thereto or to any portion thereof, or (2) reasonably makes possible a claim or claims of adverse usage or adverse possession by the public, as such, or of implied dedication of the Leased Property or any portion thereof, except as necessary in the ordinary and prudent operation of the Leased Property.

Article VIII.

8.1 **Compliance with Legal and Insurance Requirements, etc.** Lessee, at its expense, will promptly (a) comply with all applicable Legal Requirements and Insurance Requirements in respect of the use, operation, maintenance, repair and restoration of the Leased Property, and (b) procure, maintain and comply with all appropriate licenses and other authorizations required for any use of the Leased Property and Lessee's Personal Property then being made, and for the proper operation and maintenance of the Leased Property or any part thereof.

8.2 **Legal Requirement Covenants.** Lessee covenants and agrees that Lessee shall not use the Leased Property and Lessee's Personal Property for any unlawful purpose, and that Lessee shall use commercially reasonable efforts to avoid any unlawful use of the Leased Property by others. Lessee shall acquire and maintain all appropriate licenses, certifications, permits and other authorizations and approvals needed to operate the Leased Property in its customary manner for the Permitted Uses, and any other lawful use conducted on the Leased Property as may be permitted from time to time hereunder, subject to unavoidable circumstances. Lessee further covenants and agrees that Lessee's use of the Leased Property and maintenance, alteration, and operation of the same, and all parts thereof, shall at all times conform to all Legal Requirements, unless the same are finally determined by a court of competent jurisdiction to be unlawful (and Lessee shall use reasonable efforts to cause all such sub-tenants, invitees or others to so comply with all Legal Requirements). Lessee may, however, upon prior Notice to Lessor, contest the legality or applicability of any such Legal Requirement or any licensure or certification decision if Lessee maintains such action in good faith, with due diligence, without prejudice to Lessor's rights hereunder, and at Lessee's sole expense. If by the terms of any such Legal Requirement compliance therewith pending the prosecution of any such proceeding may legally be delayed without the incurrence of any lien, charge or liability of any kind against the Leased Property or Lessee's leasehold interest therein and without subjecting Lessee or Lessor to any liability, civil or criminal, for failure so to comply therewith, Lessee may delay compliance therewith until the final determination of such proceeding.

8.3 **Environmental Covenants.** Lessor and Lessee (in addition to, and not in diminution of, Lessee's covenants and undertakings in Sections 8.1 and 8.2 hereof) covenant and agree as follows:

(a) Lessee agrees to give Lessor prompt written Notice of (1) all Environmental Liabilities when known; (2) all pending, threatened or anticipated Proceedings when known, and all Notices, demands, requests or investigations, relating to any Environmental Liability or relating to the issuance, revocation or change in any Environmental Authorization required for operation of the Leased Property; and (3) all Releases at, on, in, under or in any way affecting the Leased Property when known, or any Release known by Lessee at, on, in or under any property adjacent to the Leased Property.

(b) Lessee hereby agrees to defend, indemnify and save harmless any and all Lessor Indemnified Parties from and against any and all Environmental Liabilities except to the extent caused by the gross negligence or willful misconduct of Lessor.

(c) If any Proceeding is brought against any Indemnified Party in respect of an Environmental Liability with respect to which such Indemnified Party may claim indemnification under this Section, the Indemnifying Party, upon request, shall at its sole expense resist and defend such Proceeding, or cause the same to be resisted and defended by counsel designated by the Indemnified Party and approved by the Indemnifying Party, which approval shall not be unreasonably withheld; provided, however, that such approval shall not be required in the case of defense by counsel designated by any insurance company undertaking such defense pursuant to any applicable policy of insurance. Each Indemnified Party shall have the right to employ separate counsel in any such Proceeding and to participate in the defense thereof, but the fees and expenses of such counsel will be at the sole expense of such Indemnified Party unless such counsel has been approved by the Indemnifying Party, which approval shall not be unreasonably withheld. The Indemnifying Party shall not be liable for any settlement of any such Proceeding made without its consent, which shall not be unreasonably withheld, but if settled with the consent of the Indemnifying Party, or if settled without its consent (if its consent shall be unreasonably withheld), or if there be a final, non-appealable judgment for an adversary party in any such Proceeding, the Indemnifying Party shall indemnify and hold harmless the Indemnified Parties from and against any liabilities incurred by such Indemnified Parties by reason of such settlement or judgment.

(d) If at any time any Indemnified Party has reason to believe circumstances exist which could reasonably result in an Environmental Liability, upon reasonable prior written notice to Lessee stating such Indemnified Party's basis for such belief, an Indemnified Party shall be given immediate access to the Leased Property (including, but not limited to, the right to enter upon, investigate, drill wells, take soil borings, excavate, monitor, test, cap and use available land for the testing of remedial technologies), Lessee's employees, and to all relevant documents and records regarding the matter as to which a responsibility, liability or obligation is asserted or which is the subject of any Proceeding; provided that such access may be conditioned or restricted as may be reasonably necessary to ensure compliance with law and the safety of personnel and facilities. All Indemnified Parties requesting such immediate access and cooperation shall endeavor to coordinate such efforts to result in as minimal interruption of the operation of the Leased Property as practicable.

(e) The indemnification rights and obligations provided for in this Article VIII shall be in addition to any indemnification rights and obligations provided for elsewhere in this Lease.

(f) The indemnification rights and obligations provided for in this Article VIII shall survive the termination of this Lease.

Article IX.

9.1 **Absolute Net: Maintenance and Repair.**

(a) Lessor and Lessee acknowledge and agree that both parties intend that this Lease shall be and constitute what is generally referred to in the real estate industry as a

"absolute net" lease, such that, except as otherwise set forth herein, Lessee shall be obligated hereunder to pay all costs and expenses incurred with respect to, and associated with, the Leased Property and the business operated thereon and therein, including, without limitation, all taxes and assessments, utility charges, insurance costs, maintenance costs and repair, replacement and restoration expenses (all as more particularly herein provided) together with any and all other assessments, charges, costs and expenses of any kind or nature whatsoever related to, or associated with, the Leased Property and the business operated thereon and therein; provided, however, that Lessor shall nonetheless be obligated to pay any debt service on any mortgage encumbering Lessor's interest in the Leased Property, audit expenses and Lessor's personal income taxes with respect to the rents received by Lessor under this Lease. Except as expressly hereinabove provided, Lessor shall bear no cost or expense of any type or nature with respect to, or associated with, the Leased Property.

(b) Subject to Sections 3.5, 9.1(e), 14.2 and 15.4 below, Lessee shall, at Lessee's sole cost and expense, keep and maintain the Leased Property, including, without limitation, the roof, foundation, all floors, floor coverings, windows, glass, plate glass, ceilings, skylights, walls, doors, electrical and lighting equipment, plumbing and fixtures, sprinkler systems, heating, ventilating, and air conditioning systems, parking areas, driveways, walkways, parking lots, loading dock areas and doors, rail spur areas, fences, signs, lawns and landscaping in all respects in good repair and in a clean and safe condition. Lessee's maintenance and repair obligations include all necessary and appropriate repairs (including Capital Expenditures) thereto of every kind and nature, whether interior or exterior, ordinary or extraordinary, foreseen or unforeseen. Lessee shall obtain and maintain in effect maintenance contracts throughout the Term with reputable service firms on all serviceable systems and assets included with the fixtures which constitute a portion of the Leased Property, unless such services can be competently provided by Lessee's employees, in which event such services may be provided by Lessee's employees. All repairs shall, to the extent reasonably achievable, be at least equivalent in quality to the original work. Lessee will not take or omit to take any action, the taking or omission of which might materially impair the value or the usefulness of the Leased Property or any part thereof for the Permitted Uses. Except as expressly set forth elsewhere in this Lease, Lessee hereby waives, to the extent permitted by law, the right to make repairs at the expense of Lessor pursuant to any law in effect at the time of the execution of this Lease or hereafter enacted. Lessor shall have the right to give, record and post, as appropriate, Notices of non-responsibility under any mechanic's lien laws now or hereafter existing. Notwithstanding anything to the contrary contained herein, Lessor shall be permitted upon thirty (30) days prior written notice to Lessee (except no notice shall be required in the event of Emergency Repairs) to assume the repair obligations of Lessee and invoice the Lessee for the costs incurred by Lessor or in the event the repairs cover more than the Leased Property then invoice the Lessee for the Allocable Share of the costs incurred by Lessor.

(c) Nothing contained in this Lease and no action or inaction by Lessor shall be construed, without Lessor's prior written consent, as (1) constituting the request of Lessor, expressed or implied, to any contractor, subcontractor, laborer, materialman or vendor to or for the performance of any labor or services or the furnishing of any materials or other

property for the construction, alteration, addition, repair or demolition of or to the Leased Property or any part thereof, or (2) giving Lessee any right, power or permission to contract for or permit the performance of any labor or services or the furnishing of any materials or other property in such fashion as would permit the making of any claim against Lessor in respect thereof or to make any agreement that may create, or in any way be the basis for any right, title, interest, lien, claim or other encumbrance upon the estate of Lessor in the Leased Property, or any portion thereof.

(d) Lessee will, upon the expiration or prior termination of the Term, vacate and surrender the Leased Property to Lessor in substantially the condition in which the Leased Property was originally received from Lessor, except as repaired, rebuilt, restored, altered or added to as permitted or required by the provisions of this Lease and except for ordinary wear and tear (subject to the obligation of Lessee to maintain the Leased Property in accordance with Section 9.1(b) above during the entire Term of the Lease), or damage by casualty or Condemnation (subject to the obligations of Lessee to restore or repair as set forth in the Lease).

(e) Lessee shall be responsible for all existing fuel storage tanks and lines located on the Leased Property, including any maintenance, labor, and costs to keep current with federal, state, local and other guidelines. Lessee shall provide annually to Lessor all documentation that the fuel storage tanks have been maintained and are in compliance with all laws and requirements of the underground storage tanks division of the applicable jurisdiction and any other regulatory authorities.

9.2 **Encroachments, Restrictions, etc.** If, as a result of any act or omission on the part of Lessee, any of the Leased Improvements, at any time, (i) materially encroach upon any property, street or right-of-way adjacent to the Leased Property, or (ii) violate the agreements or conditions contained in any lawful restrictive covenant or other agreement affecting the Leased Property, or any part thereof, or (iii) impair the rights of others under any easement or right-of-way to which the Leased Property is subject as a result of any act or omission on the part of Lessee, then promptly upon the request of Lessor or at the behest of any person affected by any such encroachment, violation or impairment, Lessee shall, at its expense, subject to its right to contest the existence of any encroachment, violation or impairment and in such case, in the event of an adverse final determination, either (a) obtain valid and effective waivers or settlements of all claims, liabilities and damages resulting from each such encroachment, violation or impairment, whether the same shall affect Lessor or Lessee or (b) make such changes in the Leased Improvements, and take such other actions, as Lessee in the good faith exercise of its judgment deems reasonably practicable to remove such encroachment, and to end such violation or impairment, including, if necessary, the alteration of any of the Leased Improvements, and in any event take all such actions as may be necessary in order to be able to continue the operation of the Leased Improvements for its intended use substantially in the manner and to the extent the Leased Improvements were operated prior to the assertion of such violation, impairment or encroachment. Any such alteration shall be made in conformity with the applicable requirements of Article X. Lessee's obligations under this Section 9.2 shall be in addition to and shall in no way discharge or diminish any obligation of any insurer under any policy of title or other insurance held by Lessor.

Article X.

10.1 **Alterations.** After receiving approval of Lessor (except no approvals are needed for Emergency Repairs that do not exceed ten thousand dollars ($10,000)), which approval shall not be unreasonably withheld and which approval may be evidenced by Lessor's approval of the Capital Budget, Lessee shall have the right to make such material additions, modifications or improvements to the Leased Property from time to time as Lessee deems desirable for its permitted uses and purposes, provided that non-material additions, modifications and improvements will not require such consent if funds are available for such non-material items pursuant to the applicable Annual Budget and no such action significantly alters the character or purposes or significantly detracts from the value or operating efficiency thereof and will not significantly impair the revenue-producing capability of the Leased Property (other than during the period such work is being performed) or adversely affect the ability of Lessee to com ply with the provisions of this Lease. The cost of such additions, modifications or improvements to the Leased Property shall be paid by Lessee, and all such additions, modifications and improvements shall, without payment by Lessor at any time, be included under the terms of this Lease and upon expiration or earlier termination of this Lease shall pass to and become the property of Lessor.

10.2 **Salvage.** All materials which are scrapped or removed in connection with the making of repairs required by Articles IX or X shall be or become the property of Lessor or Lessee depending on which party is paying for or providing the financing for such work.

Article XI.

11.1 **Liens.** Subject to the provision of Article XII relating to permitted contests, Lessee will not directly or indirectly create or allow to remain and will promptly discharge at its expense any lien, encumbrance, attachment, title retention agreement or claim upon the Leased Property or any attachment, levy, claim or encumbrance in respect of the Rent, not including, however, (a) this Lease, (b) the matters, if any, included as exceptions in the title policy insuring Lessor's interest in the Leased Property, (c) restrictions, liens and other encumbrances which are consented to in writing by Lessor or any easements granted pursuant to the provisions of Section 7.3 of this Lease, (d) liens for those taxes upon Lessor which Lessee is not required to pay hereunder, (e) liens for Impositions or for sums resulting from noncompliance with Legal Requirements so long as (1) the same are not yet payable or are payable without the addition of any fine or penalty or (2) such liens are in the process of being contested as permitted by Article XII, (f) liens of mechanics, laborers, materialmen, suppliers or vendors for sums either disputed or not yet due provided that (1) the payment of such sums shall not be postponed under any related contract for more than sixty (60) days after the completion of the action giving rise to such lien and such reserve or other appropriate provisions as shall be required by law or generally accepted accounting principles shall have been made therefor or (2) any such liens are in the process of being contested as permitted by Article XII hereof, and (g) liens resulting from the acts or omissions of Lessor, except to the extent that Lessor undertook work to cure a default or otherwise satisfy an obligation of Lessee hereunder.

Article XII.

12.1 **Permitted Contests.** Lessee shall have the right to contest the amount or validity of any Imposition to be paid by Lessee or any Legal Requirement or Insurance Requirement or

any lien, attachment, levy, encumbrance, charge or claim ("**Claims**") not otherwise permitted by Article XI, by appropriate legal proceedings in good faith and with due diligence (but this shall not be deemed or construed in any way to relieve, modify or extend Lessee's covenants to pay or its covenants to cause to be paid any such charges at the time and in the manner provided in this Article), on condition, however, that such legal proceedings shall not operate to relieve Lessee from its obligations hereunder and shall not cause the sale or risk the loss of any portion of the Leased Property, or any part thereof, or cause Lessor or Lessee to be in default under any mortgage, deed of trust, security deed or other agreement encumbering the Leased Property or any interest therein. Upon the request of Lessor, Lessee shall either (a) provide a bond or other assurance reasonably satisfactory to Lessor that all Claims which may be assessed against the Leased Property together with interest and penalties, if any, thereon will be paid, or (b) deposit within the time otherwise required for payment with a bank or trust company as trustee upon terms reasonably satisfactory to Lessor, as security for the payment of such Claims, money in an amount sufficient to pay the same, together with interest and penalties in connection therewith, as to all Claims which may be assessed against or become a Claim on the Leased Property, or any part thereof, in said legal proceedings. Lessee shall furnish Lessor and any lender of Lessor with reasonable evidence of such deposit within five days of the same. Lessor agrees to join in any such proceedings if the same be required to legally prosecute such contest of the validity of such Claims; provided, however, that Lessor shall not thereby be subjected to any liability for the payment of any costs or expenses in connection with any proceedings brought by Lessee; and Lessee covenants to indemnify and save harmless Lessor from any such costs or expenses. Lessee shall be entitled to any refund of any Claims and such charges and penalties or interest thereon which have been paid by Lessee or paid by Lessor and for which Lessor has been fully reimbursed. In the event that Lessee fails to pay any Claims when due or to provide the security therefor as provided in this paragraph and to diligently prosecute any contest of the same, Lessor may, upon ten days advance Notice to Lessee, pay such charges together with any interest and penalties and the same shall be repayable by Lessee to Lessor as Additional Charges at the next Payment Date provided for in this Lease; provided, however, that should Lessor reasonably determine that the giving of such Notice would risk loss to the Leased Property or cause damage to Lessor, then Lessor shall give such Notice as is practical under the circumstances. Lessor reserves the right to contest any of the Claims at its expense not pursued by Lessee. Lessor and Lessee agree to cooperate in coordinating the contest of any Claims.

Article XIII.

13.1 **Insurance Requirements.** During the Term, Lessee agrees at all times to keep the Leased Property, and all property located in or on the Leased Property, including Lessee's Personal Property, insured with the following kinds and amounts of insurance (except to the extent that Lessor approves insurance coverage that deviates from the following or in the event Lessee is an Affiliate of Lessor and Lessor elects in writing to carry the coverage as the primary insured with the Lessee being only an insured or additional insured under the Lessor's respective policy):

(a) Property including Flood, Named Storm and Earthquake: Insurance against loss or damage by fire, casualty and other hazards as now are or subsequently may be covered by an "all risk" policy or a policy covering "special" causes of loss, with such endorsements as Lessor or any holder of a mortgage or security deed encumbering the Leased Property (a "Mortgagee") may from time to time reasonably require and which are

customarily required by institutional lenders of similar properties similarly situated, including, without limitation, building ordinance law, lightning, windstorm, civil commotion, hail, riot, strike, water damage, sprinkler leakage, collapse, malicious mischief, explosion, smoke, aircraft, vehicles, boats/watercraft, vandalism, falling objects and weight of snow, ice or sleet, builders risk/installation floater for ongoing projects or ground up construction and if applicable earthquake, earthquake sprinkler leakage, named storm, flood (for locations in a 100 year flood zone) and covering the Leased Property in an amount equal to 100% of the full insurable replacement value of the Leased Property (exclusive of footings and foundations below the lowest basement floor) without deduction for depreciation or co-insurance clause except as indicated below. The determination of the replacement cost amount shall be adjusted annually to comply with the requirements of the insurer issuing the coverage or, at Lessor's (or a Mortgagee's) election, by reference to such indexes, appraisals or information as Lessor (or a Mortgagee) determines in its reasonable discretion, and, unless the insurance required by this paragraph shall be effected by blanket policies in accordance with the requirements of this Lease. Each policy shall, subject to Lessor's (or a Mortgagee's) approval, contain replacement cost coverage, without deduction for depreciation with exception (with Lessor's written approval) of scheduled property (equipment), docks and piers, and shall provide for deductibles in such amounts as Lessor (or a Mortgagee) may permit in its sole discretion;

(b) Business Interruption Insurance: providing in the event of damage or destruction of the Leased Property an amount sufficient to sustain Lessee for a period of not less than one (1) year and not subject to coinsurance for: (i) the net profit that would have been realized had Lessee's business continued; and (ii) such fixed charges and expenses as must necessarily continue during a total or partial suspension of business to the extent to which they would have been incurred had no business interruption occurred, including, but not limited to, interest on indebtedness of Lessee, salaries of executives and other employees under contract, charges under non-cancelable contracts, charges for advertising, legal or other professional services, taxes and rents, insurance premiums, and depreciation; and

(c) Boiler and Machinery: If the Leased Property contains steam boilers, steam pipes, steam engines, steam turbines or other high pressure vessels, insurance covering the major components of the central heating, air conditioning and ventilating systems, boilers, other pressure vessels, high pressure piping and machinery, elevators and escalators, if any, and other similar equipment installed in the Leased Improvements, in an amount equal to one hundred percent (100%) of the full replacement cost and not subject to coinsurance, of the Leased Improvements, which policies shall insure against physical damage to and loss of occupancy and use of the Leased Improvements arising out of an accident or breakdown covered thereunder;

(d) Crime Coverage: Limit of at least $1,000,000 per claim.

(e) Loss Payee: Lessor and any Mortgagee shall be included as loss payee for subsections (a), (b), (c), and (d).

(f) Commercial General liability Marine Operators Legal Liability and Protection and Indemnity insurance under a policy containing "Broad Form CGL" coverage (or a policy which otherwise incorporates the language of such endorsement), which policy shall name Lessor as an additional insured party and which shall include, without limitation, coverage against claims for personal injury, bodily injury, death and property damage liability with respect to the Leased Property and the operations related thereto, whether on or off the Leased Property, and the following coverages: Employee as Additional Insured, Completed Operations; Broad Form Contractual Liability, Personal Injury and Advertising Injury Protection, Medical Payment (with a minimum limit of $5,000 per person), all of which shall be in such amounts as Lessor may from time to time reasonably require, but not less than One Million and No/100 Dollars ($1,000,000.00) per occurrence, One Million and No/100 Dollars ($1,000,000.00) per Leased Property, and an annual aggregate limit of Two Million and No/100 Dollars ($2,000,000.00). If such policy shall cover more than one Leased Property, such limits shall apply on a "per location" basis, subject to the annual aggregate limit of Two Million and No/100 Dollars ($2,000,000.00). Such liability policy shall delete the contractual exclusion under the personal injury coverage, if possible.

(g) Liquor Liability: if any alcoholic beverages shall be sold, manufactured or distributed in the Leased Property, liquor liability coverage, all of which shall be in such amounts as Lessor may from time to time reasonably require, but not less than One Million and No/100 Dollars ($1,000,000.00) per occurrence, One Million and No/100 Dollars ($1,000,000.00) per Leased Property, and a policy aggregate limit of Two Million and No/100 Dollars ($2,000,000.00).

(h) Auto Liability: Owned, hired and non-owned automobile coverage (including rented and leased vehicles), with a $1,000,000 bodily injury and property damage combined single limit.

(i) Pollution Liability: (if applicable) Coverage limits of at least $1,000,000 each incident. Such coverage shall include premises legal liability and coverage for underground storage tanks and above ground storage tanks on the Leased Property.

(j) Sections (f), (g), (h), (i), and (o) shall include Lessor and Mortgagee as additional insureds, be primary and noncontributory and shall not contain cross liability exclusion. If available, shall include the following endorsements: Notice of Accident, Knowledge of Occurrence, and Unintentional Error and Omission.

(k) Hull and Machinery: Full replacement cost for Hull and Machinery.

(l) Workers' Compensation and Employers Liability: Workers' Compensation coverage with statutory limits and Employers Liability with limits of $1,000,000.

(m) In addition to the insurance described above, Lessee shall maintain such additional insurance as may be reasonably required from time to time by Lessor or any Mortgagee and shall further at all times maintain.

(n) Umbrella Liability: Lessee will also maintain an "Umbrella" liability policy in addition to and sitting above and excess to the Commercial General Liability, Liquor Liability, Marine Operators Legal Liability, Auto Liability and Employers Liability with limits not less than Five Million and No/100 Dollars ($5,000,000.00).

13.2 **Waiver of Subrogation.** All insurance policies carried by Lessee shall expressly waive any right of subrogation on the part of the insurer against Lessor. Lessee agrees that Lessee's policies will include such waiver clause or endorsement.

13.3 **Form Satisfactory, etc.** All of the policies of insurance referred to in this Article XIII shall be written in a form, with deductibles reasonably satisfactory to Lessor. Lessee shall pay or cause to be paid all of the premiums and any deductibles relating to insurance coverage required per Section 13.1 and deliver certificates thereof to Lessor within thirty (30) days of their effective date and annually thereafter. In the event of the failure of Lessee either to effect such insurance as herein called for or to pay the premiums therefore, or to deliver such certificates thereof to Lessor at the times required, Lessor shall be entitled, but shall have no obligation, to effect such insurance and pay the premiums therefore, and Lessee shall reimburse Lessor for any premium or premiums paid by Lessor for the coverage required under this Section upon written demand therefore, and Lessee's failure to repay the same within 30 days after Notice of such failure from Lessor shall constitute an Event of Default within the meaning of Section 16.1. Each insurer mentioned in this Article XIII shall agree, by endorsement to the policy or policies issued by it, that it will give to Lessor at least 30 days written notice before the coverage under such policy or policies in question shall be materially reduced, allowed to expire or cancelled.

13.4 **Increase in Limits.** In the event that a Lessor or Mortgagee shall at any time reasonably determine the limits and/or retentions of the coverages outlined in Section 13.1 then carried to be insufficient, Lessee shall thereafter carry the insurance with increased limits and/or retentions until further change pursuant to the provisions of this Section.

13.5 **Blanket Policy.** Notwithstanding anything to the contrary contained in this Article XIII, Lessee may bring the insurance provided for herein within the coverage of a so-called blanket policy or policies of insurance carried and maintained by Lessee; provided, however, that the coverage afforded to Lessor and Lessee will not be reduced or diminished or otherwise be different from that which would exist under a separate policy of insurance, and provided further that the requirements of this Article XIII are otherwise satisfied.

13.6 **Separate Insurance.** Lessee shall not on Lessee's own initiative or pursuant to the request or requirement of any third party, take out separate insurance or increase the amount of any then-existing insurance by securing an additional policy or additional policies on the Leased Property, unless all parties having an insurable interest in the subject matter of the insurance, including in all cases Lessor, are included therein as additional insureds, and the loss is payable under separate additional insurance in the same manner as losses are payable under this Lease. Lessee shall immediately notify Lessor in writing that Lessee has obtained any such separate insurance or of the increasing of any of the amounts of the then existing insurance.

13.7 **Reports on Insurance Claims.** Lessee shall promptly investigate and make a complete and timely written report to the appropriate insurance company as to all accidents. Claims

for damage relating to the ownership, operation, and maintenance of the Leased Property, any damage or destruction to the Leased Property and the estimated cost of repair thereof shall be prepared by Lessee. Lessee shall prepare any and all reports required by any insurance company as required under the terms of the insurance policy involved, and a final copy of such report shall be furnished to Lessor. Lessee shall be authorized to execute proofs of such loss, in the aggregate amount of $50,000 or less (subject however to restrictions or requirements set forth pursuant to the Mortgage Loan), with respect to any single casualty or other event.

Article XIV.

14.1 **Insurance Proceeds.** Except to the extent otherwise required in the policies of insurance required hereunder, all proceeds payable by reason of any loss or damage to the Leased Property, or any portion thereof, and insured under any policy of insurance required by Article XIII of this Lease shall be paid to Lessor and held in trust by Lessor or Mortgagee if so required in an interest-bearing account, shall be made available for reconstruction or repair, as the case may be, of any damage to or destruction of the Leased Property, or any portion thereof, and, shall be paid out by Lessor from time to time for the reasonable costs of such reconstruction or repair upon satisfaction of reasonable terms and conditions specified by Lessor. Any excess proceeds of insurance remaining after the completion of the restoration or reconstruction to the Leased Property shall be paid to Lessor. Determination of all salvage resulting from any property covered by insurance shall be made by Lessor. Notwithstanding anything herein to the contrary, in the event of any inconsistency between the provisions of this Lease and the provisions of any mortgage encumbering Lessor's interest in the Leased Property regarding the handling and use of proceeds payable by reason of any loss or damage to the Leased Property, the provisions of the mortgage shall control.

14.2 **Reconstruction in the Event of Damage or Destruction Covered by Insurance.** If the Leased Property is totally or partially destroyed, Lessee shall, with all reasonable diligence, to the extent that proceeds from the insurance required by this Lease are available (subject to the provisions of any Mortgage encumbering the Leased Property) for such purpose, repair or replace the damaged or destroyed portion of the Leased Property to substantially the same condition as existed previously.

14.3 **Lessee's Personal Property.** All insurance proceeds payable by reason of any loss of or damage to any of Lessee's Personal Property and any business interruption insurance shall be paid to Lessee; provided, however, no such payments shall diminish or reduce the insurance payments otherwise payable to or for the benefit of Lessor hereunder.

14.4 **No Abatement of Rent.** Any damage or destruction due to casualty notwithstanding, this Lease shall remain in full force and effect, and Lessee's obligation to make rental payments and to pay all other charges required by this Lease shall not be abated, fully or partially, as a result such damage or destruction.

14.5 **Waiver.** Lessee hereby waives any statutory rights of termination that may arise by reason of any damage or destruction of the Leased Property that Lessor is obligated to restore or may restore under any of the provisions of this Lease.

Article XV.

15.1 **Parties' Rights and Obligations.** If, during the Term, there is any Condemnation of all or any part of the Leased Property or any interest in this Lease, the rights and obligations of Lessor and Lessee shall be determined by this Article XV.

15.2 **Total Taking.** If title to the fee of the whole of the Leased Property or Lessor's leasehold interest in the Leased Property is condemned by any Condemnor, this Lease shall cease and terminate as of the Date of Taking by the Condemnor with respect to the Leased Property. If title to the fee of less than the whole of the Leased Property or Lessor's leasehold interest in a part of the Leased Property is so taken or condemned, which nevertheless renders the Leased Property Unsuitable for its Previous Use or Uneconomic for its Previous Use as reasonably determined by Lessor, Lessee and Lessor shall each have the option, by notice to the other, at any time prior to the Date of Taking, to terminate this Lease as of the Date of Taking. Upon such date, if such Notice has been given, this Lease shall thereupon cease and terminate with respect to the Leased Property. All Base Rent, Percentage Rent and Additional Charges paid or payable by Lessee hereunder with respect to the Leased Property shall be apportioned as of the Date of Taking, and Lessee shall promptly pay Lessor such amounts.

15.3 **Allocation of Award.** The total Award made in connection with a Total Taking, or a partial Taking that results in a termination of this Lease with respect to the Leased Property, or for loss of Rent, or for Lessor's loss of business beyond the Term, shall be solely the property of and payable to Lessor. Any Award made for loss of Lessee's business during the remaining Term, if any, or for the taking of Lessee's Personal Property or for removal and relocation expenses of Lessee in any such proceedings shall be the sole property of and payable to Lessee. Any other Award not separately allocated to Lessor or Lessee shall be equitably apportioned between Lessor and Lessee in proportion to the then fair market value of the leasehold estate of Lessee hereunder and the then fair market value of the Leased Property.

15.4 **Partial Taking.** If title to less than the whole of the Leased Property is condemned, and the Leased Property is still suitable for its previous use and not Uneconomic for its Previous Use as reasonably determined by Lessor, or if Lessee or Lessor is entitled but neither elects to terminate this Lease with respect to the Leased Property as provided in Section 15.2, Lessor at its cost shall with all reasonable dispatch restore the untaken portion of any Leased Improvements so that the Leased Improvements constitute a complete architectural unit of the same general character and condition (as nearly as may be possible under the circumstances) as the Leased Improvements existing immediately prior to the Condemnation.

15.5 **Temporary Taking.** If the whole or any part of the Leased Property or of Lessee's interest under this Lease is condemned by any Condemnor for its temporary use or occupancy, which for purposes hereof shall mean two (2) weeks or less, this Lease shall not terminate by reason thereof, and Lessee shall continue to pay, in the manner and at the terms herein specified, the full amounts of Base Rent and Additional Charges with respect to such Leased Property. In addition, Lessee shall pay, to the extent required by the Master Lease, Percentage Rent at a rate equal to the average Percentage Rent during the last three preceding Fiscal Years (or if three Fiscal Years shall not have elapsed, the average during the preceding Fiscal Years). Except only to the extent that Lessee may be prevented from so doing pursuant to the terms of the order of the

Condemnor, Lessee shall continue to perform and observe all of the other terms, covenants, conditions and obligations hereof on the part of Lessee to be performed and observed, as though such Condemnation had not occurred. In the event of any Condemnation as in this Section 15.5 described, the entire amount of any Award made for such Condemnation allocable to the Term of this Lease, whether paid by way of damages, rent or otherwise, shall be paid to Lessor. Lessor covenants that upon the termination of any such period of temporary use or occupancy it will, at its sole cost and expense, restore the Leased Property as nearly as may be reasonably possible to the condition in which the same was immediately prior to such Condemnation, unless such period of temporary use or occupancy extends beyond the expiration of the Term, in which case Lessor shall not be required to make such restoration.

Article XVI.

16.1 **Events of Default.** If any one or more of the following events (individually, an "**Event of Default**") occurs:

(a) if Lessee fails to make payment of any portion of the Base Rent, Percentage Rent (as applicable) or Additional Charges (as applicable) within ten (10) days after receipt of written notice that the same is due and payable (provided, however, that Lessor shall not be required to provide such notice with respect to more than one (1) payment of Base Rent or Percentage Rent during any twelve (12) month period during the term hereof, and after such notice, it shall be an Event of Default if Lessee fails to make payment of such amounts within ten (10) days after the applicable due date); or

(b) if Lessee fails to observe or perform any other term, covenant or condition of this Lease and such failure is not cured by Lessee within a period of thirty (30) days after receipt by such party of Notice thereof from Lessor, unless such failure cannot with due diligence be cured within a period of thirty (30) days, in which case it shall not be deemed an Event of Default if Lessee proceeds promptly and with due diligence to cure the failure and diligently completes the curing thereof; provided, however, in no event shall such cure period extend beyond 90 days after such Notice (provided that no Event of Default shall be deemed to have occurred pursuant to this subsection (b) to the extent that Lessee's failure to observe or perform any term, covenant or condition of this Lease is caused by Lessor's failure to fulfill its obligations under this Lease or an Unavoidable Occurrence); or

(c) if Lessee shall file a petition in bankruptcy or reorganization for an arrangement pursuant to any federal or state bankruptcy law or any similar federal or state law, or shall be adjudicated a bankrupt or shall make an assignment for the benefit of creditors or shall admit in writing its inability to pay its debts generally as they become due, or if a petition or answer proposing the adjudication of Lessee as a bankrupt or its reorganization pursuant to any federal or state bankruptcy law or any similar federal or state law shall be filed in any court and Lessee shall be adjudicated a bankrupt and such adjudication shall not be vacated or set aside or stayed within sixty (60) days after the entry of an order in respect thereof, or if a receiver of Lessee of the whole or substantially all of the assets of Lessee shall be appointed in any proceedings brought by Lessee or if any such

receiver, trustee or liquidator shall be appointed in any proceeding brought against Lessee shall not be vacated or set aside or stayed within sixty (60) days after such appointment; or

(d) if Lessee is liquidated or dissolved, or begins proceedings toward such liquidation or dissolution, or, if Lessee or Lessor in any manner, permits the sale or divestiture of substantially all of its assets; or

(e) if the estate or interest of Lessee in the Leased Property or any part thereof is voluntarily or involuntarily transferred, assigned, conveyed, levied upon or attached in any proceeding (unless Lessee is contesting such lien or attachment in good faith in accordance with this Lease); or

(f) if, except as a result of damage, destruction, renovation or a partial or complete Condemnation or otherwise with Lessor's prior written approval, Lessee voluntarily ceases operations on the Leased Property for a period in excess of thirty (30) consecutive (and not in the aggregate) days; or

(g) if Lessee fails to satisfy the REIT Requirements set forth in Section 19.1, or breaches any representations, warranties, or covenants set forth in Section 19.2 or 19.3.

Then, and in any such event and provided such Event of Default by the defaulting party is continuing, the non-defaulting party may exercise one or more remedies available to it herein or at law or in equity, including but not limited to its right to terminate this Lease giving Lessee not less than ten (10) days' prior written notice of such termination (or, with respect to a default set forth in Section 16.1(g), immediately upon delivery of written notice of such termination), provided that such non-defaulting party is not itself in default under this Lease.

If litigation is commenced with respect to any alleged default under this Lease, the prevailing party in such litigation shall receive, in addition to its damages incurred, such sum as the court shall determine as its reasonable attorneys' fees, and all costs and expenses incurred in connection therewith.

16.2 **Surrender.** If an Event of Default occurs for other than by reason of an Unavoidable Occurrence (and the event giving rise to such Event of Default has not been cured within the curative period relating thereto as set forth in Section 16.1) and is continuing, whether or not this Lease has been terminated pursuant to Section 16.1, Lessee shall, if requested by Lessor so to do, immediately surrender and assign to Lessor or Lessor's designee the Leased Property including, without limitation, any and all books, records, files, licenses, perm its and keys relating thereto, and quit the same and Lessor may enter upon and repossess the Leased Property summary proceedings, ejectment or otherwise, and may remove Lessee and all other persons and any and all personal property from the Leased Property, subject to rights of any residents of the Leased Property and to any requirement of law. Lessee hereby waives any and all requirements of applicable laws for service of notice to re-enter the Leased Property. Lessor shall be under no obligation to, but may if it so chooses, relet the Leased Property or otherwise mitigate Lessor's damages.

16.3 **Damages.**

(a) Neither (i) the termination of this Lease, (ii) the repossession of the Leased Property, (iii) the failure of Lessor to relet the Leased Property, nor (iv) the reletting of all or any portion thereof, shall relieve Lessee of its liability and obligations hereunder, all of which shall survive any such termination, repossession or reletting. In the event of any such termination, Lessee shall forthwith pay to Lessor all Rent due and payable with respect to the Leased Property to and including the date of such termination.

(b) Lessee shall forthwith pay to Lessor, at Lessor's option, as and for liquidated and agreed current damages for Lessee's default, either:

(1) Without termination of Lessee's right to possession of the Leased Property, each installment of Rent (including Percentage Rent as determined below if applicable) and other sums payable by Lessee to Lessor under the Lease as the same becomes due and payable, which Rent and other sums shall bear interest at the Overdue Rate, and Lessor may enforce, by action or otherwise, any other term or covenant of this Lease; or

(2) The unpaid Rent which had accrued at the time of termination, repossession or reletting.

16.4 **Waiver.** If this Lease is terminated pursuant to Section 16.1, Lessee waives, to the extent permitted by applicable law, (a) any right to a trial by jury in the event of summary proceedings to enforce the remedies set forth in this Article XVI, and (b) the benefit of any laws now or hereafter in force exempting property from liability for rent or for debt.

16.5 **Application of Funds.** Any payments received by Lessor under any of the provisions of this Lease during the existence or continuance of any Event of Default shall be applied to Lessee's obligations in the order that Lessor may determine or as may be prescribed by the laws of the State.

Article XVII.

17.1 **Lessor's Right to Cure Lessee's Default.** If Lessee fails to make any payment or to perform any act required to be made or performed under this Lease, and fails to cure the same within the relevant time periods provided in Section 16.1, Lessor, without waiving or releasing any obligation of Lessee, and without waiving or releasing any obligation or default, may (but shall be under no obligation to) at any time thereafter make such payment or perform such act for the account and at the expense of Lessee, and may, to the extent permitted by law, enter upon the Leased Property for such purpose and take all such action thereon as, in Lessor's opinion, may be necessary or appropriate therefor. No such entry shall be deemed an eviction of Lessee. All sums so paid by Lessor and all costs and expenses (including, without limitation, reasonable attorneys' fees and expenses, in each case to the extent permitted by law) so incurred, together with a late charge thereon (to the extent permitted by law) at the Overdue Rate from the date on which such sums or expenses are paid or incurred by Lessors, shall be paid by Lessee to Lessor on demand. The obligations of Lessee and rights of Lessor contained in this Article shall survive the expiration or earlier termination of this Lease.

Article XVIII.

18.1 **Master Lease Provisions.** The provisions of this Section 18.1 shall be applicable if the Leased Property (or any portion thereof) is subject to a Master Lease. This Lease is subordinate to the terms, conditions and provisions of the Master Lease (a copy of which has been provided to Lessee). Lessee agrees to keep, observe, perform and be bound by all of Lessor's obligations under the Master Lease that are applicable to the Leased Property (unless otherwise expressly provided in this Lease), and Lessee shall take no action that would constitute a default under the Master Lease. Except as otherwise provided herein, all of the terms and provisions of the Master Lease which are applicable to or binding upon Lessor as tenant/lessee thereunder, shall also be applicable to or binding upon Lessee in the same manner as if such terms and provisions had been set forth in full herein. All provisions of the Master Lease which inure to the benefit of the ground lessor therein, shall inure to the benefit of and be enforceable by Lessor herein as against Lessee. Lessor shall not be required to perform any obligations of the ground lessor under the Master Lease. Lessor shall not be in default hereunder and shall have no liability to Lessee in connection with any default by ground lessor under the Master Lease. Lessee hereby acknowledges and agrees that the only services or other rights that Lessee is entitled to under this Lease are those to which Lessor is entitled under the Master Lease, and Lessee hereby agrees that Lessee will look solely to ground lessor under the Master Lease for all such services and other rights. If any conflict exists between this this Lease and the Master Lease, the Master Lease shall govern and control.

Article XIX.

19.1 **REIT Requirements.**

(a) Lessee understands that, in order for Suntex Marina Investors LLC ("**SMI**"), either itself or as the operating partnership in conjunction with a to be formed entity (individually or collectively the "**SUNTEX REIT**"), which holds a direct or indirect ownership interest in the Lessor to be eligible to be taxable as a "real estate investment trust" (a "**REIT**") pursuant to Code Section 856, the following requirements (the "**REIT Requirements**") must be satisfied:

(1) Personal Property Limitation. Anything contained in this Lease to the contrary notwithstanding, the average of the fair market values of the items of personal property that are leased to Lessee under this Lease at the beginning and at the end of any Fiscal Year shall not exceed fifteen percent (15%) of the average of the aggregate fair market values of the Leased Property at the beginning and at the end of such Fiscal Year (the "**Personal Property Limitation**"). If Lessor reasonably anticipates that the Personal Property Limitation will be exceeded with respect to the Leased Property for any Fiscal Year, Lessor shall notify Lessee, and Lessee shall either (i) purchase at fair market value any personal property anticipated to be in excess of the Personal Property Limitation ("**Excess Personal Property**") either from Lessor or a third party or (ii) lease the Excess Personal Property from a third party, all in the discretion of Lessee. In either case, Lessee's Rent obligation shall be equitably adjusted in a manner mutually acceptable to both Lessor and Lessee. Notwithstanding anything to the contrary set forth above, Lessee shall not be responsible in any way for determining whether Lessee has

exceeded or will exceed the Personal Property Limitation and shall not be liable to Lessor or any of its shareholders in the event that the Personal Property Limitation is exceeded, as long as Lessee meets its obligation to acquire or lease any Excess Personal Property as provided above. This Section 19.1 is intended to ensure that the Rent qualifies as "rents from real property," within the meaning of Section 856(d) of the Code, or any similar or successor provisions thereto, and shall be interpreted in a manner consistent with such intent.

(2) Sublease Rent Limitation. Anything contained in this Lease to the contrary notwithstanding, Lessee shall not sublet the Leased Property on any basis such that the rental or other amounts to be paid by the sublessee thereunder would be based, in whole or in part, on either (a) the net income or profits derived by the business activities of the sublessee, or (b) any other formula such that any portion of the Rent would fail to qualify as "rents from real property" within the meaning of Section 856(d) of the Code, or any similar or successor provision thereto.

(b) Lessee agrees, and agrees to use its best efforts to cause its Affiliates, to use its best efforts to permit the REIT Requirements to be satisfied and to cooperate in good faith with SUNTEX REIT and Lessor to ensure that the REIT Requirements are satisfied. Lessee agrees, and agrees to use reasonable efforts to cause its Affiliates, upon request by SUNTEX REIT, and, where appropriate, at SUNTEX REIT's expense, to take reasonable action necessary to ensure compliance with the REIT Requirements. Immediately after becoming aware that the REIT Requirements are not, or will not be, satisfied, Lessee shall notify, or use reasonable efforts to cause its Affiliates to notify, SUNTEX REIT of such non-compliance.

(c) If Lessee retains a manager to manage the Leased Property (a "**Property Manager**"), such Property Manager, as well as the property management agreement between Lessee and the Property Manager (the "**Property Management Agreement**") will be subject to the approval of Lessor, which approval may be given or withheld in Lessor's sole and absolute discretion. In such event, Lessee will, at all times during the Term, cause the Leased Property to be operated and managed in a manner that will comply with all REIT Requirements. Lessee may not amend, modify, or terminate the Property Management Agreement in any respect or change the Property Manager without the prior written consent of Lessor, which may be given or withheld in Lessor's sole and absolute discretion. Lessee shall also provide Lessor with copies of any amendments or modifications to the Property Management Agreement which are entered into from time to time or any other Property Management Agreement (which shall be subject to the approval of Lessor as stated above).

(d) Notwithstanding anything to the contrary in this Agreement, in the event that counsel or independent accountants for SUNTEX REIT, determine that there exists a material risk that the receipt of any Rent by Lessor during a taxable year hereunder would generate income not described in Sections 856(c)(2)(A)-(H) and 856(c)(3)(A)-(I) of the Code (such income, "Non-Qualifying Income") and thereby create a material risk that SUNTEX REIT would have Non-Qualifying Income for the applicable year in an amount in excess of 4.5% of gross income for such year (any amount so in excess, the "Excess

Non-Qualifying Income"), the amount of Rent paid to Lessor pursuant to Section 3.1 of this Agreement in such tax year shall not exceed the maximum amount that can be paid to Lessor in such year without causing SUNTEX REIT to have Excess Non-Qualifying Income for such year. If the amount of Rent paid for any tax year under the preceding sentence is less than the amount of Rent which would otherwise be paid to Lessor pursuant to Section 3.1 of this Agreement (the "Deferred Rent Amount"), then: Lessor shall not be entitled to any such amount, unless and until Lessor delivers to Lessee, at the sole option of Lessor, (i) an opinion of such Lessor's tax counsel to the effect that such amount, if and to the extent paid, should not constitute Excess Non-Qualifying Income, (ii) a letter from the independent accountants of such Lessor indicating the maximum amount that should be payable at that time to Lessor without causing SUNTEX REIT to have Excess Non-Qualifying Income for any relevant taxable year, in which case Lessor shall be paid such maximum amount or (iii) a private letter ruling issued by the IRS to such SUNTEX REIT indicating that the receipt of any Deferred Rent Amount hereunder will not cause SUNTEX REIT to fail to meet the requirements imposed on REITs pursuant to Sections 856 through and including 860 of the Code. The obligations of Lessee to pay any Deferred Rent Amount which is not paid as a result of this provision shall terminate five years from the original date such amount would have been paid without regard to this provision and Lessor shall have no further right to receive any such amount.

Article XX.

20.1 **Holding Over.** If Lessee for any reason remains in possession of the Leased Property after the expiration or earlier termination of the Term, such possession shall be as a tenant at sufferance during which time Lessee shall pay as rental each month one hundred fifty percent (150%) of the aggregate of (a) one-twelfth ($1/12^{th}$) of the aggregate Base Rent and Percentage Rent payable with respect to the last Fiscal Year of the Term with respect to such Leased Property, (b) all Additional Charges accruing during the applicable month and (c) all other sums, if any, payable by Lessee under this Lease with respect to the Leased Property. During such period, Lessee shall be obligated to perform and observe all of the terms, covenants and conditions of this Lease, but shall have no rights hereunder other than the right, to the extent given by law to tenancies at sufferance, to continue its occupancy and use of the Leased Property. Nothing contained herein shall constitute the consent, express or implied, of Lessor to the holding over of Lessee after the expiration or earlier termination of this Lease.

Article XXI.

21.1 **Abatement of Rent.** Except in the event of a constructive eviction of Lessee from the Leased Property for any reason other than an Event of Default or as expressly provided in this Lease, Lessee shall not be entitled to any abatement of Rent.

Article XXII.

22.1 **Indemnification.** Notwithstanding the existence of any insurance, and without regard to the policy limits of any such insurance or self-insurance, Lessee will protect, indemnify, hold harmless and defend Lessor from and against all liabilities, obligations, claims, damages, penalties, causes of action, costs and expenses (including, without limitation, reasonable attorneys'

fees and expenses), to the extent permitted by law, imposed upon or incurred by or asserted against Lessor Indemnified Parties by reason of any failure of Lessee or any of its agents, employees or invitees to perform any obligations under this Lease or by reason of their respective gross negligence or willful misconduct. Any amounts that become payable under this Section shall be paid within ten (10) days after liability therefor on the part of the Indemnifying Party is determined by litigation or otherwise, and if not timely paid, shall bear a late charge (to the extent permitted by law) at the Overdue Rate from the date of such determination to the date of payment. An Indemnifying Party, at its expense, shall contest, resist and defend any such claim, action or proceeding asserted or instituted against the Indemnified Party. The Indemnified Party, at its expense, shall be entitled to participate in any such claim, action, or proceeding, and the Indemnifying Party may not compromise or otherwise dispose of the same without the consent of the Indemnified Party, which may not be unreasonably withheld. Nothing herein shall be construed as indemnifying a Lessor Indemnified Party against its own grossly negligent acts or omissions or willful misconduct.

Article XXIII.

23.1 **Subletting and Assignment.** Lessee may not assign or sublet all or any portion of this Lease or the Leased Property without the written consent of Lessor, which consent may be withheld in Lessor's sole discretion. In the case of a subletting, the sublessee shall comply with the provisions of Section 23.2, and in the case of an assignment, the assignee shall assume in writing and agree to keep and perform all of the terms of this Lease on the part of Lessee to be kept and performed and shall be, and become, jointly and severally liable with Lessee for the performance thereof. In case of either an assignment or subletting made during the Term, Lessee shall remain primarily liable, as principal rather than as surety, for the prompt payment of the Rent and for the performance and observance of all of the covenants and conditions to be performed by Lessee hereunder. An original counterpart of each such sublease and assignment and assumption, duly executed by Lessee and such sublessee or assignee, as the case may be, in form and substance satisfactory to Lessor, shall be delivered promptly to Lessor. In addition to the foregoing requirements, if the Leased Property (or any portion thereof) is subject to a Master Lease, any assignment or subletting by Lessee must be performed in strict compliance with the terms of such Master Lease.

23.2 **Subordination and Attornment.** Lessee shall insert in each sublease permitted under Section 23.1 that is entered into subsequent to the Effective Date provisions to the effect that (a) such sublease is subject and subordinate to all of the terms and provisions of this Lease and to the rights of Lessor hereunder (if Lessor executes a non-disturbance agreement with respect thereto), (b) if this Lease terminates before the expiration of such sublease, the sublessee thereunder will, at Lessor's option, attorn to Lessor (or to any subsequent lessee of all or any portion of the Leased Property) and waive any right the sublessee may have to terminate the sublease or to surrender possession thereunder as a result of the termination of this Lease, and (c) if the sublessee receives a written Notice from Lessor or Lessor's assignees, if any, stating that an uncured Event of Default exists under this Lease, the sublessee shall thereafter be obligated to pay all rentals accruing under said sublease directly to the party giving such Notice, or as such party may direct. All rentals received from the sublessee by Lessor or Lessor's assignees, if any, as the case may be, shall be credited against the amounts owing by Lessee under this Lease.

Article XXIV.

24.1 **Officer's Certificates; Financing Statements; Lessor's Estoppel Certificates and Covenants.**

(a) At any time and from time to time upon not less than ten (10) days' Notice by Lessor, Lessee will furnish to Lessor or to any person designated by Lessor an estoppel certificate certifying that this Lease is unmodified and in full force and effect (or that this Lease is in full force and effect as modified and setting forth the modifications), the date to which the Rent has been paid, whether to the knowledge of Lessee there is any existing default or Event of Default hereunder by Lessor or Lessee, and such other information as may be reasonably requested by Lessor. Any such certificate furnished pursuant to this Section may be relied upon by Lessor, any lender and any prospective purchaser of the Leased Property.

(b) Upon the request of Lessor, Lessee will furnish the following statements to Lessor:

(1) with reasonable promptness, such information respecting the financial condition and affairs of Lessee including financial statements, as Lessor may reasonably request from time to time; and

(2) the most recent Consolidated Financials of Lessee within forty-five (45) days after each quarter of any Fiscal Year (or, in the case of the final quarter in any Fiscal Year, the most recent Consolidated Financials of Lessee within ninety (90) days).

(c) At any time and from time to time upon not less than ten (10) days' Notice by Lessee, Lessor will furnish to Lessee or to any person designated by Lessee an estoppel certificate certifying that this Lease is unmodified and in full force and effect (or that this Lease is in full force and effect as modified and setting forth the modifications), the date to which Rent has been paid, whether to the knowledge of Lessor there is any existing default or Event of Default on Lessee's part hereunder, and such other information as may be reasonably requested by Lessee.

Article XXV.

25.1 **Lessor's Right to Inspect.** Lessee shall permit Lessor and its authorized representatives as frequently as reasonably requested by Lessor to inspect the Leased Property and Lessee's accounts and records pertaining thereto and make copies thereof, during usual business hours upon reasonable advance Notice. Lessor shall provide at least twenty-four (24) hours' Notice to Lessee prior to such inspection, except in the event of an emergency.

Article XXVI.

26.1 **No Waiver.** No failure by Lessor or Lessee to insist upon the strict performance of any term hereof or to exercise any right, power or remedy consequent upon a breach thereof, and no acceptance of full or partial payment of Rent during the continuance of any such breach, shall

constitute a waiver of any such breach or of any such term. To the extent permitted by law, no waiver of any breach shall affect or alter this Lease, which shall continue in full force and effect with respect to any other then existing or subsequent breach.

Article XXVII.

27.1 **Remedies Cumulative.** To the extent permitted by law, each legal, equitable or contractual right, power and remedy of Lessor or now or hereafter provided either in this Lease or by statute or otherwise shall be cumulative and concurrent and shall be in addition to every other right, power and remedy, and the exercise or beginning of the exercise by Lessor of any one or more of such rights, powers and remedies shall not preclude the simultaneous or subsequent exercise by Lessor of any or all of such other rights, powers and remedies.

Article XXVIII.

28.1 **Acceptance of Surrender.** No surrender to Lessor of this Lease or of the Leased Property or any part thereof, or of any interest therein, shall be valid or effective unless agreed to and accepted in writing by Lessor, and no act by Lessor or any representative or agent of Lessor, other than such a written acceptance by Lessor, shall constitute an acceptance of any such surrender.

Article XXIX.

29.1 **No Merger of Title.** There shall be no merger of this Lease or of the leasehold estate created hereby by reason of the fact that the same person or entity may acquire, own or hold, directly or indirectly: (a) this Lease, or the leasehold estate created hereby or any interest in this Lease or such leasehold estate and (b) the fee estate in the Leased Property.

Article XXX.

30.1 **Conveyance by Lessor.** If Lessor or any successor owner of the Leased Property conveys the Leased Property in accordance with the terms hereof other than as security for a debt, and the grantee or transferee of the Leased Property expressly assumes all obligations of Lessor hereunder arising or accruing from and after the date of such conveyance or transfer, Lessor or such successor owner, as the case may be, shall thereupon be released from all future liabilities and obligations of Lessor under this Lease arising or accruing from and after the date of such conveyance or other transfer as to the Leased Property and all such future liabilities and obligations shall thereupon be binding upon the new owner.

30.2 **Mortgages and Subordination.** This Lease and Lessee's interest hereunder shall at all times be subject and subordinate to the lien and security title of any deeds to secure debt, deeds of trust, mortgages, or other interests heretofore or hereafter granted by Lessor or which otherwise encumber or affect the Leased Property and to any and all advances to be made thereunder and to all renewals, modifications, consolidations, replacements, substitutions, and extensions thereof (all of which are herein called the "**Mortgage**"); provided, however, that with respect to any Mortgage hereinafter granted, such subordination is conditioned upon delivery to Lessee of a non-disturbance agreement which provides that Lessee shall not be disturbed in its possession of the Leased Property hereunder following a foreclosure of such Mortgage and that

the holder of such Mortgage or the purchaser at a foreclosure sale shall perform all obligations of Lessor under this Lease. In confirmation of such subordination, however, Lessee shall, at Lessor's request, promptly execute, acknowledge and deliver any instrument which may be required to evidence subordination to any Mortgage and to the holder thereof. In the event of Lessee's failure to deliver such subordination and if the Mortgage does not change any term of the Lease, Lessor may, in addition to any other remedies for breach of covenant hereunder, execute, acknowledge, and deliver the instrument as the agent or attorney-in-fact of Lessee, and Lessee hereby irrevocably constitutes Lessor its attorney-in-fact for such purpose, Lessee acknowledging that the appointment is coupled with an interest and is irrevocable. Lessee hereby waives and releases any claim it might have against Lessor or any other party for any actions lawfully taken by the holder of any Mortgage.

Article XXXI.

31.1 **Quiet Enjoyment.** So long as Lessee pays all Rent as the same becomes due and complies with all of the terms of this Lease and performs its obligations hereunder, in each case within the applicable grace periods, if any, Lessee shall peaceably and quietly have, hold and enjoy the Leased Property for the Term hereof, free of any claim or other action by Lessor or anyone claiming by, through or under Lessor, but subject to all liens and encumbrances subject to which the Leased Property was conveyed to Lessor or hereafter consented to by Lessee or provided for herein.

Article XXXII.

32.1 **Notices.** All notices, demands, requests, consents, approvals and other communications ("**Notice**" or "**Notices**") hereunder shall be in writing and (i) personally served or, (ii) mailed by registered or certified mail, return receipt requested and postage prepaid or, (iii) sent by trackable overnight nationally recognized courier service, next Business Day delivery or, (iv) via facsimile (provided (i), (ii) or (iii) are also utilized), and addressed as follows:

If to Lessor:

SUNRISE COVE SMI WESTREC, LLC
17330 Preston Road, Suite 220A
Dallas, Texas 75252
Attn: Bryan Redmond

If to Lessee:

SUNRISE SMI OPCO, LLC,
17330 Preston Road, Suite 220A
Dallas, Texas 75252
Attn: Bryan Redmond

Personally delivered Notice shall be effective upon receipt, Notice given by mail shall be complete at the time of deposit in the U.S. Mail system, Notice given by trackable overnight nationally recognized courier service, next Business Day delivery shall be complete at the time of deposit

with such courier service, and Notice given by facsimile shall be complete at the time evidenced by the printed verification thereof, provided one of the other methods is also utilized, but any prescribed period of Notice and any right or duty to do any act or make any response within any prescribed period or on a date certain after the service of such Notice given by mail shall be extended five days.

Article XXXIII.

33.1 **Lessor May Grant Liens.** Without the consent of Lessee, Lessor may, from time to time, directly or indirectly, create or otherwise cause to exist any lien, encumbrance or title retention agreement ("**Encumbrance**") upon the Leased Property, including specifically, without limitation, one or more Encumbrances that secure financing or refinancing.

Article XXXIV.

34.1 **Miscellaneous.** Anything contained in this Lease to the contrary notwithstanding, all claims against, and liabilities of, Lessee or Lessor arising prior to any date of termination of this Lease shall survive such termination for a period or one (1) year, and any claim or action in connection therewith shall be filed within said one (1) year period or be deemed finally and irrevocably waived, released and relinquished thenceforth. If any term or provision of this Lease or any application thereof is invalid or unenforceable, the remainder of this Lease and any other application of such term or provisions shall not be affected thereby. If any late charges or any interest rate provided for in any provision of this Lease are based upon a rate in excess of the maxim um rate permitted by applicable law, the parties agree that such charges shall be fixed at the maximum permissible rate. Neither this Lease nor any provision hereof may be changed, waived, discharged or terminated except by a written instrument signed by Lessor and Lessee. All the terms and provisions of this Lease shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns. The headings in this Lease are for convenience of reference only and shall not limit or otherwise affect the meaning hereof. This Lease shall be governed by and construed in accordance with the laws of the State, but not including its conflicts of law rules.

34.2 **Transition Procedures.** Upon the expiration or termination of the Term, for whatever reason, Lessor and Lessee shall do the following (and the provisions of this Section 34.2 shall survive the expiration or termination of this Lease until they have been fully performed) and, in general, shall cooperate in good faith to effect an orderly transition of the management and/or lease of the Leased Property.

(a) Transfer of Licenses. Upon the expiration or earlier termination of the Term, Lessee shall use commercially reasonable efforts (i) to transfer to Lessor or Lessor's nominee all licenses, operating permits and other governmental authorizations and all contracts, including contracts with governmental or quasi-governmental entities, that may be necessary for the operation of the Leased Property (collectively, "**Licenses**"), or (ii) if such transfer is prohibited by law or Lessor otherwise elects, to cooperate with Lessor or Lessor's nominee in connection with the processing by Lessor or Lessor's nominee of any applications for, all Licenses; provided, in either case, that the costs and expenses of any

such transfer or the processing of any such application shall be paid by Lessor or Lessor's nominee.

(b) Leases and Concessions. Lessee shall assign to Lessor or Lessor's nominee simultaneously with the termination of this Lease, and Lessee shall cooperate with the assignee in the assignment or termination of all leases and concession agreements in effect with respect to the Leased Property then in Lessee's name.

(c) Books and Records. All books and records for the Leased Property kept by Lessee shall be delivered promptly to Lessor or Lessor's nominee, simultaneously with the termination of this Lease, but such books and records shall thereafter be available to Lessee at all reasonable times for inspection, audit, examination, and transcription for a period of one (1) year and Lessee may retain (on a confidential basis) copies or computer records thereof.

(d) Final Financial Statements. Lessor and Lessee shall cooperate in the preparation of final financial statements and the final reconciliation with respect to management fees, Leased Property expenses, and any other costs related to the use and operation of the Leased Property, which shall be calculated by Lessee within three (3) months after termination of this Lease (such reconciliation to be completed at Lessee's expense).

(e) Interim Management Arrangement. So as to avoid any disruption or delay of any services at the Leased Property, Lessee shall, upon the request of the successor lessee or operator of the Leased Property, enter into an interim management arrangement with such successor in form and substance reasonably acceptable to Lessee, which shall lawfully permit the successor tenant or operator to continue to operate the Leased Property or activities of the Leased Property under Lessee's (or any Property Manager's) license or permit until the completion of the transfer and issuance of a replacement license or permit, not to exceed one hundred twenty (120) days.

(f) Subleases. Lessee shall assign its interest in any subleases to Lessor or a successor lessee, as directed by Lessor.

34.3 **Waiver of Presentment, etc.** Lessee waives all presentments, demands for payment and for performance, notices of non-performance, protests, notices of protest, notices of dishonor, and notices of acceptance and waives all notices of the existence, creation, or incurring of new or additional obligations, except as expressly granted herein.

34.4 **Limitation of Liability.** The obligations of Lessor and Lessee under this Lease do not constitute personal obligations of their respective individual partners, members, directors, officers, shareholders, trustees or beneficiaries, and neither party shall seek recourse against the other party's partners, members, directors, officers, shareholders, trustees or beneficiaries (whether directly or by virtue of pursuing a note receivable from (or other claim by Lessor or Lessee against) such partners, members, directors, officers, shareholders, trustees or beneficiaries), or any of their personal assets for satisfaction of any liability with respect to this Lease. The provisions of this Section are not designed to relieve either party from the performance of any of their obligations

hereunder, but rather to limit such party's liability in the case of the recovery of a judgment against it, as aforesaid; nor shall any of the provisions of this Section be deemed to limit or otherwise affect a party's right to obtain injunctive relief or specific performance or availability of any other right or remedy which may be accorded such party by law or the Lease. Notwithstanding the foregoing provisions of this Section 34.4 to the contrary, Lessor may pursue a claim against the partners, members, directors, officers, shareholders, trustees or beneficiaries of Lessee to the extent that Lessee distributes Gross Revenue to any or all of such parties at such time as Rent is due and owing to Lessor or Lessee otherwise misappropriates or misapplies Gross Revenues in a manner contrary to the terms and conditions of this Lease; provided, however, that any such claim shall be limited to the amount that is so distributed, misappropriated or misapplied.

Article XXXV.

35.1 **Memorandum of Lease.** Lessor and Lessee shall promptly upon the request of either enter into short form memoranda of both the existence and termination of this Lease, as and when applicable, in form suitable for recording under the laws of the State in which reference to this Lease, and all options contained herein, shall be made. The party requesting any such memorandum of this Lease shall pay all costs and expenses of recording such memorandum, including any real estate excise transfer or sales tax that may be due and payable in conjunction with recording any such memorandum. The provisions of this paragraph shall survive termination of the Lease.

Article XXXVI.

36.1 **Option to Renew.** Lessee shall have the right to extend the Term as set forth on Exhibit B.

36.2 **Fair Market Rent.** For the purposes of this Article, "**Fair Market Rent**" shall mean the Base Rent, on a so called "triple net" basis, that would be paid by a willing tenant, not compelled to lease, and accepted by a willing landlord, not compelled to lease, for the Leased Property as of the commencement date of the applicable Renewal Term. At the written request of Lessee made at any time within the last Lease Year of the Term or any Renewal Term, Lessor shall notify Lessee of its determination of Fair Market Rent. If Lessee disagrees with the Fair Market Rent as determined by Lessor, Lessee shall promptly notify Lessor of same and Lessee and Lessor shall negotiate in good faith the appropriate amount of Fair Market Rent for the applicable Renewal Term.

36.3 **Conditions.** At Lessor's option, which may be exercised in its sole discretion, Lessee may exercise its option to renew hereunder, and an exercise thereof shall be only effective, if at the time of Lessee's exercise of the option and on the commencement date of the applicable Renewal Term, this Lease is in full force and effect and there are no events or circumstances which, with the giving of notice or the passage of time, or both, could constitute a default by Lessee under this Lease, and inasmuch as this option is intended only for the benefit of the original Lessee named in this Lease, the entire Leased Property are occupied by the original Lessee named herein and the Lessee has neither assigned this Lease nor sublet any portion of the Leased Property.

[Signature Page Follows.]

IN WITNESS WHEREOF, the parties have executed this Lease by their duly authorized officers as of the date first above written.

LESSOR:

SUNRISE COVE SMI WESTREC, LLC,
a Delaware limited liability company

By:_____
Name:_____
Title:_____

LESSEE:

SUNRISE SMI OPCO, LLC,
a Delaware limited liability company

By:_____
Name:_____
Title:_____

EXHIBIT A

OUTLINE OF LEASED LAND

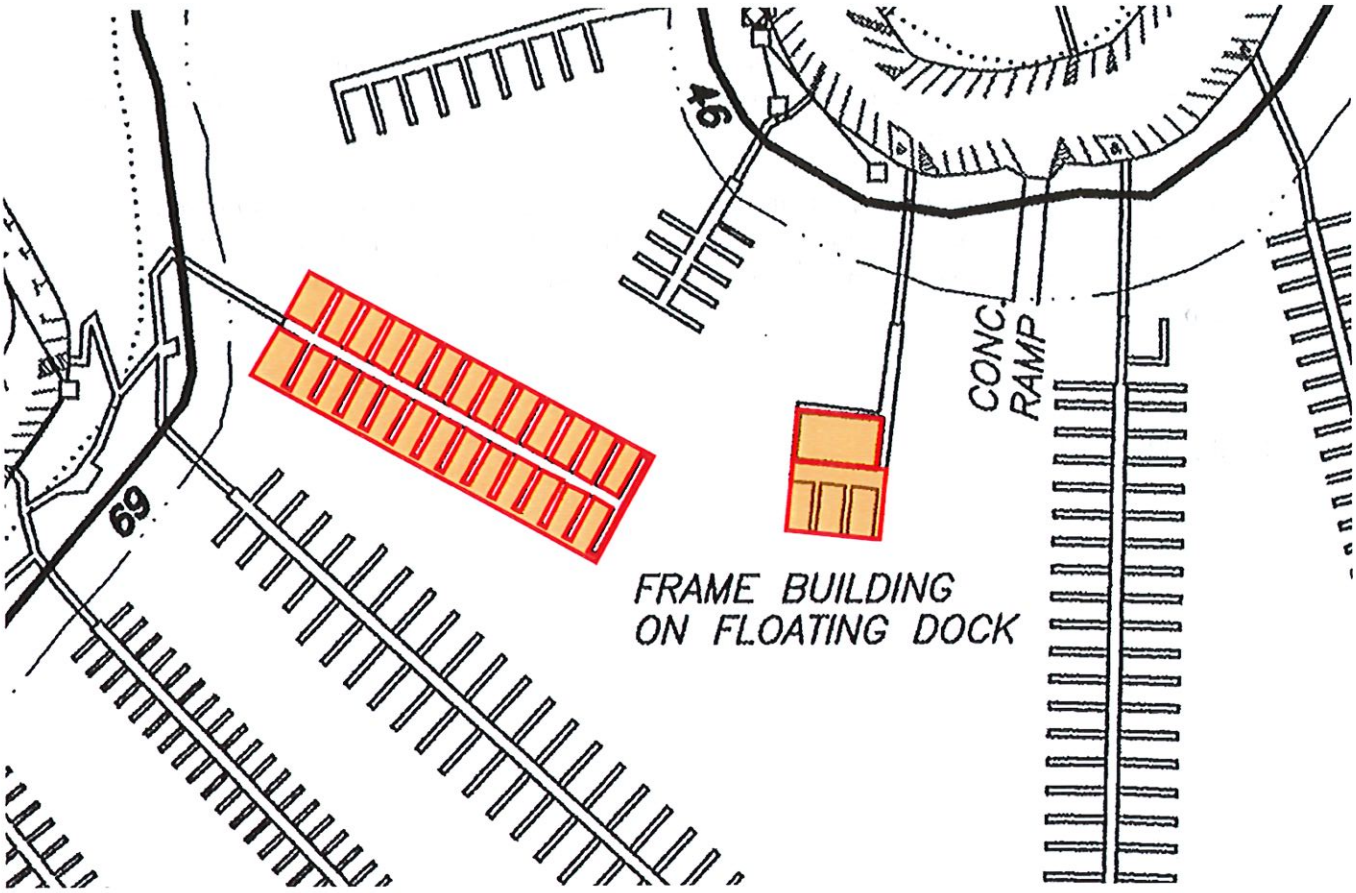


EXHIBIT B

CERTAIN KEY TERMS

Term. Term of the Lease shall expire on December 31, 2023. Lessee shall have the right to extend the Term for one (1) term of two (2) years (the "**Renewal Term**") but only to the extent permitted under the Master Lease, if applicable.

Permitted Uses: Restaurant Facility; Clubhouse; Ship Store; Fuel Service Station/Fueling Docks; Cabin/Cottage Rentals; Service Center/Boat Repair Facility; Parts Warehouse; Boat Rental Facility; Office Space; Retail Space; Banquet/Event Space; Fitness Facility; Houseboats; Other (specify): None

Allocable Share: N/A

EXHIBIT C-1

BASE RENT

Base Rent – $620.00/month

EXHIBIT C-2

PERCENTAGE RENT

IF APPLICABLE:

Lessee shall pay Lessor Percentage Rent as required under this Lease or as otherwise required in accordance with the terms and conditions of the Master Lease; provided, however, in order to avoid duplication, the Rent paid by Lessee to Lessor under this Lease shall not be included in gross receipts and thus will have no effect on the amount of percentage rent payable to Master Lessor under the Master Lease.

IF PERCENTAGE RENT IS NOT APPLICABLE, CHECK HERE: _____:

If checked, any references in the Lease to "Percentage Rent" (including payments of such amounts and delivery of materials evidencing calculation of such amount) are hereby deemed deleted.

APPENDIX A

DEFINITIONS

For all purposes of this Lease, except as otherwise expressly provided or unless the context otherwise requires, (a) the terms defined in this Appendix A have the meanings assigned to them in this Appendix A and include the plural as well as the singular, (b) all accounting terms not otherwise defined herein have the meanings assigned to them in accordance with generally accepted accounting principles as are at the time applicable, (c) all references in this Lease to designated "Articles," "Sections" and other subdivisions are to the designated Articles, Sections and other subdivisions of this Lease and (d) the words "herein," "hereof" and "hereunder" and other words of similar import refer to this Lease as a whole and not to any particular Article, Section or other subdivision.

Additional Charges. As defined in Section 3.3.

Affiliate. As used in this Lease, the term "**Affiliate**" of a person shall mean (a) any person that, directly or indirectly, controls or is controlled by or is under common control with such person, (b) any other person that owns, beneficially, directly or indirectly, ten percent (10%) or more of the outstanding capital stock, shares or equity interests of such person or (c) any officer, director, employee, partner or trustee of such person or any person controlling, controlled by or under common control with such person (excluding trustees and persons serving in similar capacities who are not otherwise an Affiliate of such person). The term "**person**" means and includes individuals, corporations, general and limited partnerships, stock companies or associations, joint ventures, associations, companies, trusts, banks, trust companies, land trusts, business trusts, or other entities and governments and agencies and political subdivisions thereof. For the purposes of this definition, "**control**" (including the correlative meanings of the terms "**controlled by**" and "**under common control with**"), as used with respect to any person, shall mean the possession, directly or indirectly, of the power to direct or cause the direction of the management and policies of such person, through the ownership of voting securities, partnership interests or other equity interests.

Annual Budget. As used in this Lease, the term "**Annual Budget**" shall mean an operating and capital budget prepared by or for Lessee and delivered to Lessor in accordance with Section 3.5.

Award. All compensation, sums or anything of value awarded, paid or received on a total or partial Condemnation.

Base Rate. The prime rate of interest announced publicly by Citibank, N.A., in New York, New York, from time to time. If no such rate is announced or becomes discontinued, then such rate as is published in The Wall Street Journal as the prime rate from time to time.

Base Rent. As defined in Section 3.1(a).

Business Day. Each Monday, Tuesday, Wednesday, Thursday and Friday that is not a day on which the Federal Reserve Bank of Dallas is closed.

Capital Expenditures. As used in this Lease, the term "**Capital Expenditures**" shall mean expenditures for capital improvements to the Leased Property and replacement or refurbishing of the Improvements, Furniture, Fixtures and Equipment and of other equipment and systems that constitute portions of the Leased Property in connection with the Permitted Uses, and the cost of all approvals, licenses, permits and other authorizations necessary to complete such improvements, replacements and refurbishings, all as designated as capital improvements by and determined in accordance with generally accepted accounting principles.

Capital Impositions. Taxes, assessments or similar charges imposed upon or levied against the Leased Property for the costs of public improvements, including, without limitation, roads, sidewalks, public lighting fixtures, utility lines, storm sewers, drainage facilities and similar improvements.

CERCLA. The Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended.

Claims. As defined in Section 12.1

Code. The Internal Revenue Code of 1986, as amended.

Commencement Date. The Effective Date.

Condemnation. A Taking resulting from (1) the exercise of any governmental power, whether by legal proceedings or otherwise, by a Condemnor, and (2) a voluntary sale or transfer by Lessor to any Condemnor, either under threat of condemnation or while legal proceedings for condemnation are pending.

Condemnor. Any public or quasi-public authority, or private corporation or individual, having the power of Condemnation.

Consolidated Financials. For any Fiscal Year or other accounting period for Lessee and its consolidated subsidiaries, statements of earnings and retained earnings and cash flow and for the period from the beginning of the respective Fiscal Year to the end of such period and the related balance sheet as at the end of such period, all in reasonable detail and setting forth in comparative form the corresponding figures for the corresponding period in the preceding Fiscal Year, and prepared in accordance with generally accepted accounting principles as applied to Lessee and certified by Lessee's Chief Financial Officer.

Date of Taking. The date the Condemnor has the right to possession of the property being condemned.

Encumbrance. As defined in Article XXXIII.

Environmental Authority. Any department, agency or other body or component of any Government that exercises any form of jurisdiction or authority over Lessor, Lessee or the Leased Property under any Environmental Law.

Environmental Authorization. Any license, permit, order, approval, consent, notice, registration, filing or other form of permission or authorization required under any Environmental Law.

Environmental Laws. All applicable federal, state, local and foreign laws and regulations relating to the environment (including without limitation, ambient air, surface water, ground water, land surface or subsurface strata), including without limitation laws and regulations relating to emissions, discharges, Releases or threatened Releases of Hazardous Materials or otherwise relating to the manufacture, processing, distribution, use, treatment, storage, disposal, transport or handling of Hazardous Materials and laws relating to health or safety. Environmental Laws include but are not limited to CERCLA, FIFRA, RCRA, SARA, OSHA and TSCA.

Environmental Liabilities. Any and all obligations to pay the amount of any judgment or settlement, the cost of complying with any settlement, judgment or order for injunctive or other equitable relief, the cost of compliance or corrective action in response to any notice, demand or request from an Environmental Authority, the amount of any civil penalty or criminal fine, and any court costs and reasonable amounts for attorney's fees, fees for witnesses and experts, and costs of investigation and preparation for defense of any claim or any Proceeding, regardless of whether such Proceeding is threatened, pending or completed, that may be or have been asserted against or imposed upon Lessor, Lessee, any Predecessor, the Leased Property or any property used therein and arising out of:

(a) Failure of Lessee to comply at any time with all Environmental Laws;

(b) Presence of any Hazardous Materials in excess of allowable limits under any Environmental Laws on, in, under, at or in any way affecting the Leased Property;

(c) A Release at any time of any Hazardous Materials on, in, at, under or in any way affecting the Leased Property;

(d) Identification by an Environmental Authority of Lessee, Lessor or any Predecessor as a potentially responsible party under CERCLA or under any Environmental Law similar to CERCLA;

(e) Presence at any time of any above-ground and/or underground storage tanks, as defined in RCRA or in any applicable Environmental Law on, in, at or under the Leased Property or any adjacent site or facility; or

(f) Any and all claims for injury or damage to persons or property arising out of exposure to Hazardous Materials originating or located at the Leased Property, or resulting from operation thereof or any adjoining property.

Event of Default. As defined in Section 16.1.

FIFRA. The Federal Insecticide, Fungicide, and Rodenticide Act, as amended.

Fiscal Year. The 12-month period from January 1 to December 31.

Furniture, Fixtures and Equipment. For purposes of this Lease, the terms "Furniture, Fixtures and Equipment" shall mean collectively all furniture, wall coverings, fixtures and equipment and systems located at, or used in connection with, the Leased Property, together with all replacements therefor and additions thereto, including, without limitation, (i) all equipment and systems required for the operation of fuel docks, boat service centers and related repair facilities, kitchens and laundry facilities, (ii) office equipment, (iii) dining room wagons, materials handling equipment, cleaning and engineering equipment, (iv) telephone and computerized accounting systems, and (v) vehicles including boats and watercraft of any kind.

Government. The United States of America, any state, district or territory thereof, any foreign nation, any state, district, department, territory or other political division thereof, or any political subdivision of any of the foregoing.

Gross Revenues. means, in connection with any period, all operating revenue received or accrued for the benefit of Lessee and arising from the operation of the Leased Property (or any portion thereof) attributable to such period, calculated on an accrual basis and determined in accordance with GAAP or as defined whether named as "gross receipts" or "gross revenue" under the Master Lease, if applicable.

Hazardous Materials. Hazardous Materials shall mean and include:

(a) Solid, gaseous, or liquid wastes (including hazardous wastes), hazardous air pollutants, hazardous substances, hazardous materials, regulated substances, restricted hazardous wastes, hazardous chemical substances, mixtures, toxic substances, pollutants or contaminants or terms of similar import as such terms are defined in any Environmental Law as such definition may change from time to time;

(b) Any substance or material which now or in the future is known to constitute a threat to health, safety, property or the environment or which has been or in the future is determined by an Environmental Authority to pose a risk of injury to health, safety, property or the environment or exposure to which is prohibited, limited or regulated by any Environmental Law or any Environmental Authority, including all of those materials, wastes and substances designated now or in the future as hazardous or toxic by any Environmental Authority; and

(c) Any petroleum, or petroleum products or byproducts, radioactive materials, polychlorinated biphenols, asbestos, whether friable or non-friable, and urea formaldehyde foam insulation or radon gas.

Impositions. Collectively, all taxes (including, without limitation, all ad valorem, sales and use, single business, gross receipts, transaction privilege, rent or similar taxes as the same relate to or are imposed upon Lessee or its business conducted upon the Leased Property and all real estate or ad valorem property taxes and inventory and personal property taxes and similar charges on or relating to the Leased Property and the Facility), assessments (including, without

limitation, all assessments under private covenants and for public improvements or benefit, whether or not commenced or completed prior to the date hereof and whether or not to be completed within the Term), water, sewer or other rents and charges, excises, tax inspection, authorization and similar fees and all other governmental charges, in each case whether general or special, ordinary or extraordinary, or foreseen or unforeseen, of every character in respect of the Leased Property or the business conducted thereon by Lessee (including all interest and penalties thereon caused by any failure in payment by Lessee), which at any time prior to, during or with respect to the Term hereof may be assessed or imposed on or with respect to or be a lien upon (a) Lessor's interest in the Leased Property, (b) the Leased Property, or any part thereof or any rent therefrom or any estate, right, title or interest therein, or (c) any occupancy, operation, use or possession of, or sales from, or activity conducted on or in connection with the Leased Property, or the leasing or use of the Leased Property or any part thereof by Lessee. Nothing contained in this definition of Impositions shall be construed to require Lessee to pay (1) any tax based on net income (whether denominated as a franchise or capital stock or other tax) imposed on Lessor or any other person, or (2) any net revenue tax of Lessor or any other person, or (3) any tax imposed with respect to the sale, exchange or other disposition by Lessor of the Leased Property or the proceeds thereof, or (4) any single business, gross receipts (other than a tax on any rent received by Lessor from Lessee), transaction, privilege or similar taxes as the same relate to or are imposed upon Lessor.

Indemnified Party. Any Lessor Indemnified Party.

Indemnifying Party. Any party obligated to indemnify an Indemnified Party pursuant to Section 8.3 or Article XXII.

Insurance Requirements. All terms of any insurance policy required by this Lease and all requirements of the issuer of any such policy.

Inventory. All merchandise utilized by Lessee in connection with the operation of the Leased Improvement as a Facility, including, without limitation, food, beverage, fuel, linens and other non-depreciable personal property.

Land. As defined in Article I.

Lease. This Facilities Lease Agreement.

Leased Improvement, Leased Property. Each as defined in Article I.

Legal Requirements. All federal, state, county, municipal and other governmental statutes, laws, rules, orders, regulations, ordinances, judgments, decrees and injunctions affecting either the Leased Property or the maintenance, construction, use or alteration thereof (whether by Lessee or under Lessee's control), whether or not hereafter enacted and in force, including (a) all laws, rules or regulations pertaining to the environment, occupational health and safety and public health, safety or welfare, and (b) any laws, rules or regulations that may (1) require repairs, modifications or alterations in or to the Leased Property or (2) in any way adversely affect the use and enjoyment thereof; and all permits, licenses and authorizations and regulations relating thereto and all covenants, agreements, restrictions and encumbrances contained in any instruments, either

of record or known to Lessee (other than encumbrances created by Lessor without the consent of Lessee), at any time in force affecting the Leased Property.

Lender. The holder of any loan secured by Lessor's interest in the Leased Property.

Lessee. The Lessee designated on this Lease and its respective permitted successors and assigns.

Lessee's Personal Property. As defined in Section 6.2.

Lessor. The Lessor designated on this Lease and its respective successors and assigns.

Lessor Indemnified Party. Lessor, any Affiliate of Lessor, any other Person against whom any claim for indemnification may be asserted hereunder as a result of a direct or indirect ownership interest (including a stockholder's, partnership or membership interest) in Lessor, the officers, directors, partners, members, stockholders, employees, agents and representatives of Lessor, and the respective heirs, personal representatives, successors and assigns of any such officer, director, partner, member, stockholder, employee, agent or representative.

Master Lease. If applicable that certain ground lease, license or concession contract by and between Lessor as lessee and the applicable governmental agency as fee interest owner or land lessor ("**Master Lessor**") covering the Leased Land and, to the extent further applicable, any overlease between Master Lessor and the fee interest owner which covers the Leased Land.

Mortgage Loan. Any loan secured by Lessor's interest in the Leased Property.

Notice. A notice given pursuant to Article XXXII.

Officer' s Certificate. A certificate of Lessee reasonably acceptable to Lessor, signed by an authorized signatory of Lessee, or any other person whose power and authority to act has been authorized by delegation in writing by such authorized signatory.

OSHA. The Occupational Health and Safety Act, as amended.

Overdue Rate. On any date, a rate equal to the Base Rate plus 5% per annum, but in no event greater than the maxim um rate then permitted under applicable law.

Payment Date. Any due date for the payment of any installment of Base Rent.

Percentage Rent. As defined in Section 3.1(b).

Permitted Uses. As defined in Section 7.2(b).

Person. Any Government, natural person, corporation, general or limited partnership, limited liability company, stock company or association, joint venture, association, company, trust, bank, trust company, land trust, business trust, or other entity.

Predecessor. Any Person whose liabilities arising under any Environmental Law have or may have been retained or assumed by Lessee, either contractually or by operation of law, relating to the Leased Property.

Proceeding. Any judicial action, suit or proceeding (whether civil or criminal), any administrative proceeding (whether formal or informal), any investigation by a governmental authority or entity (including a grand jury), and any arbitration, mediation or other non-judicial process for dispute resolution.

RCRA. The Resource Conservation and Recovery Act, as amended.

Release or Releases. A "**Release**" as defined in CERCLA or in any Environmental Law unless such Release has been properly authorized and permitted in writing by all applicable Environmental Authorities or is allowed by such Environmental Law without authorizations or permits.

Rent. Collectively, the Base Rent, Percentage Rent and Additional Charges.

SARA. The Superfund Amendments and Reauthorization Act of 1986, as amended.

State. The State or Commonwealth of the United States in which the Leased Property is located.

Subsidiaries. Persons in which a party owns, directly or indirectly, more than 50% of the voting stock or control, as applicable (individually, a "**Subsidiary**").

SUNTEX REIT as defined in Section 19.1(a).

Taking. A taking or voluntary conveyance during the Term of all or part of the Leased Property, or any interest therein or right accruing thereto or use thereof, as the result of, or in settlement of, any Condemnation or other eminent domain proceeding affecting the Leased Property whether or not the same shall have actually been commenced.

Term. As defined in Section 1.2.

TSCA. The Toxic Substances Control Act, as amended.

Unavoidable Occurrence. If Lessee is unable to timely fulfill its obligations under this lease due to: (i) strikes or lockouts affecting the general vicinity in which the Leased Property is located, (ii) delays in the delivery of materials or disruption of shipping, (iii) wars, riots, or civil insurrection, (iv) changes (occurring after the date hereof) in laws, codes and regulations (but not based on the failure, within the reasonable control of Lessee, to comply with laws, codes, or regulations and documents of record presently in effect), (v) fire or other casualty not caused by Lessee or any Affiliate of Lessee, (vi) lawsuits, injunctions and moratoriums beyond Lessee's reasonable control (but not based on the failure, within the reasonable control of Lessee, to comply with laws, codes, or regulators and documents of record presently in effect), (vii) weather or (viii) drought.

Uneconomic for Previous Use. A state or condition of the Leased Property such that, in the good faith judgment of Lessee or Lessor, as applicable, reasonably exercised and evidenced by the resolution of the board of directors or other governing body of the respective entity, the Leased Property cannot be operated on a commercially practicable basis for its previous use, taking into account, among other relevant factors, the number of usable units and projected revenues, such that Lessee shall complete the cessation of operations from the Leased Property.

Unsuitable for Previous Use. A state or condition of the Leased Property such that, in the good faith judgment of Lessee or Lessor, as applicable, reasonably exercised and evidenced by the resolution of the board of directors or other governing body of the respective entity, due to casualty damage or loss through Condemnation, the Leased Property cannot function as a Leased Property consistent with standards applicable to a well maintained and operated marina facility.

SUNTEX MARINAS

17330 Preston Road, Suite 220A, Dallas, TX 75252

December 21, 2022

Hall County Board of Commissioners
Attn: Brent Holloway, CPRP
Director | Parks & Community Services
Hall County Government
PO Drawer 1435
Gainesville, GA 30503

RE: Sublease Agreement dated February 12, 1999 (the "Sublease") between Hall County, Georgia ("County"), as Lessor, and Sunrise Cove SMI Westrec, LLC, as successor in interest ("PropCo") concerning certain real property that is located on and around the Lake Sidney Lanier Project in Hall County, Georgia and is more fully described in the Sublease (the "Marina")

Dear Brent:

In connection with becoming eligible to be taxable as a real estate investment trust (a "REIT"), PropCo desires to sublease to Sunrise SMI OpCo, LLC ("OpCo") a portion of the Marina (the "Sublet Premises") in order to enable PropCo to operate in such a manner that its income and assets will satisfy the REIT income and asset tests of Section 856(c)(2), (c)(3) and (c)(4) of the Internal Revenue Code of 1986, as amended (the "Code"). The proposed Facilities Lease Agreement (the "OpCo Lease") between PropCo and OpCo and the County's Consent are enclosed herein for review and approval.

Should you have any questions or concerns please do not hesitate to contact the undersigned.

Sincerely,

James L. Frye

James L. Frye
Vice President Real Estate
Suntex Marina Investors, LLC

CONSENT OF LESSOR

This CONSENT OF LESSOR (this "**Consent**") is made and entered into to be effective as of, although not necessarily executed on, the 1st day of February 2022, between the HALL COUNTY, GEORGIA, a political subdivision of the State of Georgia ("**Lessor**"), for the benefit of SUNRISE COVE SMI WESTREC LLC, a Delaware limited liability company, as successor-in-interest ("**Lessee**") and SUNRISE SMI OPCO, LLC, a Delaware limited liability company ("**Affiliated Sublessee**").

RECITALS

A. The United States Department of the Army ("**Army**"), as lessor, and Lessor entered into that certain Lease (as amended, the "**Master Lease**") dated July 31, 1998, concerning certain real property that is located on and around the Lake Sidney Lanier Project in Hall County, Georgia and is more fully described in the Master Lease (the "**Master Leased Premises**").

B. Lessor and PS Marinas 3, LP ("**PS Marinas 3**"), as sublessee, entered into that certain Lease Agreement (the "**PS Marinas Sublease**") dated February 12, 1999, concerning a portion of the Master Leased Premises (the "**Subleased Premises**").

C. PS Marinas 3 assigned its right, title, and interest in and to the PS Marinas Sublease and the Subleased Premises to Lessee pursuant to that certain Assignment and Assumption of Lease and Consent ("**Assignment**") dated February 1, 2022.

D. Lessee, as successor-in-interest to PS Marinas 3, is the current lessee under that certain Lease Agreement with Lessor as lessor (the "**Lease**"), which Lease is the subject of that certain Memorandum of Sublease, which is recorded in Deed Book 5771, at Page 198 of the Records of the Clerk of the Superior Court of Hall County, Georgia (as amended, the "**Memorandum of Lease**") for Sunrise Cove on Lake Lanier Marina (the "**Marina**").

E. Lessee and Affiliated Sublessee desire to execute a Facilities Lease Agreement for Sunrise Cove on Lake Lanier Marina dated April 29, 2022, to be effective as of the date of this Consent (the "**Sublease**") pursuant to which SUNRISE COVE SMI WESTREC, LLC (as Lessor) will sublease to SUNRISE SMI OPCO, LLC (as Lessee) a certain portion of the Premises (the "**Subleased Premises**") as more particularly described in the Sublease for use by Affiliated Sublessee.

F. Section 10 of the Lease states that the Lease cannot be subleased without the prior written consent of the Lessor (Hall County, Georgia).

G. Lessor is willing to provide its consent to this Consent, on the terms and conditions set forth herein.

NOW, THEREFORE, in consideration of the premises, the sum of Ten Dollars ($10.00) and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged and confessed, the parties hereto hereby agree as follows:

1. Consent to Sublease. Hall County, Georgia (as Lessor) hereby consents to the Sublease on the following terms and conditions:

(a) Lessee shall remain fully liable for the performance of all the obligations of the "Lessee" under the Lease.

(b) The use and occupancy of the Subleased Premises by Affiliated Sublessee shall be subject to all of the terms and conditions of the Lease.

(c) No further assignment of the Lease or subletting of the Subleased Premises that requires the consent of Lessor under the terms of the Lease shall be made without the prior written consent of Lessor except that Lessee shall be permitted to modify the rent paid by Affiliated Sublessee under the Sublease without the prior written consent of Lessor so long as all gross receipts derived from the Subleased Premises continue to be included in the calculation of percentage rent paid under the Lease.

(d) Affiliated Sublessee shall be required to obtain Lessor's consent to any action or matter with respect to which Lessee is required to obtain Lessor's consent under the Lease.

2. No Modification. Nothing in this Consent amends the Sublease except to the extent expressly stated herein.

3. Effectiveness. The effectiveness of this Consent shall be conditioned upon the Army's extension of the term of the Master Lease to expire on or after July 31, 2036, and the Army's approval of the Sublease as required by Section 10 (a) of the underlying Master Lease between Hall County and the Army.

4. Governing Law. This Consent shall be governed by and construed in accordance with the laws of the State of Georgia applicable to contracts made and performed in such State.

5. Successors and Assigns. This Consent shall be binding on and inure to the benefit of the successors and assigns of the parties hereto.

6. Headings. The section headings hereof are inserted for convenience of reference only and shall in no way alter, amend, define or be used in the construction or interpretation of the text of such section.

7. Construction. Whenever the context hereof so requires, reference to the singular shall include the plural and likewise, the plural shall include the singular; words denoting gender shall be construed to mean the masculine, feminine or neuter, as appropriate; and specific enumeration shall not exclude the general but shall be construed as cumulative of the general recitation.

8. Severability. If any clause or provision of this Agreement is or should ever be held to be illegal, invalid or unenforceable under any present or future law applicable to the terms hereof, then and in that event, it is the intention of the parties hereto that the remainder of this Agreement shall not be affected thereby, and that in lieu of each such clause or provision of this Amendment that is illegal, invalid or unenforceable, such clause or provision shall be judicially construed and interpreted to be as similar in substance and content to such illegal, invalid or unenforceable clause or provision, as the context thereof would reasonably suggest, so as to thereafter be legal, valid and enforceable.

9. Multiple Counterparts. This Agreement may be executed in multiple counterparts, each of which shall constitute an original instrument, but all of which shall constitute one and the same agreement.

EXECUTED as of the date and year first above written.

LESSOR:

HALL COUNTY, GEORGIA,
a political subdivision of the State of Georgia

By: _____

Name: _____

Title: _____

HALL COUNTY, GEORGIA, COUNTY CLERK

By: _____

Date: _____

HALL COUNTY, GEORGIA, COUNTY ATTORNEY

By: _____

Date: _____

LESSEE:

SUNRISE COVE SMI WESTREC LLC,
a Delaware limited liability company

By: _____

Name: _____

Title: _____

AFFILIATED SUBLESSEE:

SUNRISE SMI OPCO, LLC,
a Delaware limited liability company

By: _____

Name: _____

Title: _____

FIRST AMENDMENT TO SUBLEASE AGREEMENT

THIS FIRST AMENDMENT TO SUBLEASE AGREEMENT (hereinafter this "Amendment") is made effective as of the ___ day of _____ 2022 (the "Effective Date"), by and among **HALL COUNTY, GEORGIA**, a political subdivision of the State of Georgia (hereinafter, the "County"), and **SUNRISE COVE SMI WESTREC, LLC**, a Delaware limited liability company, as successor in interest (hereinafter "Sublessee").

WITNESSETH:

WHEREAS, the United States Department of the Army ("Army"), as lessor, and the County, as lessee, executed and entered into that certain Lease (as amended, the "Underlying Lease") dated July 31, 1998, concerning certain real property that is located on and around the Lake Sidney Lanier Project in Hall County, Georgia and is more fully described in the Underlying Lease;

WHEREAS, Hall County, as sublessor, and PS Marinas 3, LP, a California limited partnership ("PS Marinas 3"), as sublessee, executed and entered into that certain Lease Agreement (as amended, the "Sublease") dated February 12, 1999, concerning certain real property that is located on and around the Lake Sidney Lanier Project in Hall County, Georgia and is more fully described in the Sublease (the "Subleased Premises");

WHEREAS, the Hall County Board of Commissioners approved an extension of the Sublease through July 31, 2029 as reflected in the Minutes of the January 13, 2022 meeting of the Hall County Board of Commissioners;

WHEREAS, PS Marinas 3 assigned its right, title, and interest in and to the Sublease and the Subleased Premises to Sublessee pursuant to that certain Assignment and Assumption of Lease and Consent ("Assignment") dated February 1, 2022, and said Assignment was approved by the County;

WHEREAS, County is the current sublessor under the Sublease and Sublessee is the current sublessee under the Sublease; and

WHEREAS, County and Sublessee desire to amend the Sublease as described herein.

NOW, THEREFORE, for and in consideration of the premises and of the mutual agreements contained herein, the parties covenant and agree as follows:

1. The above Recitals are true and correct and are incorporated into this Amendment. Capitalized terms used in this Amendment and not defined herein shall have the meanings ascribed to them in the Sublease. All references in the Sublease to "the Sublease" or "this Sublease" or similar references shall be references to the Sublease as amended from time to time, including by this Amendment.

2. Section 1 of the Sublease is hereby amended to provide that, unless the Sublease Term is extended, the Sublease Term shall expire on July 31, 2036.

3. The effectiveness of this Amendment shall be conditioned upon the Army's approval of this extension of the Sublease until July 31, 2036 as required by Section 10 (a) of the underlying Lease between Hall County and the Army.

4. Other than with respect to the amendments to the Sublease contained or referred to in this Amendment, which shall supersede any contrary or inconsistent terms of the Sublease, this Amendment does not modify, change or amend the Sublease, and such Sublease shall, as so amended, reinstated, and ratified, remain in full force and effect as amended hereby and the Sublease shall be interpreted and construed accordingly.

5. This Amendment may be executed simultaneously in counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. Counterpart signature pages in this Amendment transmitted by electronic mail in portable document format (.pdf), or by any other electronic means intended to preserve the original graphic and pictorial appearance of a document, will have the same effect as physical delivery of the paper document bearing an original signature.

SIGNATURE PAGES FOLLOW

Executed and effective as of the date Effective Date.

SUBLESSEE:

SUNRISE COVE SMI WESTREC, LLC,
a Delaware limited liability company

By: _____

_____
Authorized Person

Date: _____

ACKNOWLEDGMENT

STATE OF _____)
) ss
COUNTY OF _____)

On this ___ day of _____ 2022, before me, the undersigned Notary Public, personally appeared _____, known to me to be the person described in the foregoing instrument, who acknowledged that he executed the same in the capacity therein stated and for the purposes therein contained.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal.

[S E A L]

_____
Notary Public, State of _____

_____
Printed Name of Notary

My Commission Expires: _____

COUNTY:

THE COUNTY OF HALL, GEORGIA

By: _____

Name: _____

Title: _____

ACKNOWLEDGMENT

STATE OF _____)
) ss
COUNTY OF _____)

On this ___ day of _____ 2022, before me, the undersigned Notary Public, personally appeared _____, known to me to be the person described in the foregoing instrument, who acknowledged that he executed the same in the capacity therein stated and for the purposes therein contained.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal.

[S E A L]

_____
Notary Public, State of _____

_____
Printed Name of Notary

My Commission Expires: _____

AGENDA ITEM

Financial Services

REPORT TO: **Work Session (01/09/23)**

REPORT TO: **Voting Meeting (01/12/23)**

ITEM NO: 716/2022

SUBJECT: Approve the award of RFQ/P #43-018 Professional General Contracting Services for the Georgia Mountain Food Bank Capital Improvements Project to Scroggs & Grizzel Contracting, Inc. of Clermont, GA, in the amount of $3,632,415.00.

Meetings:

Work Session Date: 01/09/23

Voting Meeting Date: 01/12/23

Executive Summary:

Presenter: WG

Recommendation:
Scroggs & Grizzel Contracting, Inc.

Purpose of Request:
The Georgia Mountain Food Bank and Hall County solicited proposals for General Contractors for Grant services from professional construction firms or teams of firms with a strong record in successfully assisting local governments with the implementation of Community Development Block Grant (CDBG) programs through RFQ/P#: 43-018. These grants are funded by the federal government and administered at the state level by the Georgia Department of Community Affairs (DCA) and are a Section 3 Opportunity. Therefore, all activities must be performed in strict adherence to applicable federal and state regulations. The application for this grant was approved at the November 10, 2021 voting meeting.

History:

The Food Bank distributes food to 66 partner agencies in its five-counties service area, including: Dawson, Forsyth, Hall, Lumpkin and Union counties.

Facts and Issues:

Options:

The purpose of the project will include the construction of 10,000 square feet of additional warehouse space and a parking lot at the Georgia Mountain Food Bank's Boomershine Family Logistics Center, 1642 Calvary Industrial Drive, Gainesville, GA 30507. Firm may be asked to assist and participate with citizen and governmental board committees.

Funding Requested	$ 3,632,415.00
Are funds within current budget?	Yes
Source of Funds	CDBG Grant
Does the action involve a Resolution, Ordinance, Contract, Agreement, etc.?	Yes
Has it been reviewed by the County Attorney?	Yes
Is there a deadline for this item?	

Approvals:

Buyer	Submit	Purchasing	Budget
MH	WG	AP	TS
Finance	**Attorney**	**Administration**	**Clerk**
WG	WLI	CR	JR

Attachments:

Financial Supplement
43-018 Notice of Intent to Award
43-018 Bidder's List
43-018 Bid Tab
43-018 Estimate Details
43-018 Vendor Response
43-018 Project Manual
43-018 Architectual Plans
43-018 Architectual Plans (Addendum)
43-018 MOU - GMFB, Hall Co.

HALL COUNTY BOARD OF COMMISSIONERS
FINANCIAL SUPPLEMENT REPORT

AGENDA ITEM 716/2022

Funds Requested: $ 3,632,415.00

Request Budgeted: Yes

Proposed Source of Funding:

CDBG Grant

Budget Transfer Requested:

Yes

Funding Source Items:

Fiscal Year	Fund	Division	Account	Amount
2023	017 - GRANTS	777 - CDBG-CV GRANT	4608 - AGENCY ALLOCATIONS	$3,632,415.00
2023	017 - GRANTS	777 - CDBG-CV GRANT	3734 - DEPT OF COMMUNITY AFFAIR	$-2,188,697.00
2023	017 - GRANTS	777 - CDBG-CV GRANT	3930 - HALL COUNTY SHARE	$-1,443,718.00

Budget Transfer Items:

Fiscal Year	Fund	Division	Account	Amount
2023	017 - GRANTS	777 - CDBG-CV GRANT	4608 - AGENCY ALLOCATIONS	$1,443,718.00
2023	017 - GRANTS	777 - CDBG-CV GRANT	3930 - HALL COUNTY SHARE	$1,443,718.00

Additional Information/Comments:

This building construction cost is being funded by a CDBG Grant and matching dollars from the Georgia Mountain Food Bank. Hall County will front the cost for the Construction, and the Food Bank will reimburse the County for those matching dollars. No dollars are being matched for this project by Hall County. This budget transfer will increase the grant budget for the matching dollars to be provided by the Georgia Mountain Food Bank.

Contact for Questions: JW

Phone: 770-535-8274

STATE OF GEORGIA
COUNTY OF HALL

CONTRACT RFQ/P #43-018

CONTRACT FOR PROFESSIONAL GENERAL CONTRACTING SERVICES – SECTION 3 OPPORTUNITY

This agreement, made and entered into this the _____, by and between the Board of Commissioners of Hall County, Georgia (Hereinafter referred to as "County") and Scroggs & Grizzel Contracting, Inc., 6415 Cleveland Hwy. Clermont, GA 30527 (Hereafter referred to as "Contractor").

Witnessed:

Whereas, the County intends to contract to provide services for **PROFESSIONAL GENERAL CONTRACTING SERVICES** per all the requirements, terms and provisions in RFQ/P #43-018, herein referred to as the "Contract" and has entered into an agreement for the necessary services provided by the contract and whereas, the Contractor desires to perform the services for the contract costs as detailed in the bidder's response.

Hall County's RFQ/P #43-018 issued on November 2, 2022, the Bidder's response (All originals are on file in the Hall County Purchasing Department, 2875 Browns Bridge Rd 4th Floor - Purchasing, Gainesville, Georgia 30504), and this contract are all incorporated into and made a part of this agreement by reference.

If any paragraph, sub-paragraph, sentence, clause, phrase or any portion of this agreement shall be declared invalid or unconstitutional by any Court of competent jurisdiction or if the provisions of any part of this agreement as applied to any particular situation or set of circumstances shall be declared invalid or unconstitutional, such invalidity shall not be constructed to affect the portions of this agreement not so held to be invalid or the application of this agreement to other circumstances not so held to be invalid. It is hereby declared to be the intent of the parties to this agreement to provide for separate and divisible parts, and to hereby adopt any and all parts hereof as may not be held invalid for any reason.

IN WITNESS WHEREOF, said Parties have hereunto affixed their signature and seal on the day, month, and year first above written:

SCROGGS & GRIZZEL CONTRACTING, INC.

By: _____

Title: President

Print Name: Mike Grizzel

Sworn to and subscribed before me this

21st Day of December, 2022

Notary Public: _____

Notary commission expires: 4/25/2024

[Locus Sigilli]

HALL COUNTY, GEORGIA

By: _____
Richard Higgins, Chairman
Hall County Board of Commissioners

Attestment: _____
County Clerk, Deputy County Clerk

Sworn to and subscribed before me this

_____ Day of _____, 2023

Notary Public: _____

Notary commission expires: _____

[Locus Sigilli]

APPROVED AS TO FORM:

_____
Van Stephens, County Attorney
William Linkous, Deputy County Attorney

HALL COUNTY
GEORGIA
We have it all in Hall

POST OFFICE DRAWER 1435
GAINESVILLE, GA 30503

t: 770.535.8270 | f: 770.531.6711

DIRECTOR
Wesley Geddings

Hall County Government
FINANCIAL SERVICES

December 20, 2022

Scroggs & Grizzel Contracting, Inc.
Attn: Mike Grizzel
6415 Cleveland Hwy.
Clermont, GA 30527
mikegrizzel@scroggsandgrizzel.com

Notice of Intent to Award

RFQ/P #43-018 - CONTRACT FOR PROFESSIONAL CONTRACTING SERVICES – SECTION 3 OPPORTUNITY

Dear Mike,

I am pleased to inform you that Hall County, Georgia, intends to award Scroggs & Grizzel Contracting, Inc., a contract for the Georgia Mountain Food Bank Capital Improvements Project.

You are requested to sign and notarize and return to me the attached Contract document no later than Monday, December 26, 2022. Electronic receipts are acceptable.

The Food Bank is expected to make a presentation to the Hall County Board of Commissioners for the approval of the contract on January 12, 2023. If approved, the County will then execute the contract and return a signed copy to you with a Notice of Award to follow.

Sincerely,

Mike Hawkins
Buyer
Hall County, Georgia

Cc: Contract

RFQ/P #43-018 contract for General Contractor Grant Services	Bids Sent = (25), Bids Received = (1)	No Bids = (2)		
COMPANY NAME	**MAILING ADDRESS 1**	**MAILING ADDRESS 2**	**CITY**	**STATE**
CAS Architecture	183 N Perry St.		Lawrenceville	GA
Clark Patterson Lee	3011 Sutton Gate Drive	Suite 130	Suwanee	GA
Construct Connect	30 Technology Pkw S	Ste 100	Norcross	GA
ConstructionBid Source	416 Cottonwood Ln		Holly Springs	NC
Cooper Carry, Inc.	191 Peachtree St, NE	Suite 2400	Atlanta	GA
Diversified Construction of GA, Inc	2104 Vista Dale CT		Tucker	GA
Epsten Group	399 Edgewood Avenue		Atlanta	GA
Goodwyn Mills & Cawood, Inc.	12600 Deerfield Pkwy.	Suite 100	Alpharetta	GA
Hayes James & Associates, Inc.	4145 Shackleford Road	Suite 300	Norcross	GA
Hussey Gay Bell	6224 Sugarloaf Pkwy.	Suite 150	Duluth	GA
Lose & Associates, Inc.	220 W. Crogan St.	Suite 100	Lawrenceville	GA
McFarland Dyer & Associates, Inc.	4174 Silver Peak Pkwy.		Suwanee	GA
New Space Design, Inc.	3331 North Berkeley Lake Road	Suite 200	Duluth	GA
North American Procurement Council, Inc. PBS	PO Box 40445		Grand Junction	CO
Novus Architects	45 Technology Pkwy, S	Suite 150	Peachtree Corners	GA
Pieper O'Brien Herr Architects	3000 Royal Blvd. S		Alpharetta	GA
Pond & Company	3500 Pkwy. Lane	Suite 600	Norcross	GA
Premier Building Systems, Inc.	847 Highway 12A	Suite A	Braselton	GA
Prime Vendor Inc	4622 Cedar Ave		Wilmington	NC
Scroggs & Grizzel Contracting, Inc	6415 Cleveland HWY		Clermont	GA
Studio 8 Design Architects	2722 N Oak St., Upper Level		Valdosta	GA
Tipton Construction	604 Washington Street W		Gainesville	GA
Viriya Consutling, LLC	2514 Annie Baxter Ave		Joplin	MO
Wakefield Beasley & Associates	5200 Avalon Blvd.		Alpharetta	GA
WSP USA	1123 Zonolite Road, NE	Suite 25	Atlanta	GA

RFQ/P: 43-018

GEORGIA MOUNTAIN FOOD BANK EXPANSION

	SCROGGS & GRIZZEL	TIPTON CONSTRUCTION	PREMIER BUILDING SYSTEMS
Description	**Cost**	**Cost**	**Cost**
TOTAL	**$3,632,415.00**	**NO BID**	**NO BID**

Georgia Mountain Food Bank

December 2022

DIVISION TWO	
Mobilize & Site Prep	1,510
Mobilization, Site Demolition & Clearing	11,900
Earthwork	190,406
Erosion Control	38,970
Storm Drainage	36,398
Temporary Gravel	5,000
Backfill Walls	6,500
Termite Control	2,000
Curb & Gutter & Concrete Paving	187,413
Erosion Control Maintenance	4,500
Asphalt Paving	104,780
Stripping & Site Signage	2,995
Sidewalks	
Fence at Pallet Storage	19,348
Landscaping	75,000
Dumpster Gate	
Site Walls	
Irrigation	
Site Engineering	8,500
Sanitary Sewer	
Site Water Lines	
Site Layout Staking	8,485
DIVISION THREE	
Slabs On Grade	372,900
DIVISION FOUR	
Brick	58,792
Stone	
DIVISION FIVE	
Structural Steel	90,984
Canopy	
Compactor Gates	
Erection	
Metal Stairs	
Bollards	
Handrails	

DIVISION SIX	
Rough Misc. Carpentry	4,320
Finish & Millwork	7,875
DIVISION SEVEN	
Downspout Piping Allowance	15,000
Sealants	
DIVISION EIGHT	
Hollow Metal	23,961
Windows	
Glass & Glazing	16,900
Finish Hardware	13,138
Overhead Doors	21,103
Wood Doors	9,718
DIVISION NINE	
Resilient Floor & Carpeting	24,717
Stair and Epoxy Flake	6,200
Veneer Stone at Radius Wall	
Painting & Caulking & Masonry Coating	56,445
Office Walls, Ceilings & Insulation	71,361
Exterior Walls Furring, Studs, Insul & Drywall	94,673
CFMF	
DIVISION TEN	
Fire Extinguishers	795
Fire Sprinkler Heads to ACT	
Signage & Graphics	400
DIVISION ELEVEN	
OH Door Lift Rental & Handling	3,150
Dock Seals	8,400
Dock Leveler	22,200
DIVISION TWELVE	
Casework	6,299
DIVISION THIRTEEN	

Pre-Engineered Building	171,085
Misc. Flat Metal	4,000
Erection	104,219
Remove Existing End Wall	5,444
Cooler / Freezer	710,278
Roof Insulation	28,648
DIVISION FIFTEEN	
Plumbing	12,000
Grease Trap & Plumbing for Dumpster	
Extend Sanitary to somewhere allowance	20,000
Outside Water	
Lift Station or Grinder Pump	
Fire Protection	102,400
Fire Pump	
Outside Underground Line to 5'	
Outside Underground Fire Line & Vault	
HVAC	58,123
Mechanical Pads	
DIVISION SIXTEEN	
Electrical	214,000
Site Lighting	
IT and Security Systems Conduit & System	
Fire Alarm	
Final Clean-up	4,335
Dump Fees	3,600
Clean Up	16,607
EQUIPMENT:	
Job Office	5,000
Temporary Toilet	2,160
Vehicles	9,600
Bobcat	2,700
Boom Lift Rental	
Rental	3,000
Small Tools	2,400
Fuel	9,353

Schedule	3,592
Storage Container	1,350
Meetings	2,881
TEMPORARY UTILITIES:	
Gas	
Water	
Electrical	
Job Phone	2,400
Meter Fees (Water & Sewer)	
Job Sign	2,000
Drinking Water	360
DELIVERIES:	
Deliveries To & From Job	
Freight	
Load & Unload	
Barricades & Fencing	4,000
Safety Signs & Equipment	700
Soil Testing by Owner Allowance	
Testing, Concrete & Steel Allowance	
Plans & Postage	1,200
Superintendent	87,812
Assistant Superintendent	
Project Manager	51,224
Assistant Project Manager	23,642
Accounting & Clerical & Software	17,000
Permits, Licenses & Impact Fees	3,555
Rentals	
Travel & Hotel	
Contingency	
Professional Insurance	14,000
Drug Testing	400
Insurance	23,064
SUBTOTAL	3,361,169
Contractor's Fee	235,281
BOND COST	35,965
==========	==========
TOTAL	**3,632,415**

Scroggs & Grizzel
CONTRACTING, INC.

GEORGIA MOUNTAIN FOOD BANK
'til no one is hungry

Request for Qualifications with Price

Hall County Board of Commissioners

Proposal #43-018

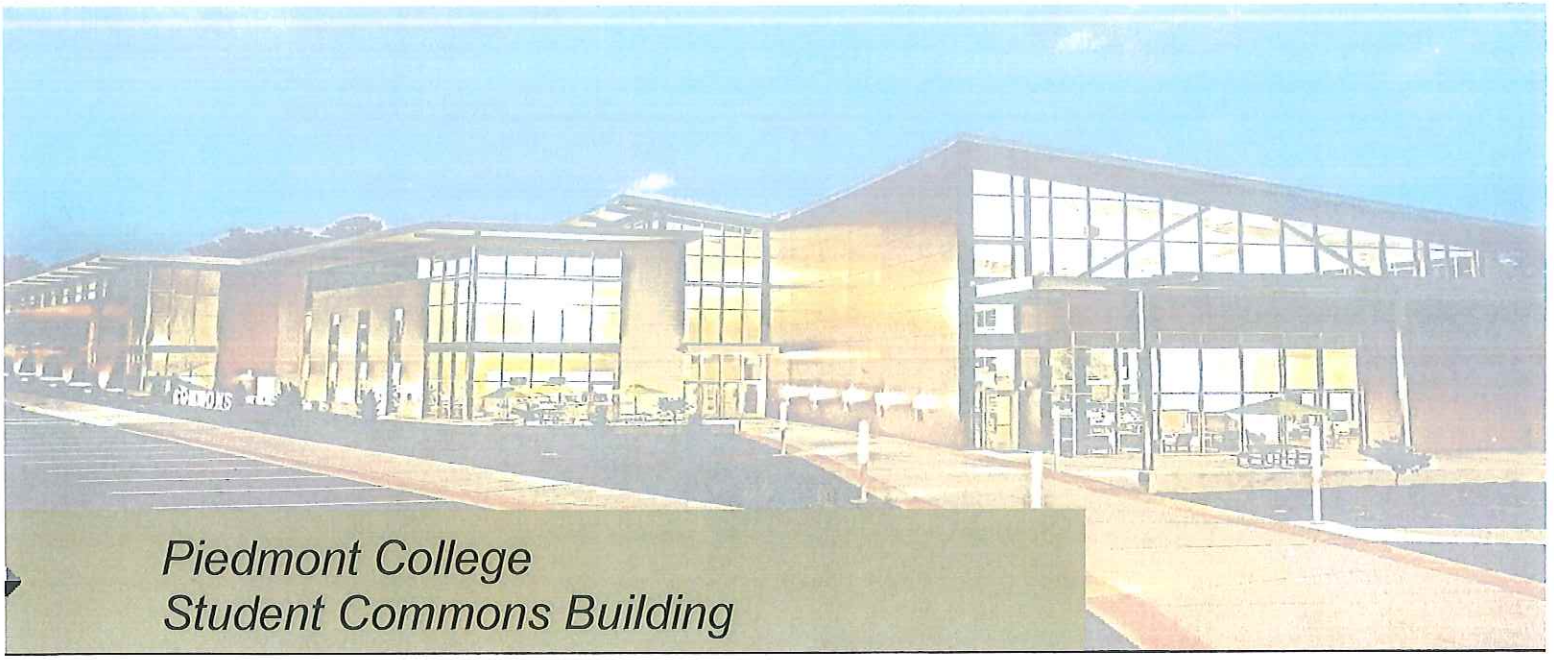
Contract for Professional General Contracting Services

Section 3 Opportunity

Georgia Mountain Food Bank
Capital Improvements Project

December 16, 2022

Mail: P.O. Box 706 Clermont, GA 30527 **Physical:** 6415 Cleveland Hwy Clermont, GA 30527
Phone: 770-532-5000 **FAX:** 770-532-0640



Piedmont College
Student Commons Building

Table of Contents

1. Introductory Letter

2. Firm Experience and Workload

3. Firm Personnel Experience

4. Sub-Consultant Personnel Experience

Attachment A: SAVE Program Affidavit

Attachment B: Certificate of Drug Free Workplace

Appendix E: Statement of Qualifications

Contractor Affidavit

Mandatory Section 3 Solicitation Package

Mail: P.O. Box 706 Clermont, GA 30527 **Physical:** 6415 Cleveland Hwy Clermont, GA 30527
Phone: 770-532-5000 **FAX:** 770-532-0640

Scroggs & Grizzel Contracting, Inc.

December 16, 2022

Hall County Board of Commissioners
Georgia Mountain Food Bank

Re: Request for Qualifications with Price Proposal RFQ/P#: 43-018

At Scroggs & Grizzel Contracting, Inc., we realize that the Hall County Board of Commissioners and the Georgia Mountain Food Bank are making very important decisions concerning the expansion of the Food Bank facility. We believe that Scroggs & Grizzel Contracting, Inc. (SGCI) can help achieve the goal of expanding the facility to accommodate the growing need of these vital resources.

Scroggs & Grizzel Contracting, Inc. is a Construction Manager and General Contractor that is large enough to perform projects in the 20-million-dollar range and small enough to still provide the personal relationship between the contractor, architect, and owner. The personnel at Scroggs & Grizzel Contracting, Inc. bring with them a wide variety of construction experience. We have experience in all types of construction. Some examples of these are conventional construction with structural steel and masonry construction, cast in place concrete buildings, precast concrete buildings, wood framed construction, pre-engineered buildings, and hybrid combinations of the above. We also have extensive renovation experience of all types of facilities. We have constructed schools, banks, country clubs, office buildings, retail centers, medical office facilities, recreational facilities, libraries, and churches. Our history as a contractor in both new construction and renovations provides us with the ability to recognize areas for possible cost savings and value engineering, anticipate possible problems, coordinate your work, and deliver a quality project to you.

Thank you for the opportunity to present Scroggs & Grizzel Contracting, Inc. to you for consideration. Should you have any questions please contact Mike Grizzel at 770-532-5000 or mgrizzel@hotmail.com.

Sincerely,

Mike Grizzel, President
Scroggs & Grizzel Contracting, Inc.
770-532-5000 Office Phone
770-503-4602 Cell Phone
mgrizzel@hotmail.com



SCROGGS & GRIZZEL CONTRACTING, INC.

MAILING:
P.O. BOX 706
CLERMONT, GA 30527

PHYSICAL:
6415 CLEVELAND HWY
CLERMONT, GA 30527

770-532-5000 (T)
770-532-0640 (F)

SCROGGSANDGRIZZEL.COM

MIKE GRIZZEL, PRESIDENT

License #GCQA000897
mgrizzel@hotmail.com

INCORPORATED 1994

Gainesville, GA

Corporate Officers:
Mike Grizzel, President
Kaycee Motes, Secretary
Mike Grizzel, Treasurer

GENERAL CONTRACTOR LICENSE NO. GCCO000322 CITY OF CLERMONT, GA BUSINESS #0117-40-2022

Scroggs & Grizzel Contracting, Inc. (SGCI) was formed by Danny Scroggs and Mike Grizzel in 1993 and incorporated in 1994 as a non-union company in Gainesville, Georgia. After a long and successful partnership, Danny retired in 2017 at which time Mike became sole Owner & President of Scroggs & Grizzel Contracting, Inc.

Gainesville, GA has been the home of SGCI since inception until 2022. All of the SGCI operations have been moved to Clermont, GA, a location that centers the radius in which most all of our work is performed.

Operating for 29 years as a Construction Manager and General Contractor, SGCI is large enough to perform projects in the 20-million-dollar range yet small enough to provide the personal relationships between the contractor, architect and owner that are essential for success in today's construction environment.

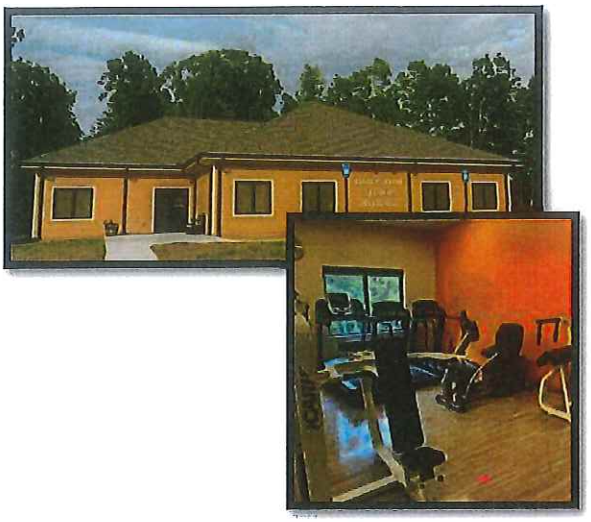
Scroggs & Grizzel Contracting, Inc. (SGCI) employs twelve (12) full-time employees with knowledge and experience in all types of construction. Some examples of these are conventional construction with structural steel and masonry construction, cast in place concrete buildings, precast concrete buildings, wood framed construction, pre-engineered buildings, and hybrid combinations of the above. We have constructed schools, banks, country clubs, office buildings, retail centers, medical office facilities, recreational facilities, and churches.

Approximately 70% of our projects are negotiated with the owner and architect. We have been performing design-build services with both government and privately-owned projects since the inception of the company. All larger projects are negotiated and constructed using the project team concept. Construction has changed over the years; construction times have been reduced and the amount of work and construction cost has increased. This team concept creates a better working relationship between the owner, architect, and construction manager/contractor by keeping all parties involved from the earliest possible time frame. It creates a better understanding regarding the final intent and helps to progress the project with fewer problems.

Scroggs & Grizzel Contracting, Inc. has no circumstances which will cause a conflict of interest in performing the services required.

a. PREVIOUS CBDG PROJECT

Habersham County Senior Wellness Center
Demorest, GA
OWNERS REPRESENTATIVE INFORMATION:
Habersham County Board of Commissioners
Mike Bramlett, Facilities Management Director
706-839-0167
Mbramlett@habershamga.com
SERVICES:
Prime Contractor
COMPLETION DATE:
June 2019
SGCI PROJECT MANAGER & SUPERINTENDENT:
Joel Turner, Project Manager
Lamar Etris, Superintendent
PROJECT COST:
$933,349



GENERAL SCOPE OF WORK:
Construction of a 5,200 sf, wood-framed building. Scope of project included sitework, slab on grade, shingle roof, cement plank siding, all major trades & finishes. The building consisted of offices, restrooms, meeting areas and work-out areas.

b. SITE SPECIFIC SIMILAR PROJECTS

Sonstegard Foods of GA Dryer Addition & Civil Site – Gainesville, GA

Owner:	Sonstegard Foods of GA
Services:	General Contractor
Contract Cost:	$1,652,271.00
Completion Date:	November 2021
Project Manager:	Eddie Black
Superintendent:	Donald Bruce
Features:	New Construction of an 1,800 SQ.FT. industrial production facility. Scope Includes concrete foundation, conventional structural steel, IMP panels, TPO Roof and interior buildout
Contact:	David Sutherland, Engineer Manager 712-209-1786 David@sunrisefarms.us

City of Gainesville Administration Building 1st Floor Renovation – Gainesville, GA

Owner:	City of Gainesville, GA – Department of Water Resources
Services:	Construction Manager
Contract Cost:	$2,178,927.00
Completion Date:	July 2021
Project Manager:	Mike Grizzel
Superintendent:	Lamar Etris

Features:	Renovation of the 1st Floor to include flooring, ceiling, walls, electrical, HVAC, paint, casework, new storefronts, and buildouts
Contact:	Chris McGauley, Project Manager for the City of Gainesville 770-538-2413 CMcGauley@gainesvillega.gov

Piedmont College Renovation of Nielsen Hall (Renamed Sewell Hall) – Demorest, GA



Owner:	Piedmont University
Services:	Construction Manager
Contract Cost:	$2,669,517.00
Completion Date:	November 2020
Project Manager:	Mike Grizzel
Superintendent:	Jim VanNostrand
Features:	Renovation of an existing 16,800 SQ.FT., two-story brick building. Scope included demolition, structural steel, masonry, concrete, elevator installation, acoustical & drywall, casework, doors & hardware, specialty doors, storefronts, operable partitions, flooring, painting & caulking, toilet accessories & partitions, fire protection, HVAC, Electrical & Plumbing
Contact:	Dr. James Mellichamp, President 706-778-3000 jmellichamp@piedmont.edu

Sonstegard Foods, GA Freezer Office Addition – Gainesville, GA

Owner:	Sonstegard Foods of GA
Services:	General Contractor
Contract Cost:	$952,568.00
Completion Date:	April 2019
Project Manager:	Eddie Black
Superintendent:	Donald Bruce
Features:	Building Addition to include Grading, concrete foundations, cold-form metal stud framing, structural steel, IMP panels, TPO roof, domestic and process plumbing, office buildouts, additional restrooms, casework, ceramic tile flooring, drywall, acoustical ceilings, exterior site work
Contact:	David Sutherland, Engineer Manager 712-209-1786 David@sunrisefarms.us

Wahoo Baptist Church Renovation & Addition – Murrayville, GA



Owner:	Wahoo Baptist Church
Services:	Construction Manager
Contract Cost:	$1,072,574.00
Completion Date:	August 2020
Project Manager:	Mike Grizzel
Superintendent:	Jacob Renshaw
Features:	Renovation and construction of a 5,000+Sq.Ft. addition. Scope included demolition, structural steel, rough carpentry, concrete, masonry, roofing,

drywall & acoustical, casework, toilet accessories & partitions, flooring, painting, electrical, HVAC and plumbing

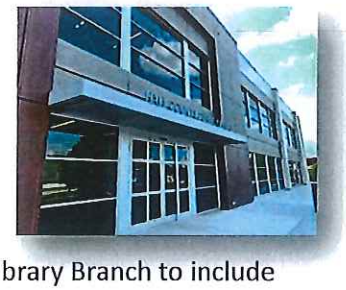
Contact: Dr. Mark Stroud, Pastor
770-540-8759
markstroud@windstream.net

c. COMPLETED HALL COUNTY PROJECTS OVER THE PAST FIVE (5) YEARS

Hall County Sheriff's Office 3rd Floor Buildout (Law Enforcement Ctr) – Gainesville, GA

Owner: Hall County Board of Commissioners
Services: Construction Manager at Risk
Contract Cost: $946,667.00
Completion Date: May 2022
Project Manager: Kim Jensen
Superintendent: Rodney Lee
Features: Buildout of existing 3rd floor space to include offices, cubicle areas, breakroom, meeting rooms and restrooms
Contact: Chuck Pinney, Purchasing Supervisor
770-535-8271
cpinney@hallcounty.org

Hall County Library Renovation & Addition (Main Branch) – Gainesville, GA



Owner: Hall County Board of Commissioners
Services: Construction Manager
Contract Cost: $4,391,104.00
Completion Date: November 2020
Project Manager: Mike Grizzel
Superintendent: Rodney Lee
Features: Complete renovation and addition to the HCLS Main Library Branch to include demolition, site work, precast, concrete, steel, ACM panels, acoustical & drywall, flooring, painting, restroom renovations, casework, storefronts, data cabling, roofing, fire protection, wall finishes, canopy, asphalt paving, marking & signage for parking, electrical, HVAC and plumbing
Contact: Lisa MacKinney, Library Director
770-532-3311
Lmackinney@hallcountylibrary.org

Gainesville – Hall County Senior Life Center Expansion – Gainesville, GA



Owner: City of Gainesville, GA
Services: Prime Contractor
Contract Cost: $1,365,521.00
Completion Date: 2018
Project Manager: David Davenport
Superintendent: Lamar Etris
Features: 10,400 sqft Addition: Kitchen, Offices, Gym, Locker Rooms, Arts & Crafts Room, Restrooms
Contact: Mr. Barclay Fouts

bfouts@gainesville.org
770-533-5886

d. CURRENT PROJECTS

Arthritis Center of North Georgia – Gainesville, GA

Owner:	Arthritis Center of North Georgia
Services:	Design-Build
Estimated Cost:	$6,066,986.00
Percent Complete:	10%; Expected Completion September 2023
Project Manager:	Mike Grizzel
Superintendent:	Rodney Lee
Features:	New Construction of a 2-Story Medical Office to include, asbestos abatement, demolition, grading, concrete, masonry, asphalt paving, carpentry, casework, plumbing, electrical, lighting, fire safety, HVAC, elevator & stairs, glass & glazing, landscaping
Contact:	Michael Cullen, MBA, Practice Administrator 770-531-3711 mcullen@ARTICULARISHEALTHCARE.COM

Good News at Noon Homeless Shelter – Gainesville, GA



Owner:	Good News at Noon
Services:	Design-Build
Estimated Cost:	$2,977,574.00
Percent Complete:	98%, Final Closeout Stage
Project Manager:	Mike Grizzel
Superintendent:	Donald Bruce
Features:	Construction of a 1-Story Building to include, grading, concrete, masonry, asphalt paving, carpentry, casework, plumbing, electrical, lighting, fire safety, HVAC, elevator & stairs, glass & glazing, landscaping
Contact:	Ken Gossage, Director 770-503-1366 kgossage@goodnewsatnoon.org

e. Gross Income of the Firm

Financial Information and Resources of the Firm are Released as Requested Upon Award of Project.



Mike Grizzel, President
Project Director
45% Dedicated Time to Project



Kim Jensen
Project Manager
65% Dedicated Time to Project



Eddie Black
Safety & Quality Control Mgr
35% Dedicated Time to Project

Superintendent To Be Determined
100% Dedicated Time to Project

Scroggs & Grizzel Contracting, Inc. approaches all projects as a team. Although specific members are designated as the Project Manager, all work together and step in, as needed, to get the job done.

For this project, Mike Grizzel will be the Project Director, he will oversee the preconstruction and estimating of this project. Once the project goes into construction, Kim Jensen will take over as the Project Manager. Kim will be responsible for contracting and coordinating with the subcontractors and overseeing project operations. The selected Superintendent will be working closely with Kim and the subcontractors to construct this project within the time and budgetary constraints set by the Design Team.

All our Superintendents have 20+ years' experience in construction, primarily commercial construction. Again, there will be one Superintendent assigned to this project, but all will be informed through our weekly Project Manager's & Superintendents meeting of the progress on this project. These meetings serve to keep everyone informed on the status of all our projects and gives everyone a chance to discuss any issues they might have on a project so that through everyone's experience and training, they work together for solutions. Also, it is the intention that through these meetings, if at any time an emergency arises to take a Superintendent away from a project, any one of the others can step in and oversee the project for that time.

Other project management/support staff, etc.:

Vonda Barrett, Accounting Director
Eddie Black, Safety & Compliance Manager

Scroggs & Grizzel Contracting, Inc.



MIKE GRIZZEL, PRESIDENT
SENIOR PROJECT MANAGER

OBJECTIVE

LEAD a professional staff by example both personally and professionally.
GUIDE the company into the future using the knowledge of our past and willingness to learn & adapt to today's needs and requirements.
DIRECT our staff & customers toward working relationships that result in successful projects for all.

SKILLS & ABILITIES

Hands-on background in all aspects of construction from Carpenter to Project Manager/Estimator.

Successful Butler Metal Building dealer for North Georgia.

EXPERIENCE

SCROGGS & GRIZZEL CONTRACTING, INC.
1993 TO PRESENT

I have been in the residential and commercial construction industry for 44 years, with extensive experience working in all aspects of construction. In 1993, Danny Scroggs and I began Scroggs & Grizzel Contracting then incorporated the company in 1994. Danny served as the President and I served as Vice President until Danny's retirement in 2017. I have taken over the role of Owner/President but remain active in taking on new projects as Estimator/Project Manager. My projects range from wood frame to structural steel, masonry to total poured-in-place concrete building. I am also a Butler Metal Building dealer with vast experience and knowledge in pre-engineered metal building construction.

SAMPLE OF PROJECTS MANAGED

FRANCES MEADOWS AQUATIC CENTER
Owner: City of Gainesville, GA

WINDMILL PARK SPORTS COMPLEX
Owner: Banks County, GA Board of Commissioners

PIEDMONT COLLEGE STUDENT COMMONS
Owner: Piedmont College

REFERENCES

JACKIE WALTERS, WALTERS MANAGEMENT COMPANY
770-534-1094

GARLAND REYNOLDS, REYNOLDS ARCHITECTS
770-531-0100

Scroggs & Grizzel Contracting, Inc.



KIM JENSEN
PROJECT MANAGER / ESTIMATOR

OBJECTIVE

To be a productive and effective team member of Scroggs & Grizzel Contracting, Inc. Meeting and exceeding our customers goals through estimating and managing projects with a focus on cost efficiency and time sensitivity.

SKILLS & ABILITIES

Estimating, managing and scheduling construction projects to meet our customers quality, schedule and budget.

EXPERIENCE

SCROGGS & GRIZZEL CONTRACTING, INC.

HIRED 2021

I came to Scroggs & Grizzel Contracting, Inc. with a 12+ year career as a commercial construction project manager, residential design-builder and President/Organizer for community beautification projects in the Buckhead community of Atlanta.

PRESCO PROPERTIES

2018 - 2021

Designed (CAD), permitted and managed commercial build-outs for tenants. CAD drawings included Architectural, Plumbing, Electrical, Mechanical, Wall Sections and more.

SELF-EMPLOYED DESIGNER/BULDER

2016 - 2019

Designed, permitted and managed all phases of privately owned residential renovations,

BASILS' RESTAURANT

1999 - 2016

General Manager & Co-Owner. Designed and managed the post-fire rebuild of the 2,500 SF restaurant.

EDUCATION

PROJECT MANAGEMENT PROFESSIONAL CERTIFICATION - 2021

UNIVERSITY OF GEORGIA, ATHENS, GA
MASTER OF FINE ARTS - 1995

UNIVERSITY OF GEORGIA, ATHENS, GA
BACHELOR OF FINE ARTS - 1991

Scroggs & Grizzel Contracting, Inc.



EDDIE BLACK
PROJECT MANAGER / ESTIMATOR
SAFETY COORDINATOR

OBJECTIVE

To be a productive and effective team member of Scroggs & Grizzel Contracting, Inc. Meeting and exceeding our customers goals through estimating and managing projects with a focus on cost efficiency and time sensitivity.

SKILLS & ABILITIES

Estimating, managing and scheduling construction projects to meet our customers quality, schedule and budget.

EXPERIENCE

SCROGGS & GRIZZEL CONTRACTING, INC.

2017 - PRESENT

I came to Scroggs & Grizzel Contracting, Inc. with 18 years of experience in the Construction Industry. I've worked as Superintendent, Project Manager, Estimator and Quality Control Coordinator in both Residential and Commercial Construction.

SELF-EMPLOYED CONTRACTOR

2013 - 2017

New construction and renovation of residential and light commercial projects.

ASA CARLTON

2011 - 2013

Superintendent; Renovation of Type-C stores

EDDIE BLACK CONSTRUCTION, INC.

2000 - 2011

New construction and renovation of residential and light commercial projects.

EDUCATION

SOUTHERN POLY STATE UNIVERSITY

BS MECHANICAL ENGINEERING TECHNOLOGY

UNIVERSITY OF NORTH GEORGIA

PROJECT MANAGEMENT CERTIFICATION

Scroggs & Grizzel Contracting, Inc. does not intend to use any outside consultants or associates for this project.

Subcontractors will be awarded once the bid has been turned in and the project awarded.

Attachment A: Systematic Alien Verification for Entitlements (SAVE) Program Affidavit

Hall County Board of Commissioners
S.A.V.E Program Affidavit

Systematic Alien Verification for Entitlements (SAVE) Program
Office of U.S. Citizenship and Immigration Service (USCIS).

Background

Pursuant to the "Georgia Security and Immigration Compliance Act," Hall County cannot contract for the physical performance of services unless the contractor registers and participates in the federal work authorization program to verify information of all new employees. Neither may any contractor or subcontractor enter a contract with the County in connection with the physical performance of services unless the contractor or subcontractor registers and participates in the federal work authorization program to verify information of all new employees. O.C.G.A. § 13-10-91. **Each contractor is urged to fill out the affidavit below stating they comply with this Georgia Compliance Act before Hall County can legally accept the bids from each contractor/vendor.**

To register for the E-Verify Program visit www.uscis.gov . Your bid will not be accepted without this E- Verify Number.

Procedure

Affirmative language will be set forth in contracts for the performance of services regarding the above requirement. The County will require an affidavit from a contractor showing its compliance with the requirements of O.C.G.A. § 13-10-91 at the time a contract for the performance of physical services is executed. The contract shall include language referencing this obligation and providing that failure to supply an affidavit evidencing such compliance (or to continue to meet the statutory obligation during the life of the contract) shall constitute a material breach of the contract. Upon notice of such breach, the contractor shall be entitled to cure the breach within ten (10) days and provide evidence of such cure. Should the breach not be cured, the County should be entitled to all available remedies, including termination of the contract and damages.

See affidavit on following page

Hall County Board of Commissioners
S.A.V.E Program Affidavit

Systematic Alien Verification for Entitlements (SAVE) Program
Office of U.S. Citizenship and Immigration Service (USCIS).

Affidavit

By executing this affidavit, the undersigned contractor verifies its compliance with O.C.G.A. § 13-10-91, stating affirmatively that the individual, firm or corporation which is contracting with Hall County, Georgia, has registered and is participating in a federal work authorization program* (an electronic verification of work authorization program operated by the U.S. Department of Homeland Security or any equivalent federal work authorization program operated by the U.S. Department of Homeland Security to verify information of newly hired employees, pursuant to the Immigration Reform And Control Act of 1986 (IRCA), in accordance with the deadlines established in the referenced statute.

**The applicable federal work authorization program as of the effective date of the statute is the E-Verify Program of the Systematic Alien Verification for Entitlements (SAVE) Program Office of U.S. Citizenship and Immigration Service (USCIS). To register for the E-Verify Program visit www.uscis.gov .your bid will not be accepted without this E-Verify Number.*

Scroggs & Grizzel Contracting, Inc.
Company Name

By: Authorized Officer or Agent
[Contractor Name]

December 16, 2022
Date

Mike Grizzel
Printed Name

162930
Contractor's/Vendor's E-Verify #

Subscribed and sworn before me on this the 16th day of December , 2022

Notary Public Lechille K. Motes
My commission expires: April 25, 2024

LECHILLE K MOTES NOTARY PUBLIC Exp. Apr. 25, 2024 HALL COUNTY, GA

Revised 10/18/2022 AGP

Attachment B: Certificate of Drug Free Workplace

Hall County Board of Commissioners
Certificate of Drug Free Workplace

I hereby certify that I am a principle and duly authorized representative of:

Scroggs & Grizzel Contracting, Inc.,

Whose address is 6415 Cleveland Hwy Clermont, GA 30527,

and it is also certified that:

1. The provisions of Section 50-24-1 through 50-24-6 of the Official Code of Georgia Annotated, relating to the "Drug-Free Workplace Act" have been complied with in full; and

2. "As part of the subcontracting agreement with the Consultant, certifies to the Hall County that a drug-free workplace will be provided for the subcontractor's employees during the performance of this contract pursuant to paragraph (7) of subsection (b) of the Official Code of Georgia Annotated Section 50-24-3"; and

3. It is certified that the undersigned will not engage in unlawful manufacture, sale, distribution, dispensation, possession, or use of a controlled substance or marijuana during the performance of the contract.

4.

Authorized Signature — December 16, 2022 (Date)

Mike Grizzel (Printed Name) — President (Title)

Appendix E:
Statement of Qualifications

****

NAME OF COMPANY: Scroggs & Grizzel Contracting, Inc.

ADDRESS: 6415 Cleveland Hwy Clermont, GA 30527

1. Years in Business in Present Form: 29

2. Business History and Resource Capability to Perform Required Services:

Scroggs & Grizzel Contracting, Inc. (SGCI) has extensive experience as a General Contractor and Construction Manager in all types of renovations and new construction.

3. Titles, Names, and Addresses of all Officers:

Mike Grizzel, President & Treasurer - 3 Grizzle Lane Murrayville, GA

Kaycee Motes, Secretary - 8625 Skitts Mountain Rd Clermont, GA

4. List categories in which firm is legally qualified to do business. Include Licenses and Registrations where applicable.

General Contractor State of GA License # GCCO000322; General Contractor Qualifying Agent State of GA License #GCQA000897; Town of Clermont Business License #0117-40-2022

5. Does your business carry Errors and Omissions Insurance? Yes

6. If you were awarded the design, bid phase, and inspection for this project, what would your fee be?
N/A

7. Does your firm charge for the preliminary engineering report (PER)? If yes, what would the charge be? $ N/A

Can your firm meet the draft PER deadline? YES N/A NO

8. List up to five (5) projects, which demonstrate skills to be used on CDBG projects. Note project name, location, owner, year, contract amount, and nature of firm's responsibility.

1. Habersham County Senior Wellness Center, Demorest, GA, 2019
Habersham Co. Board of Commissioners, $933,349.00, Prime Contractor

2. Sonstegard Foods of GA, Gainesville, GA Additions & Civil Site, Gainesville, GA,
Sonstegard Foods of GA, 2021, $1,652,271.00, General Contractor

3. City of Gainesville Administration Bldg 1st Floor Renovation, Gainesville, GA,
City of Gainesville Dept of Water Resources, 2021, $2,178,927.00, Construction Manager

4. Sonstegard Foods of GA, Gainesville, GA Freezer Office Addition, Gainesville, GA,
Sonstegard Foods of GA, 2019, $952,568.00, General Contractor

5. Hall County Library Renovation & Addition (Main Campus), Gainesville, GA,
Hall Co. Board of Commissioners, 2020, $4,391,104.00, Construction Manager

9. List key personnel (with qualifications) likely to be involved on these projects and explain their specific role in CDBG work.

- Mike Grizzel will be the projects Executive Proj. Manager, overseeing adherence to CDBG requirements.
- Kim Jensen, Project Manager will oversee all functions of the project and complete required CDBG paperwork throughout project progression.
- Eddie Black will ensure Quality Control and Safety measures are being met on the project site.

10. List three (3) references for the Firm.

1. Barclay Fouts, City of Gainesville Project Mgr, 770-533-5886, BFouts@gainesvillega.gov
2. Mike Bramlett, Habersham Co. Facilities Mgmnt Director, 706-839-0167, Mbramlett@habershamga.com
3. Lisa MacKinney, Hall Co. Library Director, 770-532-3311, Lmackinney@hallcountylibrary.org

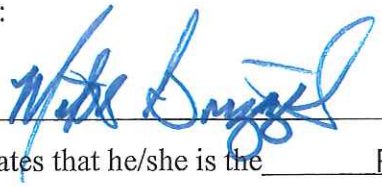
11. Are you a Section 3 Business Concern? Yes_____ No X

If yes, the Attached Section 3 Business Concern Certification, Previous Certification and Action Plan must be filled out, signed, notarized, and submitted with your proposal.

12. Is the signed and notarized Section 3 Business Concern Certification, Previous Certification and Action Plan attached to your proposal? Yes No

If no, you will only need to submit the Section 3 forms if you are the successful proposer.

Certifying that:

Mr./~~Mrs./Ms.~~  (Signature) being duly sworn

Mike Grizzel

deposes and states that he/she is the President (title)

of Scroggs & Grizzel Contracting, Inc. (name of firm) and that answers to the foregoing questions and all statements herein contained are true and correct.

CONTRACTOR AFFIDAVIT AND AGREEMENT

By executing this affidavit, the undersigned contractor verifies its compliance with O.C.G.A. 13-10-91, stating affirmatively that the individual, firm or corporation which is contracting with Murray County, Georgia has registered with, is authorized to use and is participating in a federal work authorization program* [any of the electronic verification work authorization programs operated by the United States Department of Homeland Security or any equivalent federal work authorization program operated by the United States Department of Homeland Security to verify information of newly hired employees, pursuant to the Immigration Reform and Control Act of 1986 (IRCA), P.L. 99-603], in accordance with the applicability provisions and deadlines established in O.C.G.A. 13-10-91. The user identification number and the date of authorization for the affiant are set forth below. The undersigned contractor is using and will continue to use the federal work authorization program throughout the contract period.

The undersigned further agrees that, should it employ or contract with any subcontractor(s) in connection with the physical performance of services pursuant to this contract with Murray County, Georgia, that undersigned shall require as a condition of such employment or contract that contractor or subcontractor registers and participates in a federal work authorization program to verify information of all newly hired employees. In addition, contractor will secure from such contractor(s) or subcontractor(s) similar verification of compliance with O.C.G.A. 13-10-91 on the Subcontractor Affidavit provided in Rule 300-10-01- .08 or a substantially similar form. Contractor further agrees to maintain records of such compliance and provide a notice of identity of such contractor or subcontractor together with a copy of each such verification to Murray County, Georgia within five (5) business days after the time the contractor(s) or subcontractor(s) is retained to perform such service.

162930
E-Verify* User identification Number

06/19/2009
Date of Authorization for Contractor

Scroggs & Grizzel Contracting, Inc.
Company Name

By: Authorized Officer or Agent

12/16/2022
Date

President
Title of Authorized Officer or Agent of Contractor

Mike Grizzel
Printed Name of Authorized Officer or Agent

SUBSCRIBED AND SWORN BEFORE ME THIS
16th DAY OF December, 2022.

Notary Public:
My Commission expires: April 25, 2024

LECHILLE K MOTES
NOTARY PUBLIC
Exp. Apr. 25, 2024
HALL COUNTY GA
(SEAL)

**As of the effective date of O.C.G.A. 13-10-91, the applicable federal work authorization program is "EVerify" operated by the U.S. Citizenship and Information Services Bureau of the U.S. department of Homeland Security, in conjunction with the Social Security Administration (SSA).*

Georgia Department of Community Affairs
60 Executive Park South, NE, Atlanta, GA 30329

Mandatory Section 3 Solicitation Package

This mandatory solicitation package has been developed in accordance with DCA's Section 3 Policy for Covered HUD Funded Activities. DCA encourages all recipients, sub-recipients, contractors, and sub-contractors to review this policy prior to completion of the solicitation package. For those awards that meet the applicable Section 3 thresholds, this package must be returned in accordance with the applicable instructions to the contracting entity prior to award ***or at the time of submission of a bid/proposal in order to claim a Section 3 preference***. The Section 3 Clause, required forms, and instructions are included in this package.

All Recipients and Sub-recipients of Section 3 covered Assistance (including but not limited to contractors, sub-contractors, developers , grantees ,CHDOs, non-profits, and local government entities) are subject to compliance with regulations in 2Part 75.

Additional provisions for Housing and Community Development Financial Assistance.
§ 75.19 Requirements.
(a) Employment and training.

(1) To the greatest extent feasible and consistent with e isting ederal state and local laws and regulations recipients covered by this subpart shall ensure that employment and training opportunities arising in connection with Section 3 projects are provided to Section 3 workers within the metropolitan area (or nonmetropolitan county) in which the pro ect is located.

(2) Where feasible priority for opportunities and training described in paragraph (a)(1) of this section should be given to:

(i) Section 3 workers residing within the service area or the neighborhood of the project , and

(ii) Participants in YouthBuild programs.

(3) Contracting.

(1) To the greatest extent feasible and consistent with existing, Federal, state, and local laws and regulations recipients covered by this subpart shall ensure contracts for work awarded in connection with Section 3 projects are provided to business concerns that provide economic opportunities to Section 3 workers residing within the metropolitan area (or nonmetropolitan county) in which the project is located.

(2) Where feasible, priority for contracting opportunities described in paragraph (b)(1) of this section should be given to:

(i) Section 3 business concerns that provide economic opportunities to Section 3 workers residing within the service area or the neighborhood of the project, and

(ii) YouthBuild programs.

Any bid/proposal claiming a preference must include the completed and signed Section 3 Self-Certification and Action Plan and the Section 3 Business Concern Self Certification, and be submitted by the bid/proposal deadline.

The following Section 3 forms must be completed and returned prior to contract execution:

- Section 3 Self Certification and Action Plan
- Previous Section 3 Compliance Certification
- Assurance of Compliance Certification

Additionally, if the contractor is claiming certification as a 51% owned by low or very low-income residents or is certifying as a 75% workforce the Resident Self-Certification and Skills Data Form must be returned for all employees who meet the low- or very low-income requirement as well as the appropriate Section 3 Business Certification.

Section 3 Solicitation Overview and Instructions for Contractors

The DCA Section 3 Policy requires that, when the **Section 3 regulation is triggered,** every effort within the contractor's disposal must be made, to the greatest extent feasible, to offer all available employment and contracting opportunities to Section 3 residents and Section 3 businesses based on the compliance methods below.

All Contracts and All Contractors must meet Section 3 compliance by:

A. Giving notice of any and all opportunities for employment and contracting to residents of the local Public Housing Authority (PHA), and other low and very low income area residents and businesses, by posting the opportunity in community sources generally available to low income residents and the general public. Exercising a ***minimum of three (3)*** of the following listed sources must be completed prior to offering employment to anyone not covered by Section 3 requirements:

1. The local community newspaper
2. The most widely distributed newspaper
3. Company or agency website
. The management office of the local housing authority/homeless service agency/local low income housing community
5. Local Workforce Board (i.e. Department of Labor)
. Local office of the Georgia Division of Family and Children Services
7. Dodge Room http://www.construction.com/dodge/dodge.asp
8. Other locations as approved by DCA

. The recipient, sub-recipient or contractor must check the HUD Section 3 Business Registry to determine if there are any Section 3 businesses in the County where the work will be performed. If there are Section 3 businesses in the County that may be able to perform the work, the recipient, sub-recipient or contractor must provide a copy of the contracting opportunity(ies) (e.g., bid notices) to the Section 3 businesses. See the HUD Section 3 Business Registry at: https://portalapps.hud.gov/Sec3BusReg/BRegistry/What.

. Clearly stating in notices that the position is a "Section 3 covered position under the HUD Act of 1968 and that Section 3 Residents and Business Concerns are encouraged to apply."

D. Placing the Section 3 Clause provided in Appendix A in ALL solicitations.

. When possible, other activities may be done to demonstrate effort to comply with the Safe Harbor Limits. These other efforts are listed in the appendix to part 75 of the Code of Federal Regulations—24 CFR Part 75 and include:

1. Distributing or posting flyers advertising positions to be filled;

2. Contacting the local government or housing authority for a list of residents who have expressed interest in Section 3 employment;
3. Holding job informational meetings for residents, contractors, etc...;
4. Contacting agencies administering HUD YouthBuild programs and requesting their assistance in recruiting HUD YouthBuild program participants for training and employment positions.

F. Linking residents or businesses to local resources that may be available to help prepare them for applying for and achieving the opportunity.

G. Working with DCA, the recipient, sub-recipient or contractor as applicable in developing a communication and follow up process to track and report all Section 3 applications and hiring activities to ensure the reporting of compliance efforts, and that contracting and sub-contracting are accurate. Provide preference in hiring and contracting to Section 3 applicants and contractors when employment or contracting opportunities are offered and all requirements are met and remain equal. Contractors must:

1. Provide this package to all sub-contractors when soliciting bids for all contracts or sub-contracts;
2. Meet all the same processes in A-E; and
3. Provide Preference to all sub-contractors meeting the definitions as stated in Section VI of DCA's Section 3 Policy for Covered HUD Funded Activities.

H. In order for Preference as a Section 3 Contractor to be factored into the award decision, all elements of the solicitation criteria must be equal between contracts. This means price and all other factors must be equal. Then the contractors that elect Preference on the Certification and Action Plan form that meet that Preference criterion will be provided Preference in the award of the contract as provided in Part VI., Preferences and Eligibility of DCA's Section 3 Policy for Covered HUD Funded Activities.

Example:
Bill's electrical and Sue's Electrical bid a job where the housing authority has a budget of $500,000. Bill bids $480,000 and elects a Preference as a Section 3 business concern because he qualifies as a Section 3 Business concern. Sue bids $450,000 but does not elect any Preference. Both companies met all the other requirements. Sue will be awarded the contract because Bill's bid was higher.

Important items to remember about receiving Preferences in contract award:

All contractors and/or subcontractors that elect a Preference and are awarded a contract must be in compliance prior to the issuance of a Notice to Proceed by DCA, the recipient, sub-recipient, or the contractor based on the policies established for the applicable DCA funding program. The contractor and/or subcontractor must maintain the elected Preference standard during the entire contract or risk having the contract terminated for failure to comply. **See Appendix B for further details.**

When a contractor and/or subcontractor that elected a Preference is unable to identify a Section 3 resident or a Section 3 business for employment or contracting opportunities, the contractor then ***must*** offer employment related training to the Section 3 residents in the county. The training must be provided according to Part VII – Other Economic Opportunities in DCA's Section 3 Policy.

Appendix A
Section 3 Clause

Training and Employment Opportunities for Residents in the Project Area (Section 3, HUD Act of 1968; 24 CFR 135)

(a) The work to be performed under this contract is subject to the requirements of section 3 of the Housing and Urban Development Act of 1968, as amended, 12 U.S.C. 1701u (section 3). The purpose of section 3 is to ensure that employment and other economic opportunities generated by HUD assistance or HUD-assisted projects covered by section 3, shall, to the greatest extent feasible, be directed to low- and very low-income persons, particularly persons who are recipients of HUD assistance for housing.

(b) The parties to this contract agree to comply with HUD's regulations in 24 CFR Part 75, which implement section 3. As evidenced by their execution of this contract, the parties to this contract certify that they are under no contractual or other impediment that would prevent them from complying with the Part 75 regulations.

(c) The contractor agrees to send to each labor organization or representative of workers with which the contractor has a collective bargaining agreement or other understanding, if any, a notice advising the labor organization or workers' representative of the contractor's commitments under this section 3 clause, and will post copies of the notice in conspicuous places at the work site where both employees and applicants for training and employment positions can see the notice. The notice shall describe the section 3 preference, shall set forth minimum number and job titles subject to hire, availability of Section 3 apprenticeship and training positions, the qualifications for each; and the name and location of the person(s) taking applications for each of the positions; and the anticipated date the work shall begin.

(d) The contractor agrees to include this section 3 clause in every subcontract subject to compliance with regulations in 24 CFR Part 75, and agrees to take appropriate action, as provided in an applicable provision of the subcontract or in this section 3 clause, upon a finding that the subcontractor is in violation of the regulations in 24 CFR Part 75. The contractor will not subcontract with any subcontractor where the contractor has notice or knowledge that the subcontractor has been found in violation of the regulations in 24 CFR Part 75.

(e) The contractor will certify that any vacant employment positions, including training positions, that are filled (1) after the contractor is selected but before the contract is executed, and (2) with persons other than those to whom the regulations of 24 CFR Part 75 require employment opportunities to be directed, were not filled to circumvent the contractor's obligations under 24 CFR Part 75.

(f) Noncompliance with HUD's regulations in 24 CFR Part 75 may result in sanctions, termination of this contract for default, and debarment or suspension from future HUD assisted contracts.

Appendix B

Section 3 Contract Non-Compliance Cure /Termination Processes

This language is a component of contract compliance with the work to which you are responding in this solicitation. The full requirements are provided in the Section 3 Clause found elsewhere in this package and in DCA's Section 3 Policy for Covered HUD Funded Activities.

Any recipient, sub-recipient or contractor claiming Preference **must be in compliance prior to issuance of a notice to proceed by DCA, recipient, sub-recipient, or contractor based on the policies established for the applicable DCA funding program. This preference can be met by any of the three qualifications:**

1. 51% or more owned and controlled by low or very-low income persons
2. Over 75 %of the labor hours performed for the business over the prior three-month period are performed by Section 3 wor ers
3. 51% or more owned and controlled by current residents of public housing or Section 8-assisted housing

The recipient, sub-recipient or contractor must maintain compliance throughout the life of the contract. The contractor understands and agrees that a compliance management firm may be used to conduct routine and certified payroll reviews to ensure compliance. The Contractor agrees to provide the payroll data in an Excel or Word format each time the payroll is processed throughout the contract.

Failure to meet the Section 3 requirements will result in penalties up to and including contract termination. Any contractor triggering the regulation by doing any hiring or contracting once they are awarded the contract through execution must comply with the Section 3 requirements by executing the efforts on their Certification and Action Plan in accordance with DCA's Section 3 Policy.

DCA, the recipient, sub-recipient or contractor shall execute these remedies to achieve compliance in this order:

NON-COMPLIANCE CURE PROCESS

A. Based on the first observation or report of non-compliance with Section 3, the recipient, sub-recipient or contractor will be sent an e-mail by the compliance manager notifying them of their non-compliance issue. The recipient, sub-recipient or contractor will have until the next payroll or 10 business days, whichever is less, to bring the contract into compliance and/or justify in writing why they cannot meet compliance requirements.

B. DCA, the recipient, sub-recipient or contractor must render a response to the violating party within 10 business days of receipt of the violating party's letter of reason for non-compliance. If DCA, the recipient, sub-recipient, or the contractor deems the reason to

be unacceptable, at its option, DCA, the recipient, sub-recipient, or the contractor can extend the response period one time for up to 5 business days to allow the violating party to identify and secure other compliance options.

NON-COMPLIANCE TERMINATION PROCESS

If the violating party fails to take any corrective action to bring the contract into compliance within the allotted time, or DCA, the recipient, sub-recipient, or the contractor rejects any of the corrective plans and justifications for non-compliance, DCA, the recipient, sub-recipient, or the contractor will either terminate the contract immediately or impose liquidated damages equal to $100 a day for every day out of compliance. At DCA's determination, any liquidated damages received must be paid to the recipient, sub-recipient or DCA, at DCA's determination, and be used to promote economic opportunities for Section 3 Residents and Business Concerns.

DCA, the recipient, sub-recipient, or the contractor will hold **all funds due to the violating party until such time that a financial workout is completed**.

Additionally the violating party may be banned by DCA, the recipient, sub-recipient, and the contractor on future HUD funded projects.

Georgia
Department of Community Affairs

Appendix C
Section 3 Forms

Georgia Department of Community Affairs

Georgia Department of Community Affairs

Required Submittal - Section 3 Self-Certification and Action Plan

All firms and individuals intending to do business with DCA, its recipients, sub-recipients and contractors MUST complete and submit this Action Plan and submit it with the bid, offer, or proposal in order to claim a preference on any contract or prior to award of a contract when pro ects involve more than $200,000 in CDBG funds.

Business Name: Scroggs & Grizzel Contracting, Inc.		
D.B.A. (if different from above):		
Address: 6415 Cleveland Hwy	City: Clermont	State/Zip: GA, 30527
Business Phone: (770) 532-5000	Fax: (770) 532-0640	
E-Mail: mgrizzel@hotmail.com	Business Website: www.scroggsandgrizzel.com	
Federal Employer Identification Number: 58-2145532	Owner Social Security Number (if no EIN):	
Contact Person & Title: Mike Grizzel, President	Contact Phone: 770-532-5000 ext. 620	

Trade Description:

☐ Carpentry	☐ Heating (HVAC)	☐ Electrical	☐ Painting
☐ Masonry Restoration	☐ Asbestos	☐ Plumbing	☐ Roofing
☐ Lead (Abatement)	☒ General Contractor	☐ Concrete	☐ Ironwork
☐ Carpet/Flooring	☐ Rubbish Removal/Hauling	☐ Appraisal Services	☐ Landscaping
☐ Demolition	☐ Other:		

Date Business was established (MM/DD/YYYY): 11/08/1994

Type of Business (Check One): ☒ Corporation ☐ Partnership ☐ Sole Proprietorship
☐ Limited Liability Corporation (LLC) ☐ Limited Liability Partnership (LLP) ☐ Joint Venture
☐ Other (Describe):

Number of employees: Full-time: 11 Part-time: _____ Contract: _____ **Total:** 11

Section 3 wor ers: Full-time: _____ Part-time: _____ Contract: _____ **Total:** 0

I am Certifying as a Section 3 Business Concern and requesting Preference accordingly (Select only One Option):

Option 1

☐A business claiming status as 51% or more owned and controlled by low or very-low income persons

Option 2

☐ Over 75% of the labor hours performed for the business over the prior three-month period are performed by Section 3 workers

Option 3

☐51% or more owned and controlled by current residents of public housing or Section 8-assisted housing

Business Concern Affirmation

I, affirm that the above statements of this form in its entirety are true complete and correct to the best of my nowledge and belief. I understand that businesses who misrepresent themselves as Section 3 business concerns and report false information to insert name of recipient/grantee may have their contracts terminated as default and be barred from ongoing and future considerations for contracting opportunities. Thereby certify under penalty of law that the following information is correct to the best of my knowledge.

.Print name: Signature: Date:

Certification expires within six (6) months of the date of signature
Information regarding Section 3 Business Concerns can be found at 2 Part 75.5

FOR ADMINISTRATIVE USE ONLY

☐ Yes the business a Section 3 business concern based upon their certification

EMPLOYERS MUST RETAIN THIS FORM IN THEIR SECTION 3 COMPLIANCE FILE FOR FIVE YEARS.

I am NOT Requesting Preference under Section 3:

☒ *I am NOT certifying as a qualified Section 3 Business Concern and I am not requesting a preference.* However ***if*** *I do trigger the regulation by doing any sub-contracting or hiring, I will comply by meeting all requirements of DCA's Section 3 policy and am* committing to do the outreach as specified below.

Check all methods you will employ to secure Section 3 Residents/Businesses

Posting the position/contract opportunity in community sources that are generally available to low income residents and Section 3 Businesses and the general public is a standard requirement. **Check at least three (3) methods you will employ:**

- ☒ The local community newspaper
- ☐ The most widely distributed newspaper
- ☒ Company or agency website
- ☐ The management office of the local housing authority, or homeless service agency, or local low income housing community
- ☒ Local Workforce Board (i.e., Department of Labor)
- ☐ Local office of the Georgia Division of Family and Children Services
- ☐ Local office of the Georgia Department of Public Health
- ☐ Dodge Room http://www.construction.com/dodge/dodge.asp
- ☐ Other locations identified below and subject to DCA approval:

_____

_____

_____Initial here to confirm selection of this option

Signature: _____

Printed/Typed Name: Mike Grizzel

Title: President

Date: 12/16/2022

Notarial Affidavit

Sworn to and subscribed before me this 16th day of December, 2022.

_____

Signature of Notary Public

LECHILLE K MOTES NOTARY PUBLIC Exp. Apr. 25, 2024 HALL COUNTY, GA

Lechille K. Motes

Printed Name of Notary Public

Commission Expiration Date: April 25, 2024

(Notarial Seal)

Georgia Department of Community Affairs
Required Submittal - Previous Section 3 Compliance Certification

Name of Business: Scroggs & Grizzel Contracting, Inc.

Address of Business: 6415 Cleveland Hwy Clermont, GA

Type of Business (Check One): ☒ Corporation ☐ Partnership

☐ Sole Proprietorship ☐ Other

Business Activity: General Contractor / Construction Manager

All firms and individuals intending to do business with DCA, its recipients, sub-recipients, or contractors **MUST** complete and submit this certification of prior compliance prior to award of any contract for a project involving $200,000 or more in CDBG assistance. Please check the appropriate line box below and sign and date the form.

1. I am certifying that I have complied with the HUD Section 3 Regulations, when triggered by new hiring or contracting opportunities, in my past contracts **when required** by the recipient, sub-recipient or contractor by either:
   - i. Certifying as a Section 3 Business Concern because at least 51 percent of the business is owned and controlled by low- or very low-income persons;
   - ii. Certifying as a Section 3 Business Concern because over 75 percent of the labor hours performed for the business over the prior three-month period are performed by Section 3 workers;
   - iii. Certifying as a Section 3 Business Concern because at least 51 percent of the business is owned and controlled by current public housing residents or residents who currently live in Section 8-assisted housing;
   - iv. Hiring or contracting to the "greatest extent feasible" with Section 3 Residents or Section 3 Businesses.

   ☐ Check this box

2. I have never done any HUD funded contracting.

   ☐ Check this box

3. I completed HUD Section 3 covered contracts in the past three years but the regulation was not triggered because either there were no new hires on the contract(s) and/or I did not do any new contracting or subcontracting.

   ☒ Check this box

Signature: Mike Grizzel

Print Name: Mike Grizzel

Title: President

Required Submittal - Assurance of Compliance Certification
Section 3 Action Plan
Housing and Urban Development Act of 1968
(12 U.S.C. 1701 U)

Contract/Solicitation Name or Number:

RFQ/P#: 43-018 Contract for General Contractor Grant Services

DCA Funding Program: Community Development Block Grant Program (CDBG)

Entity Receiving DCA Funding Award: Hall Co Board of Commissioners

Purpose: To ensure that regulations promulgated under 24 CFR Part 75 Employment Opportunities for Businesses and Lower Income Persons in Connection with Assisted Projects and the Section 3 Policy of DCA, its recipients, sub-recipients and contractors to the greatest extent feasible is adhered to, and to serve as the "assurance of compliance" certification and action plan as required in the bid documents, supplemental general conditions, and required forms for the contract for any HUD work funded by DCA.

Description of the project's work detail: The project work will be as listed in the final scope of work in the contract with DCA, its recipients, sub-recipients and contractors including any change orders. List all known subcontractors below:

Subcontractor(s): UNKNOWN

Subcontractor(s): _____

Subcontractor(s): _____

Subcontractor(s): _____

Subcontractor(s): _____

Subcontractor(s): _____

Subcontractor(s): _____

Subcontractor(s): _____

Use an additional sheet if required.

Note: If subcontractors are unknown at this time, print UNKNOWN on the line above. Also, the contractor must notify DCA or recipient or sub-recipient if subcontractors are added or changed during the contract. Any changes to this certification requires a resubmission of this form to DCA or recipient or sub-recipient.

Preliminary Statement for Work Force Needs:

DCA intends to meet Section 3 compliance at the highest level and it is our intent to identify any short-term and long-term employment or contracting opportunities for qualified Section 3 wor ers and Business Concerns during the course of the contract funded by DCA via its recipients or sub-recipients and contractors. Please list the status of all planned employment positions and opportunities for this contract. **Preference for all opportunities must be given to low and very low-income residents if they qualify. If awarded a contract,** regardless of whether your firm has elected a preference, **you are required to provide a list of your aggregate workforce on this project. Any changes to that workforce during the project will constitute NEW hires. You must notify DCA, its recipient, sub-recipient or contractor (respectively) overseeing your contract of any new hire opportunities that arise during the life of your contract.** The a*nticipated workforce list may be provided on a separate sheet or in a different format.*

List All Employees	Date Hired	Section 3 Worker (Yes/No)	Job Title/Trade	Salary Range
Name: Lamar Etris Address: 4405 Barney Clark Rd City, ZIP: Gainesville, GA 30506	6/14/07	No	Superintendent	32.50/hr
Name: Donald Bruce Address: 4088 Leach Rd City, Zip Code: Gainesville, GA 30506	1/13/03	No	Superintendent	32.50/hr
Name: Rodney Lee Address: 128 N Parks St City, Zip Code: Dahlonega, GA 30533	4/5/18	No	Superintendent	32.50/hr
Name: Jeff Allison Address: 258 Cabin Creek Dr City, Zip Code: Cleveland, GA 30528	3/8/22	No	Superintendent	32.50/hr

Use additional pages as needed.

List All Employees	Date Hired	Section 3 Worker (Yes/No)	Job Title/Trade	Salary Range
Name: William Bruce Address: 4106 Leach Rd City, ZIP: Gainesville, GA 30506	7/9/15	No	Laborer	16.50/hr

"To the Greatest Extent Feasible":

The Contractor has identified 0 # of **OPEN** positions with respect to this contract. The positions are filled by the _____ (Position title) of the Contractor.

Should the scope of work or duties of the contractor change to a degree requiring a modification of the work force needs, the contractor shall put forth a reasonable effort to fill vacant positions with eligible Section 3 wor ers.

Documentation of "To the Greatest Extent Feasible":

The contractor will work with DCA, its recipients, sub-recipients, and contractors staff to notify residents of any opportunities afforded under the contract. The contractor will partner with DCA, its recipients, sub-recipients, and contractors by giving preference of any employment opportunities to the Section 3 persons or businesses.

The contractor shall recruit or attempt to recruit from the Section 3 service area the necessary number of low-income and very low-income residents and Section 3 businesses, as applicable. The contractor must also document their recruiting efforts and any impediments to compliance with DCA's Section 3 policy and the requirements of this solicitation package. This documentation must be submitted to the recipient or sub-recipient.

1. DCA, its sub-recipients and contractors shall: Maintain a list of all low-income area residents who have applied, either on their own or from referral from any source, and employ such person if otherwise eligible and if a trainee vacancy exists.
2. Conduct solicitation in accordance with DCA's Section 3 policy and the requirements outlined in the solicitation package.

The contractor shall review all employment applications and determine if low-income and very low-income residents or Section 3 businesses meet minimum hiring or contracting qualifications. If these applicants meet such minimum qualifications, but are not hired due to lack of employment opportunities or for other reasons, they will be placed on a priority list and offered positions/contracts upon the occurrence of the first available appropriate opening.

Utilization of Section 3 Businesses Located Within the service area or neighborhood of the project:

The recipient, sub-recipient or contractor does ___ does not ___ intend to subcontract any of the work identified in the scope of work cited in the bid specifications, scope of work or General Conditions. Should the scope of work or needs of the contractor change, the contractor shall, to the greatest extent feasible, shall ensure contracts for wor awarded in connection with Section 3 pro ects are provided to business concerns that provide economic opportunities to Section 3 wor ers residing within the metropolitan area (or nonmetropolitan county) in which the pro ect is located.

Record Keeping:

The recipient, sub-recipient, contractor or subcontractor, as applicable, shall maintain on file all records related to employment and job training of low-income and very low-income residents or other such records, advertisements, legal notices, brochures, flyers, publications, assurances of compliance from sub-contractors, etc., in connection with this contract. If a report is needed in the future, the recipient,

sub-recipient, contractor or subcontractor, as applicable, agrees to provide all records upon request. The contractor shall, upon request, provide such records or copies of records to HUD, DCA, their recipients, sub-recipients, contractors, staff, or agents. Records shall be maintained for at least three (3) years after the close of the contract.

Reports:
The recipient, sub-recipient or contractor shall provide reports as required in connection with the contractor specifications. All certified and regular payrolls shall clearly detail which employees qualify under Section 3. The U.S. Department of Housing and Urban Development (HUD) re uires that recipients of federal funds capture record and report the total number of labor hours the total amount of Section 3 worker hours and the total amount of Section 3 Target worker hours.

Certification:
The recipient, sub-recipient or contractor will certify that any vacant employment positions, including training positions that filled:

1) After the recipient, sub-recipient or contractor is selected but before the contract is executed, and
2) With persons other than those to who the regulations of 24 CFR Part 75 require employment opportunities to be directed, were not filled to circumvent the subcontractor's obligations under 24 CFR Part 75.

Grievance and Compliance:

The recipient, sub-recipient, contractor or subcontractor hereby acknowledges that they understand that any low-income and very low-income resident of the project area, for him/her or as representatives of persons similarly situated, seeking employment or job training opportunities in the project area, or any eligible business concerns seeking contract opportunities may file a grievance if efforts to the greatest extent feasible were not executed. The grievance must be filed with HUD not later than one hundred eighty (180) calendar days from the date of the action (or omission) upon which the grievance is based.

I attest that the information on the preceding pages is true and correct.

Signature

12/16/2022
Date

Mike Grizzel
Print Name

President
Title

RESIDENT SECTION 3 SELF-CERTIFICATION AND SKILLS DATA FORM

The purpose of this form is to comply with HUD Section 3 administration and certification regulations. **Certification for Section 3 Workers or other Low-Income Persons Seeking Employment, Training or Contracting**

I, _____, am a legal resident of the United States and meet the income eligibility and federal guidelines for a Section 3 Resident as defined within this Certification.

My home address is: _____
Must be a **Street** address not a P O Box # Apt Number

_____
City State Zip Home # Cell #

_____
County of Residence

Graduated High School or GED (month/year): _____ I Read and Speak English Fluently: Yes or No

Attended College, Trade, or Technical School: Yes or No Graduated? Yes or No Year Graduated:_____

Check the Skills, Trades, and/or Professions in which you have been employed or contracted to do for others:

☐Drywall Hanging	☐Drywall Finishing	☐Interior Painting	☐Framing
☐HVAC	☐Electrical	☐Interior Plumbing	☐Exterior Plumbing
☐Siding	☐Cabinet Hanging	☐Door Replacement	☐Trim/Carpentry
☐Stucco	☐Window/Door Replacement	☐Construction Cleaning	☐Exterior Framing
☐Data Entry	☐Receptionist	☐ Sales	☐Telephone Customer Service
☐Administrative	☐Teaching/Training	☐Personal Care Aide	☐Landscaping
☐CDL License	☐Roofing	☐Concrete/Asphalt Work	☐Heavy Equipment Operator
☐Fencing	☐Metal/Steel Work	☐Welding	
☐Other		☐Other	

I am certifying as a Section 3 or er: ☐ **Person seeking Training** **or** ☐ **Person seeking employment**
(Check all that apply):

☐ A low or very-low income resident ☐Employed by a Section 3 Business Concern ☐YouthBuild Participant

☐I live in the service area or neighborhood -one-mile radius of project site or if fewer than 5,000 people a radius of project containing 5,000 people.

My total annual income is $_____.

I certify that all of the information given on this Certification is true and correct. If found to be inaccurate, I understand that I may be disqualified as an applicant and/or a certified Section 3 individual which may be grounds for termination of training, employment, or contracts that resulted from this certification. I attest under penalty of perjury that my income annually is at or below the income amount at the time of this document is being signed and notarized. I understand that proof of this statement may be requested in the future.

_____ _____
Signature Date

Printed Name: _____

Purpose:
The purpose of Section 3 of the Housing and Urban Development of 1968 (12 U.S.C. 1701u) (Section 3) is to ensure that employment and other economic and business opportunities generated by HUD Financial Assistance shall be directed to the Authority Residents and other low- and very low-income persons, particularly those who are recipients of government housing assistance and to business concerns which provide economic opportunities to low- and very low-income persons and YouthBuild participants.

A Section 3 worker as defined by §75.5 is any worker who currently fits or when hired within the past five years fit at least one of the following criteria:

(1) The worker s income for the previous or annualized calendar year is below the income limit established by HUD.

(2) The worker is employed by a Section 3 business concern.

(3) The worker is a YouthBuild participant.

A person seeking the training and employment preference provided by section 3 bears the responsibility of providing evidence (if re uested) that the person is eligible for the preference. Low- and very low-income limits are defined in Section 3(b)(2) of the Housing Act of 1937 and are determined annually by HUD. These limits are typically established at 80 percent and 50 percent of the area median individual income. HUD income limits may be obtained from: https://www.huduser.gov/portal/datasets/il.html.

(§75.21) A Targeted Section 3 worker for housing and community development financial assistance means a Section 3 wor er who is:

(1) A worker employed by a Section 3 business concern or
(2) A worker who currently fits or when hired fit at least one of the following categories as documented within the past five years:
(i) Living within the service area or the neighborhood of the project as defined in 75.5 or
(ii) A YouthBuild participant.

Service area or the neighborhood of the project means an area within one mile of the Section 3 project or if fewer than 5,000 people live within one mile of a Section 3 project within a circle centered on the Section 3 project that is sufficient to encompass a population of 5,000 people according to the most recent U.S. Census.

§75.19 Requirements.

(a) Employment and training.

(1) To the greatest extent feasible and consistent with existing Federal, state, and local laws and regulations recipients covered by this subpart shall ensure that employment and training opportunities arising in connection with Section 3 projects are provided to Section 3 workers within the metropolitan area (or nonmetropolitan county) in which the project is located.

(2) Where feasible priority for opportunities and training described in paragraph (a)(1) of this section should be given to:

(i) Section 3 workers residing within the service area or the neighborhood of the project and

(ii) Participants in YouthBuild programs.

RESIDENT SECTION 3 SELF-CERTIFICATION AND SKILLS DATA FORM
AFFADAVIT

STATE OF _____

County of _____

I, _____, a Notary Public of the City/County of _____, State of _____, do hereby certify that, _____, whose name is signed to the writing above bearing date on the _____ Day of _____, 20_____, has acknowledged the same before me in my State aforesaid.

Given under my hand and official seal, this the _____ day of _____, 20___.

_____

Signature of Notary Public

_____

Printed Name of Notary Public

Commission Expiration Date: _____

(Notarial Seal)

SECTION 3 BUSINESS CONCERN SELF CERTIFICATION

The Georgia Department of Community Affairs (DCA) is seeking to extend the benefits of and to promote compliance with Section 3 by identifying Section 3 Business Concerns and targeting Section 3 Business Concerns for business opportunities, events and educational programs.

In an effort to comply with Federal Section 3 Regulations which promote contract, employment and training opportunities for State of Georgia residents, DCA has instituted a Section 3 Self Certification process.

Businesses seeking certification must complete and submit the attached Section 3 Business Concern Self Certification forms as follow:

1. If your company is qualified because it is owned (51% or more) by one or more low or very-low-income residents, then complete **Form A, "Section 3 Business Concern – Resident Business Owner(s) Verification"; OR**

2. If your company is qualified because over 75 percent of the labor hours performed for the business over the prior three-month period are performed by Section 3 wor ers, then complete **Form B, "Section 3 Business Concern – 75% + Workforce".**
   OR

3. If at least 51 percent owned and controlled by current public housing residents or residents who currently live in Section 8-assisted housing, then complete **Form C, "Section 3 Business Concern-Housing Residents".**

Please answer all questions, sign the completed forms, and notarize the affidavit.

Completed packets must be returned to the sub-recipient or contractor as follows:

Name of sub-recipient/contractor: _____
Attn: _____
Mailing Address: _____
_____

If you have any questions or require assistance, please contact:

Name: _____
Phone Number: _____
Email Address: _____

Form A

SECTION 3 BUSINESS CONCERN

Resident Business Owner(s) Verification

A business can be certified as a Section 3 Business Concern if the business is owned (51% or more) by low or very-low-income residents.

Name of Owner:_____

Home Street Address:_____

Home City, County, & Zip Code:_____

Name of Business:_____

Percentage of Ownership: _____%

Low- and very low-income limits are defined in Section 3(b)(2) of the Housing Act of 1937 and are determined annually by HUD. These limits are typically established at 80 percent and 50 percent of the area median individual income. HUD income limits may be obtained from: https://www.huduser.gov/portal/datasets/il.html.

Individual Income Limits

FY 20 Income Limit Area	Income Limits Category	FY 202_Income Limits
	Extremely Low Income Limits	
	Very Low Income Limits (50%)	
	Low Income Limits (80%)	

If the business is owned by more than one low to very-low-income residents, list each owner below and each should submit a separate Resident Business Owner Verification Form (Form A).

Name	Position	% Percentage of Ownership

I certify that I am a resident of the State of Georgia and my total income last year was not more than the amount shown above. I further certify the information provided is true and accurate and agree to provide upon request, documents verifying the information submitted to qualify as a Section 3 Business Concern.

Print: _____ **Signature:** _____ **Date:** _____

Georgia
Department of Community Affairs

Form B

SECTION 3 BUSINESS CONCERN

75% + Workforce

A business can be certified as a Section 3 Business Concern if over 75 percent of the labor hours performed for the business over the prior three-month period are performed by Section 3 workers. For your firm to be eligible UNDER THIS CRITERIA, you must provide the following information for **all permanent, full-time employees.**

You may attach additional copies of this chart, if necessary.

List All Employees	**Date Hired**	**Section 3 Worker**	**Job Title/Trade**	**Salary Range**
Name: Address: City/Zip:				
Name: Address: City/Zip:				
Name: Address: City/Zip:				
Name: Address: City/Zip:				
Name: Address: City/Zip:				
Total Number of Employees:	**Full-Time:** _____	**Part-Time:** _____	**Contract:** _____	
Number of Section 3 or ers:				
Section 3 % of Total Workforce:				

I certify that the information provided is true and accurate and agree to provide upon request, any/all documents verifying the information submitted to qualify as a Section 3 Business Concern.

Print Name: _____

Title: _____

Company Name: _____

Signature: _____

Date: _____

Form C
SECTION 3 BUSINESS CONCERN
Public Housing Residents

To qualify the business must be at least 51 percent owned and controlled by current public housing residents or residents who currently live in Section 8-assisted housing

Business Information

Name of Business:_____

Address of Business: _____

Name of Business Owner: _____

Phone Number of Business Owner: _____

Email Address of Business Owner: _____

Preferred Contact Information:_____

Name of Preferred Contact:_____

Phone Number of Preferred Contact:_____

Type of Business (select from the following options):

☐Corporation ☐Partnership ☐Sole Proprietorship ☐Joint Venture

- **Percent owned and controlled by current public housing residents or residents who currently live in Section 8-assisted housing:_____%**

I certify that the information provided is true and accurate and agree to provide upon request, any/all documents verifying the information submitted to qualify as a Section 3 business concern.

Print Name: _____

Title: _____

Company Name: _____

Signature: _____

Date: _____

GEORGIA MOUNTAIN FOOD BANK
EXPANSION

1642 Calvary Industrial Drive SW
Gainesville, GA 30507



PROJECT MANUAL

PERMIT SET FOR CONSTRUCTION
September 20, 2022

ARCHITECT
SYNTONY DESIGN COLLABORATIVE, LLC
643 Robinson Avenue SE
Atlanta, GA 30312

Syntony©
Design Collaborative LLC.

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	NOT USED		

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26 24 16	Panel Boards	09/20/2022	
26 27 26	Wiring Devices	09/20/2022	

26 28 13	Fuses	09/20/2022	
26 28 16	Enclosed Switches and Circuit Breakers	09/20/2022	
26 51 00	Interior Lighting Systems	09/20/2022	
26 56 19	LED Exterior Lighting Systems	09/20/2022	

DIVISION 27 - COMMUNICATIONS

NUMBER	DOCUMENT TITLE	ISSUED	REVISED
	NOT USED		

DIVISION 28 - ELECTRONIC SAFETY AND SECURITY

NUMBER	DOCUMENT TITLE	ISSUED	REVISED
	NOT USED		

DIVISION 31 - EARTHWORK

NUMBER	DOCUMENT TITLE	ISSUED	REVISED
	Specifications Indicated on Drawings		

DIVISION 32 - EXTERIOR IMPROVEMENTS

NUMBER	DOCUMENT TITLE	ISSUED	REVISED
	Specifications Indicated on Drawings		

DIVISION 33 - UTILITIES

NUMBER	DOCUMENT TITLE	ISSUED	REVISED
	Specifications Indicated on Drawings		

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SECTION 00 0011 - CERTIFICATION PAGE

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PROJECT NUMBER:	Project No.: 220001
DATE:	September 20, 2022

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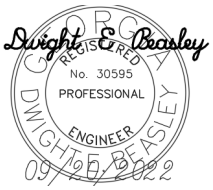

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END OF CERTIFICATION PAGE

REPORT
OF
GEOTECHNICAL SUBSURFACE EXPLORATION

GEORGIA FOOD BANK ADDITION SITE
1642 CALVARY INDUSTRIAL DRIVE SW
GAINESVILLE, GEORGIA
SGC PROJECT NO. 13498G, REPORT NO. 92896

July 26, 2022

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July 26, 2022

Georgia Mountain Food Bank
1642 Calvary Industrial Drive SW
Gainesville, Georgia 30507

Attention: Ms. Rebecca Thurman

Subject: Geotechnical Subsurface Exploration
Proposed Georgia Mountain Food Bank Addition Site
1642 Calvary Industrial Drive SW
Gainesville, Georgia
SGC Project No. 13498G, Report No. 92896

Gentlemen:

Southern Geotechnical Consultants (SGC), LLC has completed a subsurface exploration for the referenced project in accordance with our Proposal No. GP-2506, dated June 2, 2022. This report presents our understanding of the project, our findings, and our conclusions and geotechnical engineering recommendations. After you have reviewed our report, we recommend either a meeting or a telephone conference to discuss our recommendations.

SGC appreciates the opportunity to be of service to Georgia Food Bank, and we look forward to being of service to you through project completion. Please contact us if you have any questions.

Respectfully submitted,

Southern Geotechnical Consultants, LLC

Rodney Clark
Project Manager

A. Glenn Motes, III, P.E., P.G.
Senior Geotechnical Engineer/Geologist
Reg. Ga. Nos. 23774, 920

RC/AGM/ads

Enclosures





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REPORT OF GEOTECHNICAL SUBSURFACE EXPLORATION
GEORGIA FOOD BANK ADDITION SITE
1642 CALVARY INDUSTRIAL DRIVE SW
GAINESVILLE, GEORGIA
SGC PROJECT NO. 13498G, REPORT NO. 92896

1.0 INTRODUCTION

1.1 GENERAL

SGC, LLC has completed a subsurface exploration of the proposed addition to be located south of the building within an open grassed pad. The purpose of this exploration was to assess subsurface soil, rock, and groundwater conditions, and to provide recommendations for the geotechnical aspects of design and construction. This report explains our understanding of the project, documents our findings, and presents our conclusions and geotechnical engineering recommendations.

1.2 REPORT SUMMARY

We have evaluated the subsurface soil, rock, and groundwater conditions with respect to the proposed addition and find that the pad is underlain by fill up to about 15 feet of variable consistency existing fill that contains rock and wood fragments. Options for building support include both shallow or deep foundation systems. Note that the preceding summary is provided for overview. Any party who relies on this report must read the full report. The summary omits a number of details, any one of which could be crucial to the proper application of this report. More detailed discussions concerning the aforementioned summary items are included in the body of this report.

2.0 PROJECT INFORMATION

2.1 EXISTING SITE

The proposed addition project site is located south of the existing building within a rough graded grassed pad. A site location map is attached in Appendix A (Plate 1). Topographically, the site is relatively flat with grades gently sloping to the southwest away from the existing building. Maximum topographic relief across the site of the proposed addition area is estimated to be 4 feet or less. While not known at this time, we estimate maximum cuts and fills as part of mass grading will approach 5 feet as part of mass grading. Deeper excavation depths are likely with site utilities. Photographs of the site are included in the Appendix.

2.2 PROPOSED CONSTRUCTION

We understand that plans are underway to begin the development process for the addition. As shown on Syntony Design Collaborative's First Level Floor Plan dated March 30, 2022 provided to us, we understand that the building will have a footprint of about 10,000 square feet flanked to the south by an approximate 2,500 square foot exterior pallet storage area. While no specifics have been provided about the building at this time, we assume for the sake of defining our geotechnical recommendations the building will be single story and be of steel frame with a metal panel exterior. Approximately half of the building will be constructed to be temperature controlled for perishable food storage. While structural loading has not been provided, we assume for the sake of defining boring depths that maximum column loads will be 75 kips or less, wall loads will be 1 to 2 kips per linear foot and floor loading will be 250 psf or less. We note that if any assumptions made are incorrect, please contact us so that the correct data can be re-evaluated and adjustments to our recommendations provided if needed.

3.0 PUBLISHED SITE INFORMATION

3.1 SITE GEOLOGY

The project site is located in Georgia's Piedmont Physiographic Province. The soils have been formed by the in-place chemical weathering of the parent metamorphic and igneous rock. The common soil profile consists of upper clayey strata that transition with depth into a less clayey, coarser grained soils having varying mica content. Separating the completely weathered soil overburden from the unaltered parent rock is a transition zone of very high consistency materials locally referred to as "partially weathered rock". Partially weathered rock retains much of the appearance and fabric of the parent rock formations and is normally composed of alternating layers of high consistency soil and rock.

The weathering processes that form the overburden soils and partially weathered rock are extremely variable, dependent upon such factors as rock mineralogy, past groundwater conditions, and tectonic history (joints, faults, igneous intrusives, etc.) of this specific area. Differential weathering of the rock mass results in extremely erratic subsurface conditions evidenced by abrupt changes in soil type and consistency in relatively short horizontal and vertical distances. Furthermore, irregular depths to rock and isolated boulders, discontinuous rock layers, or rock pinnacles within the overburden transition zones can be present.

As mapped, the site is underlain by rocks that include gneiss schist and amphibolite. Gneissic bedrock is commonly very resistant to chemical weathering and forms shallower soil profiles consisting of micaceous silty sands and sandy silts. Schist is more easily weathered and commonly forms deeper soil profiles; however, the depth of the soil horizon will depend on numerous factors including the presence of fractures/jointing in the rock, the presence of water, and the rock mineralogy. With regards to the rock mineralogy, the more quartz present in the rock the more resistant to chemical weathering. The quartz content in schist can vary over fairly short distances. Therefore, it is not uncommon to observe variations in the soil profile, or have rock exposures, boulders, or rock pinnacles to be present in areas mapped as containing schist bedrock. Amphibolites are also less resistant to weathering and typically weather into silty soils that are lightweight, and typically have high in-place moisture content. These soils have the potential to be unstable and highly compressible. Furthermore, it is not uncommon for a preferred zone of slippage to occur along foliation planes within relic soils unearthed by excavation. The risk is more prevalent on trench excavations and as part of construction the attitudes of local foliation and/or metamorphic mineral aggregation layers/planes should be noted by the site geotechnical representative and if noted to be adverse to the slope angle, trench shoring included to help minimize impact.

Fill is material placed by man in conjunction with construction or disposal activities. Fill can be composed of many differing soil types from various sources and can also include debris from building demolition, organics, topsoil, trash, etc. The engineering properties of fill soils depend primarily on their composition, density, and moisture content. We note that previous fill placement has occurred at the site as part of creating the rough graded pad. However, we do not have any knowledge of the nature of the fill , its distribution or engineering properties. If such information is available, we ask that it be provided to us for review.

4.0 EXPLORATION METHODS

4.1 FIELD EXPLORATION

Five soil test borings were performed during our exploration. Plates 2 and 3 in Appendix A provides the approximate boring locations. Our representative located the requested boring locations shown on

the Syntony Design Collaborative's site plan provided by estimating right angles and pacing distances from the existing site features shown on the pan and an aerial photograph of the site obtained off of Hall County GIS. The boring locations shown on the Boring Location Plan should be considered approximate.

The exploratory borings were made by mechanically twisting hollow-stem augers into the soil. Soil samples were obtained at the surface or 5-foot depth intervals with a standard 1.4-inch I.D., 2-inch O.D. split-barrel sampler. The sampler was first seated 6-inches and then driven an additional foot with blows of 140-pound hammer falling 30-inches. The number of hammer blows required to drive the sampler the final foot was recorded and is designated the "standard penetration resistance" with units of blows per foot (bpf). Very dense residual materials described as partially weathered rock were found in several of the borings. In these materials, 50 hammer blows drove the sampler less than 12-inches and the Test Boring Records show the penetration for 50 blows as 50/3", 50/5", etc.

The samples obtained during the exploration were returned to our laboratory and were reviewed by a member of our staff. The purposes of this review were to check the field classification, visually estimate the relative percentages of the soil's constituents (sand, clay, etc.) and identify pertinent structural features such as foliation planes, slickensides, etc. The stratification lines shown on the boring records represent the approximate boundaries between soil types and the transition may be gradual.

5.0 SUBSURFACE CONDITIONS

5.1 SOIL TEST BORINGS

As part of the exploration, five borings were extended to depths of 20 feet. Initially, the borings penetrated an approximate 3-inch topsoil layer. Underlying the topsoil about 3 to 15 feet of variable consistency existing fill was penetrated. As sampled, the fill is generally described as firm to stiff, reddish- tan, brown, purple-gray, black, and gray-black, micaceous sandy silt. In Boring No. 3, the fill sampled contained rock and wood fragments. Standard penetration resistance values in the fill soils sampled range from 7 to 14 blows per foot (bpf).

Underlying the fill residual soil was encountered. The residual soil descriptions vary but are generally described as firm to hard, tan-brown, gray-brown, and tan-black micaceous sandy silts with partially weathered rock lenses at depth. Standard penetration resistance values in the fill soils sampled range from 9 to 38 blows per foot (bpf).

Partially weathered rock was encountered in Boring No. 2 at a depth of approximately 18 feet below the existing ground surface. Hard rock as inferred by auger refusal was not encountered in the borings within the depths explored. All borings were terminated in residual soils and/or partially weathered rock.

For more detailed descriptions, please refer to our boring records in Appendix B. A tabulation of the boring data is provided in the following Boring Summary Table.

Boring No.	Fill Thickness, ft	Depth to Partially Weathered Rock, ft	Auger Refusal Depth, ft	Boring Termination Depth, ft	Groundwater, ft
1	8	-	-	20	Caved @ 12½
2	3	18	-	20	Caved @ 16
3	15	-	-	20	Caved @ 13
4	15	-	-	20	Caved @ 13
5	15	-	-	20	Caved @ 13½

Note: All depths, and thicknesses should be considered approximate

5.2 GROUNDWATER

Groundwater was not encountered in the borings at the time of drilling. Additionally, the borings caved after drilling at depths ranging from about 12½ to 16 feet below the existing ground surface. We are not sure based solely upon the apparent moisture content of the samples collected whether the caving depths approximate the groundwater table, but it appears largely to be related to the texture of the soils that promoted the caving. The only way to differentiate this possibility is to install temporary piezometers so that stabilized readings can be made. We will be happy to further assess groundwater levels in select areas for this potential impact. Also, we note that groundwater levels will fluctuate with seasonal and yearly rainfall variations, local heavy precipitation events, etc. and could exist at different levels in the future.

6.0 CONCLUSIONS

We base the following conclusions on the project information provided to us, the assumptions outlined herein, and the results of this geotechnical exploration. The following information describes our conclusions concerning this site with respect to the proposed construction.

- Based upon the boring data and minimal grading required, widespread difficult excavation associated with ripping of partially weathered rock and hard rock is not anticipated. However, in the Piedmont of Georgia variations in bedrock levels can vary drastically over short distances. As such isolated difficult excavation is possible.

- Existing fill was penetrated in the borings at estimated thicknesses of about 3 to 15 feet. The fill overall appears to have received some compactive effort when placed; however, soft zones and some wood and rock fragments were noted in some of the samples. We expect, based upon the grades, that most of the fill across the pad will remain as part of development. If no risk for undetected soft fill zones impacting building performance is acceptable then all existing fill within the building areas and 10 feet beyond should be removed and replaced with new compacted structural fill. Alternatively, if some risk for undetected soft zones is acceptable to Georgia Mountain Food Bank, then any fill is left in-place in cut areas after reaching grade and/or any existing fill is present in areas to receive fill, can be further evaluated and if soft zones are encountered removed and replaced with new compacted structural fill. As a third option, the planned building can be supported on a ground improvement specialty foundation system such as rammed aggregate piers or helical piers. While specialty foundation alternatives such as helical piers or rammed aggregate piers are proprietary and the risks associated with compliance

with the structural tolerances part of their design, it is our findings base upon our review that both of these are viable options that should be capable of meeting the design requirements.

- Based upon the boring data and our analysis it would appear that shallow foundations supported on residual soils, new compacted structural fill and/or existing fill if risk is excepted by the owner and further evaluated by SGC at the time of construction and found to be satisfactory for support.

- All new soil fill should be compacted to at least 95 percent of its standard Proctor maximum dry density (ASTM D698). We anticipate that the site's residual soils and existing fill will be suitable for reuse as structural fill; however, any existing fill containing topsoil and/or debris needs to be wasted off site or used in landscape or non-structural areas. Also, we note that blending of the residual soils may be required to limit impact from higher lighter weight soils.

- The first-floor slab for the proposed building can be directly soil-supported on existing residual soils, compacted new structural fill or existing fill if risk is excepted by the owner and further evaluated by SGC at the time of construction and found to be satisfactory.

7.0 RECOMMENDATIONS

7.1 GENERAL DISCUSSIONS

In the borings, hard rock was encountered at depth in two of the borings and partially weathered rock was encountered as layers within the residual soils. Based upon the boring data, any potential impacts appear largely to be isolated with the greatest potential for impact associated with deeper site utilities. Nevertheless, variability in rock levels is possible and the levels noted should be considered with final grade design and budgeting.

As previously noted, existing fill is present across the site including the footprint of the proposed building addition. Up to 15 feet of fill appears to be present within the planned building addition to the south of the existing structure. We expect that the fill was placed as part of the initial building pad development. While the fill appears to be relatively clean, rock and wood fragments were noted, and some of the borings penetrated softer zones. We note that no compaction data has been provided to us concerning how the original fill was placed or the nature of the material used, and compaction achieved during earthwork procedures. Nevertheless, the fill overall appears to have received some compactive effort during placement and no obvious settlement related cracking was observed on the original structure during our site reconnaissance. Furthermore, no structural issues have been provided to us concerning the existing building presently supported in part on the fill. Nevertheless, if the fill is used for direct support of the additions, the owner must accept risk of post construction structural issues. If such risk cannot be tolerated, all existing fill should be removed and replaced with new compacted structural fill. Likewise, the building could be founded on one of the proprietary deep foundation systems such as helical piers or rammed aggregate piers.

The proposed building can be supported by conventional shallow foundations bearing on new compacted soil fill, undisturbed residual soils or existing fill if further evaluated at the time of construction by one of our representatives as part of the option above chosen by the owner. We recommend that an allowable bearing pressure of 2,500 psf be used to size footings supporting the proposed building. For any foundations constructed adjacent to an existing building an allowable bearing pressure of 1,000 psf should be used. We recommend that a contingency be included in the budget for partial replacement of near surface soils in impacted footing excavations with compacted No. 57 size crushed stone. The amount required will best be handled by one of our engineers at the time of construction.

Beyond the building area more tolerance in the potential for consistency variability is possible; however, it will require that we be allowed to evaluate further at the time of construction. Such will require that both the relative compaction/stability of the fill be assessed as it relates to the planned use (example roadway, utilities, retaining walls, etc.).

The boring data groundwater depths when compared to the assumed likely pad grades find groundwater to be at least 10 feet below existing grade. We note that groundwater levels can change with seasonal and yearly variation by more than 3 to 5 feet. Also, even though direct impact does not occur, the nearby presence of the groundwater table could impact the site's soil moisture content especially when excavation of soils reaches within about 5 feet of the water table. Such will necessitate moisture conditioning of the soils to achieve compaction.

As indicated by the published literature soils possibly derived from the weathering of amphibolite are present at the site. These soils typically are found as isolated bands within a residual soil matrix. We note that soils weathered from amphibolite rocks typically have high in-place moisture contents, have the potential to be highly compressible and make poor pavement/floor slab subgrades. As such, we caution that some select undercutting and replacement of the materials in the near surface may be required if encountered at final subgrades in the building, foundation excavations and paving areas. Also, we recommend that the construction budget include provisions for stabilization of these materials if encountered either by use of crushed stone, geotextiles and/or new compacted structural fill. The need and extend of mitigative measures required is best managed at the time of construction as part of our on-site construction phase services.

7.2 SITE PREPARATION

To prepare the site for construction, all surface vegetation and topsoil should be stripped and properly disposed off site. Also, at this time further evaluation of existing fill within the planned building area can proceed if this option is chosen. This evaluation must include methodical proofrolling of exposed soils to detect near-surface areas of instability. Any soft or unstable areas can be repaired or removed and replaced with compacted structural soil fill. It is important that a representative of our firm observe the excavation of any soft or unstable soils below any proposed grades to assist in evaluating the necessary extent and depth of excavation, use of the excavated soils as structural fill, and when satisfactory residual soils are encountered. Previously unexplored or unknown conditions could also become evident during these operations. At this time, we can assess whether the recommendations in this report must be modified in light of the exposed conditions.

7.3 FILL PLACEMENT

After subgrade evaluation/preparation, the building and pavement areas may be brought to their design subgrade levels with structural fill. For this project we recommend that structural fill be defined as inorganic natural soils with maximum particle size limited to about 6- to 8-inches in mass graded areas and 3- to 4-inches in utility trenches and behind any retaining walls. All new soil fill should be compacted to at least 95 percent of its standard Proctor maximum dry density (ASTM D698). We anticipate that the existing fill and residual soils will be suitable for reuse as structural fill; however, any existing fill containing topsoil and/or debris needs to be wasted off site or used in landscape or non-structural areas. We suggest that the upper 24-inches beneath floor slabs and pavement areas be compacted to 98 percent, since the support characteristics of Piedmont soils typically increase with higher degrees of compaction. The moisture content of the soils beneath planned building slabs and pavements should be adjusted by wetting or drying to produce a stable subgrade in addition to meeting the recommended compaction criterion. In addition, blending of soils may be required. Our onsite geotechnical representative will assess the conditions as they arise and make appropriate recommendations.

It is possible that cut soils may include some soils described as being derived from the weathering of amphibolite that will have to be used as part of site grading. If encountered, mixing of these soils with other residual soils and some drying may be required.

We recommend that the in-place density tests be performed as new structural fill is placed to check that the previously recommended compaction criteria are achieved. The frequency of testing can be determined at the time of the construction. However, as a minimum, we recommend that density tests be performed for every 2 vertical feet of fill placed. We recommend that the earthwork be monitored, and density tests performed by one of our qualified technicians working under the supervision of our registered engineer/geologist.

7.4 EXCAVATION DIFFICULTY

The boring data notes that hard rock was encountered within the depths drilled and partially weathered rock was limited to isolated layers and/or greater depths. As such, the potential impacts appear largely to be isolated with the greatest potential for impact associated with site utility excavations. Nevertheless, variability in rock levels is possible and the levels noted should be considered with final grade design and budgeting. As such, it is advisable for the project specifications to include a definition of rock to limit potential contract disputes. A sample rock definition is included in Appendix B for your review.

In areas where “soft” rock and partially weathered rock as well as very high consistency soils (greater than 30 bpf) are encountered will require a large bulldozer (such as a Caterpillar D9K) or front-end loader (such as a Caterpillar 973) or tracked backhoe (Caterpillar 325 or equivalent) to make any needed excavations during mass grading and utility and foundation installation.

We recommend that rock excavation extend to at least 1 foot below foundation or utility levels during mass grading and the over excavation backfilled with compacted crushed No. 57 stone or compacted soil structural fill. In this way, foundations and shallow utilities can be installed routinely without any secondary blasting or removal with a pneumatic hammer. It has been our experience that the exposed rock surface from blasting can be highly uneven due to overblast. Overblast as used in the context of this report consists of materials fractured and/or dislodged from their natural state due to blasting. As such, we recommend that care be taken to limit any overblast that will require removal and replacement with compacted structural fill. If overblast is left in-place there is risk that post construction settlement could impact building performance. We note that if blasting is required, a specialty blasting consultant should be hired to provide blasting recommendations, perform a pre-blast survey of surrounding structures at the school campus including nearby residences and perform vibration monitoring during blasting.

7.5 MATERIAL USAGE

As previously discussed, structural fill should be defined as inorganic natural soils with maximum particle sizes of 6- to 8-inches or less in mass-graded areas and 3- to 4-inches or less in trench or retaining wall backfill. The following paragraphs will discuss the usage of the materials which will likely be encountered at this site.

Piedmont residual soils like those encountered by our borings at the site are generally compatible with achieving a high degree of compaction as indicated for structural fill in building and parking areas. Any existing fill encountered will need to be evaluated to determine if it is satisfactory for re-use. However, it is likely that with all the onsite soils, moisture content adjustments will be necessary to achieve the recommended compaction criteria.

Any partially weathered rock and very dense soils encountered will require ripping with a large bulldozer prior to loading by scraper or excavation with a front-end loader or tracked backhoe. The excavated partially weathered rock will have an extremely variable gradation ranging from silt and clay-size particles through cobble and boulder-size. Some breakdown of the larger particles can be expected during the excavation-placement-compaction process, depending upon rock type, degree of weathering, and jointing frequency. Weathered rock and dense soils that break down into particles less than about 6- to 8-inches can be used as structural fill to support buildings, roadways, and pavements. Partially weathered rock that does not break down to this maximum particle size criterion can be used as fill in lower portions of pavement areas or in non-structural areas. A recommended maximum lift thickness for this coarser partially weathered rock (particles exceeding the 6-inch maximum size criterion) is 1 foot. At least 3 feet of soil structural fill should be placed between coarse graded partially weathered rock and the pavement subgrade.

Partially weathered rock should be compacted with a heavy self-propelled sheepsfoot roller such as a Caterpillar 815. This device can typically break down the partially weathered rock to a gradation compatible with both the maximum particle size criterion for structural fill and in-place density testing. The partially weathered rock should be compacted to at least 95 percent of its standard Proctor maximum dry density. If the partially weathered rock does not break down to a gradation compatible with in-place density testing, then compactive effort should be applied until there is no perceptible increase in fragmentation of the particles or observable consolidation of the fill beneath the equipment. Qualified geotechnical personnel should be present to identify when this condition has been achieved.

If “rocky” or rock fill has to be used as part of site grading, we recommend that rock fill be limited to non-structural areas if possible. However, if quantities require, it may be placed in deeper parking or building area fills. We recommend that any rock fill be limited to a maximum particle size of 3 feet. All rock fill should be placed in accordance with Section 208 of the Georgia DOT Standard Specifications for Construction of Roads and Bridges. Also, a minimum of 5 feet of soil fill cover should separate the top of any rock fill from pavement and or building subgrades. Also, it is advisable that rock fill be kept below utility inverts and not be used as backfill for utilities unless a 2 to 3 foot soil structural fill buffer is placed initially over the utility line. To limit raveling of soil into the rock fill, several inches of graded aggregate base or a geotextile may need to be placed at the contact between any rock fill and soil structural fill. Boulders or shot rock pieces larger than 3 feet in any dimension should be broken down so that they may be placed as described above.

7.6 EXISTING UTILITIES

Based upon past land use it is quite possible that existing utilities cross the proposed building footprint. Ideally, to eliminate the risk of existing soft backfill or breaks in conduits affecting the performance of the structures, all existing utilities should be abandoned, removed, and relocated to outside the building footprint. Where existing utility lines are removed, we recommend that the excavated trench be evaluated by one of our representatives prior to backfilling. At this time, any additional soft backfills identified should be removed. If the existing utility line is to be left in place beneath the building footprint, we recommend that the existing backfill be evaluated by one of our representatives to determine if it is satisfactory for support of the structure. This evaluation should include test pits excavated along the alignment of the utility trench to check the degree of compaction achieved and composition of the fill. Any existing utilities within about 4 feet of the subgrade elevation of planned pavement areas should be evaluated by proofrolling, and possibly density testing, to determine the soils’ stability to assess whether the soil is capable of satisfactorily supporting the proposed pavement. Any backfill not meeting the structural fill criteria outlined herein will need to be removed and replaced with new compacted soil structural fill. In addition, we recommend that any utility line left in-place beneath the building be evaluated to determine if it would be impacted by additional structural loads.

Any utility lines to be abandoned and not completely removed should be filled with a lean non-shrink grout. We recommend that prior to grouting, the volume of the line be determined, and the downslope termination point in the line be plugged. The grouting of the line should begin at the plugged end by use of a grout tube extending the full length of the line to prevent voids from forming as grout is placed. We recommend that a representative of our firm be present to monitor the grouting operations.

7.7 SLOPES

We anticipate both temporary and permanent earth slopes will be required during site grading and building construction. Generally, permanent cut and fill slopes should be inclined no steeper than 2H:1V and temporary slopes no steeper than 1½ H:1V. These slope recommendations are based on our previous experience with similar conditions since no detailed slope stability analysis was performed to justify steeper slopes. If topsoil is used in fill slopes and has not been compacted to the 95 percent standard Proctor criterion, a flatter inclination should be used.

We recommend a minimum building setback of 10 feet from the top of all slopes and a minimum setback of at least 3 feet for curb lines adjacent to parking areas. We must also caution against installing drop inlets or storm sewer lines at the crest of the slopes, as possible leakage may create maintenance problems or possible slope failures. The crest area should be sloped to prevent surface water run-off from flowing over the slope face.

It is difficult to construct fill slopes to the specified inclination without creating a loose, poorly compacted zone near the slope face. For this reason, we recommend that the finished soil slope be tracked perpendicular to the slope face to reduce, as much as practical, the thickness of this soft surficial veneer.

The vegetative cover should be placed as soon as practical after the slopes are completed. The anticipated fill materials are primarily sandy silts and silty sands which will be highly erodible.

Any utility trenches will need to be sloped or shored to comply with appropriate government safety requirements. Please be aware that our firm is not involved in job site safety and that the contractor is solely responsible for stable temporary excavations.

7.8 SITE DEGRADATION DURING CONSTRUCTION

We note that if construction extends into the typical “rainy” winter months then care must be exercised to minimize disturbance to exposed soil subgrades during construction. This would include floor slab, pavement, and footing subgrades. If exposed to weather extremes and/or rainy weather, degradation of the subgrade will occur. One option in dealing with the potential subgrade degradation of floor slabs would be to keep the subgrade approximately 6- to 12-inches high until slab construction is to occur so as to minimize any undercutting. A second option would be to cover the soil subgrade with approximately 4- to 6-inches of compacted graded aggregate base (GAB) crushed stone. This material is more resistant to degradation from exposure to the elements. With regards to footing excavations, we recommend that concrete be placed in all footing excavations on the day they are excavated. Otherwise, the exposed soil subgrades and footing excavations must be protected, or disturbed soils excavated immediately prior to concrete placement.

7.9 FOUNDATIONS

Given the presence of the thicker variable consistency fill veneer beneath the footprint of the planned addition, both shallow and deep foundation support alternatives are provided. Typically, the cost for

deep foundations is typically greater, but it may be competitive given if the risks in using the existing fill for support are too great and will require that the fill be further evaluated, and all are partially excavated and replaced within the building area. The following discuss both options.

7.9.1 Shallow Foundation Support Option

Based upon the boring data, we find that the proposed building can be supported by conventional shallow foundations bearing on new compacted soil fill, undisturbed residual soils, or existing fill if risk for potential impact is accepted by the owner and the fill is further evaluated during construction by SGC and the near surface fill for each foundation found to be supportive. We recommend that an allowable bearing pressure of 2,500 psf be used to size footings supporting the building with footings constructed adjacent to any existing building designed for an allowable bearing pressure of 1,000 psf. Due to the potential for isolated occurrence of soft or unsatisfactory soils to be encountered in foundation excavations, we recommend that a contingency be included in the budget for partial replacement of near surface soils with new compacted structural fill or compacted No. 57 size crushed stone. The amount required will best be managed by one of our engineers at the time of construction.

Even though computed footing dimensions may be less, column footings should be at least 24-inches wide and strip footings should be at least 18-inches wide. These dimensions facilitate hand cleaning of the footing subgrades disturbed by excavation and also reduce the potential for localized punching shear failure. The bottoms of all exterior footings and footings in unheated areas should be at least 12-inches below minimum adjacent grade elevation to protect against frost heave.

With regards to general undercutting of foundations set in residual soils or existing fill, we recommend that a contingency be included in the budget for partial replacement of the soils beneath the footings with compacted No. 57 size crushed stone. This procedure should be used to help mitigate the potential for greater settlement potential where lower consistency soils and/or amphibolitic soils are identified in the field at the time of construction.

We note that the previous recommendations are contingent upon all footing excavations being evaluated by our firm to observe the field conditions in light of our reported design recommendations. We can also provide geotechnical guidance to the design team should any unforeseen foundation problems develop during construction.

Footing excavation often produces a thin veneer of disturbed soil at the footing subgrade. We recommend that this disturbed soil be hand cleaned prior to placing reinforcing steel. Furthermore, the footing bottom should be free of all fall-in prior to placing concrete.

The strength properties of soils exposed at the footing subgrade will change when exposed to weather extremes (wetting, desiccation, or freezing). Every effort should be made to place concrete the same day as the footing excavation is completed. If subgrades are to be left open for more than one day, they should be covered with polyethylene sheeting. If inclement weather is expected, a lean (1,000 psi) concrete veneer about 3-inches thick should be placed on the exposed subgrade. If these protective measures are not implemented, excavation of disturbed soils may be required.

7.9.2 Deep Foundation Support Option

As an alternative, we provide for consideration support of the planned building on deep foundations. Given the size of the planned building we anticipate that helical piers or rammed aggregate piers would be the most cost effective. With these options the risk for excessive settlement is significantly reduced and foundation load transfer is carried to underlying high consistency residual soils. While

the design of this option is proprietary and the risks associated with compliance with the structural tolerances part of their design, it is our findings base upon our review that this is a viable option. Moving forward if this option is utilized, we recommend the following:

- That all design calculations and drawings once completed be provided to us and the project structural engineer for review.

- That coring of the underlying bedrock is performed to further assess the nature of the materials below bearing elevations if such is used for direct bearing support. It has been our experience in this area that soils layers could be present below refusal depths that could impact foundation performance.

- If vibro piers are used, we ask that we be allowed to install piezometers at the site within the likely depths of pier installation to make a check on current groundwater levels prior to construction, and that wet installation measures for installation be used.

- That a representative of our firm be present during construction to provide independent third-party documentation of installation/testing procedures, and general compliance with the project specifications.

- That a pile/plate load and modulus load tests be performed as applicable and that we be allowed to perform an independent laboratory modulus verification of any aggregate to be used for the pier installation.

7.10 FLOOR SLABS

The on-grade floor slabs may be supported on undisturbed residual soils, new structural fill or possibly existing fill if further evaluated by one of our representatives and found to be satisfactory for support. To reduce the possibility of slab cracking due to minor differential settlement, the floor slab should be structurally separate from the foundations. Both cut and fill soils exposed at slab subgrade will consist primarily of micaceous sandy silts. These materials are particularly susceptible to disturbance and are difficult to repair in place. One way to reduce this disturbance and the resulting repairs would be to leave the subgrade at least 4- to 6-inches above the proposed subgrade elevation, cutting it down immediately before constructing the slab. Another option would be to cover the subgrade soils within the building pad with 3- to 4-inches of compacted graded aggregate base (GAB). From a construction aspect, the granular layer will help protect the underlying soil and reduce the construction delays caused by wet weather.

If perched groundwater tables are encountered, it is possible that French drains and an underslab drainage layer may be needed in areas to lessen the risk from a rising groundwater table. More specific delineation of the potential areas impacted can be provided at the time of construction. We recommend that the floor slab subgrades be covered by an effective vapor barrier to reduce the possibility of slab dampness due to soil moisture.

The slab areas should be evaluated by a geotechnical engineer prior to additional fill placement to detect any obvious low consistency soils. This evaluation should be conducted simultaneous with the overall site preparation effort and will consist of observing the subgrade under the weight of compaction equipment. Any material judged to perform unsatisfactorily under the moving load should receive additional passes of the compaction equipment or should be undercut and replaced with fill compacted to the previously discussed criteria.

7.11 FINAL FLOOR SLAB AND PAVEMENT SUBGRADE PREPARATION

Between completion of grading and slab or pavement construction, floor slab and pavement area subgrades are often disturbed by weather, footing and utility line installation, and other construction activities. For this reason, the subgrades should be evaluated by a geotechnical engineer immediately prior to placing the vapor barrier and constructing the floor slab or placing the pavement base course. During this evaluation, the subgrade, where possible, should be proofrolled with a loaded dump truck. Areas judged by the geotechnical engineer to perform unacceptably under the moving load should be undercut and replaced with compacted crushed stone or structural soil fill. We note that silty soils will likely be present at the finished subgrade elevation in large portions of the building and pavement areas. Such soils are easily disturbed and are difficult to compact and stabilize during wet seasonal conditions.

7.12 BELOW-GRADE/RETAINING WALLS

It is possible that the final plans will include site retaining walls and/or foundation walls being constructed. Also, any loading dock wall will act as a retaining wall to provide the required grade change from the building slab to the pavement subgrade. Where retaining walls are not free to rotate, such as the loading dock wall, we recommend using the “at-rest” earth pressure condition. For site retaining walls where some rotation is usually permissible, the “active” earth pressure condition can be used in design.

Soils behind the retaining walls are assumed to exert a triangular stress distribution which can be modeled in terms of an "equivalent fluid" for both the active and at-rest cases. If a uniform area surcharge is applied behind the wall, a portion of the surcharge is transferred to the wall in the form of a uniform or rectangular lateral stress distribution. The magnitude of the lateral stress transferred to the wall is a function of the soil's strength and the permissible degree of deflection or rotation. It is computed by multiplying the soil's "earth pressure coefficient" by the magnitude of the surcharge. The following table contains values of earth pressure coefficients and equivalent fluid unit weights for the at-rest and active earth pressure conditions.

Earth Pressure Condition	Earth Pressure Coefficient	Recommended Equivalent Fluid Unit Weight, pcf
At-Rest, Horizontal Backfill	0.53	60
Active, Horizontal Backfill	0.36	40

The above values assume there is a horizontal surface beyond the toe of the wall.

Passive earth pressure of soil adjacent to the footing as well as soil friction at the footing base may be used to resist sliding. The ultimate friction coefficient between the concrete footing and soil can be assumed to be 0.4. For computations, the ultimate passive soil resistance may be assumed to act as a fluid with an equivalent unit weight of 300 pcf. In computing soil friction at the footing base, compacted soil placed above the footing can be assumed to have a unit weight of 110 pounds per cubic foot. We recommend that a safety factor of 2 or more be used when computing restraining forces.

The recommended equivalent fluid pressures also assume that constantly functioning drainage systems are installed between walls and soil backfill to prevent the build-up of hydrostatic pressures

and lateral stresses in excess of those calculated for drained conditions. Wall drainage systems should consist of a filtered granular backfill (No. 57 size crushed stone) or a manufactured material such as Enkadrain or Miradrain. The drainage medium should extend to within 2 feet of the ground surface in exterior locations with compacted structural fill placed over the drainage medium to prevent direct surface water inflow. For the loading dock wall, the drainage media should be connected to a positive draining footing drain. If crushed stone drainage is used, we recommend that it be separated from the surrounding soil by a non-woven geotextile filter cloth. A non-woven geotextile fabric should also be placed between the weep hole openings and crushed stone.

Compacted structural fill should be used as backfill behind the retaining walls. We recommend that these materials be compacted to at least 95 percent of their standard Proctor maximum dry density. Either light, hand-operated compaction equipment must be used within 4 feet of walls to reduce the risk of over-stressing the walls, or the walls must be designed to resist the stresses imposed by large compaction equipment.

The previously recommended soil parameters are "average" values based on the laboratory data and our experience. Triaxial shear tests and standard Proctor compaction tests of soils in this geologic region indicate that there could be a potential scatter of 30± percent in soil parameters. Both remolded triaxial shear tests and standard Proctor compaction tests on retaining wall backfill should be performed as part of the construction phase should be performed to help confirm design values.

7.13 SEISMIC DESIGN CONSIDERATIONS

Based on the 2018 International Building Code (IBC 2018), the soil conditions encountered at the south addition site and our past experience, we calculate the site to have a site Soil Classification of “D”. Seismic design coefficients were determined for both regional bedrock accelerations and for a site-specific bedrock acceleration based upon geographic site location and the site data. The coefficient S_a is derived using the spectral acceleration coefficients S_s and S_1 which are selected from coefficient maps of the United States for short (0.2 sec) and large (1.0 sec) periods, respectively. For the project area, the regional maps set the S_s and S_1 coefficients equal to 0.210g and 0.089g, respectively. The table below presents the recommended seismic coefficients for the proposed building at the site for Risk Category III.

Site Class	S_S	S_1	F_a	F_v	S_{MS}	S_{M1}	S_{DS}	S_{D1}
D	0.210g	0.089g	1.6	2.4	0.335g	0.213g	0.224g	0.142g

7.13.1 Liquefaction Assessment

In the borings performed at the site, the soil textures are generally characterized as sandy silts to silty fine sands with varying mica content. In our opinion, the overall fine grain texture and variability help lessen risk for liquefaction. As such, we feel that the overall risk of structural distress from liquefaction as low to moderate.

7.13.2 Slope Instability

Typically, slopes at moderate inclinations (2H:1V or flatter) constructed in this area perform reasonably well during earthquake events. Slopes that do fail during earthquake events, however, can generally be attributed to over-steepened conditions, weak zones, or water saturation. The

natural soils sampled were reasonably stiff and although not expected at this time, any fill slopes are to be comprised of materials compacted to at least 95 percent of their standard Proctor (ASTM D698) maximum dry density. Thus, because of the anticipated slope inclinations, inferred strength of the on-site soils, and the recommended compaction criterion for newly placed fill, we judge that the likelihood of slope instability during a design earthquake event to be low.

8.0 FOLLOW-UP SERVICES

Our services should not end with the submission if this geotechnical report. SGC should be kept involved throughout the design and construction process to main continuity and to verify that our recommendations are properly interpreted and implemented. To achieve this, we should review project plans and specifications with the designers to see that our recommendations are fully incorporated. We also should be retained to monitor and evaluate the site preparation and foundation construction.

Site preparation and foundation construction will be a critical aspect of this project. Our familiarity with the site and with the foundation recommendations will make us a valuable part of your construction quality assurance team. In addition, a qualified engineering technician should observe and evaluate all structural concrete, masonry, and steel. Only experienced, qualified persons trained in geotechnical engineering and familiar with foundation construction should be allowed to monitor and evaluate foundation installation. Normally, full-time monitoring of the site work and foundation installation is appropriate. SGC strongly recommends that such service be provided under direct contract with the client to prevent conflict of interest.

9.0 LIMITATIONS OF REPORT

This report has been prepared for the exclusive use of Georgia Mountain Food Bank and their designers for specific application to this project. Our conclusions and recommendations have been prepared using generally accepted standards of geotechnical engineering practice in the State of Georgia. No other warranty is expressed or implied. SGC is not responsible for the conclusions, opinions, or recommendations of others based on this data.

Our conclusions and recommendations are based on the design information furnished to us, the data obtained from this geotechnical exploration, the assumptions outlined herein, and our experience. They do not reflect variations in the subsurface conditions in this geologic region. If such variations are found during construction, re-evaluating our conclusions and recommendations will be necessary.

If changes are made in the overall design, elevations, structural loads, or location of the building or parking areas, the recommendations contained in this report will not be considered valid unless our firm has reviewed the changes and modified or verified our recommendations in writing. You should give us the opportunity to review the foundation plans, the grading plans, and the applicable portions of the project specifications when the designers complete the design. This review will allow us to check whether these documents are consistent with the intent of our recommendations.

The boring records present of interpretation of the subsurface conditions at specific boring locations at the time of our exploration. The stratification lines represent the approximate boundary between soil types. The actual transition may be more gradual then implied.

APPENDIX A

SITE LOCATION PLAN (PLATE 1)

BORING LOCATION PLANS (PLATES 2 & 3)

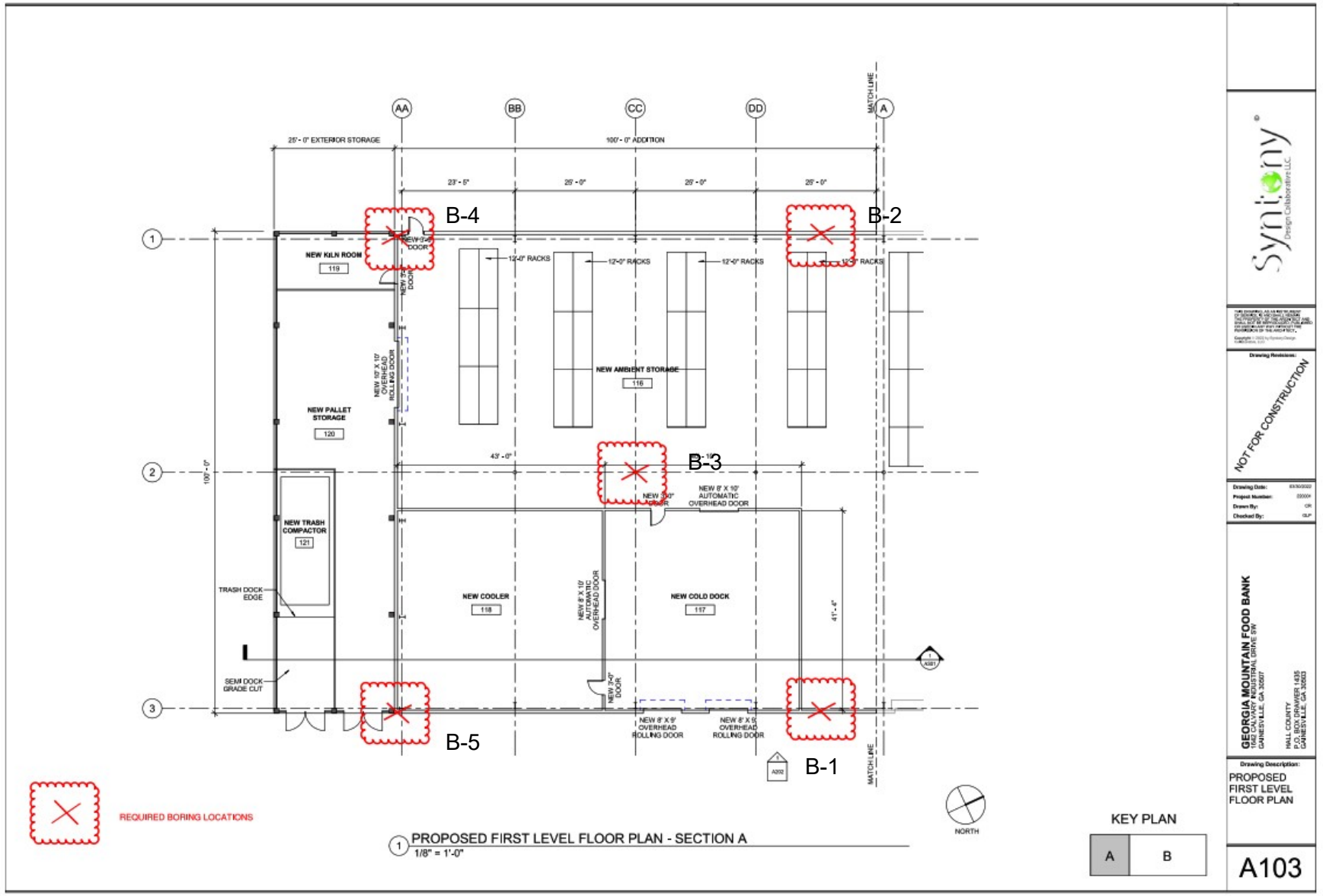
SITE PHOTOGRAPHS



Adapted from Google Maps

Southern Geotechnical Consultants

SITE LOCATION PLAN GEORGIA FOOD BANK ADDITION SITE 1642 CALVARY INDUSTRIAL DRIVE SW GAINESVILLE, GEORGIA	DATE : 7/25/2022	REPORT NO. 92896
	DRAWN BY : AGM	PROJECT NO. 13498G
	HORIZ. SCALE : NTS	PLATE NO. 1



Adapted from Syntony Design Collaborative Site Plan

BORING LOCATION PLAN GEORGIA FOOD BANK ADDITION SITE 1642 CALVARY INDUSTRIAL DRIVE SW GAINESVILLE, GEORGIA	DATE : 7/25/2022	REPORT NO. 92896
	DRAWN BY : AGM	PROJECT NO. 13498G
	HORIZ. SCALE : NTS	PLATE NO. 2



N

Adapted from Google Maps Site Plan

APPROXIMATE BORING LOCATION

Southern Geotechnical Consultants

BORING LOCATION PLAN GEORGIA FOOD BANK ADDITION SITE 1642 CALVARY INDUSTRIAL DRIVE SW GAINESVILLE, GEORGIA	DATE : 7/25/2022	REPORT NO. 92896
	DRAWN BY : AGM	PROJECT NO. 13498G
	HORIZ. SCALE : NTS	PLATE NO. 3





APPENDIX B

TEST BORING RECORDS

PROCEDURES

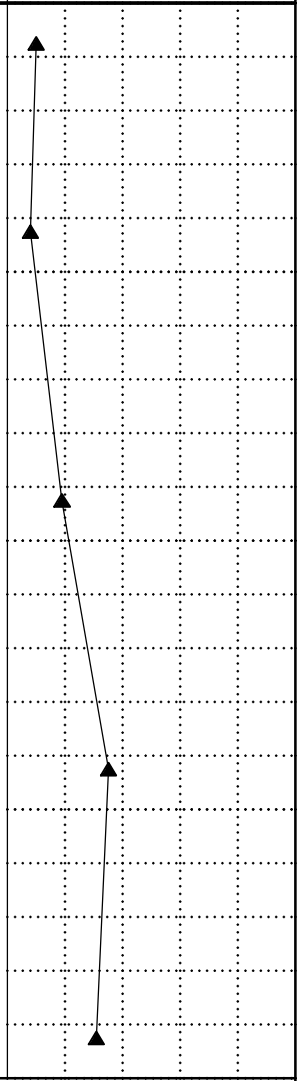
ROCK DEFINITION

Southern Geotechnical Consultants, LLC
2660 White Sulphur Road / 14476 Duval Place West Suite 803
Gainesville, Georgia 30501 / Jacksonville, Florida 32218
Telephone: 770.536.5220 / 904.374.2252

BORING NUMBER 1

CLIENT Georgia Mountain Food Bank
PROJECT NAME Georgia Mountain Food Bank Addition SE
PROJECT NUMBER 13498G, 92896
PROJECT LOCATION Gainesville, Georgia
DATE STARTED 6/17/22 **COMPLETED** 6/17/22
GROUND ELEVATION 1147 ft **HOLE SIZE** inches
DRILLING CONTRACTOR Drilling Solutions
GROUND WATER LEVELS:
DRILLING METHOD Automatic Hammer
AT TIME OF DRILLING ---
LOGGED BY JRC **CHECKED BY** AGM
AT END OF DRILLING ---
NOTES
24hrs AFTER DRILLING --- Caved at 12.5 feet

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)
0		**TOPSOIL**					
		(ML) **FILL** - FIRM TO STIFF REDDISH TAN MICACEOUS SANDY SILT			3-4-6 (10)		
5					3-4-4 (8)		
		(ML) **RESIDUUM** - VERY STIFF TO HARD TAN-BROWN AND GRAY-BROWN MICACEOUS SANDY SILT WITH TRACE OF PARTIALLY WEATHERED ROCK LENSES			6-7-12 (19)		
10							
15					15-17-18 (35)		
20					10-15-16 (31)		
		BORING TERMINATED AT 20 FEET Bottom of borehole at 20.0 feet.					



GEOTECH BH PLOTS - GINT STD US LAB.GDT - 6/29/22 10:08 - S:\GEOTECH SHARED NETWORK DRIVE\REPORTS\13498G GEORGIA MOUNTAIN FOOD BANK ADDITION SE\13498G, 92896 GEORGIA MOUNTAIN FOOD BANK ADDITION BORING LOGS.GPJ

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Gainesville, Georgia 30501 / Jacksonville, Florida 32218
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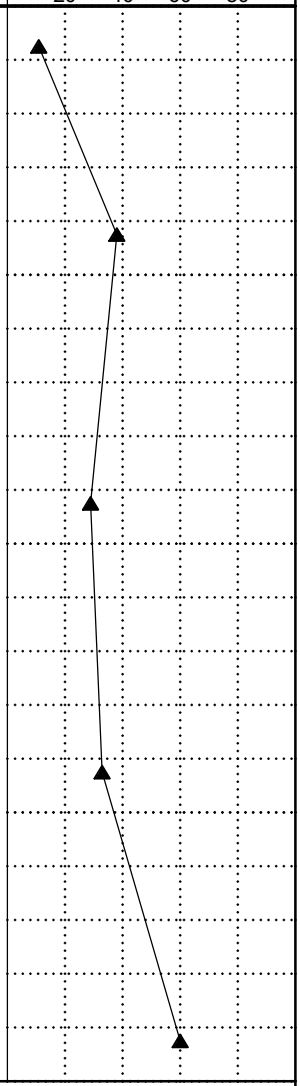
BORING NUMBER 2

CLIENT Georgia Mountain Food Bank
PROJECT NAME Georgia Mountain Food Bank Addition SE
PROJECT NUMBER 13498G, 92896
PROJECT LOCATION Gainesville, Georgia
DATE STARTED 6/17/22 **COMPLETED** 6/17/22
GROUND ELEVATION 1147 ft **HOLE SIZE** inches
DRILLING CONTRACTOR Drilling Solutions
GROUND WATER LEVELS:
DRILLING METHOD Automatic Hammer
AT TIME OF DRILLING ---
LOGGED BY JRC **CHECKED BY** AGM
AT END OF DRILLING ---
NOTES
24hrs AFTER DRILLING --- Caved at 16 feet

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)
0		**TOPSOIL**					
		(ML) **FILL** - STIFF REDDISH TAN MICACEOUS SANDY SILT			4-5-6 (11)		
		(ML) **RESIDUUM** - VERY STIFF TO HARD TAN-BROWN AND GRAY-BROWN MICACEOUS SANDY SILT			8-22-16 (38)		
5							
					16-16-13 (29)		
10							
					12-15-18 (33)		
15							
		(ML) **PARTIALLY WEATHERED ROCK** SAMPLED AS VERY HARD TAN-GRAY AND GRAY-BLACK MICACEOUS SANDY SILT WITH PARTIALLY WEATHERED ROCK LENSES			9-27-33 (60)		
20		BORING TERMINATED AT 20 FEET Bottom of borehole at 20.0 feet.					



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Telephone: 770.536.5220 / 904.374.2252

BORING NUMBER 3

CLIENT Georgia Mountain Food Bank
PROJECT NAME Georgia Mountain Food Bank Addition SE
PROJECT NUMBER 13498G, 92896
PROJECT LOCATION Gainesville, Georgia
DATE STARTED 6/17/22 **COMPLETED** 6/17/22
GROUND ELEVATION 1143 ft **HOLE SIZE** inches
DRILLING CONTRACTOR Drilling Solutions
GROUND WATER LEVELS:
DRILLING METHOD Automatic Hammer
AT TIME OF DRILLING ---
LOGGED BY JRC **CHECKED BY** AGM
AT END OF DRILLING ---
NOTES
24hrs AFTER DRILLING --- Caved at 13 feet

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)
0		**TOPSOIL**					
		(ML) **FILL** - FIRM TO STIFF REDDISH TAN-BROWN AND PURPLE-GRAY MICACEOUS SANDY SILT WITH ROCK FRAGMENTS AND WOOD FRAGMENTS			3-3-4 (7)		
5					4-4-5 (9)		
10					4-5-5 (10)		
15					4-4-4 (8)		
		(ML) **RESIDUUM** - STIFF DARK BROWN AND TAN-BLACK MICACEOUS SANDY SILT					
20					3-5-6 (11)		
		BORING TERMINATED AT 20 FEET Bottom of borehole at 20.0 feet.					

▲ SPT N VALUE ▲
20 40 60 80
PL MC LL
20 40 60 80
☐ FINES CONTENT (%) ☐
20 40 60 80

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BORING NUMBER 4

CLIENT Georgia Mountain Food Bank
PROJECT NAME Georgia Mountain Food Bank Addition SE
PROJECT NUMBER 13498G, 92896
PROJECT LOCATION Gainesville, Georgia
DATE STARTED 6/17/22 **COMPLETED** 6/17/22
GROUND ELEVATION 1143 ft **HOLE SIZE** inches
DRILLING CONTRACTOR Drilling Solutions
GROUND WATER LEVELS:
DRILLING METHOD Automatic Hammer
AT TIME OF DRILLING ---
LOGGED BY JRC **CHECKED BY** AGM
AT END OF DRILLING ---
NOTES
24hrs AFTER DRILLING --- Caved at 13 feet

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)
0		**TOPSOIL**					
		(ML) **FILL** - FIRM TO STIFF TAN-BROWN AND BROWN-GRAY AND BLACK MICACEOUS SANDY SILT WITH ROCK FRAGMENTS			3-4-4 (8)		
5					3-3-5 (8)		
10					3-5-6 (11)		
15					3-4-5 (9)		
		(ML) **RESIDUUM** - FIRM DARK BROWN AND TAN-BLACK MICACEOUS SANDY SILT					
20					2-3-6 (9)		
		BORING TERMINATED AT 20 FEET Bottom of borehole at 20.0 feet.					

▲ SPT N VALUE ▲
20 40 60 80
PL MC LL
20 40 60 80
☐ FINES CONTENT (%) ☐
20 40 60 80

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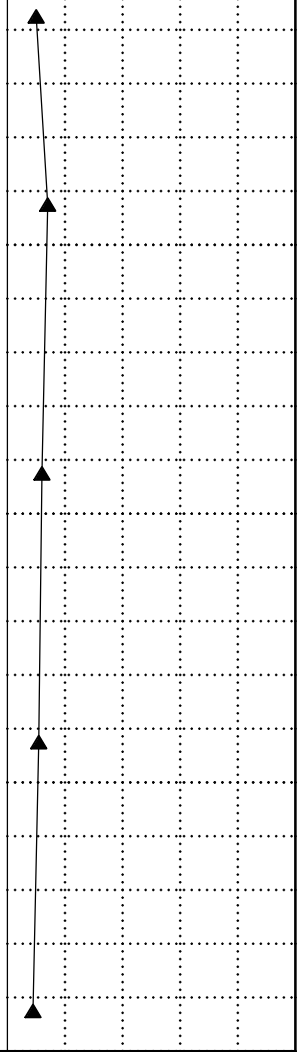
Gainesville, Georgia 30501 / Jacksonville, Florida 32218
Telephone: 770.536.5220 / 904.374.2252

BORING NUMBER 5

CLIENT Georgia Mountain Food Bank
PROJECT NAME Georgia Mountain Food Bank Addition SE
PROJECT NUMBER 13498G, 92896
PROJECT LOCATION Gainesville, Georgia
DATE STARTED 6/17/22 **COMPLETED** 6/17/22
GROUND ELEVATION 1145 ft **HOLE SIZE** inches
DRILLING CONTRACTOR Drilling Solutions
GROUND WATER LEVELS:
DRILLING METHOD Automatic Hammer
AT TIME OF DRILLING ---
LOGGED BY JRC **CHECKED BY** AGM
AT END OF DRILLING ---
NOTES
24hrs AFTER DRILLING --- Caved at 13.5 feet

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)
0		**TOPSOIL**					
		(ML) **FILL** - STIFF TAN-BROWN, BROWN AND GRAY-BLACK MICACEOUS SANDY SILT WITH ROCK FRAGMENTS			4-5-5 (10)		
5					5-6-8 (14)		
10					5-7-5 (12)		
15					5-5-6 (11)		
		(ML) **RESIDUUM** - STIFF DARK BROWN AND TAN-BLACK MICACEOUS SANDY SILT					
20					3-4-5 (9)		
		BORING TERMINATED AT 20 FEET Bottom of borehole at 20.0 feet.					

▲ SPT N VALUE ▲
20 40 60 80
PL MC LL
20 40 60 80
☐ FINES CONTENT (%) ☐
20 40 60 80



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PROCEDURES

INTRODUCTION

SGC, LLC. performs tests in general accordance with the American Society for Testing and Materials (ASTM) or the United States Army Corps of Engineers procedures. These procedures are generally recognized as the basis for uniformity and consistency of test results in the geotechnical engineering profession. All work is initiated and supervised by qualified engineers. Our tests are performed by skilled technicians trained in either ASTM or Corps procedures. Our equipment is well maintained, and our laboratory equipment is calibrated at least yearly.

Subsequent portions of this Appendix present briefly describe of our testing procedures. Where applicable, we have referenced these procedures to either ASTM or the Corps of Engineers standards, which contain specific descriptions of apparatus, procedures, reporting, etc.

Annual Book of ASTM Standards, Section 4, Volumes 4.08 and 4.09: Soil and Rock. American Society for Testing and Materials, Latest Edition

EM 1110-2-1803. Subsurface Investigations, Soils, Chapter 3. U.S. Army Corps of Engineers, 1972.

EM 1110-1-1801, Geological Investigations. U.S. Army Corps of Engineers, 1978.

EM 1110-2-1907, Soil Sampling. U.S. Army Corps of Engineers, 1972.

EM 1110-1-1802, Geophysical Exploration. U.S. Army Corps of Engineers, 1979.

EM 1110-2-1906, Laboratory Soils Testing. U.S. Army Corps of Engineers, 1970.

PROCEDURES

SOIL TEST BORING, ASTM D-1586

The borings were made with a hollow-stem auger powered by a 125-horsepower drill rig. At regular intervals, soil samples were obtained through the hollow augers with a standard 1.4-inch I.D., 2.0-inch O.D. split-tube sampler.

The sampler was initially seated 6 inches to penetrate any loose cuttings; then driven an additional foot with blows of a 140-pound hammer falling 30 inches. The number of hammer blows required to drive the sampler the final foot was recorded and is designated as the *standard penetration resistance*. Penetration resistance, when properly evaluated, is an index to soil strength and density.

In the field, the driller logged and described the samples as they were obtained. Representative portions of each soil sample were then sealed in labeled glass jars and transported to our laboratory. The samples were examined by a graduate geotechnical engineer or engineering geologist to visually check the field descriptions. Boring data, including sample intervals, penetration resistances, soil descriptions, and groundwater level are shown on the attached Test Boring Records.

AUGER REFUSAL MATERIALS

Auger refusal is a term that describes subsurface materials sufficiently competent to prevent further penetration by our $5^{5}/_{8}$-inch O.D. hollow-stem augers. Our criteria for auger refusal is the inability of our 125-horsepower drill rig to advance the augers while operating in second gear. Typically, refusal materials exhibit penetration resistances in excess of 100 blows per foot. Refusal materials can be hard cemented soil, soft weathered rock, coarse gravel or boulders, rubble or other hard debris, thin rock seams, or the upper surface of sound continuous rock. Core drilling procedures are required to determine the character and continuity of refusal materials.

CORRELATION OF STANDARD PENETRATION RESISTANCE WITH RELATIVE COMPACTNESS AND CONSISTENCY

Sand and Gravel

Standard Penetration Resistance Blows/Foot	Relative Compactness
0-4	Very Loose
5-10	Loose
11-20	Firm
21-30	Very Firm
31-50	Dense
Over 50	Very Dense

Silt and Clay

Standard Penetration Resistance Blows/Foot	Consistency
0-1	Very Soft
2-4	Soft
5-8	Firm
9-15	Stiff
16-30	Very Stiff
31-50	Hard
Over 50	Very Hard

ROCK DEFINITION

We suggest that *Rock* be defined as the following:

General Excavation:

Any material which cannot be excavated with a single-tooth ripper drawn by a crawler tractor having a draw bar pull rated at not less than 56,000 pounds (Caterpillar D8K or equivalent) or excavated by a front-end loader with a minimum bucket breakout force of 25,600 pounds (Caterpillar 977 or equivalent).

Trench Excavation:

Any material which cannot be excavated with a backhoe having a bucket curling force rated at not less than 33,010 pounds (Caterpillar 225B or equivalent).

SECTION 01 10 00 - SUMMARY

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:

1. Work covered by the Contract Documents.
2. Project Description
3. Work under other contracts.
4. Use of premises.
5. Owner's occupancy requirements.
6. Specification formats and conventions.
7. Type of Contract.
8. Examination of site.
9. Protection.
10. Documents to Agencies

1.2 WORK COVERED BY CONTRACT DOCUMENTS

A Project Identification: **Georgia Mountain Food Bank Expansion**
1642 Calvary Industrial Drive
Gainesville, GA 30507

B. Owner: **Georgia Mountain Food Bank**
1642 Calvary Industrial Drive
Gainesville, GA 30507

C. Architect: **Garfield Peart. AIA**
Syntony Design Collaborative LLC
643 Robinson Avenue SE
Atlanta, GA 30312

1.3 PROJECT DESCRIPTION

A. General: The work of this project consists of all work identified and otherwise required by the Contract Drawings, for the construction of Georgia Mountain Food Bank Expansion, and by the remainder of this Project Manual, including all Divisions and Sections. All work indicated on the documents is included in the Scope of this Work unless specifically indicated to be by Owner (B.O.) or not in contract (N.I.C.). Work identified in equipment drawings as “Customer/Contractor Supplied and Installed Items”, shall be the responsibility of the General Contractor.

B Scope of Work:

The proposed project is an expansion of the existing Boomershine Family Logistics Center (Georgia Mountain Food Bank) and new parking on 2.5 acres of recently acquired land. The entire project will accommodate a new 10,000 square foot expansion with additional loading docks, covered pallet storage areas, one additional freezer and refrigerator and additional parking of 30 spaces. Existing second floor offices will be renovated and new two-story shipping and receiving offices will be provided in the warehouse as shown on the Drawings, new mechanical and electrical equipment will be installed in the above referenced areas..

1. Construction of the Project shall be in accordance with the information given by the Drawings, Specifications and related Contract Documents.
2. Execute all construction required to achieve the results indicated. The Work shall be accomplished as one single package from initial startup to substantial completion and acceptance by the Owner. All construction shall be complete and finished, inspected by all applicable regulatory agencies in authority and ready for the Owner's use and occupancy upon project Substantial Completion.

1.4 WORK UNDER OTHER CONTRACTS

A. General: Cooperate fully with separate contractors so work on those contracts may be carried out smoothly, without interfering with or delaying work under this Contract. Coordinate the Work of this Contract with work performed under separate contracts.

1.5 USE OF PREMISES

A. General: Contractor shall have full use of premises for construction operations, including use of Project site, during construction period. Contractor's use of premises is limited only by Owner's right to perform work or to retain other contractors on portions of Project.

B Dress Code/Behavior:

1. No shirts or hats displaying tobacco, alcoholic beverages, firearms, or improper language will be allowed on the jobsite. No tobacco products are allowed on Hall County projects.

C. Contractors Use of Site:

1. Confine construction operations to the Project site.
2. Keep public streets and sidewalks clear and available at all times. Do not use these areas for parking or storage of materials, unless permit for such use is obtained from local governing authorities.
3. Do not unreasonably encumber the site with materials or equipment. Confine if additional storage is necessary, obtain and pay for such storage off-site. Insert additional paragraphs specifying specific limitations on use of existing building.

D. Work at Existing Areas:

1. A fence or barrier shall be specified to enclose the work area so as to protect and separate school personnel and students from work area.

1.6 SPECIFICATION FORMATS AND CONVENTIONS.

A Specification Format: The Specifications are organized into Divisions and Sections using the 48-division format and “MasterFormat 2020 or later" numbering system.

B Division 01: Sections in Division 01 govern the execution of the Work of all Sections in the Specifications.

C Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:

11. Abbreviated Language: Language used in the Specifications and other Contract Documents is abbreviated. Words and meanings shall be interpreted as appropriate. Words implied, but not stated, shall be inferred as the sense requires. Singular words shall

be interpreted as plural, and plural words shall be interpreted as singular where applicable as the context of the Contract Documents indicates.

12. Imperative mood and streamlined language are generally used in the Specifications. Requirements expressed in the imperative mood are to be performed by Contractor. Occasionally, the indicative or subjunctive mood may be used in the Section Text for clarity to describe responsibilities that must be fulfilled indirectly by Contractor or by others when so noted.

    a. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.

1.7 TYPE OF CONTRACT

A. Type of Contract: The Project will be constructed under a single prime contract. No project phasing is required

1.8 EXAMINATION OF SITE

A Examination of Documents and Site: Contractor shall carefully examine the Contract Documents and the Project Site to obtain the first-hand knowledge of scope and the conditions of the Work.

B. Contractor's Representation: By executing the Contract, the Contractor represents that he has:

1. Visited the site;
2. Made due allowances for all reasonably anticipated difficulties and contingencies that may be encountered;
3. Compared Contract Documents with site conditions and permanent construction in place; and
4. Notified the Architect and of ambiguities, inconsistencies, and errors discovered in the Contract Documents, or between the Contract Documents and existing conditions.

C. Certification of Lines and Levels:

1. The Contractor shall employ a licensed surveyor to locate the building on the site and to establish the building's dimension, elevation, and angles.
2. The Contractor shall furnish the Architect with certification from the surveyor that the Lines and levels of the building are established in accordance with the drawings.
3. The surveyor selected for the above purpose shall be subject to the approval of the Architect.

1.9 PROTECTION

A. Protection: During construction of the Project the waterproof integrity of the building in progress shall be maintained continuously. Temporary provisions shall be provided wherever and whenever required to protect finished construction from damage due to weather or construction operations. Any damage sustained due to lack of protective measures will be the contractors' sole responsibility to repair.

1.10 DOCUMENTS TO AGENCIES

A. The Contractor shall apply to the local authorities as appropriate, for the Building Permit and pay all required fees. The Contractor shall pay for any related fees and apply and pay for all fees to agencies in authority as required after signing of Owner/Contractor Contract. All required arrangements, notices and scheduling for agency inspections, including but not

limited to, the securing of occupancy certificates, inspections, etc., shall be the responsibility of the Contractor.

PART 2 - PRODUCTS

2.1 CONTRACTOR FURNISHED ITEMS

A. Contractor-Furnished/Contractor-Installed: The Contractor shall provide all mechanical and electrical equipment and other items indicated by the Contract Documents as required to complete the Work in accordance with the Contract Documents. Work under the Contract includes supplying the item and complete installation of each equipment item, including support systems and mechanical and electrical services and connections. The Contractor shall be responsible for coordinating all rough-in requirements for equipment.

2.2 MISCELLANEOUS PROVISIONS

A. Removal and Storage of Furnishings in Existing Buildings: Unless otherwise provided in the contract, the Owner will provide for the removal of furnishings within the work area prior to the beginning of the construction project.

1. The Owner will provide for the storage of furnishings at the site so as not to interfere with the Contractor's construction activities.

2. The Owner will name a Logistical Representative for coordination of the activities of the Owner's own forces and of any separate contractor in connection with the above work.

3. The Contractor will provide reasonable opportunity for storage of furnishings, materials and equipment and performance of activities of the Owner's own forces and separate contractors.

B. Removal and Reinstallation of Work: No additional payment will be authorized for relocation, removal and/or temporary removal and reinstallation of any existing or newly installed construction (ducts, conduit, piping, wiring. fixtures, equipment, finishes, etc.) necessary to properly complete the Work, which could have been anticipated by careful examination of the site, existing construction and the Contract Documents. Any such work, as required to complete the Project, shall be performed at no additional cost to the Owner.

B. Utility Outages: All shutdowns of power, HVAC, water, and sewerage shall be pre-scheduled and approved by the Owner. The Owner shall receive 48-hour notice with full right of refusal prior to any proposed utility shutdown. There shall be no utility shutdown without the Owner's prior approval.

C Parking:

1. Construction vehicles and equipment shall be parked or marshaled only on the construction site or previously approved parking area by owner or Project manager.
2. Private Vehicles of those working on the site shall be parked on the site as the Contractor shall direct or, if space is not available, off the site in a legal manner.
3. Smoking: There will be no smoking within the Project area.
4. Discipline: The Contractor shall enforce strict discipline over all workers associated with this Project to assure proper deportment on the Project site and on and about the property. Rude, boisterous or inappropriate behavior will not be tolerated. In the unlikely event of such cases the Contractor is expected to take appropriate action

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01 25 00 - SUBSTITUTION PROCEDURES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Procedural requirements for proposed substitutions.

1.02 RELATED REQUIREMENTS

A. Section 01 3300 – Submittal Procedures: Submittal procedures, coordination.

B. Section 01 6000 - Product Requirements: Fundamental product requirements, product options, delivery, storage, and handling.

C. Refer to other Sections for specific requirements and limitations for substitutions.

1.03 DEFINITIONS

A. Substitutions: Changes from Contract Documents requirements proposed by Contractor to materials, products, assemblies, and equipment.
   1. Substitutions for Cause: Changes proposed by Contractor that are required due to changed Project conditions, such as un-availability of product, regulatory changes, or un-availability of required warranty terms.
   2. Substitutions for Convenience: Changes proposed by Contractor or Owner that are not required in order to meet other Project requirements but may offer advantages to Contractor or Owner.

1.04 SUBSTITUTION REQUESTS

A. Substitution Requests: Submit three copies of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
   1. Substitution Request Form During the Bidding/Negotiation Phase: Use CSI Form 1.5C and CSI Form 20.3.
   2. Substitution Request Form After the Bidding/Negotiation Phase: Use CSI Form 13.1A and CSI Form 20.3.
   3. Documentation: Show compliance with requirements for substitutions and the following, as applicable:
      a. Statement indicating why specified material or product cannot be provided.
      b. Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by Owner and separate contractors, that will be necessary to accommodate proposed substitution.
      c. Detailed point-by-point comparison of significant qualities of proposed substitution with those of the Work specified. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
      d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
      e. Samples, where applicable or requested.
      f. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners.
      g. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
      h. Research/evaluation reports evidencing compliance with building code in effect for Project, from a model code organization acceptable to authorities having jurisdiction.
      i. Detailed comparison of Contractor's Construction Schedule using proposed substitution with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided

within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating lack of availability or delays in delivery.

j. Cost information, including a proposal of change, if any, in the Contract Sum.

k. Contractor's certification that proposed substitution complies with requirements in the Contract Documents and is appropriate for applications indicated.

l. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.

4. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within 7 days of receipt of a request for substitution. Architect will notify Contractor of acceptance or rejection of proposed substitution within 15 days of receipt of request, or 7 days of receipt of additional information or documentation, whichever is later.

a. Form of Acceptance: Change Order.

b. Use product specified if Architect cannot make a decision on use of a proposed substitution within time allocated.

B. Comparable Product Requests: Submit three copies of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.

1. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within one week of receipt of a comparable product request. Architect will notify Contractor of approval or rejection of proposed comparable product request within 15 days of receipt of request, or 7 days of receipt of additional information or documentation, whichever is later.

a. Form of Approval: As specified in Section 013000 Project Management and Coordination.

b. Use product specified if Architect cannot make a decision on use of a comparable product request within time allocated.

1.05 QUALITY ASSURANCE

A. Compatibility of Substitutions: Investigate and document compatibility of proposed substitution with related products and materials. Engage a qualified testing agency to perform compatibility tests recommended by manufacturers.

1.06 PROCEDURES

A. Coordination: Revise or adjust affected work as necessary to integrate work of the approved substitutions.

1.07 SUBSTITUTIONS

A. Substitutions for Cause: Submit requests for substitution immediately on discovery of need for change, but not later than 15 days prior to time required for preparation and review of related submittals.

1. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:

a. Requested substitution is consistent with the Contract Documents and will produce indicated results.

b. Substitution request is fully documented and properly submitted.

c. Requested substitution will not adversely affect Contractor's construction schedule.

d. Requested substitution has received necessary approvals of authorities having jurisdiction.

e. Requested substitution is compatible with other portions of the Work.

f. Requested substitution has been coordinated with other portions of the Work.

g. Requested substitution provides specified warranty.

h. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

B. Substitutions for Convenience: Architect will consider requests for substitution if received within 60 days after the Notice to Proceed. Requests received after that time may be considered or rejected at discretion of Architect.

1. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:
   a. Requested substitution offers Owner a substantial advantage in cost, time, energy conservation, or other considerations, after deducting additional responsibilities Owner must assume. Owner's additional responsibilities may include compensation to Architect for redesign and evaluation services, increased cost of other construction by Owner, and similar considerations.
   b. Requested substitution does not require extensive revisions to the Contract Documents.
   c. Requested substitution is consistent with the Contract Documents and will produce indicated results.
   d. Substitution request is fully documented and properly submitted.
   e. Requested substitution will not adversely affect Contractor's construction schedule.
   f. Requested substitution has received necessary approvals of authorities having jurisdiction.
   g. Requested substitution is compatible with other portions of the Work.
   h. Requested substitution has been coordinated with other portions of the Work.
   i. Requested substitution provides specified warranty.
   j. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

1.08 SUBSTITUTION PROCEDURES

A. Instructions to Bidders specify time restrictions for submitting requests for substitutions during the bidding period. Comply with requirements specified in this section.

B. Document each request with complete data substantiating compliance of proposed substitution with Contract Documents.

C. A request for substitution constitutes a representation that the submitter:
   1. Has investigated proposed product and determined that it meets or exceeds the quality level of the specified product.
   2. Will provide the same warranty for the substitution as for the specified product.
   3. Will coordinate installation and make changes to other Work that may be required for the Work to be complete with no additional cost to Owner.
   4. Waives claims for additional costs or time extension that may subsequently become apparent.
   5. Will reimburse Owner and Architect for review or redesign services associated with re-approval by authorities.

D. Substitutions will not be considered when they are indicated or implied on shop drawing or product data submittals, without separate written request, or when acceptance will require revision to the Contract Documents.

E. CSI/CSC Form 1.5C - Substitution Request (During the Bidding/Negotiating Stage); Current Edition.

F. CSI/CSC Form 13.1A - Substitution Request (After the Bidding/Negotiating Phase); Current Edition.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

3.01 GENERAL REQUIREMENTS

A. A Substitution Request for products, assemblies, materials, and equipment constitutes a representation that the submitter:
   1. Has investigated proposed product and determined that it meets or exceeds the quality level of the specified product, equipment, assembly, or system.
   2. Agrees to provide the same warranty for the substitution as for the specified product.
   3. Agrees to provide same or equivalent maintenance service and source of replacement parts, as applicable.
   4. Agrees to coordinate installation and make changes to other work that may be required for the work to be complete, with no additional cost to Owner.
   5. Waives claims for additional costs or time extension that may subsequently become apparent.
   6. Agrees to reimburse Owner and Architect for review or redesign services associated with re-approval by authorities.

B. A Substitution Request for specified installer constitutes a representation that the submitter:
   1. Has acted in good faith to obtain services of specified installer, but was unable to come to commercial, or other terms.

C. Document each request with complete data substantiating compliance of proposed substitution with Contract Documents. Burden of proof is on proposer.
   1. Note explicitly any non-compliant characteristics.

D. Content: Include information necessary for tracking the status of each Substitution Request, and information necessary to provide an actionable response.
   1. Forms indicated in the Project Manual are adequate for this purpose, and must be used.

E. Limit each request to a single proposed substitution item.
   1. Submit an electronic document, combining the request form with supporting data into single document.

3.02 SUBSTITUTION PROCEDURES DURING PROCUREMENT

A. Instructions to Bidders specifies time restrictions for submitting requests for substitutions during the bidding period, and the documents required.

B. Submittal Form (before award of contract):
   1. Submit substitution requests by completing CSI/CSC Form 1.5C - Substitution Request (During the Bidding/Negotiating Stage). See this form for additional information and instructions. Use only this form; other forms of submission are unacceptable.

3.03 SUBSTITUTION PROCEDURES DURING CONSTRUCTION

A. Submittal Form (after award of contract):
   1. Submit substitution requests by completing CSI/CSC Form 13.1A - Substitution Request. See this form for additional information and instructions. Use only this form; other forms of submission are unacceptable.

B. Submit request for Substitution for Cause within 14 days of discovery of need for substitution, but not later than 14 days prior to time required for review and approval by Architect, in order to stay on approved project schedule.

C. Submit request for Substitution for Convenience immediately upon discovery of its potential advantage to the project, but not later than 14 days prior to time required for review and approval by Architect, in order to stay on approved project schedule.
   1. In addition to meeting general documentation requirements, document how the requested substitution benefits the Owner through cost savings, time savings, greater energy conservation, or in other specific ways.

2. Document means of coordinating of substitution item with other portions of the work, including work by affected subcontractors.
3. Bear the costs engendered by proposed substitution of:
    a. Owner's compensation to the Architect for any required redesign, time spent processing and evaluating the request.

D. Substitutions will not be considered under one or more of the following circumstances:
1. When they are indicated or implied on shop drawing or product data submittals, without having received prior approval.
2. Without a separate written request.
3. When acceptance will require revisions to the Contract Documents.

3.04 RESOLUTION

A. Architect may request additional information and documentation prior to rendering a decision. Provide this data in an expeditious manner.

B. Architect will notify Contractor in writing of decision to accept or reject request.

3.05 ACCEPTANCE

A. Accepted substitutions change the work of the Project. They will be documented and incorporated into work of the project by Change Order, Construction Change Directive, Architectural Supplementary Instructions, or similar instruments provided for in the Conditions of the Contract.

3.06 CLOSEOUT ACTIVITIES

A. See Section 01 7800 - Closeout Submittals, for closeout submittals.

B. Include completed Substitution Request Forms as part of the Project record. Include both approved and rejected Requests.

END OF SECTION

SECTION 01 26 00 - CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. This Section specifies administrative and procedural requirements for handling and processing Contract modifications.

1.2 MINOR CHANGES IN THE WORK

A. Architect will issue supplemental instructions authorizing Minor Changes in the Work, not involving adjustment to the Contract Sum or the Contract Time, on AIA Document G710, "Architect's Supplemental Instructions." form included at end of Part 3.

1.3 PROPOSAL REQUESTS

A. Owner-Initiated Proposal Requests: Architect will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.

1. Proposal Requests issued by Architect are for information only. Do not consider them instructions either to stop work in progress or to execute the proposed change.
2. Within time specified in Proposal Request after receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.

    a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
    b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
    c. Include costs of labor and supervision directly attributable to the change.
    d. Include an updated Contractor's Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.

B. Contractor-Initiated Proposals: If latent or unforeseen conditions require modifications to the Contract, Contractor may propose changes by submitting a request for a change to Architect.

1. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.
2. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.

4. Include costs of labor and supervision directly attributable to the change.
5. Include an updated Contractor's Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
6. Comply with requirements in Division 01 Section "Product Requirements" if the proposed change requires substitution of one product or system for product or system specified.

C. Proposal Request Form: Use AIA Document G709 for Proposal Requests.

1.4 CHANGE ORDER PROCEDURES

A. On Owner's approval of a Proposal Request, Architect will issue a Change Order for signatures of Owner and Contractor on AIA Document G701.

1.5 CONSTRUCTION CHANGE DIRECTIVE

A. Construction Change Directive: Architect may issue a Construction Change Directive on AIA Document G714 Construction Change Directive instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.

1. Construction Change Directive contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.

B. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive.

1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01 2900 - PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. This Section specifies administrative and procedural requirements necessary to prepare and process Applications for Payment.

1.2 SCHEDULE OF VALUES

A. Coordination: Coordinate preparation of the Schedule of Values with preparation of Contractor's Construction Schedule.

1. Correlate line items in the Schedule of Values with other required administrative forms and schedules, including Application for Payment forms with Continuation Sheets Submittals Schedule and Contractor's Construction Schedule.
2. Submit the Schedule of Values to Architect at earliest possible date but no later than twenty (20) days before the date scheduled for submittal of initial Applications for Payment.

B. Format and Content: Use the Project Manual table of contents as a guide to establish line items for the Schedule of Values. Provide at least one line-item for each Specification Section.

1. Identification: Include the following Project identification on the Schedule of Values:

    a. Project name and location.
    b. Name of Architect.
    c. Architect's project number.
    d. Contractor's name and address.
    e. Date of submittal.

2. Submit draft of AIA Document G703 Continuation Sheets.
3. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Coordinate with the Project Manual table of contents. Provide several line items for principal subcontract amounts, where appropriate.
4. Round amounts to nearest whole dollar; total shall equal the Contract Sum.
5. Provide a separate line item in the Schedule of Values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.
6. Provide separate line items in the Schedule of Values for initial cost of materials, for each subsequent stage of completion, and for total installed value of that part of the Work.
7. Allowances: Provide a separate line item in the Schedule of Values for each allowance. Show line-item value of unit-cost allowances, as a product of the unit cost, multiplied by measured quantity. Use information indicated in the Contract Documents to determine quantities.
8. Each item in the Schedule of Values and Applications for Payment shall be complete. Include total cost and proportionate share of general overhead and profit for each item.

a. Temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown either as separate line items in the Schedule of Values or distributed as general overhead expense, at Contractor's option.

9. Schedule Updating: Update and resubmit the Schedule of Values before the next Applications for Payment when Change Orders or Construction Change Directives result in a change in the Contract Sum.

1.3 APPLICATIONS FOR PAYMENT

A. Each Application for Payment shall be consistent with previous applications and payments as certified by Architect and paid for by Owner.

1. Initial Application for Payment, Application for Payment at time of Substantial Completion, and final Application for Payment involve additional requirements.

B. Payment Application Times: The date for each progress payment is indicated in the Agreement between Owner and Contractor. The period of construction Work covered by each Application for Payment is the period indicated in the Agreement.

C. Payment Application Times: Progress payments shall be submitted to the Project Manager by the 15 of the month. The period covered by each Application for Payment is one month, ending on the last day of the month.

D. Payment Application Forms: Use AIA Document G702 and AIA Document G703 Continuation Sheets as form for Applications for Payment.

E. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. Architect or Project Manager will return incomplete applications without action.

1. Entries shall match data on the Schedule of Values and Contractor's Construction Schedule. Use updated schedules if revisions were made.
2. Include amounts of Change Orders and Construction Change Directives issued before last day of construction period covered by application.

F. Transmittal: Submit six (6) signed and notarized original copies of each Application for Payment to the Architect by a method ensuring receipt within 24 hours. One copy shall include waivers of lien and similar attachments if required.

1. Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.

G. Waivers of Mechanic's Lien: With each Application for Payment, submit waivers of mechanic's lien from every entity who is lawfully entitled to file a mechanic's lien arising out of the Contract and related to the Work covered by the payment.

1. Submit partial waivers on each item for amount requested in previous application, after deduction for retainage, on each item.
2. When an application shows completion of an item, submit final or full waivers.
3. Owner reserves the right to designate which entities involved in the Work must submit waivers.
4. Waiver Forms: Submit waivers of lien on forms, executed in a manner acceptable to Owner.

H. Monthly Pay Application Waiver: With each Application for Payment, submit Monthly Pay Application Waiver. Pay Applications will not be accepted if this waiver is not included.

I. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:

1. List of subcontractors.
2. Schedule of Values.
3. Contractor's Construction Schedule.
4. Schedule of unit prices.
5. Submittals Schedule.
6. List of Contractor's staff assignments.
7. List of Contractor's principal consultants.
8. Copies of building permits.
9. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.
10. Initial progress report.
11. Report of preconstruction conference.
12. Certificates of insurance and insurance policies.
13. Monthly Pay Application Waiver.

J. Application for Payment at Substantial Completion: After issuing the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete.

1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.
2. This application shall reflect Certificates of Partial Substantial Completion issued previously for Owner occupancy of designated portions of the Work.

K. Final Payment Application: Submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:

1. Evidence of completion of Project closeout requirements.
2. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
3. Updated final statement, accounting for final changes to the Contract Sum.
4. AIA Document G706, "Contractor's Affidavit of Payment of Debts and Claims."
5. AIA Document G706A, "Contractor's Affidavit of Release of Liens."
6. AIA Document G707, "Consent of Surety to Final Payment."
7. Evidence that claims have been settled.
8. Final meter readings for utilities, a measured record of stored fuel, and similar data as of date of Substantial Completion or when Owner took possession of and assumed responsibility for corresponding elements of the Work.
9. Final, liquidated damages settlement statement.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01 31 00 - PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:

1. Coordination Drawings.
2. Project meetings.
3. Requests for Interpretation (RFI's).

B. See Division 01 Section "Execution" for procedures for coordinating general installation and field-engineering services, including establishment of benchmarks and control points.

1.2 DEFINITIONS

A. RFI: Request from Contractor seeking interpretation or clarification of the Contract Documents.

1.3 COORDINATION

A. Coordinate construction operations included in different Volume/Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations, included in different Sections, that depend on each other for proper installation, connection, and operation.

1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
2. Coordinate installation of different components with other contractors to ensure maximum accessibility for required maintenance, service, and repair.
3. Make adequate provisions to accommodate items scheduled for later installation.
4. Where availability of space is limited, coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair of all components, including mechanical and electrical.
5. Schedule product deliveries to assure continuity and proper sequence of operations, without delay and interruptions.
6. Verify that equipment items are suitable for available mechanical and electrical systems.

B. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.

1. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.

C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities and activities of other contractors to avoid conflicts

and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:

1. Preparation of Contractor's Construction Schedule.
2. Preparation of the Schedule of Values.
3. Installation and removal of temporary facilities and controls.
4. Delivery and processing of submittals.
5. Progress meetings.
6. Preinstallation conferences.
7. Project closeout activities.
8. Startup and adjustment of systems.
9. Project closeout activities.

1.4 SUBMITTALS

A. Coordination Drawings: Prepare Coordination Drawings if limited space availability necessitates maximum utilization of space for efficient installation of different components or if coordination is required for installation of products and materials fabricated by separate entities.

1. Content: Project-specific information, drawn accurately to scale. Do not base Coordination Drawings on reproductions of the Contract Documents or standard printed data. Include the following information, as applicable:

   a. Indicate functional and spatial relationships of components of architectural, structural, civil, mechanical, and electrical systems.
   b. Indicate dimensions shown on the Contract Drawings and make specific note of dimensions that appear to be in conflict with submitted equipment and minimum clearance requirements. Provide alternate sketches to Architect for resolution of such conflicts. Minor dimension changes and difficult installations will not be considered changes to the Contract.

2. Sheet Size: At least 8-1/2 by 11 inches (215 by 280 mm) but no larger than 30 by 42 inches (750 by 1000 mm).
3. Number of Copies: Submit three (3) opaque copies of each submittal. Architect will return one copy.
4. Refer to individual Sections for Coordination Drawing requirements for Work in those Sections.

1.5 PROJECT MEETINGS

A. General: Schedule and conduct meetings and conferences at Project site, unless otherwise indicated a minimum of one (1) meeting every two weeks for coordination and information.

1 Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify Owner and Architect of scheduled meeting dates and times.
2. Agenda: Prepare the meeting agenda. Distribute the agenda to all invited attendees.
3. Minutes: Record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned, including Owner and Architect, within three (3) days of the meeting.

B. Preconstruction Conference: Schedule a preconstruction conference before starting construction, at a time convenient to Owner and Architect, but no later than ten (10) days after

execution of the Agreement. Hold the conference at Project site or another convenient location. Conduct the meeting to review responsibilities and personnel assignments.

1. Attendees: Authorized representatives of Owner, Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the conference. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
2. Agenda: Discuss items of significance that could affect progress, including the following:

    a. Construction schedule.
    b. Phasing.
    c. Critical work sequencing and long-lead items.
    d. Designation of key personnel and their duties.
    e. Procedures for processing field decisions and Change Orders.
    f. Procedures for RFIs.
    g. Procedures for testing and inspecting.
    h. Procedures for processing Applications for Payment.
    i. Distribution of the Contract Documents.
    j. Submittal procedures.
    k. Preparation of Record Documents.
    l. Use of the premises.
    m. Work restrictions.
    n. Owner's occupancy requirements.
    o. Responsibility for temporary facilities and controls.
    p. Construction waste management and recycling.
    q. Parking availability.
    r. Office, work, and storage areas.
    s. Equipment deliveries and priorities.
    t. First aid.
    u. Security.
    v. Progress cleaning.
    w. Working hours.

3. Minutes: General Contractor will record and distribute meeting minutes.

C. Preinstallation Conferences: Conduct a preinstallation conference at Project site before each construction activity that requires coordination with other construction.

1. Attendees: Installer and representatives of manufacturers and fabricators involved in or affected by the installation and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advise Architect of scheduled meeting dates.
2. Agenda: Review progress of other construction activities and preparations for the particular activity under consideration, including requirements for the following:

    a. The Contract Documents.
    b. Options.
    c. Related RFIs.
    d. Related Change Orders.
    e. Purchases.
    f. Deliveries.
    g. Submittals.
    h. Review of mockups.
    i. Possible conflicts.
    j. Compatibility problems.

k. Time schedules.
l. Weather limitations.
m. Manufacturer's written recommendations.
n. Warranty requirements.
o. Compatibility of materials.
p. Acceptability of substrates.
q. Temporary facilities and controls.
r. Space and access limitations.
s. Regulations of authorities having jurisdiction.
t. Testing and inspecting requirements.
u. Installation procedures.
v. Coordination with other work.
w. Required performance results.
x. Protection of adjacent work.
y. Protection of construction and personnel.

3. Record significant conference discussions, agreements, and disagreements, including required corrective measures and actions.
4. Reporting: Distribute minutes of the meeting to each party present and to parties who should have been present.
5. Do not proceed with installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the Work and reconvene the conference at earliest feasible date.

D. Progress Meetings: Conduct bi-weekly progress meetings. Coordinate dates of meetings with preparation of payment requests.

1. In work under contract with a Construction Manager, the Construction Manager shall schedule and conduct meetings with the Architect and Owner as specified in the contract (AIA A133-2009).

2. Attendees: In addition to representatives of Owner and Architect, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
3. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.

a. Contractor's Construction Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's Construction Schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.

1) Review schedule for next period.

b. Review present and future needs of each entity present, including the following:

1) Interface requirements.
2) Sequence of operations.
3) Status of submittals.
4) Deliveries.

5) Off-site fabrication.
6) Access.
7) Site utilization.
8) Temporary facilities and controls.
9) Work hours.
10) Hazards and risks.
11) Progress cleaning.
12) Quality and work standards.
13) Status of correction of deficient items.
14) Field observations.
15) RFIs.
16) Status of proposal requests.
17) Pending changes.
18) Status of Change Orders.
19) Pending claims and disputes.
20) Documentation of information for payment requests.

4. Minutes: Contractor will record and distribute the meeting minutes.
5. Reporting: Distribute minutes of the meeting to each party present and to parties who should have been present.

a. Schedule Updating: Revise Contractor's Construction Schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with the report of each meeting.

1.6 REQUESTS FOR INTERPRETATION (RFIs)

A. Procedure: Immediately on discovery of the need for interpretation of the Contract Documents, and if not possible to request interpretation at Project meeting, prepare and submit an RFI in the form specified.

1. RFIs shall originate with Contractor. RFIs submitted by entities other than Contractor will be returned with no response.
2. Coordinate and submit RFIs in a prompt manner so as to avoid delays in Contractor's work or work of subcontractors.

B. Content of the RFI: Include a detailed, legible description of item needing interpretation and the following:

1. Project name.
2. Date.
3. Name of Contractor.
4. Name of Architect.
5. RFI number, numbered sequentially.
6. Specification Section number and title and related paragraphs, as appropriate.
7. Drawing number and detail references, as appropriate.
8. Field dimensions and conditions, as appropriate.
9. Contractor's suggested solution(s). If Contractor's solution(s) impact the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
10. Contractor's signature.
11. Attachments: Include drawings, descriptions, measurements, photos, Product Data, Shop Drawings, and other information necessary to fully describe items needing interpretation.

C. Hard-Copy RFIs:

1. Identify each page of attachments with the RFI number and sequential page number.

D. Architect's Action: Architect will review each RFI, determine action required, and return it.

Allow four (4) working days for Architect's response for each RFI. RFIs received after 1:00 p.m. will be considered as received the following working day.

1. The following RFIs will be returned without action:

   a. Requests for approval of submittals.
   b. Requests for approval of substitutions.
   c. Requests for coordination information already indicated in the Contract Documents.
   d. Requests for adjustments in the Contract Time or the Contract Sum.
   e. Requests for interpretation of Architect's actions on submittals.
   f. Incomplete RFIs or RFIs with numerous errors.

2. Architect's action may include a request for additional information, in which case Architect's time for response will start again.
3. Architect's action on RFIs that may result in a change to the Contract Time or the Contract Sum may be eligible for Contractor to submit Change Proposal according to Division 01 Section "Contract Modification Procedures."

   a. If Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Architect in writing within five (5) days of receipt of the RFI response.

E. On receipt of Architect's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Architect within seven (7) days if Contractor disagrees with response.

F. RFI Log: Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. Submit log weekly.

1. Project name.
2. Name and address of Contractor.
3. Name and address of Architect.
4. RFI number including RFIs that were dropped and not submitted.
5. RFI description.
6. Date the RFI was submitted.
7. Date Architect's response was received.
8. Identification of related Minor Change in the Work, Construction Change Directive, and Proposal Request, as appropriate.
9. Identification of related Field Order, Work Change Directive, and Proposal Request, as appropriate.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 Execute in accordance with the procedures identified above.

END OF SECTION

SECTION 01 32 00 - CONSTRUCTION PROGRESS DOCUMENTATION

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:

1. Submittals Schedule
2. Contractor's Construction Schedule.
3. Daily construction reports.
4. Field condition reports.

B. See Division 01 Section "Photographic Documentation" for submitting construction photographs.

1.2 DEFINITIONS

A. Activity: A discrete part of a project that can be identified for planning, scheduling, monitoring, and controlling the construction project. Activities included in a construction schedule consume time and resources.

1. Critical activities are activities on the critical path. They must start and finish on the planned early start and finish times.
2. Predecessor Activity: An activity that precedes another activity in the network.
3. Successor Activity: An activity that follows another activity in the network.

B. CPM: Critical path method, which is a method of planning and scheduling a construction project where activities are arranged based on activity relationships. Network calculations determine when activities can be performed and the critical path of Project.

C. Critical Path: The longest connected chain of interdependent activities through the network schedule that establishes the minimum overall Project duration and contains no float.

D. Float: The measure of leeway in starting and completing an activity.

1. Float time is not for the exclusive use or benefit of either Owner or Contractor, but is a jointly owned, expiring Project resource available to both parties as needed to meet schedule milestones and Contract completion date.

E. Fragments: A partial or fragmentary network that breaks down activities into smaller activities for greater detail.

F. Major Area: A story of construction, a separate building, or a similar significant construction element.

G. Milestone: A key or critical point in time for reference or measurement.

H. Network Diagram: A graphic diagram of a network schedule, showing activities and activity relationships.

I. Resource Loading: The allocation of manpower and equipment necessary for the completion of an activity as scheduled.

1.3 SUBMITTALS

A. Submittals Schedule: Submit six (6) copies of the submittals schedule. Arrange the following information in a tabular format:

1. Scheduled date for first submittal.
2. Specification Section number and title.
3. Submittal category (action or informational).
4. Name of subcontractor.
5. Description of the Work covered.
6. Scheduled date for Architect's final release or approval.

B. Contractor's Construction Schedule: Submit two (2) opaque copies of initial schedule, large enough to show entire schedule for entire construction period.

1. Submit an electronic copy of schedule, using software indicated, on CD-R, and labeled to comply with requirements for submittals. Include type of schedule (Initial or Updated) and date on label. Contractor will be required at various intervals throughout the project to submit schedule via electronic mail.

C. Daily Construction Reports: Submit one (1) copy at weekly intervals. Contractor is required to use Daily Construction Report included herein these specifications.

D. Field Condition Reports: Submit one (1) copy at time of discovery of differing conditions.

1.4 NETWORK SYSTEM FORMAT

A. Computer Software: Latest version of PM Web or prior approved equal.

B. Analysis: Diagram analysis to include tabulation of each activity shown. Provide following information for each activity:

1. Predecessors and Successors.
2. Activity description.
3. Estimated duration of activities (by work days).
4. Earliest start date (by calendar date).
5. Actual start date (by calendar date).
6. Actual finish date (by calendar date).
7. Latest start date (by calendar date).
8. Latest finish date (by calendar date).
9. Total float or slack.
10. Monetary value of activity.
11. Responsibility code (including Contractor, subcontractors, suppliers, other responsibility for accomplishment of an activity).
12. Percentage of activity completed.
13. Project capable of accepting revised completion dates as modified by approved time extensions, re-computation of tabulation dates/costs and float accordingly.
14. No activities should me shown with durations of 21 days or greater. If this occurs then the activity should be split or sequenced into sub activities (i.e.: area, floor, elevation, etc.)

1.5 SUBMISSION AND REVIEW

A. Preliminary Meeting: Participate in preliminary meeting to discuss proposed schedule, requirements of this Section prior to submission of network.

B. Proposed Plan: Submit a schedule for the first 155 days of the work within 14 days of Contract Award. Submit complete schedule within 35 calendar days after Contract Award

C. Review and Evaluation: Contractor participates in review, evaluation of proposed plan and analysis by Architect and the Owner. Revisions necessary as a result of review resubmittal for acceptance within 10 calendar days after meeting. Accepted schedule to be used for planning, organizing, directing work, reporting progress, and requesting payment for work accomplished. This will also be used as the baseline to gauge the progress of the project. Recovery plans and subsequent recovery schedules will be utilized and expected from the contractor. Owner and /or Project Manager reserve the right to require the contractor to acquire professional scheduling services if schedules do not meet the requirements set forth in these specifications.

D. Monthly Reports: Submit monthly report of actual construction progress by updating required sorts, time scaled logic diagram. Initially, and monthly thereafter, produce projected report of scheduled activities to be started, in process or completed during upcoming reporting period, sorted by early start. At end of reporting period, Contractor shall make entries on preceding Look-Ahead Report to show actual progress. As a minimum, following action will be accomplished:
   1. Identify activities started and completed during previous period.
   2. Show estimated duration (in work days) to complete each activity started but not completed.
   3. Indicate percentage of cost payable for each activity.
   4. Reflect changes in network diagram.
   5. Show conformed modifications, pending proposed changes on update report. Produce, from marked-up Look-Ahead Report, updated required sorts for project and use accumulated cost for completed and partially completed activities as basis for requesting progress payments. Contract status evaluated on basis of relative float on critical path at time of updating with negative relative float indicating contract is behind schedule and positive relative float indicating status ahead of schedule. (Relative float is the current status of an activity in relation to approved schedule completion date).

1.6 COORDINATION

A. Coordinate preparation and processing of schedules and reports with performance of construction activities and with scheduling and reporting of separate contractors.

B. Coordinate Contractor's Construction Schedule with the Schedule of Values, list of subcontracts, Submittals Schedule, progress reports, payment requests, and other required schedules and reports.

   1. Secure time commitments for performing critical elements of the Work from parties involved.
   2. Coordinate each construction activity in the network with other activities and schedule them in proper sequence.

1.7 CONTRACT MODIFICATIONS

A. Contract Modification: When required, submit proposed revisions to plan reflecting impact. Submit proposed plan revisions with cost proposal for each proposed change. Should it be determined that a mathematical analysis utilizing computer is necessary to analyze impact,

submit Total Float Report and the subsequent monthly update. Financial data not to be incorporated until issuance of contact modification. Those contract modifications determined to have no impact will require only identification of affected activities as part of proposed change proposal.

1.8 TIME EXTENSIONS

A. Time Extensions: Float or slack is defined as amount of time between early start data and late start date, or early finish date and late finish date of and of activities in Schedule. Float or slack is not time for exclusive use or benefit of either the Owner or the Contractor. Extension of time for performance will be granted only to extent that equitable time adjustments for activity or activities affected exceed total float or slack along paths involved. Submit time extension requests with a narrative report supporting request and copy of Total Float Report and input data if mathematical analysis is necessary to support narrative report. In no event shall Contractor be entitled to receive from Owner any delay damages resulting from Contractor completing the work prior to the date for substantial completion set out in this Contract, as extended by approved change orders.

PART 2 - PRODUCTS

2.1 SUBMITTALS SCHEDULE

A. Preparation: Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, resubmittal, ordering, manufacturing, fabrication, and delivery when establishing dates.

1. Coordinate Submittals Schedule with list of subcontracts, and Contractor's Construction Schedule.
2. Submit concurrently with the first complete submittal of Contractor's Construction Schedule.

2.2 CONTRACTOR'S CONSTRUCTION SCHEDULE, GENERAL

A. Time Frame: Extend schedule from date established for the Notice to Proceed to date of Final Completion.

1. Contract completion date shall not be changed by submission of a schedule that shows an early completion date, unless specifically authorized by Change Order.

B. Activities: Treat each story or separate area as a separate numbered activity for each principal element of the Work. Comply with the following:

1. Activity Duration: Define activities so no activity is longer than thirty (30) days, unless specifically allowed by Architect.
2. Procurement Activities: Include procurement process activities for the long lead items and major items, requiring a cycle of more than 60 days, as separate activities in schedule. Procurement cycle activities include, but are not limited to, submittals, approvals, purchasing, fabrication, and delivery.
3. Submittal Review Time: Include review and resubmittal times indicated in Division 01 Section "Submittal Procedures" in schedule. Coordinate submittal review times in Contractor's Construction Schedule with Submittals Schedule.
4. Startup and Testing Time: Include not less than seven (7) days for startup and testing.

5. Substantial Completion: Indicate completion in advance of date established for Substantial Completion, and allow time for Architect's administrative procedures necessary for certification of Substantial Completion.

C. Constraints: Include constraints and work restrictions indicated in the Contract Documents and as follows in schedule, and show how the sequence of the Work is affected.

1. Phasing: Arrange list of activities on schedule by phase.
2. Work under More Than One Contract: Include a separate activity for each contract.
3. Work by Owner: Include a separate activity for each portion of the Work performed by Owner.
4. Work Restrictions: Show the effect of the following items on the schedule:

a. Coordination with existing construction.
b. Limitations of continued occupancies.
c. Uninterruptible services.
d. Partial occupancy before Substantial Completion.
e. Use of premises restrictions.
f. Provisions for future construction.
g. Seasonal variations.
h. Environmental control.

5. Work Stages: Indicate important stages of construction for each major portion of the Work.

D. Milestones: Include milestones indicated in the Contract Documents in schedule, including, but not limited to:
1. Notice to Proceed
2. Mobilization Complete
3. Selective demolition
4. Metal Stud Framing Complete
5. Plumbing and electrical complete
6. Walls and doors Complete
7. Building Dried In
8. Substantial Completion
9. Close Out Complete

E. Contract Modifications: For each proposed contract modification and concurrent with its submission, prepare a time-impact analysis using fragmets to demonstrate the effect of the proposed change on the overall project schedule.

PART 3 - EXECUTION

3.1 CONTRACTOR'S CONSTRUCTION SCHEDULE

A. Contractor's Construction Schedule Updating: At monthly intervals, update schedule to reflect actual construction progress and activities. Issue schedule one week before each regularly scheduled progress meeting.

1. Revise schedule immediately after each meeting or other activity where revisions have been recognized or made. Issue updated schedule concurrently with the report of each such meeting.

2. Include a report with updated schedule that indicates every change, including, but not limited to, changes in logic, durations, actual starts and finishes, and activity durations.
3. As the Work progresses, indicate Actual Completion percentage for each activity.

B. Distribution: Distribute copies of approved schedule to the Architect, Owner, separate contractors, testing and inspecting agencies, and other parties identified by Contractor with a need-to-know schedule responsibility.

1. Post copies in Project meeting rooms and temporary field offices.
2. When revisions are made, distribute updated schedules to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in performance of construction activities.

END OF SECTION

SECTION 01 33 00 - SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.

B. Related Sections include the following:
1. Division 01 Section 013100 -Project Management and Coordination: Submitting and distributing meeting and conference minutes and for submitting Coordination Drawings.
2. Division 01 Section 013200 - Construction Progress Documentation: Submitting schedules and reports, including Contractor's Construction Schedule and the Submittals Schedule.
3. Division 01 Section 014000 -Quality Requirements: Submitting test and inspection reports and for mockup requirements.
4. Division 01 Section 017700 - Closeout Procedures: Submitting warranties.
5. Division 01 Section 017823 - Operation and Maintenance Data: Submitting operation and maintenance manuals.
6. Division 01 Section 017839 - Project Record Documents: Submitting Record Drawings, Record Specifications, and Record Product Data.
7. Division 01 Section 017900 - Demonstration and Training: Submitting videotapes of demonstration of equipment and training of Owner's personnel.
8. Divisions 02 through 33 for specific requirements for submittals in those Sections.

1.2 DEFINITIONS

A. Action Submittals: Written and graphic information that requires Architect's responsive action.

B. Informational Submittals: Written information that does not require Architect's responsive action. Submittals may be rejected for not complying with requirements.

1.3 SUBMITTAL PROCEDURES

A. General: Electronic copies of CAD Drawings of the Contract Drawings will be provided by Architect for Contractor's use in preparing submittals.

B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.

2. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.
a. Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received. Architect will advise Contractor and/or Project Manager within (5) days of receiving submittal, of their intentions to hold submittal and advise Contractor and/or Project Manager of which related submittals are required.

C. Submittals Schedule: Comply with requirements in Division 01 Section "Construction Progress Documentation" for list of submittals and time requirements for scheduled performance of related construction activities.

D. Processing Time: Allow enough time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
   1. Initial Review: Allow 10 days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Architect will advise Contractor when a submittal being processed must be delayed for coordination.
   2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
   3. Re-submittal Review: Allow 10 days for review of each re-submittal.
   4. Concurrent Consultant Review: Where the Contract Documents indicate that submittals may be transmitted simultaneously to Architect and to Architect's consultants, allow 15 days for review of each submittal. Submittal will be returned to Architect before being returned to Contractor.

E. Identification: Place a permanent label or title block on each submittal for identification.
   1. Indicate name of firm or entity that prepared each submittal on label or title block.
   2. Provide a space approximately 6 by 8 inches (150 by 200 mm) on label or beside title block to record Contractor's review and approval markings and action taken by Architect.
   3. Include the following information on label for processing and recording action taken:
      a. Project name.
      b. Date.
      c. Name and address of Architect
      d. Name and address of Contractor.
      e. Name and address of subcontractor.
      f. Name and address of supplier.
      g. Name of manufacturer.

F. Transmittal: Package each submittal individually and appropriately for transmittal and handling. Transmit each submittal using a transmittal form. Architect will return submittals, without review, received from sources other than Contractor.
   1. On an attached separate sheet, prepared on Contractor's letterhead, record relevant information, requests for data, revisions other than those requested by Architect on previous submittals, and deviations from requirements in the Contract Documents, including minor variations and limitations. Include same label information as related submittal.

G. Re-submittals: Make re-submittals in same form and number of copies as initial submittal.
   1. Note date and content of previous submittal.
   2. Note date and content of revision in label or title block and clearly indicate extent of revision.
   3. Resubmit submittals until they are marked “Approved or Approved as Noted”.

H. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.

1.4 CONTRACTOR'S USE OF ARCHITECT'S CAD FILES

A. General: At Contractor's written request, copies of Architect's CAD files will be provided to Contractor for Contractor's use in connection with Project.

PART 2 - PRODUCTS

2.1 ACTION SUBMITTALS

A. General: Prepare and submit Action Submittals required by individual Specification Sections.

B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
   1. If information must be specially prepared for submittal because standard printed data are not suitable for use, submit as Shop Drawings, not as Product Data.
   2. Mark each copy of each submittal to show which products and options are applicable.
   3. Include the following information, as applicable:
      a. Manufacturer's written recommendations.
      b. Manufacturer's product specifications.
      c. Manufacturer's installation instructions.
      d. Standard color charts.
      e. Manufacturer's catalog cuts.
      f. Wiring diagrams showing factory-installed wiring.
      g. Printed performance curves.
      h. Operational range diagrams.
      i. Mill reports.
      j. Standard product operation and maintenance manuals.
      k. Compliance with specified referenced standards.
      l. Testing by recognized testing agency.
      m. Application of testing agency labels and seals.
      n. Notation of coordination requirements.
   4. Submit Product Data before or concurrent with Samples.
   5. Number of Copies: Submit three copies of Product Data, unless otherwise indicated. Architect, will return two copies. Mark up and retain one returned copy as a Project Record Document.

C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data, unless submittal of Architect's CAD Drawings are otherwise permitted.
   1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
      a. Dimensions.
      b. Identification of products.
      c. Fabrication and installation drawings.
      d. Roughing-in and setting diagrams.
      e. Wiring diagrams showing field-installed wiring, including power, signal, and control wiring.
      f. Shop-work manufacturing instructions.
      g. Templates and patterns.
      h. Schedules.
      i. Design calculations.
      j. Compliance with specified standards.
      k. Notation of coordination requirements.
      l. Notation of dimensions established by field measurement.
      m. Relationship to adjoining construction clearly indicated.
      n. Seal and signature of professional engineer if specified.
      o. Wiring Diagrams: Differentiate between manufacturer-installed and field-installed wiring.

2. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches (215 by 280 mm) but no larger than 30 by 40 inches (750 by 1000 mm).
3. Number of Copies: Submit two opaque (bond) copies of each submittal. Architect, will return one copy.
4. Number of Copies: Submit three opaque copies of each submittal, unless copies are required for operation and maintenance manuals. Submit five copies where copies are required for operation and maintenance manuals. Architect will retain two copies; remainder will be returned. Mark up and retain one returned copy as a Project Record Drawing.

D. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittal and actual component as delivered and installed.
1. Transmit Samples that contain multiple, related components such as accessories together in one submittal package.
2. Identification: Attach label on unexposed side of Samples that includes the following:
   a. Generic description of Sample.
   b. Product name and name of manufacturer.
   c. Sample source.
   d. Number and title of appropriate Specification Section.
3. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.
   a. Samples that may be incorporated into the Work are indicated in individual Specification Sections. Such Samples must be in an undamaged condition at time of use.
   b. Samples not incorporated into the Work, or otherwise designated as Owner's property, are the property of Contractor.
4. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.
   a. Number of Samples: Submit one full set(s) of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Architect, will return submittal with options selected.
5. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.
   a. Number of Samples: Submit three sets of Samples. Architect will retain two Sample sets; remainder will be returned. Mark up and retain one returned Sample set as a Project Record Sample.
      1) Submit a single Sample where assembly details, workmanship, fabrication techniques, connections, operation, and other similar characteristics are to be demonstrated.
      2) If variation in color, pattern, texture, or other characteristic is inherent in material or product represented by a Sample, submit at least three sets of paired units that show approximate limits of variations.

E. Contractor's Construction Schedule: Comply with requirements specified in Section 013200 Construction Progress Documentation for Project Manager's action.

F. Submittals Schedule: Comply with requirements specified in Section 013200-Construction Progress Documentation.

G. Application for Payment: Comply with requirements specified in Section 012900 - Payment Procedures.

H. Schedule of Values: Comply with requirements specified in Section 012900 - Payment Procedures.

I. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. Use CSI Form 1.5A. Include the following information in tabular form:
   1. Name, address, and telephone number of entity performing subcontract or supplying products.
   2. Number and title of related Specification Section(s) covered by subcontract.
   3. Drawing number and detail references, as appropriate, covered by subcontract.
   4. Number of Copies: Submit three copies of subcontractor list, unless otherwise indicated. Architect, will return two copies.
      a. Mark up and retain one returned copy as a Project Record Document.

PART 3 - EXECUTION

3.1 CONTRACTOR'S REVIEW

A. Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Architect.

B. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

3.2 ARCHITECT'S ACTION

A. General: Architect will not review submittals that do not bear Contractor's approval stamp and will return them without action.

B. Action Submittals: Architect will review each submittal, make marks to indicate corrections or modifications required, and return it. Architect will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action taken, as follows:

C. Informational Submittals: Architect will review each submittal and will not return it, or will return it if it does not comply with requirements. Architect will forward each submittal to appropriate party.

D. Partial submittals are not acceptable, will be considered nonresponsive, and will be returned without review.

E. Submittals not required by the Contract Documents may not be reviewed and may be discarded.

END OF SECTION

SECTION 01 40 00 - QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes administrative and procedural requirements for quality assurance and quality control.

B. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.

1. Specified tests, inspections, and related actions do not limit Contractor's other quality-assurance and -control procedures that facilitate compliance with the Contract Document requirements.
2. Requirements for Contractor to provide quality-assurance and -control services required by Architect, Owner, Project Manager or authorities having jurisdiction are not limited by provisions of this Section.

C. See Divisions 02 through 33 for specific test and inspection requirements.

1.2 DEFINITIONS

A. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.

B. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Services do not include contract enforcement activities performed by Architect.

C. Mockups: Full-size, physical assemblies that are constructed on-site. Mockups are used to verify selections made under sample submittals, to demonstrate aesthetic effects and, where indicated, qualities of materials and execution, and to review construction, coordination, testing, or operation; they are not Samples. Approved mockups establish the standard by which the Work will be judged.

D. Laboratory Mockups: Full-size, physical assemblies that are constructed at testing facility to verify performance characteristics.

E. Preconstruction Testing: Tests and inspections that are performed specifically for the Project before products and materials are incorporated into the Work to verify performance or compliance with specified criteria.

F. Product Testing: Tests and inspections that are performed by an NRTL, an NVLAP, or a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with industry standards.

G. Source Quality-Control Testing: Tests and inspections that are performed at the source, i.e., plant, mill, factory, or shop.

H. Field Quality-Control Testing: Tests and inspections that are performed on-site for installation of the Work and for completed Work.

I. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.

J. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.

1. Using a term such as "carpentry" does not imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as "carpenter." It also does not imply that requirements specified apply exclusively to trades-people of the corresponding generic name.

K. Experienced: When used with an entity, "experienced" means having successfully completed a minimum of five (5) previous projects similar in size and scope to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.

1.3 CONFLICTING REQUIREMENTS

A. General: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer uncertainties and requirements that are different, but apparently equal, to Architect for a decision before proceeding.

B. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Architect for a decision before proceeding.

1.4 SUBMITTALS

A. Qualification Data: For testing agencies specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.

B. Reports: Prepare and submit certified written reports that include the following:

1. Date of issue.
2. Project title and number.
3. Name, address, and telephone number of testing agency.
4. Dates and locations of samples and tests or inspections.
5. Names of individuals making tests and inspections.
6. Description of the Work and test and inspection method.
7. Identification of product and Specification Section.
8. Complete test or inspection data.

9. Test and inspection results and an interpretation of test results.
10. Record of temperature and weather conditions at time of sample taking and testing and inspecting.
11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
12. Name and signature of laboratory inspector.
13. Recommendations on retesting and re-inspecting.

C. Permits, Licenses, and Certificates: For Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

1.5 QUALITY ASSURANCE

A. General: Qualifications paragraphs in this Article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.

B. Installer Qualifications: A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.

C. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.

D. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.

E. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of the system, assembly, or product that are similar to those indicated for this Project in material, design, and extent.

F. Specialists: Certain sections of the Specifications require that specific construction activities shall be performed by entities who are recognized experts in those operations. Specialists shall satisfy qualification requirements indicated and shall be engaged for the activities indicated.

1. Requirement for specialists shall not supersede building codes and regulations governing the Work.

G. Testing Agency Qualifications: An NRTL, an NVLAP, or an independent agency with the experience and capability to conduct testing and inspecting indicated, as documented according to ASTM E 548; and with additional qualifications specified in individual Sections; and where required by authorities having jurisdiction, that is acceptable to authorities.

1. NRTL: A nationally recognized testing laboratory according to 29 CFR 1910.7.
2. NVLAP: A testing agency accredited according to NIST's National Voluntary Laboratory Accreditation Project.

H. Factory-Authorized Service Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.

I. Mockups: Before installing portions of the Work requiring mockups, build mockups for each form of construction and finish required to comply with the following requirements, using materials indicated for the completed Work:

1. Build mockups in location and of size indicated or, if not indicated, as directed by Architect and/or Project Manager.
2. Notify Architect seven (7) days in advance of dates and times when mockups will be constructed.
3. Demonstrate the proposed range of aesthetic effects and workmanship.
4. Obtain Architect's approval of mockups before starting work, fabrication, or construction.
5. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed Work.
6. Demolish and remove mockups when directed, unless otherwise indicated.

J. Laboratory Mockups: Comply with requirements of preconstruction testing and those specified in individual Sections in Divisions 02 through 49.

1.6 QUALITY CONTROL

A. Owner Responsibilities: Where quality-control services are indicated as Owner's responsibility, Owner will engage a qualified testing agency to perform these services.

1. Owner will furnish Contractor with names, addresses, and telephone numbers of testing agencies engaged and a description of types of testing and inspecting they are engaged to perform.
2. Costs for retesting and re-inspecting construction that replaces or is necessitated by work that failed to comply with the Contract Documents will be charged to Contractor.

B. Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Unless otherwise indicated, provide quality-control services specified and those required by authorities having jurisdiction. Perform quality-control services required of Contractor by authorities having jurisdiction, whether specified or not.

1. Where services are indicated as Contractor's responsibility, engage a qualified testing agency to perform these quality-control services.

    a. Contractor shall not employ same entity engaged by Owner, unless agreed to in writing by Owner.

2. Notify testing agencies at least twenty-four (24) hours in advance of time when Work that requires testing or inspecting will be performed.
3. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
4. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
5. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.

C. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing as specified in Division 01 Section "Submittal Procedures."

D. Retesting/Re-inspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and re-inspecting, for construction that replaced Work that failed to comply with the Contract Documents.

E. Testing Agency Responsibilities: Cooperate with Architect, Project Manager and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.

1. Notify Architect, Project Manager and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
2. Determine the location from which test samples will be taken and in which in-situ tests are conducted.
3. Conduct and interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
4. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.
5. Do not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.
6. Do not perform any duties of Contractor.

F. Associated Services: Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:

1. Access to the Work.
2. Incidental labor and facilities necessary to facilitate tests and inspections.
3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
4. Facilities for storage and field curing of test samples.
5. Delivery of samples to testing agencies.
6. Preliminary design mix proposed for use for material mixes that require control by testing agency.
7. Security and protection for samples and for testing and inspecting equipment at Project site.

G. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and - control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.

1. Schedule times for tests, inspections, obtaining samples, and similar activities.

1.7 SPECIAL TESTS AND INSPECTIONS

A. Special Tests and Inspections: Owner will engage a qualified testing agency and / or special inspector to conduct special tests and inspections required by authorities having jurisdiction as the responsibility of Owner, and as follows:

B. Special Tests and Inspections: Conducted by a qualified testing agency and / or special inspector as required by authorities having jurisdiction, as indicated in individual Specification Sections, and as follows:

1. Verifying that manufacturer maintains detailed fabrication and quality-control procedures and reviewing the completeness and adequacy of those procedures to perform the Work.
2. Notifying Architect, Project Manager and Contractor promptly of irregularities and deficiencies observed in the Work during performance of its services.
3. Submitting a certified written report of each test, inspection, and similar quality-control service to Architect and Project Manager with copy to Contractor and to authorities having jurisdiction.
4. Submitting a final report of special tests and inspections at Substantial Completion, which includes a list of unresolved deficiencies.
5. Interpreting tests and inspections and stating in each report whether tested and inspected work complies with or deviates from the Contract Documents.
6. Retesting and re-inspecting corrected work.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 REPAIR AND PROTECTION

A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.

1. Provide materials and comply with installation requirements specified in other Specification Sections. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as possible.
2. Comply with the Contract Document requirements for Division 01 Section "Cutting and Patching."

B. Protect construction exposed by or for quality-control service activities.

C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION

SECTION 01 42 00 - REFERENCES

PART 1 - GENERAL

1.1 DEFINITIONS

A. General: Basic Contract definitions are included in the Conditions of the Contract.

B. "Approved": When used to convey Architect's action on Contractor's submittals, applications, and requests, "approved" is limited to Architect's duties and responsibilities as stated in the Conditions of the Contract.

C. "Directed": A command or instruction by Architect and/or Project Manager. Other terms including "requested," "authorized," "selected," "required," and "permitted" have the same meaning as "directed."

D. "Indicated": Requirements expressed by graphic representations or in written form on Drawings, in Specifications, and in other Contract Documents. Other terms including "shown," "noted," "scheduled," and "specified" have the same meaning as "indicated."

E. "Regulations": Laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, and rules, conventions, and agreements within the construction industry that control performance of the Work.

F. "Furnish": Supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.

G. "Install": Operations at Project site including unloading, temporarily storing, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.

H. "Provide": Furnish and install, complete and ready for the intended use.

I. "Project Site": Space available for performing construction activities. The extent of Project site is shown on Drawings and may or may not be identical with the description of the land on which Project is to be built.

1.2 INDUSTRY STANDARDS

A. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.

B. Publication Dates: Comply with standards in effect as of date of the Contract Documents unless otherwise indicated.

C. Copies of Standards: Each entity engaged in construction on Project should be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.

1. Where copies of standards are needed to perform a required construction activity, obtain copies directly from publication source.

D. Abbreviations and Acronyms for Standards and Regulations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the organizations responsible for the standards and regulations in the following list. Names, telephone numbers, and Web sites are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

ADAAG	Americans with Disabilities Act (ADA) Architectural Barriers Act (ABA)
CFR	Code of Federal Regulations
DOD	Department of Defense Military Specifications and Standards
DSCC	Defense Supply Center Columbus (See FS)
FED-STD	Federal Standard (See FS)
FS	Federal Specification
FTMS	Federal Test Method Standard (See FS)
MIL	(See MILSPEC)
MIL-STD	(See MILSPEC)
MILSPEC	Military Specification and Standards
UFAS	Uniform Federal Accessibility Standards

1.3 ABBREVIATIONS AND ACRONYMS

A. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities indicated below as well as entities found in Thomson Gale's "Encyclopedia of Associations" or in Columbia Books' "National Trade & Professional Associations of the U.S." Names, telephone numbers, and Web sites are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

AA	Aluminum Association, Inc. (The)
AAADM	American Association of Automatic Door Manufacturers
AABC	Associated Air Balance Council
AAMA	American Architectural Manufacturers Association
AASHTO	American Association of State Highway and Transportation Officials
AATCC	American Association of Textile Chemists and Colorists (The)
ABAA	Air Barrier Association of America

ABMA	American Bearing Manufacturers Association
ACI	ACI International (American Concrete Institute)
ACPA	American Concrete Pipe Association
AEIC	Association of Edison Illuminating Companies, Inc. (The)
AF&PA	American Forest & Paper Association
AGA	American Gas Association
AGC	Associated General Contractors of America (The)
AHA	American Hardboard Association (Now part of CPA)
AHAM	Association of Home Appliance Manufacturers
AI	Asphalt Institute
AIA	American Institute of Architects (The)
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
AITC	American Institute of Timber Construction
ALCA	Associated Landscape Contractors of America (Now PLANET - Professional Landcare Network)
ALSC	American Lumber Standard Committee, Incorporated
AMCA	Air Movement and Control Association International, Inc.
ANSI	American National Standards Institute
AOSA	Association of Official Seed Analysts, Inc.
APA	APA - The Engineered Wood Association
APA	Architectural Precast Association
API	American Petroleum Institute
ARI	Air-Conditioning & Refrigeration Institute
ARMA	Asphalt Roofing Manufacturers Association
ASCE	American Society of Civil Engineers
ASHRAE	American Society of Heating, Refrigerating and Air-Conditioning Engineers
ASME	ASME International
ASSE	American Society of Sanitary Engineering

ASTM	ASTM International (American Society for Testing and Materials International)
AWCI	AWCI International (Association of the Wall and Ceiling Industry International)
AWCMA	American Window Covering Manufacturers Association (Now WCSC)
AWI	Architectural Woodwork Institute
AWPA	American Wood-Preservers' Association
AWS	American Welding Society
AWWA	American Water Works Association
BHMA	Builders Hardware Manufacturers Association
BIA	Brick Industry Association (The)
BICSI	BICSI
BIFMA	BIFMA International (Business and Institutional Furniture Manufacturer's Association International)
BISSC	Baking Industry Sanitation Standards Committee
CCC	Carpet Cushion Council
CDA	Copper Development Association
CEA	Canadian Electricity Association
CFFA	Chemical Fabrics & Film Association, Inc.
CGA	Compressed Gas Association
CIMA	Cellulose Insulation Manufacturers Association
CISCA	Ceilings & Interior Systems Construction Association
CISPI	Cast Iron Soil Pipe Institute
CLFMI	Chain Link Fence Manufacturers Institute
CPA	Composite Panel Association
CPPA	Corrugated Polyethylene Pipe Association
CRI	Carpet & Rug Institute (The)
CRSI	Concrete Reinforcing Steel Institute
CSA	CSA International (Formerly: IAS - International Approval Services)

CSI	Cast Stone Institute
CSI	Construction Specifications Institute (The)
CSSB	Cedar Shake & Shingle Bureau
CTI	Cooling Technology Institute (Formerly: Cooling Tower Institute)
DHI	Door and Hardware Institute
EIA	Electronic Industries Alliance
EIMA	EIFS Industry Members Association
EJCDC	Engineers Joint Contract Documents Committee
EJMA	Expansion Joint Manufacturers Association, Inc.
ESD	ESD Association
FIBA	Federation Internationale de Basketball Amateur (The International Basketball Federation)
FIVB	Federation Internationale de Volleyball (The International Volleyball Federation)
FMG	FM Global (Formerly: FM - Factory Mutual System)
FMRC	Factory Mutual Research (Now FMG)
FRSA	Florida Roofing, Sheet Metal & Air Conditioning Contractors Association, Inc.
FSA	Fluid Sealing Association
FSC	Forest Stewardship Council
GA	Gypsum Association
GANA	Glass Association of North America
GRI	(Now GSI)
GS	Green Seal
GSI	Geosynthetic Institute
HI	Hydraulic Institute
HI	Hydronics Institute
HMMA	Hollow Metal Manufacturers Association (Part of NAAMM)
HPVA	Hardwood Plywood & Veneer Association
HPW	H. P. White Laboratory, Inc.

IAS	International Approval Services (Now CSA International)
IBF	International Badminton Federation
ICEA	Insulated Cable Engineers Association, Inc.
ICRI	International Concrete Repair Institute, Inc.
IEC	International Electrotechnical Commission
IEEE	Institute of Electrical and Electronics Engineers, Inc. (The)
IESNA	Illuminating Engineering Society of North America
IEST	Institute of Environmental Sciences and Technology
IGCC	Insulating Glass Certification Council
IGMA	Insulating Glass Manufacturers Alliance
ILI	Indiana Limestone Institute of America, Inc.
ISO	International Organization for Standardization
ISSFA	International Solid Surface Fabricators Association
ITS	Intertek
ITU	International Telecommunication Union
KCMA	Kitchen Cabinet Manufacturers Association
LEED	Leadership in Energy and Environmental Design
LMA	Laminating Materials Association (Now part of CPA)
LPI	Lightning Protection Institute
MBMA	Metal Building Manufacturers Association
MFMA	Maple Flooring Manufacturers Association, Inc.
MFMA	Metal Framing Manufacturers Association
MH	Material Handling (Now MHIA)
MHIA	Material Handling Industry of America
MIA	Marble Institute of America
MPI	Master Painters Institute
MSS	Manufacturers Standardization Society of The Valve and Fittings Industry Inc.
NAAMM	National Association of Architectural Metal Manufacturers

NACE	NACE International (National Association of Corrosion Engineers International)
NADCA	National Air Duct Cleaners Association
NAGWS	National Association for Girls and Women in Sport
NAIMA	North American Insulation Manufacturers Association
NBGQA	National Building Granite Quarries Association, Inc.
NCAA	National Collegiate Athletic Association (The)
NCMA	National Concrete Masonry Association
NCPI	National Clay Pipe Institute
NCTA	National Cable & Telecommunications Association
NEBB	National Environmental Balancing Bureau
NECA	National Electrical Contractors Association
NeLMA	Northeastern Lumber Manufacturers' Association
NEMA	National Electrical Manufacturers Association
NETA	InterNational Electrical Testing Association
NFHS	National Federation of State High School Associations
NFPA	NFPA (National Fire Protection Association)
NFRC	National Fenestration Rating Council
NGA	National Glass Association
NHLA	National Hardwood Lumber Association
NLGA	National Lumber Grades Authority
NOFMA	NOFMA: The Wood Flooring Manufacturers Association (Formerly: National Oak Flooring Manufacturers Association)
NRCA	National Roofing Contractors Association
NRMCA	National Ready Mixed Concrete Association
NSF	NSF International (National Sanitation Foundation International)
NSSGA	National Stone, Sand & Gravel Association
NTMA	National Terrazzo & Mosaic Association, Inc. (The)
NTRMA	National Tile Roofing Manufacturers Association (Now TRI)

NWWDA	National Wood Window and Door Association (Now WDMA)
OPL	Omega Point Laboratories, Inc. (Acquired by ITS - Intertek)
PCI	Precast/Prestressed Concrete Institute
PDCA	Painting & Decorating Contractors of America
PDI	Plumbing & Drainage Institute
PGI	PVC Geomembrane Institute
PLANET	Professional Landcare Network (Formerly: ACLA - Associated Landscape Contractors of America)
PTI	Post-Tensioning Institute
RCSC	Research Council on Structural Connections
RFCI	Resilient Floor Covering Institute
RIS	Redwood Inspection Service
RTI	(Formerly: NTRMA - National Tile Roofing Manufacturers Association) (Now TRI)
SAE	SAE International
SDI	Steel Deck Institute
SDI	Steel Door Institute
SEFA	Scientific Equipment and Furniture Association
SGCC	Safety Glazing Certification Council
SIA	Security Industry Association
SIGMA	Sealed Insulating Glass Manufacturers Association (Now IGMA)
SJI	Steel Joist Institute
SMA	Screen Manufacturers Association
SMACNA	Sheet Metal and Air Conditioning Contractors' National Association
SMPTE	Society of Motion Picture and Television Engineers
SPFA	Spray Polyurethane Foam Alliance (Formerly: SPI/SPFD - The Society of the Plastics Industry, Inc.; Spray Polyurethane Foam Division)
SPIB	Southern Pine Inspection Bureau (The)
SPRI	Single Ply Roofing Industry

SSINA	Specialty Steel Industry of North America
SSPC	SSPC: The Society for Protective Coatings
STI	Steel Tank Institute
SWI	Steel Window Institute
SWRI	Sealant, Waterproofing, & Restoration Institute
TCA	Tile Council of America, Inc.
TIA/EIA	Telecommunications Industry Association/Electronic Industries Alliance
TMS	The Masonry Society
TPI	Truss Plate Institute, Inc.
TPI	Turfgrass Producers International
TRI	Tile Roofing Institute (Formerly: RTI - Roof Tile Institute)
UL	Underwriters Laboratories Inc.
UNI	Uni-Bell PVC Pipe Association
USAV	USA Volleyball
USGBC	U.S. Green Building Council
USITT	United States Institute for Theatre Technology, Inc.
WASTEC	Waste Equipment Technology Association
WCLIB	West Coast Lumber Inspection Bureau
WCMA	Window Covering Manufacturers Association (Now WCSC)
WCSC	Window Covering Safety Council (Formerly: WCMA - Window Covering Manufacturers Association)
WDMA	Window & Door Manufacturers Association (Formerly: NWWDA - National Wood Window and Door Association)
WI	Woodwork Institute (Formerly: WIC - Woodwork Institute of California)
WIC	Woodwork Institute of California (Now WI)
WMMPA	Wood Moulding & Millwork Producers Association
WSRCA	Western States Roofing Contractors Association
WWPA	Western Wood Products Association

B. Code Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names,

telephone numbers, and Web sites are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

BOCA	BOCA International, Inc. (See ICC)
IAPMO	International Association of Plumbing and Mechanical Officials
ICBO	International Conference of Building Officials (See ICC)
ICBO ES	ICBO Evaluation Service, Inc. (See ICC-ES)
ICC	International Code Council
ICC-ES	ICC Evaluation Service, Inc.
SBCCI	Southern Building Code Congress International, Inc. (See ICC)

C. Federal Government Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names, telephone numbers, and Web sites are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

CE	Army Corps of Engineers
CPSC	Consumer Product Safety Commission
DOC	Department of Commerce
DOD	Department of Defense
DOE	Department of Energy
EPA	Environmental Protection Agency
FAA	Federal Aviation Administration
FCC	Federal Communications Commission
FDA	Food and Drug Administration
GSA	General Services Administration
HUD	Department of Housing and Urban Development
LBL	Lawrence Berkeley National Laboratory
NCHRP	National Cooperative Highway Research Project (See TRB)
NIST	National Institute of Standards and Technology
OSHA	Occupational Safety & Health Administration
PBS	Public Building Service (See GSA)
PHS	Office of Public Health and Science

RUS	Rural Utilities Service (See USDA)
SD	State Department
TRB	Transportation Research Board
USDA	Department of Agriculture
USPS	Postal Service

D. State Government Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the state where the project is located. Names, telephone numbers, and Web sites are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

PART 2 – PRODUCTS (Not Used)
PART 3 – EXECUTION (Not Used)

END OF SECTION

SECTION 01 50 00 - TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes requirements for temporary utilities, support facilities, and security and protection facilities.

B. See Division 01 Section 017300 "Execution" for progress cleaning requirements.

C. See Divisions 02 through 33 for temporary heat, ventilation, and humidity requirements for products in those Sections.

1.2 DEFINITIONS

A. Permanent Enclosure: As determined by Architect and Project Manager permanent or temporary roofing is complete, insulated, and weathertight; exterior walls are insulated and weathertight; and all openings are closed with permanent construction or substantial temporary closures.

1.3 USE CHARGES

A. General: Contractor shall be responsible for the setup and all cost associated with utilities necessary for the performance of the Work.

B. Sewer: Sewer Service is not available for use. Contractor is to provide and maintain temporary toilet facilities. Such facilities shall be serviced as often as necessary to be maintained in a sanitary condition.

C. Data/Telephone Service: Contractor will acquire services to connect and distribute data and telephone service to on-site Contractor project office(s). Contractor is responsible for the payment of these temporary services. Contractor is responsible for providing mobile telephones and portable radios for Contractor’s forces.

1.4 SUBMITTALS

A. Site Plan: Show temporary facilities, utility hookups, staging areas, and parking areas for construction personnel.

1.5 QUALITY ASSURANCE

A. Electric Service: Comply with NECA, NEMA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.

B. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.

1.6 PROJECT CONDITIONS

A. Temporary Use of Permanent Facilities: Installer of each permanent service shall assume responsibility for operation, maintenance, and protection of each permanent service during its use as a construction facility before Owner's acceptance, regardless of previously assigned responsibilities.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Pavement: Comply with Division 32.

B. Lumber and Plywood: Comply with requirements in Division 06 Section "Miscellaneous Rough Carpentry."

C. Gypsum Board: Minimum 1/2 inch (12.7 mm) thick by 48 inches (1219 mm) wide by maximum available lengths; regular-type panels with tapered edges. Comply with ASTM C 36/C 36M.

D. Insulation: Unfaced mineral-fiber blanket, manufactured from glass, slag wool, or rock wool; with maximum flame-spread and smoke-developed indexes of 25 and 50, respectively.

2.2 TEMPORARY FACILITIES

A. Field Offices, General: Prefabricated or mobile units with serviceable finishes, temperature controls, and foundations adequate for normal loading.

1. Field Offices at a minimum should be insulated, heated and air conditioned, weathertight temporary offices of sufficient size to accommodate activities at the Project site. Keep the office clean and orderly for use for small progress meetings. Furnish and equip offices, at a minimum, with the following:

a. Desk and chairs.

b. File cabinets.

c. Plan table and plan rack.

d. Shelves, for samples storage.

e. Telephone answering machine.

f. Conference room for project meetings.

g. Telephone facsimile machine.

h. Copy machine.

2. Contractor will provide area for convenient separation of construction waste handled at the site.

a. Recycling: Arrange for timely pickups from the site or deliveries to recycling facility in order to prevent contamination of recyclable materials.

b. Protect products and materials being recycled or salvaged in accordance with recycling/salvage vendor requirements.

B. Storage and Fabrication Sheds: Provide sheds sized, furnished, and equipped to accommodate materials and equipment for construction operations.

C. Barriers:
1. Barricades and Enclosures: Provide enclosures around piles of separated materials.
2. Locate enclosures out of the way of construction traffic. Provide adequate space for pick-up and delivery and convenience to subcontractors.

D. Noise, dust, and pollution control:
1. Comply with Owner's and local requirements for noise, dust, and pollution control.

E. Protection:
1. Provide coverings to protect reused products from damage due to traffic and construction operations. Remove coverings when no longer needed.
2. Save plastic covering. At completion of Project, reuse if practical; if not, then recycle if local market exists.

2.3 EQUIPMENT

A. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.

B. HVAC Equipment: Unless Owner authorizes use of permanent HVAC system, provide vented, self-contained, liquid-propane-gas or fuel-oil heaters with individual space thermostatic control.

1. Use of gasoline-burning space heaters, open-flame heaters, or salamander-type heating units is prohibited.
2. Heating Units: Listed and labeled for type of fuel being consumed, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
3. Permanent HVAC System: If Owner authorizes use of permanent HVAC system for temporary use during construction, provide filter at each return air grille in system and remove at end of construction.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required by progress of the Work.

B. Provide each facility ready for use when needed to avoid delay. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

3.2 TEMPORARY UTILITY INSTALLATION

A. General: Install temporary service or connect to existing service.

1. Arrange with utility company, Owner, Project Manager and existing users for time when service can be interrupted, if necessary, to make connections for temporary services.

B. Sewers and Drainage: Provide temporary utilities to remove effluent lawfully.

1. Connect temporary sewers to municipal system as directed by authorities having jurisdiction.

C. Water Service: Install water service and distribution piping in sizes and pressures adequate for construction.

D. Water Service: Use of Owner's existing water service facilities will be permitted, as long as facilities are cleaned and maintained in a condition acceptable to Owner. At Substantial Completion, restore these facilities to condition existing before initial use.

1. Where installations below an outlet might be damaged by spillage or leakage, provide a drip pan of suitable size to minimize water damage. Drain accumulated water promptly from pans.

2. Contractor shall provide piping, hoses, backflow preventers, valves and other items necessary to conduct water from connection point to the construction location.

3. Contractor shall supervise use of water to prevent waste and prevent damage to the building due to leaking and uncontrolled discharge.

4. Sterilize temporary water piping prior to use.

E. Sanitary Facilities: Provide temporary toilets, wash facilities, and drinking water for use of construction personnel. Comply with authorities having jurisdiction for type, number, location, operation, and maintenance of fixtures and facilities.

1. Toilets: Use of Owner's existing toilet facilities will be permitted, as long as facilities are cleaned and maintained in a condition acceptable to Owner. At Substantial Completion, restore these facilities to condition existing before initial use.

F. Heating and Cooling: Provide temporary heating and cooling required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of low temperatures or high humidity. Select equipment that will not have a harmful effect on completed installations or elements being installed.

G. Ventilation and Humidity Control: Provide temporary ventilation required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of high humidity. Select equipment that will not have a harmful effect on completed installations or elements being installed. Coordinate ventilation requirements to produce ambient condition required and minimize energy consumption.

H. Electric Power Service: Use of Owner's existing electric power service will be permitted, as long as equipment is maintained in a condition acceptable to Owner.

I. Electric Power Service: Provide electric power service and distribution system of sufficient size, capacity, and power characteristics required for construction operations.

1. Install electric power service overhead, unless otherwise indicated.
2. Connect temporary service to Owner's existing power source, as directed by Owner, or Project Manager.

J. Lighting: Provide temporary lighting with local switching that provides adequate illumination for construction operations, observations, inspections, and traffic conditions.

1. Install and operate temporary lighting that fulfills security and protection requirements without operating entire system.

K. Telephone Service: Provide temporary telephone service in common-use facilities for use by all construction personnel. Install one (1) telephone line3 for each field office.

1. Provide additional telephone lines for the following:

a. Provide a dedicated telephone line for each facsimile machine and computer in each field office.

2. At each telephone, post a list of important telephone numbers including police and fire departments, Contractor's home office, Architect's office, Project Managers Office, Owner's office, and Principal subcontractors' field and home offices.
3. Provide superintendent with cellular telephone for use when away from field office.

L. Electronic Communication Service: Provide temporary electronic communication service, including electronic mail in field office.

3.3 SUPPORT FACILITIES INSTALLATION

A. General: Comply with the following:

1. Provide incombustible construction for offices, shops, and sheds located within construction area or within 30 feet (9 m) of building lines. Comply with NFPA 241.
2. Maintain support facilities until near Substantial Completion. Remove before Substantial Completion. Personnel remaining after Substantial Completion will be permitted to use permanent facilities, under conditions acceptable to Owner.

B. Temporary Roads and Paved Areas: Construct and maintain temporary roads and paved areas adequate for construction operations.

1. Provide dust-control treatment that is nonpolluting and non-tracking. Reapply treatment as required to minimize dust.

C. Traffic Controls: Comply with requirements of authorities having jurisdiction.

1. Protect existing site improvements to remain including curbs, pavement, and utilities.
2. Maintain access for fire-fighting equipment and access to fire hydrants.

D. Parking: Provide temporary parking areas for construction personnel.

E. Familiarity with Site: It is understood that prior to bidding the Contractor became familiar with the conditions existing at the site, and accepts the site and access conditions as they are.

F. Ingress and Egress to Site: At pre-construction conference, Owner's representative will establish means of ingress and egress to work areas as well as other procedures necessary for uninterrupted operation of existing adjacent buildings. These procedures shall be strictly adhered to by all parties to the Contract.

1. Maintain safe and continuous paths of egress for building occupants during construction. Coordinate with provisions of “Section 01100 - Summary of Work” and Drawings.

G. Traffic Flow: Contractor shall coordinate vehicular and pedestrian traffic flow with Local Sheriff's Office and/or Local Police Department.

H. Conditions of Use: Keep temporary services and facilities clean and neat. Operate in a safe and efficient manner. Take necessary fire prevention measures. Do not overload facilities, or permit them to interfere with progress. Do not allow hazardous, dangerous or unsanitary conditions, or public nuisances to develop or persist on the site and in the building. Do not obstruct means of access and emergency egress.

I. Staging Areas: The Contractor and subcontractors shall locate offices, parking, materials storage, equipment storage and maintenance areas, and similar major facilities in permitted areas indicated on Drawings or otherwise directed by the Owner and Project Manager.

1. If offsite areas are required in addition to what is provided for onsite, secure and pay for at no additional cost to the Owner.

J. Access: Access routes to the construction and staging areas will be designated by the Owner to limit interference with operations of the building under other contracts. The Contractor and subcontractors shall limit access, including deliveries of materials, to designated routes.

K. Construction Cleaning: All construction related trash and debris will be the responsibility of the contractor and shall be removed from the site on a daily basis.

L. Temporary Use of Permanent Facilities: Installer of each permanent service shall assume responsibility for operation, maintenance, and protection of each permanent service during its use as a construction facility before Owner's acceptance, regardless of previously assigned responsibilities.

M. Dewatering Facilities and Drains: Comply with requirements of authorities having jurisdiction. Maintain Project site, excavations, and construction free of water.

1. Dispose of rainwater in a lawful manner that will not result in flooding Project or adjoining properties nor endanger permanent Work or temporary facilities.
2. Remove snow and ice as required to minimize accumulations.

N. Project Identification and Temporary Signs: Contractor shall within the first ten (10) days after Notice to Proceed provide and install temporary project signage. Sign shall be minimum 4’ x 8’ in size. Sign design shall be pre-approved by Owner Representative. At the end of project or upon direction of the Owner, Contractor shall uninstall temporary project signage.

1. Provide temporary, directional signs for construction personnel and visitors.
2. Maintain and touchup signs so they are legible at all times.

O. Waste Disposal Facilities: Provide waste-collection containers in sizes adequate to handle waste from construction operations. Comply with requirements of authorities having jurisdiction. Comply with Division 01 Section "Execution" for progress cleaning requirements.

P. Lifts and Hoists: Provide facilities necessary for hoisting materials and personnel.

1. Truck cranes and similar devices used for hoisting materials are considered "tools and equipment" and not temporary facilities.

Q. Temporary Stairs: Until permanent stairs are available, provide temporary stairs where ladders are not adequate.

R. Temporary Use of Permanent Stairs: Cover finished, permanent stairs with protective covering of plywood or similar material so finishes will be undamaged at time of acceptance. .Individual Project circumstances may require use of other construction aids and miscellaneous facilities, such as scaffolds, platforms, swing stages, ramps and bridges, incidental sheeting and shoring, and demolition waste chutes. Add requirements to suit Project. See Evaluations.

3.4 SECURITY AND PROTECTION FACILITIES INSTALLATION

A. Duration of Use: Do not change over from use of temporary security and protection facilities to permanent facilities until Substantial Completion.

B. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction in ways and by methods that comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.

1. Use water mist, temporary enclosures, and other suitable methods to limit the spread of dust and dirt generated by construction operations. Comply with governing environmental protection regulations.

2. Do not create hazardous or objectionable conditions, such as ice flooding, and pollution, when using water.

3. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

4. Clean adjacent buildings and improvements of dust, dirt, and debris caused by construction operations.

C. Pest Control: Engage pest-control service to recommend practices to minimize attraction and harboring of rodents, roaches, and other pests and to perform extermination and control procedures at regular intervals so Project will be free of pests and their residues at Substantial Completion. Obtain extended warranty for Owner. Perform control operations lawfully, using environmentally safe materials.

D. Site Enclosure Fence: When excavation begins, furnish and install site enclosure fence with a six foot height minimum with a green or black barrier within the fencing, in a manner that will prevent people and animals from easily entering site except by entrance gates.

1. Extent of Fence: As required to enclose entire Project site or portion determined sufficient to accommodate construction operations.

2. Maintain security by limiting number of keys and restricting distribution to authorized personnel. Provide Owner and Project Manager with one set of keys.

E. Security Enclosure and Lockup: Install substantial temporary enclosure around partially completed areas of construction. Provide lockable entrances to prevent unauthorized entrance, vandalism, theft, and similar violations of security.

F. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.

G. Temporary Enclosures: Provide temporary enclosures for protection of construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities. Provide temporary weathertight enclosure for building exterior.

1. Where heating or cooling is needed and permanent enclosure is not complete, insulate temporary enclosures.

H. Temporary Protection: Temporary protection includes, but is not necessarily limited to, temporary partitions and related items as indicated and specified. Provide temporary protection of existing facilities and of construction in progress and completed, from damage by weather, construction operations and misuse. Provide temporary barricades and enclosures as necessary to protect workers, existing building, Owner's employees and the public from injury.

1. Erect, relocate and remove temporary protection as necessary to provide continual, uninterrupted enclosures and accomplish construction in required stages.

2. Adequately cover and protect completed work from traffic and subsequent construction operations.

3. Close openings through floors and roofs with, load-bearing, wood-framed construction or substantial barricades.

4. Provide waterproof, draft-tight enclosure to protect portions of the building, which are opened to the weather during the construction operations.

I. Cleaning and Waste Disposal: Keep the construction areas, access areas, staging area, and surrounding areas free from accumulation of waste materials and rubbish caused by operations under the Contract.

1. Furnish and maintain walk-off mats at construction area entrances/exits to prevent tracking dust into other areas.

2. Execute periodic cleaning to maintain premises free from accumulation of waste material and rubbish caused by Project construction operations.

3. Sprinkle dusty debris with water.

4. Provide adequate number of containers for collection of waste materials, rubbish and debris.

5. Remove waste materials, rubbish, and debris from the site and legally dispose of same at public or private dumping areas.

6. Handle hazardous, dangerous and unsanitary waste materials separately. Do not permit discharge of toxic, flammable and hazardous materials into the ground and into drains and sewers.

7. Control the wash out and dumping of mason's and plasterer's mixing equipment, and similar operations involving cementitious materials to prevent creation of nuisance and clogging of drains.

8. Vacuum clean interior of Project work areas when ready to receive finish painting and continue vacuum cleaning on an as-needed basis until Project is ready for acceptance or occupancy.

9. Schedule cleaning operations so that dust and other contaminants resulting from cleaning process will not fall on wet, newly painted surfaces.

10. Streets & Sidewalks: The Contractor shall provide services to clean surrounding streets and sidewalks of soil, dust, stone, and deposits which result from project construction.

11. Cleaning shall occur as often as necessary, at a daily basis.

12. Jobsite: Contractor is responsible for maintaining the job-site in a neat and clean fashion. Provide sufficient debris bins for daily cleaning and removal of trash and debris from the project site.

J. Construction Aids: Construct and maintain scaffolds, ramps, and ladders necessary for reaching all portions of the work conveniently and safely. Provide hoists, trash chutes, lifts, carts and other equipment necessary for handling materials and debris.

K. Lifts and Hoists: Provide facilities necessary for hoisting materials and personnel. Truck cranes and similar devices used for hoisting materials are considered “tools and equipment” and not temporary facilities.

L. Temporary Access: The Contractor shall provide and install ramps, stairs, ladders and similar temporary access elements as required to perform the work and facilitate its inspection during installation.

M. Construction Parking: Contractor is responsible for arranging for all construction parking. Due to the limited size of the project site, there will only be a minimal amount of parking available on the project site. This parking will be reserved for the Project Manager, Contractor’s superintendent and project manager, and large passenger vans used by Contractor to transport personnel to the site.

1. All contractor vehicles must park within the designated construction limits when such a fence contains the construction project.
2. Company vehicles with company names visible on the exterior of the vehicle may only park in the designated contractor parking spaces when a fenced construction site in not required in the project. The contractor must request this designation.
3. All personal vehicles must be parked within the fenced construction site or at a remote designated contractor parking lot. The contractor may need to provide shuttle services for employees who park at remote designated contractor parking lot or area.

S Transportation of Personnel to the Job-Site: Transportation of employees, personnel, subcontractors, to the job site is the responsibility of the General Contractor.

T Material Storage and Lay-Down Areas: Due to the limited size of the project site there will be limited on-site space for material lay-down and storage. There is no space available on campus for the Owner to provide an on-campus material storage area. The Contractor is responsible for securing any off-site material storage and lay-down area that the Contractor believes to be necessary. The Contractor is encouraged to use Just-In-Time material delivery methods so that materials may be delivered and installed in the building without the need for storage.

U. Weed Control: Contractor shall maintain site vegetation in a neat fashion. On a regular basis contractor shall trim grass and weeds across the project site. Special attention shall be given to clean weeds from both sides of the construction fence. Special attention to trimming weeds shall be given when requested by Project Manager or Owner (1.e. Prior to campus events, football games, Board of Trustee Meetings).

V Temporary Partitions: Provide floor-to-ceiling dustproof partitions to limit dust and dirt migration and to separate areas occupied by Owner from fumes and noise.

1. Construct dustproof partitions with gypsum wallboard with joints taped on occupied side, and fire-retardant plywood on construction operations side.

2. Construct dustproof partitions with 2 layers of 3-mil (0.07-mm) polyethylene sheet on each side. Cover floor with 2 layers of 3-mil (0.07-mm) polyethylene sheet, extending sheets 18 inches (460 mm) up the sidewalls. Overlap and tape full length of joints. Cover floor with fire-retardant plywood.

    a. Construct vestibule and airlock at each entrance through temporary partition with not less than 48 inches (1219 mm) between doors. Maintain water-dampened foot mats in vestibule.

3. Insulate partitions to provide noise protection to occupied areas.
4. Seal joints and perimeter. Equip partitions with dustproof doors and security locks.
5. Protect air-handling equipment.
6. Weather strip openings.
7. Provide walk-off mats at each entrance through temporary partition.

W. Temporary Fire Protection: Install and maintain temporary fire-protection facilities of types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 241.

1. Prohibit smoking in fire-exposure construction areas.
2. Supervise welding operations, combustion-type temporary heating units, and similar sources of fire ignition according to requirements of authorities having jurisdiction.
3. Develop and supervise an overall fire-prevention and -protection Project for personnel at Project site. Review needs with local fire department and establish procedures to be followed. Instruct personnel in methods and procedures. Post warnings and information.
4. Provide temporary standpipes and hoses for fire protection. Hang hoses with a warning sign stating that hoses are for fire-protection purposes only and are not to be removed. Match hose size with outlet size and equip with suitable nozzles.

3.5 OPERATION, TERMINATION, AND REMOVAL

A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.

B. Maintenance: Maintain facilities in good operating condition until removal.

1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.

C. Temporary Facility Changeover: Do not change over from using temporary security and protection facilities to permanent facilities until Substantial Completion.

D. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.

1. Materials and facilities that constitute temporary facilities are property of Contractor. Owner reserves right to take possession of Project identification signs.
2. At Substantial Completion, clean and renovate permanent facilities used during construction period. Comply with final cleaning requirements specified in Division 01 Section "Closeout Procedures."

END OF SECTION

SECTION 01 60 00 - PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes administrative and procedural requirements for selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; product substitutions; and comparable products.

B. See Division 01 Section "Closeout Procedures" for submitting warranties for Contract closeout.

C. See Divisions 01 through 33 for specific requirements for warranties on products and installations specified to be warranted.

1.2 DEFINITIONS

A. Products: Items purchased for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.

1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature, that is current as of date of the Contract Documents.
2. New Products: Items that have not previously been incorporated into another project or facility. Products salvaged or recycled from other projects are not considered new products.
3. Comparable Product: Product that is demonstrated and approved through submittal process, or where indicated as a product substitution, to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.

B. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.

C. Basis-of-Design Product Specification: Where a specific manufacturer's product is named and accompanied by the words "basis of design," including make or model number or other designation, to establish the significant qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics for purposes of evaluating comparable products of other named manufacturers.

1.3 SUBMITTALS

A. Substitution Requests: Submit three copies of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.

1. Substitution Request Form: Use CSI Form 13.1A.

2. Documentation: Show compliance with requirements for substitutions and the following, as applicable:

    a. Statement indicating why specified material or product cannot be provided.
    b. Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by Owner and separate contractors, that will be necessary to accommodate proposed substitution.
    c. Detailed comparison of significant qualities of proposed substitution with those of the Work specified. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
    d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
    e. Samples, where applicable or requested.
    f. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners.
    g. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
    h. Research/evaluation reports evidencing compliance with building code in effect for Project, from a model code organization acceptable to authorities having jurisdiction.
    i. Detailed comparison of Contractor's Construction Schedule using proposed substitution with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating lack of availability or delays in delivery.
    j. Cost information, including a proposal of change, if any, in the Contract Sum.
    k. Contractor's certification that proposed substitution complies with requirements in the Contract Documents and is appropriate for applications indicated.
    l. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.

3. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within seven (7) days of receipt of a request for substitution. Architect will notify Contractor of acceptance or rejection of proposed substitution within fifteen (15) days of receipt of request, or seven (7) days of receipt of additional information or documentation, whichever is later.

    a. Form of Acceptance: Change Order.
    b. Use product specified if Architect cannot make a decision on use of a proposed substitution within time allocated.

B. Comparable Product Requests: Submit three copies of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.

1. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within one week of receipt of a comparable product request. Architect will notify Contractor of approval or rejection of proposed comparable product request within fifteen (15) days of receipt of request, or seven (7) days of receipt of additional information or documentation, whichever is later.

    a. Form of Approval: As specified in Division 01 Section "Submittal Procedures."
    b. Use product specified if Architect cannot make a decision on use of a comparable product request within time allocated.

C. Basis-of-Design Product Specification Submittal: Comply with requirements in Division 01 Section "Submittal Procedures." Show compliance with requirements.

1.4 QUALITY ASSURANCE

A. Compatibility of Options: If Contractor is given option of selecting between two or more products for use on Project, product selected shall be compatible with products previously selected, even if previously selected products were also options.

1.5 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft. Comply with manufacturer's written instructions.

B. Delivery and Handling:

1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
3. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
4. Inspect products on delivery to ensure compliance with the Contract Documents and to ensure that products are undamaged and properly protected.

C. Storage:

1. Store products to allow for inspection and measurement of quantity or counting of units.
2. Store materials in a manner that will not endanger Project structure.
3. Store products that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.
4. Store cementitious products and materials on elevated platforms.
5. Store foam plastic from exposure to sunlight, except to extent necessary for period of installation and concealment.
6. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
7. Protect stored products from damage and liquids from freezing.

1.6 PRODUCT WARRANTIES

A. Warranties shall be provided by the Contractor, all sub-contractors for all installations and by all manufacturers for all products and equipment. Warranties shall be submitted as a part of closeout submittals and are required as a condition of Final Completion.

B. Warranties specified in other Sections shall be in addition to, and run concurrent with other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.

1. Manufacturer's Warranty: Preprinted written warranty published by individual manufacturer for a particular product and specifically endorsed by manufacturer to Owner.
2. Special Warranty: Written warranty required by or incorporated into the Contract Documents, either to extend time limit provided by manufacturer's warranty or to provide more rights for Owner.

C. Special Warranties: Prepare a written document that contains appropriate terms and identification, ready for execution. Submit a draft for approval before final execution.

1. Manufacturer's Standard Form: Modified to include Project-specific information and properly executed.
2. Specified Form: When specified forms are included with the Specifications, prepare a written document using appropriate form properly executed.
3. Refer to Divisions 2 through 16 Sections for specific content requirements and particular requirements for submitting special warranties.

D. Submittal Time: Comply with requirements in Division 01 Section "Closeout Procedures."

PART 2 - PRODUCTS

2.1 PRODUCT SELECTION PROCEDURES

A. General Product Requirements: Provide products that comply with the Contract Documents, that are undamaged and, unless otherwise indicated, that are new at time of installation.

1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
3. Owner reserves the right to limit selection to products with warranties not in conflict with requirements of the Contract Documents.
4. Where products are accompanied by the term "as selected," Architect will make selection.
5. Where products are accompanied by the term "match sample," sample to be matched is Architect's.
6. Descriptive, performance, and reference standard requirements in the Specifications establish "salient characteristics" of products.

B. Product Selection Procedures:

1. Product: Where Specifications name a single product and manufacturer, provide the named product that complies with requirements.
2. Manufacturer/Source: Where Specifications name a single manufacturer or source, provide a product by the named manufacturer or source that complies with requirements.
3. Products: Where Specifications include a list of names of both products and manufacturers, provide one of the products listed that complies with requirements.
4. Manufacturers: Where Specifications include a list of manufacturers' names, provide a product by one of the manufacturers listed that complies with requirements.
5. Available Products: Where Specifications include a list of names of both products and manufacturers, provide one of the products listed, or an unnamed product, that complies

with requirements. Comply with provisions in Part 2 "Comparable Products" Article for consideration of an unnamed product.

6. Available Manufacturers: Where Specifications include a list of manufacturers, provide a product by one of the manufacturers listed, or an unnamed manufacturer, that complies with requirements. Comply with provisions in Part 2 "Comparable Products" Article for consideration of an unnamed product.
7. Product Options: Where Specifications indicate that sizes, profiles, and dimensional requirements on Drawings are based on a specific product or system, provide the specified product or system. Comply with provisions in Part 2 "Product Substitutions" Article for consideration of an unnamed product or system.
8. Basis-of-Design Product: Where Specifications name a product and include a list of manufacturers, provide the specified product or a comparable product by one of the other named manufacturers. Drawings and Specifications indicate sizes, profiles, dimensions, and other characteristics that are based on the product named. Comply with provisions in Part 2 "Comparable Products" Article for consideration of an unnamed product by the other named manufacturers.
9. Visual Matching Specification: Where Specifications require matching an established Sample, select a product that complies with requirements and matches Architect's sample. Architect's decision will be final on whether a proposed product matches.

    a. If no product available within specified category matches and complies with other specified requirements, comply with provisions in Part 2 "Product Substitutions" Article for proposal of product.

10. Visual Selection Specification: Where Specifications include the phrase "as selected from manufacturer's colors, patterns, textures" or a similar phrase, select a product that complies with other specified requirements.

    a. Standard Range: Where Specifications include the phrase "standard range of colors, patterns, textures" or similar phrase, Architect will select color, pattern, density, or texture from manufacturer's product line that does not include premium items.
    b. Full Range: Where Specifications include the phrase "full range of colors, patterns, textures" or similar phrase, Architect will select color, pattern, density, or texture from manufacturer's product line that includes both standard and premium items.

2.2 PRODUCT SUBSTITUTIONS

A. Timing: Architect will consider requests for substitution if received within thirty (30) days after the Notice to Proceed. Requests received after that time may be considered or rejected at discretion of Architect.

B. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:

1. Requested substitution offers Owner a substantial advantage in cost, time, energy conservation, or other considerations, after deducting additional responsibilities Owner must assume. Owner's additional responsibilities may include compensation to Architect for redesign and evaluation services, increased cost of other construction by Owner, and similar considerations.
2. Requested substitution does not require extensive revisions to the Contract Documents.
3. Requested substitution is consistent with the Contract Documents and will produce indicated results.

4. Substitution request is fully documented and properly submitted.
5. Requested substitution will not adversely affect Contractor's Construction Schedule.
6. Requested substitution has received necessary approvals of authorities having jurisdiction.
7. Requested substitution is compatible with other portions of the Work.
8. Requested substitution has been coordinated with other portions of the Work.
9. Requested substitution provides specified warranty.

2.3 COMPARABLE PRODUCTS

A. Conditions: Architect will consider Contractor's request for comparable product when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:

1. Evidence that the proposed product does not require extensive revisions to the Contract Documents, that it is consistent with the Contract Documents and will produce the indicated results, and that it is compatible with other portions of the Work.
2. Detailed comparison of significant qualities of proposed product with those named in the Specifications. Significant qualities include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
3. Evidence that proposed product provides specified warranty.
4. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners, if requested.
5. Samples, if requested.

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01 73 00 - EXECUTION

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes general procedural requirements governing execution of the Work including, but not limited to, the following:

1. As built survey map.
2. Construction layout.
3. Field engineering and surveying.
4. General installation of products.
5. Progress cleaning.
6. Starting and adjusting.
7. Protection of installed construction.
8. Correction of the Work.

B. See Division 01 Section "Closeout Procedures" for submitting final property survey with Project Record Documents, recording of Owner-accepted deviations from indicated lines and levels, and final cleaning.

1.2 SUBMITTALS

A. Certificates: Submit certificate signed by professional engineer certifying that location and elevation of improvements comply with requirements.

B. Landfill Receipts: Submit copy of receipts issued by a landfill facility, licensed to accept hazardous materials, for hazardous waste disposal.

C Certified Surveys: Submit six (6) copies signed by land surveyor or professional engineer.

D. Final Property Survey: Submit six (6) copies showing the Work performed and record survey data.

1.3 QUALITY ASSURANCE

A. Land Surveyor Qualifications: A professional land surveyor who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing land-surveying services of the kind indicated.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

A. As-built Survey: Contractor shall contact surveyor to survey site to produce as-built survey plan. Provide six (6) copies to Owner.

B. Existing Conditions: The existence and location of site improvements, utilities, and other construction indicated as existing are not guaranteed. Before beginning work, investigate and verify the existence and location of mechanical and electrical systems and other construction affecting the Work.

1. Before construction, verify the location and points of connection of utility services.

C. Existing Utilities: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities and other construction affecting the Work.

1. Before construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, and water-service piping; and underground electrical services.
2. Furnish location data for work related to Project that must be performed by public utilities serving Project site.

D. Acceptance of Conditions: Examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.

1. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
2. Examine roughing-in for mechanical and electrical systems to verify actual locations of connections before equipment and fixture installation.
3. Examine walls, floors, and roofs for suitable conditions where products and systems are to be installed.
4. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

3.2 PREPARATION

A. Existing Utility Information: Furnish information to local utility and Owner that is necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction. Coordinate with authorities having jurisdiction.

B. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

C. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.

D. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents, submit a request for information to Architect. Include a detailed description of problem encountered, together with recommendations for changing the Contract Documents. Submit requests on CSI Form 13.2A, "Request for Interpretation."

3.3 CONSTRUCTION LAYOUT

A. Verification: Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to the property survey and existing benchmarks. If discrepancies are discovered, notify Architect and Project Manager promptly.

B. General: Engage a land surveyor or professional engineer to lay out the Work using accepted surveying practices.

1. Establish benchmarks and control points to set lines and levels at each story of construction and elsewhere as needed to locate each element of Project.
2. Establish dimensions within tolerances indicated. Do not scale Drawings to obtain required dimensions.
3. Inform installers of lines and levels to which they must comply.
4. Check the location, level and plumb, of every major element as the Work progresses.
5. Notify Architect and Project Manager when deviations from required lines and levels exceed allowable tolerances.
6. Close site surveys with an error of closure equal to or less than the standard established by authorities having jurisdiction.

C. Site Improvements: Locate and lay out site improvements, including pavements, grading, fill and topsoil placement, utility slopes, and invert elevations.

D. Building Lines and Levels: Locate and lay out control lines and levels for structures, building foundations, column grids, and floor levels, including those required for mechanical and electrical work. Transfer survey markings and elevations for use with control lines and levels. Level foundations and piers from two or more locations.

E. Record Log: Maintain a log of layout control work. Record deviations from required lines and levels. Include beginning and ending dates and times of surveys, weather conditions, name and duty of each survey party member, and types of instruments and tapes used. Make the log available for reference by Architect and Project Manager.

3.4 FIELD ENGINEERING

A. Reference Points: Locate existing permanent benchmarks, control points, and similar reference points before beginning the Work. Preserve and protect permanent benchmarks and control points during construction operations.

3.5 INSTALLATION

A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.

1. Make vertical work plumb and make horizontal work level.
2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
3. Conceal pipes, ducts, and wiring in finished areas, unless otherwise indicated.

B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.

C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.

D. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.

E. Tools and Equipment: Do not use tools or equipment that produce harmful noise levels.

F. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.

G. Anchors and Fasteners: Provide anchors and fasteners as required to anchor each component securely in place, accurately located and aligned with other portions of the Work.

1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Architect.
2. Allow for building movement, including thermal expansion and contraction.
3. Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.

H. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.

I. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

3.6 PROGRESS CLEANING

A. General: Clean Project site and work areas daily, including common areas. Coordinate progress cleaning for joint-use areas where more than one installer has worked. Enforce requirements strictly. Dispose of materials lawfully.

1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
2. Do not hold materials more than 7 days during normal weather or 3 days if the temperature is expected to rise above 80 deg F (27 deg C).
3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.

B. Site: Maintain Project site free of waste materials and debris.

C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.

1. Remove liquid spills promptly.
2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.

D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.

E. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.

F. Exposed Surfaces in Finished Areas: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.

G. Waste Disposal: Burying or burning waste materials on-site will not be permitted. Washing waste materials down sewers or into waterways will not be permitted.

H. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.

I. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.

J. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

3.7 STARTING AND ADJUSTING

A. Start equipment and operating components to confirm proper operation. Remove malfunctioning units, replace with new units, and retest.

B. Adjust operating components for proper operation without binding. Adjust equipment for proper operation.

C. Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.

D. Manufacturer's Field Service: If a factory-authorized service representative is required to inspect field-assembled components and equipment installation, comply with qualification requirements in Division 01 Section "Quality Requirements."

3.8 PROTECTION OF INSTALLED CONSTRUCTION

A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.

B. Comply with manufacturer's written instructions for temperature and relative humidity.

3.9 CORRECTION OF THE WORK

A. Repair or remove and replace defective construction. Restore damaged substrates and finishes. Comply with requirements in Division 01 Section "Cutting and Patching."

1. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment.

B. Restore permanent facilities used during construction to their specified condition.

C. Remove and replace damaged surfaces that are exposed to view if surfaces cannot be repaired without visible evidence of repair.

D. Repair components that do not operate properly. Remove and replace operating components that cannot be repaired.

E. Remove and replace chipped, scratched, and broken glass or reflective surfaces.

END OF SECTION

SECTION 01 74 19 - CONSTRUCTION WASTE MANAGEMENT

PART 1 – GENERAL

1.01 SUMMARY

A. Section includes administrative and procedural requirements for the following:
   1. Salvaging nonhazardous demolition and construction waste.
   2. Recycling nonhazardous demolition and construction waste.
   3. Disposing of nonhazardous demolition and construction waste.

1.02 DEFINITIONS

A. Construction Waste: Building and site improvement materials and other solid waste resulting from construction, remodeling, renovation, or repair operations. Construction waste includes packaging.
B. Demolition Waste: Building and site improvement materials resulting from demolition or selective demolition operations.
C. Disposal: Removal off-site of demolition and construction waste and subsequent sale, recycling, reuse, or deposit in landfill or incinerator acceptable to authorities having jurisdiction.
D. Recycle: Recovery of demolition or construction waste for subsequent processing in preparation for reuse.
E. Salvage: Recovery of demolition or construction waste and subsequent sale or reuse in another facility.
F. Salvage and Reuse: Recovery of demolition or construction waste and subsequent incorporation into the Work.
G. Source Separated Method: Sorting recovered materials into specific material types, with a minimum amount of contamination between materials on site.
H. Commingled Method: Collecting recovered material types into a single bin or mixed collection system on site, then separating materials into recyclable material types in an off-site facility.

1.03 PERFORMANCE REQUIREMENTS

A. General: Achieve end-of-Project rates for salvage/recycling of 75 percent by weight of total non-hazardous solid waste generated by the Work across a minimum of at least four material streams. Practice efficient waste management in the use of materials in the course of the Work. Use all reasonable means to divert construction and demolition waste from landfills and incinerators.
   Facilitate recycling and salvage of materials.
   1. Use source-separated method or commingled method, at Contractor's option.
   2. Packaging: Regardless of salvage/recycle goal indicated in "General" Paragraph above, salvage or recycle 100 percent of the following uncontaminated packaging materials:
      a. Paper.
      b. Cardboard.
      c. Boxes.
      d. Plastic sheet and film.
      e. Polystyrene packaging.
      f. Wood crates.
      g. Plastic pails.

1.04 ACTION SUBMITTALS

- Waste Management Plan: Submit plan within 30 days of date established for the Notice to

Proceed.

1.05 INFORMATIONAL SUBMITTALS

A. Waste Reduction Progress Reports: Concurrent with each Application for Payment, submit report. Include the following information:
   1. Material category.
   2. Generation point of waste.
   3. Total quantity of waste in tons
   4. Quantity of waste salvaged, both estimated and actual in tons
   5. Quantity of waste recycled, both estimated and actual in tons
   6. Total quantity of waste recovered (salvaged plus recycled) in tons
   7. Total quantity of waste recovered (salvaged plus recycled) as a percentage of total waste.
B. Records of Donations: Indicate receipt and acceptance of salvageable waste donated to individuals and organizations. Indicate whether organization is tax exempt.
C. Records of Sales: Indicate receipt and acceptance of salvageable waste sold to individuals and organizations. Indicate whether organization is tax exempt.
D. Recycling and Processing Facility Records: Indicate receipt and acceptance of recyclable waste by recycling and processing facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.
E. Landfill and Incinerator Disposal Records: Indicate receipt and acceptance of waste by landfills and incinerator facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.
F. Qualification Data: For refrigerant recovery technician.
G. Statement of Refrigerant Recovery: Signed by refrigerant recovery technician responsible for recovering refrigerant, stating that all refrigerant that was present was recovered and that recovery was performed according to EPA regulations. Include name and address of technician and date refrigerant was recovered.

1.06 QUALITY ASSURANCE

A. Refrigerant Recovery Technician Qualifications: Certified by EPA-approved certification program.
B. Regulatory Requirements: Comply with hauling and disposal regulations of authorities having jurisdiction.
C. Waste Management Conference: Conduct conference at Project site to comply with requirements in Section 01 31 00 "Project Management and Coordination." Review methods and procedures related to waste management including, but not limited to, the following:
   1. Review and discuss waste management plan including responsibilities of waste management coordinator.
   2. Review requirements for documenting quantities of each type of waste and its disposition.
   3. Review and finalize procedures for materials separation and verify availability of containers and bins needed to avoid delays.
   4. Review procedures for periodic waste collection and transportation to recycling and disposal facilities.
   5. Review waste management requirements for each trade.

1.07 WASTE MANAGEMENT PLAN

A. General: Develop a waste management plan according to ASTM E 1609 and requirements in this Section. Plan shall consist of waste identification, waste reduction work plan, and cost/revenue analysis. Indicate quantities by weight or volume, but use same units of measure throughout waste management plan.
B. Waste Reduction Work Plan: List each type of waste and whether it will be salvaged,

recycled, or disposed of in landfill or incinerator. Include points of waste generation, total quantity of each type of waste, quantity for each means of recovery, and handling and transportation procedures.

1. Salvaged Materials for Reuse: For materials that will be salvaged and reused in this Project, describe methods for preparing salvaged materials before incorporation into the Work.
2. Salvaged Materials for Sale: For materials that will be sold to individuals and organizations, include list of their names, addresses, and telephone numbers.
3. Salvaged Materials for Donation: For materials that will be donated to individuals and organizations, include list of their names, addresses, and telephone numbers.
4. Manufacturers' Reclamation Programs: For materials that will be collected by manufacturers of replacement products, such as ceiling panels and carpeting, include list of manufacturers and their local receivers.
5. Recycled Materials: Include list of local receivers and processors and type of recycled materials each will accept. Include names, addresses, and telephone numbers.
6. Disposed Materials: Indicate how and where materials will be disposed of. Include name, address, and telephone number of each landfill and incinerator facility.
7. Handling and Transportation Procedures: Include method that will be used for separating recyclable waste including sizes of containers, container labeling, and designated location where materials separation will be performed.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.01 PLAN IMPLEMENTATION

A. General: Implement approved waste management plan. Provide handling, containers, storage, signage, transportation, and other items as required to implement waste management plan during the entire duration of the Contract.
   1. Comply with operation, termination, and removal requirements in Section 01 50 00 "Temporary Facilities and Controls."
B. Training: Train workers, subcontractors, and suppliers on proper waste management procedures, as appropriate for the Work.
   1. Distribute waste management plan to everyone concerned within three days of submittal return.
   2. Distribute waste management plan to entities when they first begin work on-site. Review plan procedures and locations established for salvage, recycling, and disposal.

3.02 SALVAGING DEMOLITION WASTE

A. Salvaged Items for Reuse in the Work: Salvage items for reuse and handle as follows:
   1. Clean salvaged items.
   2. Pack or crate items after cleaning. Identify contents of containers with label indicating elements, date of removal, quantity, and location where removed.
   3. Store items in a secure area until installation.
   4. Protect items from damage during transport and storage.
   5. Install salvaged items to comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make items functional for use indicated.

3.03 DISPOSAL OF WASTE

A. General: Except for items or materials to be salvaged, recycled, or otherwise reused, remove waste materials from Project site and legally dispose of them in a landfill or incinerator

acceptable to authorities having jurisdiction.

1. Except as otherwise specified, do not allow waste materials that are to be disposed of accumulate on-site.
2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

B. Burning: Do not burn waste materials.

C. Disposal: Remove waste materials from Owner's property and legally dispose of them.

END OF SECTION

SECTION 01 77 00 - CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
   1. Inspection procedures.
   2. Warranties.
   3. Final cleaning.
   4. Final site survey and As-built Plans

B. Related Sections include the following:
   1. Section 017300 – Execution: Progress cleaning of Project site.
   2. Section 017823 - Operation and Maintenance Data: Operation and maintenance manual requirements.
   3. Section 017839 - Project Record Documents: Submitting Record Drawings, Record Specifications, and Record Product Data.
   4. Section 017900 - Demonstration and Training: Requirements for instructing Owner's personnel.
   5. Divisions 02 through 33 Sections for specific closeout and special cleaning requirements for the Work in those Sections.

1.2 SUBSTANTIAL COMPLETION

A. Preliminary Procedures: Before requesting inspection for determining date of Substantial Completion, complete the following. List items below that are incomplete in request.
   1. Prepare a list of items to be completed and corrected (punch list), the value of items on the list, and reasons why the Work is not complete.
   2. Advise Owner and Project Manager of pending insurance changeover requirements.
   3. Submit specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
   4. Obtain and submit releases permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
   5. Prepare and submit Project Record Documents, operation and maintenance manuals, Final Completion construction photographs, damage or settlement surveys, property surveys, and similar final record information.
   6. Deliver tools, spare parts, extra materials, and similar items to location designated by Owner and/or Project Manager. Label with manufacturer's name and model number where applicable.
   7. Make final changeover of permanent locks and deliver keys to Owner and/or Project Manager. Advise Owner's personnel and/or Project Manager of changeover in security provisions.
   8. Complete startup testing of systems.
   9. Submit test/adjust/balance records.
   10. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
   11. Advise Owner and Project Manager of changeover in heat and other utilities.
   12. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.
   13. Complete final cleaning requirements, including touchup painting.

14. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.

B. Inspection: Submit a written request for inspection for Substantial Completion. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Architect, that must be completed or corrected before certificate will be issued.
   1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
   2. Results of completed inspection will form the basis of requirements for Final Completion.

1.3 FINAL COMPLETION

A. Preliminary Procedures: Before requesting final inspection for determining date of Final Completion, complete the following:
   1. Submit a final Application for Payment according to Section 01 29 00 - Payment Procedures.
   2. Submit certified copy of Architect's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
   3. Submit evidence of final, continuing insurance coverage complying with insurance requirements.
   4. Submit pest-control final inspection report and warranty.
   5. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems.

B. Inspection: Submit a written request for final inspection for acceptance. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.
   1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

1.4 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

A. Preparation: Submit three copies of list. Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.
   1. Organize list of spaces in sequential order, starting with exterior areas first and proceeding from lowest floor to highest floor.
   2. Organize items applying to each space by major element, including categories for ceiling, individual walls, floors, equipment, and building systems.
   3. Include the following information at the top of each page:
      a. Project name.
      b. Date.
      c. Name of Architect.
      d. Name of Contractor.
      e. Page number.

1.5 FINAL SITE SURVEY & AS-BUILT PLANS

A. Contractor shall provide final as-built survey, site plans and building plans as a condition of Final Completion

1.6 WARRANTIES

A. Submittal Time: Submit written warranties on request of Architect for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated.

B. Partial Occupancy: Submit properly executed warranties within 15 days of completion of designated portions of the Work that are completed and occupied or used by Owner during construction period by separate agreement with Contractor.

C. Organize warranty documents into an orderly sequence based on the table of contents of the Project Manual.
   1. Bind warranties and bonds in heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch (215-by-280-mm) paper.
   2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.
   3. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.
   4. All written warranties shall be scanned and the electronic file shall be provided to the Owner using the format required by the Owner.

D. Provide additional copies of each warranty to include in operation and maintenance manuals.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

PART 3 - EXECUTION

3.1 FINAL CLEANING

A. General: Provide final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.

B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance Project. Comply with manufacturer's written instructions.
   1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a portion of Project:
      a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
      b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
      c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
      d. Remove tools, construction equipment, machinery, and surplus material from Project site.

e. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
f. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
g. Sweep concrete floors broom clean in unoccupied spaces.
h. Vacuum carpet and similar soft surfaces, removing debris and excess nap; shampoo if visible soil or stains remain.
i. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials. Polish mirrors and glass, taking care not to scratch surfaces.
j. Remove labels that are not permanent.
k. Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.
    1) Do not paint over "UL" and similar labels, including mechanical and electrical nameplates.
l. Wipe surfaces of mechanical and electrical equipment and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
m. Replace parts subject to unusual operating conditions.
n. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
o. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.
p. Clean ducts, blowers, and coils if units were operated without filters during construction.
q. Clean light fixtures, lamps, globes, and reflectors to function with full efficiency. Replace burned-out bulbs, and those noticeably dimmed by hours of use, and defective and noisy starters in fluorescent and mercury vapor fixtures to comply with requirements for new fixtures.
r. Leave Project clean and ready for occupancy.

C. Pest Control: Engage an experienced, licensed exterminator to make a final inspection and rid Project of rodents, insects, and other pests. Prepare a report.

D. Comply with safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on Owner's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from Project site and dispose of lawfully.

END OF SECTION

SECTION 01 78 23 - OPERATION AND MAINTENANCE DATA

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes administrative and procedural requirements for preparing operation and maintenance manuals for all elements of the projects as a condition of Final Completion including the following:

1. Emergency manuals.
2. Operation manuals for systems, subsystems, and equipment.
3. Maintenance manuals for the care and maintenance of products, materials, finishes, systems and equipment.

B. See Divisions 02 through 33 Sections for specific operation and maintenance manual requirements for the Work in those Sections.

1.2 SUBMITTALS

A. Manual: Submit six (6) copies of each manual in final form at least fifteen (15) days before final inspection. Architect will return copy with comments within fifteen 15 days after final inspection.

1. Correct or modify each manual to comply with Architect's comments. Submit two (2) copies of each corrected manual within fifteen (15) days of receipt of Architect's comments.

2. All Operations and Maintenance Documents shall be scanned and the electronic file shall be provided to the Owner using the format required by the Owner.

PART 2 - PRODUCTS

2.1 MANUALS, GENERAL

A. Organization: Unless otherwise indicated, organize each manual into a separate section for each system and subsystem, and a separate section for each piece of equipment not part of a system. Each manual shall contain a title page, table of contents, and manual contents.

B. Title Page: Enclose title page in transparent plastic sleeve. Include the following information:

1. Subject matter included in manual.
2. Name and address of Project.
3. Name and address of Owner.
4. Date of submittal.
5. Name, address, and telephone number of Contractor.
6. Name and address of Architect.
7. Cross-reference to related systems in other operation and maintenance manuals.

C. Table of Contents: List each product included in manual, identified by product name, indexed to the content of the volume, and cross-referenced to Specification Section number in Project Manual.

D. Manual Contents: Organize into sets of manageable size. Arrange contents alphabetically by system, subsystem, and equipment. If possible, assemble instructions for subsystems, equipment, and components of one system into a single binder.

1. Binders: Heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, in thickness necessary to accommodate contents, sized to hold 8-1/2-by-11-inch (215-by-280-mm) paper; with clear plastic sleeve on spine to hold label describing contents and with pockets inside covers to hold folded oversize sheets.

    a. Identify each binder on front and spine, with printed title "OPERATION AND MAINTENANCE MANUAL," Project title or name, and subject matter of contents. Indicate volume number for multiple-volume sets.

2. Dividers: Heavy-paper dividers with plastic-covered tabs for each section. Mark each tab to indicate contents. Include typed list of products and major components of equipment included in the section on each divider, cross-referenced to Specification Section number and title of Project Manual.
3. Protective Plastic Sleeves: Transparent plastic sleeves designed to enclose diagnostic software diskettes for computerized electronic equipment.
4. Drawings: Attach reinforced, punched binder tabs on drawings and bind with text.

    a. If oversize drawings are necessary, fold drawings to same size as text pages and use as foldouts.
    b. If drawings are too large to be used as foldouts, fold and place drawings in labeled envelopes and bind envelopes in rear of manual. At appropriate locations in manual, insert typewritten pages indicating drawing titles, descriptions of contents, and drawing locations.

2.2 EMERGENCY MANUALS

A. Content: Organize manual into a separate section for type of emergency, emergency instructions, and emergency procedures.

B. Type of Emergency: Where applicable for each type of emergency indicated below, include instructions and procedures for each system, subsystem, piece of equipment, and component for fire, flood, gas leak, water leak, power failure, water outage, equipment failure and chemical release or spill.

C. Emergency Instructions: Describe and explain warnings, trouble indications, error messages, and similar codes and signals. Include responsibilities of Owner's operating personnel for notification of Installer, supplier, and manufacturer to maintain warranties.

D. Emergency Procedures: Include instructions on stopping, shutdown instructions for each type of emergency, operating instructions for conditions outside normal operating limits, and required sequences for electric or electronic systems.

2.3 OPERATION MANUALS

A. Content: In addition to requirements in this Section, include operation data required in individual Specification Sections and equipment descriptions, operating standards, operating procedures, operating logs, wiring and control diagrams, and license requirements.

B. Descriptions: Include the following:

1. Product name and model number.
2. Manufacturer's name.
3. Equipment identification with serial number of each component.
4. Equipment function.
5. Operating characteristics.
6. Limiting conditions.
7. Performance curves.
8. Engineering data and tests.
9. Complete nomenclature and number of replacement parts.

C. Operating Procedures: Include start-up, break-in, and control procedures; stopping and normal shutdown instructions; routine, normal, seasonal, and weekend operating instructions; and required sequences for electric or electronic systems.

D. Systems and Equipment Controls: Describe the sequence of operation, and diagram controls as installed.

E. Piped Systems: Diagram piping as installed, and identify color-coding where required for identification.

2.4 PRODUCT MAINTENANCE MANUAL

A. Content: Organize manual into a separate section for each product, material, and finish. Include source information, product information, maintenance procedures, repair materials and sources, and warranties and bonds, as described below.

B. Source Information: List each product included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual.

C. Product Information: Include the following, as applicable:

1. Product name and model number.
2. Manufacturer's name.

3. Color, pattern, and texture.
4. Material and chemical composition.
5. Reordering information for specially manufactured products.

D. Maintenance Procedures: Include manufacturer's written recommendations and inspection procedures, types of cleaning agents, methods of cleaning, schedule for cleaning and maintenance, and repair instructions.

E. Repair Materials and Sources: Include lists of materials and local sources of materials and related services.

F. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.

2.5 SYSTEMS AND EQUIPMENT MAINTENANCE MANUAL

A. Content: For each system, subsystem, and piece of equipment not part of a system, include source information, manufacturers' maintenance documentation, maintenance procedures, maintenance and service schedules, spare parts list and source information, maintenance service contracts, and warranty and bond information, as described below.

B. Source Information: List each system, subsystem, and piece of equipment included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual.

C. Manufacturers' Maintenance Documentation: Manufacturers' maintenance documentation including maintenance instructions, drawings and diagrams for maintenance, nomenclature of parts and components, and recommended spare parts for each component part or piece of equipment:

D. Maintenance Procedures: Include test and inspection instructions, troubleshooting guide, disassembly instructions, and adjusting instructions, and demonstration and training videotape if available, that detail essential maintenance procedures:

E. Maintenance and Service Schedules: Include service and lubrication requirements, list of required lubricants for equipment, and separate schedules for preventive and routine maintenance and service with standard time allotment.

F. Spare Parts List and Source Information: Include lists of replacement and repair parts, with parts identified and cross-referenced to manufacturers' maintenance documentation and local sources of maintenance materials and related services.

G. Maintenance Service Contracts: Include copies of maintenance agreements with name and telephone number of service agent.

H. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.

PART 3 - EXECUTION

3.1 MANUAL PREPARATION

A. Emergency Manual: Assemble a complete set of emergency information indicating procedures for use by emergency personnel and by Owner's operating personnel for types of emergencies indicated.

B. Product Maintenance Manual: Assemble a complete set of maintenance data indicating care and maintenance of each product, material, and finish incorporated into the Work.

C. Operation and Maintenance Manuals: Assemble a complete set of operation and maintenance data indicating operation and maintenance of each system, subsystem, and piece of equipment not part of a system.

D. Manufacturers' Data: Where manuals contain manufacturers' standard printed data, include only sheets pertinent to product or component installed. Mark each sheet to identify each product or component incorporated into the Work. If data include more than one item in a tabular format, identify each item using appropriate references from the Contract Documents. Identify data applicable to the Work and delete references to information not applicable.

E. Drawings: Prepare drawings supplementing manufacturers' printed data to illustrate the relationship of component parts of equipment and systems and to illustrate control sequence and flow diagrams. Coordinate these drawings with information contained in Record Drawings to ensure correct illustration of completed installation.

1. Do not use original Project Record Documents as part of operation and maintenance manuals.

F. Comply with Division 01 Section "Closeout Procedures" for schedule for submitting operation and maintenance documentation.

END OF SECTION

SECTION 01 78 39 - PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes administrative and procedural requirements for Project Record Documents, including the following:
   1. Record Drawings.
   2. Record Specifications.
   3. Record Product Data.

B. Related Sections include the following:
   1. Section 017700 - Closeout Procedures: General closeout procedures.
   2. Section 017823 - Operation and Maintenance Data: Operation and maintenance manual requirements.
   3. Divisions 02 through 33 Sections for specific requirements for Project Record Documents of the Work in those Sections.

1.2 SUBMITTALS

A. Record Drawings: Comply with the following:
   1. Number of Copies: Submit one set(s) of marked-up Record Prints.
      a. Final Submittal: Submit one set(s) of marked-up Record Prints, one set(s) of Record CAD Drawing files, one set(s) of Record CAD Drawing plots, and three copies printed from record plots. Plot and print each Drawing, whether or not changes and additional information were recorded.

B. Record Specifications: Submit one copy of Project's Specifications, including addenda and contract modifications.

C. Record Product Data: Submit one copy of each Product Data submittal.
   1. Where Record Product Data is required as part of operation and maintenance manuals, submit marked-up Product Data as an insert in manual instead of submittal as Record Product Data.

PART 2 - PRODUCTS

2.1 RECORD DRAWINGS

A. Record Prints: Maintain one set of blue- or black-line white prints of the Contract Drawings and Shop Drawings.
   1. Preparation: Mark Record Prints to show the actual installation where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, to prepare the marked-up Record Prints.
      a. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.
      b. Accurately record information in an understandable drawing technique.
      c. Record data as soon as possible after obtaining it. Record and check the markup before enclosing concealed installations.
   2. Content: Types of items requiring marking include, but are not limited to, the following:
      a. Dimensional changes to Drawings.

b. Revisions to details shown on Drawings.
c. Depths of foundations below first floor.
d. Locations and depths of underground utilities.
e. Revisions to routing of piping and conduits.
f. Revisions to electrical circuitry.
g. Actual equipment locations.
h. Duct size and routing.
i. Locations of concealed internal utilities.
j. Changes made by Change Order or Work Change Directive.
k. Changes made following Architect's written orders.
l. Details not on the original Contract Drawings.
m. Field records for variable and concealed conditions.
n. Record information on the Work that is shown only schematically.

3. Mark the Contract Drawings or Shop Drawings, whichever is most capable of showing actual physical conditions, completely and accurately. If Shop Drawings are marked, show cross-reference on the Contract Drawings.
4. Mark record sets with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at same location.
5. Mark important additional information that was either shown schematically or omitted from original Drawings.
6. Note Construction Change Directive numbers, alternate numbers, Change Order numbers, and similar identification, where applicable.

B. Record Transparencies: Immediately before inspection for Certificate of Substantial Completion, review marked-up Record Prints with Architect and Project Manager. When authorized, prepare a full set of corrected transparencies of the Contract Drawings and Shop Drawings.
1. Incorporate changes and additional information previously marked on Record Prints. Erase, redraw, and add details and notations where applicable.
2. Refer instances of uncertainty to Architect through Project Manager for resolution.
3. Owner will furnish Contractor one set of transparencies of the Contract Drawings for use in recording information.
4. Print the Contract Drawings and Shop Drawings for use as Record Transparencies. Architect will make the Contract Drawings available to Contractor's print shop.

C. Record CAD Drawings: Immediately before inspection for Certificate of Substantial Completion, review marked-up Record Prints with Architect and Project Manager. When authorized, prepare a full set of corrected CAD Drawings of the Contract Drawings, as follows:
1. Format: Same CAD Project, version, and operating system as the original Contract Drawings.
2. Format: AutoCAD , operating in Microsoft Windows operating system.
3. Incorporate changes and additional information previously marked on Record Prints. Delete, redraw, and add details and notations where applicable.
4. Refer instances of uncertainty to Architect through Project Manager for resolution.
5. Architect will furnish Contractor one set of CAD Drawings of the Contract Drawings for use in recording information.
a. Architect makes no representations as to the accuracy or completeness of CAD Drawings as they relate to the Contract Drawings.
b. CAD Software Project: The Contract Drawings are available in <Insert name and version of CAD Project and operating system.

D. Newly Prepared Record Drawings: Prepare new Drawings instead of preparing Record Drawings where Architect determines that neither the original Contract Drawings nor Shop Drawings are suitable to show actual installation.
1. New Drawings may be required when a Change Order is issued as a result of accepting an alternate, substitution, or other modification.

2. Consult Architect and Project Manager for proper scale and scope of detailing and notations required to record the actual physical installation and its relation to other construction. Integrate newly prepared Record Drawings into Record Drawing sets; comply with procedures for formatting, organizing, copying, binding, and submitting.

E. Format: Identify and date each Record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location.
1. Record Prints: Organize Record Prints and newly prepared Record Drawings into manageable sets. Bind each set with durable paper cover sheets. Include identification on cover sheets.
2. Record CAD Drawings: Organize CAD information into separate electronic files that correspond to each sheet of the Contract Drawings. Name each file with the sheet identification. Include identification in each CAD file.
3. Identification: As follows:
   a. Project name.
   b. Date.
   c. Designation "PROJECT RECORD DRAWINGS."
   d. Name of Architect and Project Manager.
   e. Name of Contractor.

2.2 RECORD SPECIFICATIONS

A. Preparation: Mark Specifications to indicate the actual product installation where installation varies from that indicated in Specifications, addenda, and contract modifications.
1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
2. For each principal product, indicate whether Record Product Data has been submitted in operation and maintenance manuals instead of submitted as Record Product Data.
3. Note related Change Orders and Record Drawings where applicable.

2.3 RECORD PRODUCT DATA

A. Preparation: Mark Product Data to indicate the actual product installation where installation varies substantially from that indicated in Product Data submittal.
1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
2. Include significant changes in the product delivered to Project site and changes in manufacturer's written instructions for installation.
3. Note related Change Orders and Record Drawings where applicable.

2.4 MISCELLANEOUS RECORD SUBMITTALS

A. Assemble miscellaneous records required by other Specification Sections for miscellaneous record keeping and submittal in connection with actual performance of the Work. Bind or file miscellaneous records and identify each, ready for continued use and reference.

PART 3 - EXECUTION

3.1 RECORDING AND MAINTENANCE

A. Recording: Maintain one copy of each submittal during the construction period for Project Record Document purposes. Post changes and modifications to Project Record Documents as they occur; do not wait until the end of Project.

B. Maintenance of Record Documents and Samples: Store Record Documents and Samples in the field office apart from the Contract Documents used for construction. Do not use Project Record Documents for construction purposes. Maintain Record Documents in good order and in a clean, dry, legible condition, protected from deterioration and loss. Provide access to Project Record Documents for Architect's reference during normal working hours.

END OF SECTION

SECTION 01 79 00 - DEMONSTRATION AND TRAINING

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes administrative and procedural requirements for instructing Owner's personnel, including the following:

1. Demonstration of operation of systems, subsystems, and equipment.
2. Training in operation and maintenance of systems, subsystems, and equipment.
3. Demonstration and training videotapes.

B. See Divisions 02 through 33 for specific requirements for demonstration and training for products in those Sections.

1.2 SUBMITTALS

A. Instruction Project: Submit six (6) copies of outline of instructional Project for demonstration and training, including a schedule of proposed dates, times, length of instruction time, and instructors' names for each training module. Include learning objective and outline for each training module.

1.3 QUALITY ASSURANCE

A. Facilitator Qualifications: A firm or individual experienced in training or educating maintenance personnel in a training Project similar in content and extent to that indicated for this Project, and whose work has resulted in training or education with a record of successful learning performance.

B. Instructor Qualifications: A factory-authorized service representative, complying with requirements in Division 01 Section "Quality Requirements," experienced in operation and maintenance procedures and training.

C. Pre-instruction Conference: Conduct conference at Project site. Review methods and procedures related to demonstration and training.

D. Coordinate content of training modules with content of approved emergency, operation, and maintenance manuals. Do not submit instruction Project until operation and maintenance data has been reviewed and approved by Architect.

PART 2 - PRODUCTS

2.1 INSTRUCTION PROJECT

A. Demonstration and training are required for all building systems. Operation and Maintenance manuals shall be provided prior to the scheduled demonstration and training.

B. Project Structure: Develop an instruction Project that includes individual training modules for each system and equipment not part of a system, as required by individual Specification Sections, and as follows:

C. Training Modules: Develop a learning objective and teaching outline for each module. Include a description of specific skills and knowledge that participant is expected to master. For each module, include instruction for the following:

1. Basis of System Design, Operational Requirements, and Criteria: Include system and equipment descriptions, operating standards, regulatory requirements, equipment function, operating characteristics, limiting conditions, and performance curves.
2. Documentation: Review emergency, operations, and maintenance manuals; Project Record Documents; identification systems; warranties and bonds; and maintenance service agreements.
3. Emergencies: Include instructions on stopping; shutdown instructions; operating instructions for conditions outside normal operating limits; instructions on meaning of warnings, trouble indications, and error messages; and required sequences for electric or electronic systems.
4. Operations: Include startup, break-in, control, and safety procedures; stopping and normal shutdown instructions; routine, normal, seasonal, and weekend operating instructions; operating procedures for emergencies and equipment failure; and required sequences for electric or electronic systems.
5. Adjustments: Include alignments and checking, noise, vibration, economy, and efficiency adjustments.
6. Troubleshooting: Include diagnostic instructions and test and inspection procedures.
7. Maintenance: Include inspection procedures, types of cleaning agents, methods of cleaning, procedures for preventive and routine maintenance, and instruction on use of special tools.
8. Repairs: Include diagnosis, repair, and disassembly instructions; instructions for identifying parts; and review of spare parts needed for operation and maintenance.

PART 3 - EXECUTION

3.1 INSTRUCTION

A. Facilitator: Engage a qualified facilitator to prepare instruction Project and training modules, to coordinate instructors, and to coordinate between Contractor and Owner for number of participants, instruction times, and location.

B. Engage qualified instructors to instruct Owner's personnel to adjust, operate, and maintain systems, subsystems, and equipment not part of a system.

1. Owner will furnish an instructor to describe Owner's operational philosophy.

C. Scheduling: Provide instruction at mutually agreed on times. For equipment that requires seasonal operation, provide similar instruction at start of each season.

1. Schedule training with Owner, through Architect, and/or Project Manager with at least seven (7) days' advance notice.

D. Evaluation: At conclusion of each training module, assess and document each participant's mastery of module by use of a demonstration performance-based test.

END OF SECTION

SECTION 02 41 19 - SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:
   1. Demolition and removal of selected portions of building or structure.
   2. Salvage of existing items to be reused or recycled.

1.2 RELATED SECTIONS

A. Section 01 74 19 Construction Waste Management: Procedure for waste disposal.

1.3 SUBMITTALS

A. Qualification Data: For demolition firm and professional engineer.

B. Schedule of Selective Demolition Activities: Indicate the following:
   1. Detailed sequence of selective demolition and removal work, with starting and ending dates for each activity. Ensure Owner's on-site operations are uninterrupted.
   2. Interruption of utility services. Indicate how long utility services will be interrupted.
   3. Coordination for shutoff, capping, and continuation of utility services.
   4. Use of elevator and stairs.
   5. Locations of proposed dust- and noise-control temporary partitions and means of egress.
   6. Coordination of Owner's continuing occupancy of portions of existing building and of Owner's partial occupancy of completed Work.
   7. Means of protection for items to remain and items in path of waste removal from building.

C. Inventory: After selective demolition is complete, submit a list of items that have been removed and salvaged.

D. Pre-demolition Photographs: Show existing conditions of adjoining construction and site improvements, including finish surfaces, that might be misconstrued as damage caused by selective demolition operations.

E. Landfill Records: Indicate receipt and acceptance of hazardous wastes by a landfill facility licensed to accept hazardous wastes.

1.4 QUALITY ASSURANCE

A. Demolition Firm Qualifications: An experienced firm that has specialized in demolition work similar in material and extent to that indicated for this Project.

B. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.

C. Standards: Comply with ANSI A10.6 and NFPA 241.

D. Pre-demolition Conference: Conduct conference at Project site to comply with requirements in Division 01 Section "Project Management and Coordination." Review methods and procedures related to selective demolition including, but not limited to, the following:
   1. Inspect and discuss condition of construction to be selectively demolished.
   2. Review structural load limitations of existing structure.

3. Review and finalize selective demolition schedule and verify availability of materials, demolition personnel, equipment, and facilities needed to make progress and avoid delays.
4. Review requirements of work performed by other trades that rely on substrates exposed by selective demolition operations.
5. Review areas where existing construction is to remain and requires protection.

1.5 PROJECT CONDITIONS

A. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.
   1. Before selective demolition, Owner will remove the following items:
      a.

B. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.

C. Storage or sale of removed items or materials on-site is not permitted.

D. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.
   1. Maintain fire-protection facilities in service during selective demolition operations.

1.6 WARRANTY

A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during selective demolition, by methods and with materials so as not to void existing warranties.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that utilities have been disconnected and capped.

B. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.

C. Inventory and record the condition of items to be removed and reinstalled and items to be removed and salvaged.

D. When unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure the nature and extent of conflict. Promptly submit a written report to Architect.

E. Engage a professional engineer to survey condition of building to determine whether removing any element might result in structural deficiency or unplanned collapse of any portion of structure or adjacent structures during selective demolition operations.

F. Survey of Existing Conditions: Record existing conditions by use of measured drawings.

G. Perform surveys as the Work progresses to detect hazards resulting from selective demolition activities.

3.2 PREPARATION

A. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
   1. Comply with requirements for access and protection specified in Division 01 Section "Temporary Facilities and Controls."

B. Temporary Shoring: Provide and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.
   1. Strengthen or add new supports when required during progress of selective demolition.

3.3 SELECTIVE DEMOLITION, GENERAL

A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
   1. Proceed with selective demolition systematically, from higher to lower level. Complete selective demolition operations above each floor or tier before disturbing supporting members on the next lower level.
   2. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping, to minimize disturbance of adjacent surfaces. Temporarily cover openings to remain.
   3. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
   4. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain portable fire-suppression devices during flame-cutting operations.
   5. Maintain adequate ventilation when using cutting torches.
   6. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
   7. Remove structural framing members and lower to ground by method suitable to avoid free fall and to prevent ground impact or dust generation.
   8. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
   9. Dispose of demolished items and materials promptly.

B. Reuse of Building Elements: Project has been designed to result in end-of-Project rates for reuse of building elements. Do not demolish building elements beyond what is indicated on Drawings without Architect's approval.

C. Removed and Salvaged Items:
   1. Clean salvaged items.
   2. Pack or crate items after cleaning. Identify contents of containers.
   3. Store items in a secure area until delivery to Owner.
   4. Transport items to Owner's storage area designated by Owner or indicated on Drawings.
   5. Protect items from damage during transport and storage.

D. Removed and Reinstalled Items:
   1. Clean and repair items to functional condition adequate for intended reuse. Paint equipment to match new equipment.

2. Pack or crate items after cleaning and repairing. Identify contents of containers.
3. Protect items from damage during transport and storage.
4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.

E. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Architect, items may be removed to a suitable, protected storage location during selective demolition and cleaned and reinstalled in their original locations after selective demolition operations are complete.

3.4 SALVAGED ITEMS

A. Contractor shall coordinate with Owner on salvaging any existing plumbing fixtures, light fixtures and/or equipment prior to removal.

3.5 SELECTIVE DEMOLITION PROCEDURES FOR SPECIFIC MATERIALS

A. Masonry: Demolish in small sections. Cut masonry at junctures with construction to remain, using power-driven saw, then remove masonry between saw cuts.

B. Resilient Floor Coverings: Remove floor coverings and adhesive according to recommendations in RFCI-WP and its Addendum.

C. Air-Conditioning Equipment: Remove equipment without releasing refrigerants.

3.6 DISPOSAL OF DEMOLISHED MATERIALS

A. General: Except for items or materials indicated to be recycled, reused, salvaged, reinstalled, or otherwise indicated to remain Owner's property, remove demolished materials from Project site and legally dispose of them in an EPA-approved landfill.
   1. Do not allow demolished materials to accumulate on-site.
   2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

B. Burning: Do not burn demolished materials.

C. Disposal: Transport demolished materials off Owner's property and legally dispose of them.

3.7 CLEANING

A. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

END OF SECTION

SECTION 031000 - CONCRETE FORMING AND ACCESSORIES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Form-facing material for cast-in-place concrete.
2. Shoring, bracing, and anchoring.

1.2 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at **Project site**.

1.3 ACTION SUBMITTALS

A. Product Data: For each of the following:

1. Exposed surface form-facing material.
2. Concealed surface form-facing material.
3. Form ties.
4. Waterstops.
5. Form-release agent.

B. Shop Drawings: Prepared by, and signed and sealed by, a qualified professional engineer responsible for their preparation, detailing fabrication, assembly, and support of forms.

1. For exposed vertical concrete walls, indicate dimensions and form tie locations.
2. Indicate dimension and locations of construction and movement joints required to construct the structure in accordance with ACI 301 (ACI 301M).

    a. Location of construction joints is subject to approval of the Architect.

3. Indicate location of waterstops.

1.4 INFORMATIONAL SUBMITTALS

A. Field quality-control reports.

B. Minutes of preinstallation conference.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Concrete Formwork: Design, engineer, erect, shore, brace, and maintain formwork, shores, and reshores in accordance with ACI 301 (ACI 301M), to support vertical, lateral, static, and dynamic loads, and construction loads that might be applied, until structure can support such loads, so that resulting concrete conforms to the required shapes, lines, and dimensions.

1. Design wood panel forms in accordance with APA's "Concrete Forming Design/Construction Guide."
2. Design formwork to limit deflection of form-facing material to 1/240 of center-to-center spacing of supports.

2.2 FORM-FACING MATERIALS

A. As-Cast Surface Form-Facing Material:

1. Provide continuous, true, and smooth concrete surfaces.
2. Furnish in largest practicable sizes to minimize number of joints.
3. Acceptable Materials: As required to comply with Surface Finish designations specified in Section 033000 "Cast-In-Place Concrete, and as follows:

    a. Plywood, metal, or other approved panel materials.

B. Concealed Surface Form-Facing Material: Lumber, plywood, metal, plastic, or another approved material.

1. Provide lumber dressed on at least two edges and one side for tight

C. Form-Release Agent: Commercially formulated form-release agent that does not bond with, stain, or adversely affect concrete surfaces and does not impair subsequent treatments of concrete surfaces.

1. Formulate form-release agent with rust inhibitor for steel form-facing materials.
2. Form release agent for form liners shall be acceptable to form liner manufacturer.

D. Form Ties: Factory-fabricated, removable or snap-off, glass-fiber-reinforced plastic or metal form ties designed to resist lateral pressure of fresh concrete on forms and to prevent spalling of concrete on removal.

1. Furnish units that leave no corrodible metal closer than 1 inch (25 mm) to the plane of exposed concrete surface.
2. Furnish ties that, when removed, leave holes no larger than 1 inch (25 mm) in diameter in concrete surface.

PART 3 - EXECUTION

3.1 INSTALLATION OF FORMWORK

A. Comply with ACI 301 (ACI 301M).

B. Construct formwork, so concrete members and structures are of size, shape, alignment, elevation, and position indicated, within tolerance limits of ACI 117 (ACI 117M) and to comply with the Surface Finish designations specified in Section 033000 "Cast-In-Place Concrete" for as-cast finishes.

C. Limit concrete surface irregularities as follows:

1. Surface Finish-1.0: ACI 117 Class D, 1 inch

D. Construct forms tight enough to prevent loss of concrete mortar.

1. Minimize joints.
2. Exposed Concrete: Symmetrically align joints in forms.

E. Construct removable forms for easy removal without hammering or prying against concrete surfaces.

1. Provide crush or wrecking plates where stripping may damage cast-concrete surfaces.
2. Provide top forms for inclined surfaces steeper than 1.5 horizontal to 1 vertical.
3. Install keyways, reglets, recesses, and other accessories, for easy removal.

F. Do not use rust-stained, steel, form-facing material.

G. Set edge forms, bulkheads, and intermediate screed strips for slabs to achieve required elevations and slopes in finished concrete surfaces.

1. Provide and secure units to support screed strips.
2. Use strike-off templates or compacting-type screeds.

H. Provide temporary openings for cleanouts and inspection ports where interior area of formwork is inaccessible.

1. Close openings with panels tightly fitted to forms and securely braced to prevent loss of concrete mortar.
2. Locate temporary openings in forms at inconspicuous locations.

I. Chamfer exterior corners and edges of permanently exposed concrete.

J. At construction joints, overlap forms onto previously placed concrete not less than 12 inches.

K. Form openings, chases, offsets, sinkages, keyways, reglets, blocking, screeds, and bulkheads required in the Work.

1. Determine sizes and locations from trades providing such items.
2. Obtain written approval of Architect prior to forming openings not indicated on Drawings.

L. Construction and Movement Joints:

1. Construct joints true to line with faces perpendicular to surface plane of concrete.
2. Install so strength and appearance of concrete are not impaired, at locations indicated or as approved by Architect.
3. Place joints perpendicular to main reinforcement.
4. Locate joints for beams, slabs, joists, and girders in the middle third of spans.

a. Offset joints in girders a minimum distance of twice the beam width from a beam-girder intersection.

5. Locate horizontal joints in walls and columns at underside of floors, slabs, beams, and girders and at the top of footings or floor slabs.
6. Space vertical joints in walls as indicated on Drawings.

a. Locate joints beside piers integral with walls, near corners, and in concealed locations where possible.

M. Provide temporary ports or openings in formwork where required to facilitate cleaning and inspection.

1. Locate ports and openings in bottom of vertical forms, in inconspicuous location, to allow flushing water to drain.
2. Close temporary ports and openings with tight-fitting panels, flush with inside face of form, and neatly fitted, so joints will not be apparent in exposed concrete surfaces.

N. Clean forms and adjacent surfaces to receive concrete. Remove chips, wood, sawdust, dirt, and other debris just before placing concrete.

O. Retighten forms and bracing before placing concrete, as required, to prevent mortar leaks and maintain proper alignment.

P. Coat contact surfaces of forms with form-release agent, according to manufacturer's written instructions, before placing reinforcement.

3.2 INSTALLATION OF EMBEDDED ITEMS

A. Place and secure anchorage devices and other embedded items required for adjoining work that is attached to or supported by cast-in-place concrete.

1. Use setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.
2. Install anchor rods, accurately located, to elevations required and complying with tolerances in Section 7.5 of AISC 303.
3. Install reglets to receive waterproofing and to receive through-wall flashings in outer face of concrete frame at exterior walls, where flashing is shown at lintels, shelf angles, and other conditions.
4. Install dovetail anchor slots in concrete structures, as indicated on Drawings.
5. Clean embedded items immediately prior to concrete placement.

3.3 SHORING AND RESHORING INSTALLATION

A. Comply with ACI 318 (ACI 318M) and ACI 301 (ACI 301M) for design, installation, and removal of shoring and reshoring.

1. Do not remove shoring or reshoring until measurement of slab tolerances is complete.

3.4 FIELD QUALITY CONTROL

A. Special Inspections: Owner will engage a special inspector and qualified testing and inspecting agency to perform field tests and inspections and prepare test reports.

B. Testing Agency: Engage a qualified testing and inspecting agency to perform tests and inspections and to submit reports.

C. Inspections:

END OF SECTION 031000

SECTION 032000 - CONCRETE REINFORCING

GENERAL

SUMMARY

Section Includes:

Steel reinforcement bars.
Welded-wire reinforcement.

PREINSTALLATION MEETINGS

Preinstallation Conference: Conduct conference at **Project site**.

ACTION SUBMITTALS

Product Data: For the following:

Each type of steel reinforcement.
1. Bar supports.

Shop Drawings: Comply with ACI SP-066:

Include placing drawings that detail fabrication, bending, and placement.
Include bar sizes, lengths, materials, grades, bar schedules, stirrup spacing, bent bar diagrams, bar arrangement, location of splices, lengths of lap splices, details of mechanical splice couplers, details of welding splices, tie spacing, hoop spacing, and supports for concrete reinforcement.

Construction Joint Layout: Indicate proposed construction joints required to build the structure.

Location of construction joints is subject to approval of Architect.

INFORMATIONAL SUBMITTALS

Welding certificates.

2. Reinforcement to Be Welded: Welding procedure specification in accordance with AWS D1.4/D1.4M.

Material Test Reports: For the following, from a qualified testing agency:

Steel Reinforcement:

For reinforcement to be welded, mill test analysis for chemical composition and carbon equivalent of the steel in accordance with ASTM A706/A706M.

Mechanical splice couplers.

Field quality-control reports.

Minutes of preinstallation conference.

QUALITY ASSURANCE

Welding Qualifications: Qualify procedures and personnel in accordance with AWS D1.4/D 1.4M.

PRODUCTS

STEEL REINFORCEMENT

B. Reinforcing Bars: ASTM A615/A615M, Grade 60, deformed.

C. Plain-Steel Welded-Wire Reinforcement: ASTM A1064/A1064M, plain, fabricated from as-drawn steel wire into flat sheets.

REINFORCEMENT ACCESSORIES

Bar Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars and welded-wire reinforcement in place.

Manufacture bar supports from steel wire, plastic, or precast concrete in accordance with CRSI's "Manual of Standard Practice," of greater compressive strength than concrete and as follows:

a. For concrete surfaces exposed to view, where legs of wire bar supports contact forms, use CRSI Class 1 plastic-protected steel wire, all-plastic bar supports, or CRSI Class 2 stainless steel bar supports.

Mechanical Splice Couplers: ACI 318 (ACI 318M) Type 1 same material of reinforcing bar being spliced.

Steel Tie Wire: ASTM A1064/A1064M, annealed steel, not less than 0.0508 inch in diameter.

2. Finish: Plain.

FABRICATING REINFORCEMENT

Fabricate steel reinforcement according to CRSI's "Manual of Standard Practice."

EXECUTION

PREPARATION

Protection of In-Place Conditions:

Do not cut or puncture vapor retarder.
Repair damage and reseal vapor retarder before placing concrete.

Clean reinforcement of loose rust and mill scale, earth, ice, and other foreign materials that reduce bond to concrete.

INSTALLATION OF STEEL REINFORCEMENT

Comply with CRSI's "Manual of Standard Practice" for placing and supporting reinforcement.

Accurately position, support, and secure reinforcement against displacement.

Locate and support reinforcement with bar supports to maintain minimum concrete cover.
Do not tack weld crossing reinforcing bars.

Preserve clearance between bars of not less than 1 inch, not less than one bar diameter, or not less than 1-1/3 times size of large aggregate, whichever is greater.

Provide concrete coverage in accordance with ACI 318 (ACI 318M).

Set wire ties with ends directed into concrete, not toward exposed concrete surfaces.

Splices: Lap splices as indicated on Drawings.

Bars indicated to be continuous, and all vertical bars to be lapped not less than 36 bar diameters at splices, or 24 inches, whichever is greater.
Stagger splices in accordance with ACI 318 (ACI 318M).
Weld reinforcing bars in accordance with AWS D1.4/D 1.4M, where indicated on Drawings.

Install welded-wire reinforcement in longest practicable lengths.

Support welded-wire reinforcement in accordance with CRSI "Manual of Standard Practice."

For reinforcement less than W4.0 or D4.0, continuous support spacing to not exceed 12 inches.

Lap edges and ends of adjoining sheets at least one wire spacing plus 2 inches for plain wire and 8 inches for deformed wire.
Offset laps of adjoining sheet widths to prevent continuous laps in either direction.
Lace overlaps with wire.

JOINTS

Construction Joints: Install so strength and appearance of concrete are not impaired, at locations indicated or as approved by Architect.

Place joints perpendicular to main reinforcement.
Continue reinforcement across construction joints unless otherwise indicated.
Do not continue reinforcement through sides of strip placements of floors and slabs.

INSTALLATION TOLERANCES

Comply with ACI 117 (ACI 117M).

FIELD QUALITY CONTROL

Special Inspections: Owner will engage a special inspector to perform field tests and inspections and prepare test reports.

Testing Agency: Engage a qualified testing and inspecting agency to perform tests and inspections and to submit reports.

Inspections:

Steel-reinforcement placement.
Steel-reinforcement mechanical splice couplers.
Steel-reinforcement welding.

END OF SECTION 0320

SECTION 033000 - CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Cast-in-place concrete, including concrete materials, mixture design, placement procedures, and finishes.

B. Related Requirements:

1. Section 031000 "Concrete Forming and Accessories" for form-facing materials, form liners, insulating concrete forms, and waterstops.
2. Section 032000 "Concrete Reinforcing" for steel reinforcing bars and welded-wire reinforcement.
3. Section 312000 "Earth Moving" for drainage fill under slabs-on-ground.

1.2 DEFINITIONS

A. Cementitious Materials: Portland cement alone or in combination with one or more of the following: blended hydraulic cement, fly ash, slag cement, and other pozzolans materials subject to compliance with requirements.

B. Water/Cement Ratio (w/cm): The ratio by weight of water to cementitious materials.

1.3 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at project site.

1.4 ACTION SUBMITTALS

A. Product Data: For each of the following.

1. Portland cement.
2. Fly ash.
3. Slag cement.
4. Blended hydraulic cement.
5. Aggregates.
6. Admixtures:

a. Include limitations of use, including restrictions on cementitious materials, supplementary cementitious materials, air entrainment, aggregates, temperature at time of concrete placement, relative humidity at time of concrete placement, curing conditions, and use of other admixtures.

7. Vapor retarders.
8. Liquid floor treatments.
9. Curing materials.
10. Joint fillers

B. Design Mixtures: For each concrete mixture, include the following:

1. Mixture identification.
2. Minimum 28-day compressive strength.
3. Durability exposure class.
4. Maximum w/cm.
5. Calculated equilibrium unit weight, for lightweight concrete.
6. Slump limit.
7. Air content.
8. Nominal maximum aggregate size.
9. Indicate amounts of mixing water to be withheld for later addition at Project site if permitted.
10. Intended placement method.
11. Submit alternate design mixtures when characteristics of materials, Project conditions, weather, test results, or other circumstances warrant adjustments.

C. Shop Drawings:

1. Construction Joint Layout: Indicate proposed construction joints required to construct the structure.

a. Location of construction joints is subject to approval of the Architect.

D. Concrete Schedule: For each location of each Class of concrete indicated in "Concrete Mixtures" Article, including the following:

1. Concrete Class designation.
2. Location within Project.
3. Exposure Class designation.
4. Formed Surface Finish designation and final finish.
5. Final finish for floors.
6. Curing process.
7. Floor treatment if any.

1.5 INFORMATIONAL SUBMITTALS

A. Material Certificates: For each of the following, signed by manufacturers:

1. Cementitious materials.
2. Admixtures.
3. Curing compounds.
4. Vapor retarders.
5. Joint-filler strips.

B. Material Test Reports: For the following, from a qualified testing agency:

1. Portland cement.
2. Fly ash.
3. Slag cement.

4. Blended hydraulic cement.
5. Aggregates.
6. Admixtures:

C. Research Reports: For concrete admixtures in accordance with ICC's Acceptance Criteria AC198.

D. Preconstruction Test Reports: For each mix design.

E. Field quality-control reports.

F. Minutes of preinstallation conference.

1.6 QUALITY ASSURANCE

A. Ready-Mixed Concrete Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C94/C94M requirements for production facilities and equipment.

1. Manufacturer certified in accordance with NRMCA's "Certification of Ready Mixed Concrete Production Facilities."

1.7 PRECONSTRUCTION TESTING

A. Preconstruction Testing Service: Engage a qualified testing agency to perform preconstruction testing on each concrete mixture.

1. Include the following information in each test report:

a. Admixture dosage rates.
b. Slump.
c. Air content.
d. Seven-day compressive strength.
e. 28-day compressive strength.

1.8 DELIVERY, STORAGE, AND HANDLING

A. Comply with ASTM C94/C94M and ACI 301.

1.9 FIELD CONDITIONS

A. Cold-Weather Placement: Comply with ACI 301 and ACI 306.1.

B. Hot-Weather Placement: Comply with ACI 301 and ACI 305.1.

PART 2 - PRODUCTS

2.1 CONCRETE, GENERAL

A. ACI Publications: Comply with ACI 301 unless modified by requirements in the Contract Documents.

2.2 CONCRETE MATERIALS

A. Cementitious Materials:

1. Portland Cement: ASTM C150/C150M, Type I, gray.
2. Fly Ash: ASTM C618, Class C or F.
3. Slag Cement: ASTM C989/C989M, Grade 100 or 120.

B. Normal-Weight Aggregates: ASTM C33/C33M, Class 3S coarse aggregate or better, graded. Provide aggregates from a single source.

1. Alkali-Silica Reaction: Comply with one of the following:

   a. Expansion Result of Aggregate: Not more than 0.04 percent at one-year when tested in accordance with ASTM C1293.
   b. Expansion Results of Aggregate and Cementitious Materials in Combination: Not more than 0.10 percent at an age of 16 days when tested in accordance with ASTM C1567.
   c. Alkali Content in Concrete: Not more than 4 lb./cu. yd. for moderately reactive aggregate or 3 lb./cu. yd. for highly reactive aggregate, when tested in accordance with ASTM C1293 and categorized in accordance with ASTM C1778, based on alkali content being calculated in accordance with ACI 301.

2. Maximum Coarse-Aggregate Size: 3/4 inch nominal.
3. Fine Aggregate: Free of materials with deleterious reactivity to alkali in cement.

C. Air-Entraining Admixture: ASTM C260/C260M.

D. Chemical Admixtures: Certified by manufacturer to be compatible with other admixtures that do not contribute water-soluble chloride ions exceeding those permitted in hardened concrete. Do not use calcium chloride or admixtures containing calcium chloride.

1. Water-Reducing Admixture: ASTM C494/C494M, Type A.
2. Retarding Admixture: ASTM C494/C494M, Type B.
3. Water-Reducing and -Retarding Admixture: ASTM C494/C494M, Type D.
4. High-Range, Water-Reducing Admixture: ASTM C494/C494M, Type F.
5. High-Range, Water-Reducing and -Retarding Admixture: ASTM C494/C494M, Type G.
6. Plasticizing and Retarding Admixture: ASTM C1017/C1017M, Type II.

E. Water and Water Used to Make Ice: ASTM C94/C94M, potable.

2.3 VAPOR RETARDERS

A. Sheet Vapor Retarder, Class A: ASTM E1745, Class A, not less than 15 mils thick. Include manufacturer's recommended adhesive or pressure-sensitive tape.

2.4 LIQUID FLOOR TREATMENTS

A. Penetrating Liquid Floor Treatment: Clear, chemically reactive, waterborne solution of inorganic silicate or siliconate materials and proprietary components; odorless; that penetrates, hardens, and densifies concrete surfaces.

2.5 CURING MATERIALS

A. Absorptive Cover: AASHTO M 182, Class 2, burlap cloth made from jute or kenaf, weighing approximately 9 oz./sq. yd. when dry.

B. Moisture-Retaining Cover: ASTM C171, polyethylene film burlap-polyethylene sheet.

1. Color:

a. Ambient Temperature Below 50 deg F (10 deg C): Black.
b. Ambient Temperature between 50 deg F (10 deg C) and 85 deg F (29 deg C): Any color.
c. Ambient Temperature Above 85 deg F (29 deg C): White.

C. Curing Paper: 8-feet wide paper, consisting of two layers of fibered kraft paper laminated with double coating of asphalt.

D. Water: Potable or complying with ASTM C1602/C1602M.

E. Clear, Waterborne, Membrane-Forming, Dissipating Curing Compound: ASTM C309, Type 1, Class B.

F. Clear, Waterborne, Membrane-Forming, Non-dissipating Curing Compound: ASTM C309, Type 1, Class B.

G. Clear, Waterborne, Membrane-Forming, Curing and Sealing Compound: ASTM C1315, Type 1, Class A.

2.6 RELATED MATERIALS

A. Expansion- and Isolation-Joint-Filler Strips: ASTM D1751, asphalt-saturated cellulosic fiber.

B. Floor Slab Protective Covering: 8-feet-wide cellulose fabric.

2.7 CONCRETE MIXTURES, GENERAL

A. Prepare design mixtures for each type and strength of concrete, proportioned on the basis of laboratory trial mixture or field test data, or both, in accordance with ACI 301 (ACI 301M).

1. Use a qualified testing agency for preparing and reporting proposed mixture designs, based on laboratory trial mixtures.

B. Cementitious Materials: Limit percentage, by weight, of cementitious materials other than portland cement in concrete as follows:

1. Fly Ash or Other Pozzolans: 25 percent by mass.

2. Slag Cement: 50 percent by mass.
3. Total of Fly Ash or Other Pozzolans, Slag Cement: 50 percent by mass, with fly ash or pozzolans not exceeding 25 percent by mass.
4. Total of Fly Ash or Other Pozzolans: 35 percent by mass with fly ash or pozzolans not exceeding 25 percent by mass.

C. Admixtures: Use admixtures in accordance with manufacturer's written instructions.

1. Use water-reducing, high-range water-reducing or plasticizing admixture in concrete, as required, for placement and workability.
2. Use water-reducing and -retarding admixture when required by high temperatures, low humidity, or other adverse placement conditions.
3. Use water-reducing admixture in concrete with a w/cm below 0.50.

2.8 CONCRETE MIXTURES

A. Class **A**: Normal-weight concrete used for footings and slab on grade.

1. Exposure Class: ACI 318 (ACI 318M)
2. Minimum Compressive Strength: 4000 psi at 28 days.
3. Maximum w/cm: 0.50.
4. Slump Limit: 4 – 5 inches.
5. Air Content: 5%, plus or minus 1%.

6. Limit water-soluble, chloride-ion content in hardened concrete to 0.15 percent by weight of cement.

2.9 CONCRETE MIXING

A. Ready-Mixed Concrete: Measure, batch, mix, and deliver concrete in accordance with ASTM C94/C94M and ASTM C1116/C1116M, and furnish batch ticket information.

B. Project-Site Mixing: Measure, batch, and mix concrete materials and concrete in accordance with ASTM C94/C94M. Mix concrete materials in appropriate drum-type batch machine mixer.

1. For mixer capacity of 1 cu. yd. (0.76 cu. m) or smaller, continue mixing at least 1-1/2 minutes, but not more than five minutes after ingredients are in mixer, before any part of batch is released.
2. For mixer capacity larger than 1 cu. yd. (0.76 cu. m), increase mixing time by 15 seconds for each additional 1 cu. yd. (0.76 cu. m).
3. Provide batch ticket for each batch discharged and used in the Work, indicating Project identification name and number, date, mixture type, mixture time, quantity, and amount of water added. Record approximate location of final deposit in structure.

PART 3 - EXECUTION

3.1 INSTALLATION OF EMBEDDED ITEMS

A. Place and secure anchorage devices and other embedded items required for adjoining Work that is attached to or supported by cast-in-place concrete.

1. Use setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.
2. Install anchor rods, accurately located, to elevations required and complying with tolerances in Section 7.5 of ANSI/AISC 303.
3. Install reglets to receive waterproofing and to receive through-wall flashings in outer face of concrete frame at exterior walls, where flashing is shown at lintels, shelf angles, and other conditions.

3.2 INSTALLATION OF VAPOR RETARDER

A. Sheet Vapor Retarders: Place, protect, and repair sheet vapor retarder in accordance with ASTM E1643 and manufacturer's written instructions.

1. Install vapor retarder with longest dimension parallel with direction of concrete pour.
2. Face laps away from exposed direction of concrete pour.
3. Lap vapor retarder over footings and grade beams not less than 6 inches (150 mm), sealing vapor retarder to concrete.
4. Lap joints 6 inches (150 mm) and seal with manufacturer's recommended tape.
5. Terminate vapor retarder at the top of floor slabs, grade beams, and pile caps, sealing entire perimeter to floor slabs, grade beams, foundation walls, or pile caps.
6. Seal penetrations in accordance with vapor retarder manufacturer's instructions.
7. Protect vapor retarder during placement of reinforcement and concrete.

    a. Repair damaged areas by patching with vapor retarder material, overlapping damages area by 6 inches (150 mm) on all sides, and sealing to vapor retarder.

3.3 JOINTS

A. Construct joints true to line, with faces perpendicular to surface plane of concrete.

B. Construction Joints: Coordinate with floor slab pattern and concrete placement sequence.

1. Install so strength and appearance of concrete are not impaired, at locations indicated on Drawings or as approved by Architect.
2. Place joints perpendicular to main reinforcement.

    a. Continue reinforcement across construction joints unless otherwise indicated.
    b. Do not continue reinforcement through sides of strip placements of floors and slabs.

3. Form keyed joints as indicated. Embed keys at least 1-1/2 inches (38 mm) into concrete.
4. Locate joints for beams, slabs, joists, and girders at third points of spans. Offset joints in girders a minimum distance of twice the beam width from a beam-girder intersection.
5. Locate horizontal joints in walls and columns at underside of floors, slabs, beams, and girders and at the top of footings or floor slabs.
6. Space vertical joints in walls as indicated on drawings. Unless otherwise indicated on Drawings, locate vertical joints beside piers integral with walls, near corners, and in concealed locations where possible.

C. Control Joints in Slabs-on-Ground: Form weakened-plane control joints, sectioning concrete into areas as indicated. Construct control joints for a depth equal to at least one-fourth of concrete thickness as follows:

1. Grooved Joints: Form control joints after initial floating by grooving and finishing each edge of joint to a radius of 1/8 inch (3.2 mm). Repeat grooving of control joints after applying surface finishes. Eliminate groover tool marks on concrete surfaces.
2. Sawed Joints: Form control joints with power saws equipped with shatterproof abrasive or diamond-rimmed blades. Cut 1/8-inch- (3.2-mm-) wide joints into concrete when cutting action does not tear, abrade, or otherwise damage surface and before concrete develops random cracks.

D. Isolation Joints in Slabs-on-Ground: After removing formwork, install joint-filler strips at slab junctions with vertical surfaces, such as column pedestals, foundation walls, grade beams, and other locations, as indicated.

1. Extend joint-filler strips full width and depth of joint, terminating flush with finished concrete surface unless otherwise indicated on Drawings.
2. Terminate full-width joint-filler strips not less than 1/2 inch (13 mm) or more than 1 inch (25 mm) below finished concrete surface, where joint sealants, specified in Section 079200 "Joint Sealants," are indicated.
3. Install joint-filler strips in lengths as long as practicable. Where more than one length is required, lace or clip sections together.

E. Doweled Joints:

1. Install dowel bars and support assemblies at joints where indicated on Drawings.
2. Lubricate or asphalt coat one-half of dowel bar length to prevent concrete bonding to one side of joint.

F. Dowel Plates: Install dowel plates at joints where indicated on Drawings.

3.4 CONCRETE PLACEMENT

A. Before placing concrete, verify that installation of formwork, reinforcement, embedded items, and vapor retarder is complete and that required inspections are completed.

1. Immediately prior to concrete placement, inspect vapor retarder for damage and deficient installation, and repair defective areas.
2. Provide continuous inspection of vapor retarder during concrete placement and make necessary repairs to damaged areas as Work progresses.

B. Notify Architect and testing and inspection agencies 24 hours prior to commencement of concrete placement.

C. Do not add water to concrete during delivery, at Project site, or during placement unless approved by Architect in writing, but not to exceed the amount indicated on the concrete delivery ticket.

1. Do not add water to concrete after adding high-range water-reducing admixtures to mixture.

D. Before test sampling and placing concrete, water may be added at Project site, subject to limitations of ACI 301 (ACI 301M), but not to exceed the amount indicated on the concrete delivery ticket.

1. Do not add water to concrete after adding high-range water-reducing admixtures to mixture.

E. Deposit concrete continuously in one layer or in horizontal layers of such thickness that no new concrete is placed on concrete that has hardened enough to cause seams or planes of weakness.

1. If a section cannot be placed continuously, provide construction joints as indicated.
2. Deposit concrete to avoid segregation.
3. Deposit concrete in horizontal layers of depth not to exceed formwork design pressures and in a manner to avoid inclined construction joints.
4. Consolidate placed concrete with mechanical vibrating equipment in accordance with ACI 301 (ACI 301M).

    a. Do not use vibrators to transport concrete inside forms.
    b. Insert and withdraw vibrators vertically at uniformly spaced locations to rapidly penetrate placed layer and at least 6 inches (150 mm) into preceding layer.
    c. Do not insert vibrators into lower layers of concrete that have begun to lose plasticity.
    d. At each insertion, limit duration of vibration to time necessary to consolidate concrete, and complete embedment of reinforcement and other embedded items without causing mixture constituents to segregate.

F. Deposit and consolidate concrete for floors and slabs in a continuous operation, within limits of construction joints, until placement of a panel or section is complete.

1. Do not place concrete floors and slabs in a checkerboard sequence.
2. Consolidate concrete during placement operations, so concrete is thoroughly worked around reinforcement and other embedded items and into corners.
3. Maintain reinforcement in position on chairs during concrete placement.
4. Screed slab surfaces with a straightedge and strike off to correct elevations.
5. Level concrete, cut high areas, and fill low areas.
6. Slope surfaces uniformly to drains where required.
7. Begin initial floating using bull floats or darbies to form a uniform and open-textured surface plane, before excess bleedwater appears on the surface.
8. Do not further disturb slab surfaces before starting finishing operations.

3.5 FINISHING FORMED SURFACES

A. As-Cast Surface Finishes:

1. ACI 301 (ACI 301M) Surface Finish SF-1.0: As-cast concrete texture imparted by form-facing material.

    a. Patch voids larger than 1-1/2 inches (38 mm) wide or 1/2 inch (13 mm) deep.
    b. Remove projections larger than 1 inch (25 mm).
    c. Tie holes do not require patching.
    d. Surface Tolerance: ACI 117 (ACI 117M) Class D.
    e. Apply to concrete surfaces [**not exposed to public view**] <**Insert locations**>.

2. ACI 301 (ACI 301M) Surface Finish SF-2.0: As-cast concrete texture imparted by form-facing material, arranged in an orderly and symmetrical manner with a minimum of seams.

    a. Patch voids larger than 3/4 inch (19 mm) wide or 1/2 inch (13 mm) deep.
    b. Remove projections larger than 1/4 inch (6 mm).
    c. Patch tie holes.

d. Surface Tolerance: ACI 117 (ACI 117M) Class B.
e. Locations: Apply to concrete surfaces exposed to public view, to receive a rubbed finish, or to be covered with a coating or covering material applied directly to concrete.

3. ACI 301 (ACI 301M) Surface Finish SF-3.0:

a. Patch voids larger than 3/4 inch (19 mm) wide or 1/2 inch (13 mm) deep.
b. Remove projections larger than 1/8 inch (3 mm).
c. Patch tie holes.
d. Surface Tolerance: ACI 117 (ACI 117M) Class A.
e. Locations: Apply to concrete surfaces exposed to public view, to receive a rubbed finish, or to be covered with a coating or covering material applied directly to concrete.

B. Related Unformed Surfaces:

1. At tops of walls, horizontal offsets, and similar unformed surfaces adjacent to formed surfaces, strike off smooth and finish with a color and texture matching adjacent formed surfaces.
2. Continue final surface treatment of formed surfaces uniformly across adjacent unformed surfaces unless otherwise indicated.

3.6 FINISHING FLOORS AND SLABS

A. Comply with ACI 302.1R recommendations for screeding, restraightening, and finishing operations for concrete surfaces. Do not wet concrete surfaces.

B. Scratch Finish:

1. While still plastic, texture concrete surface that has been screeded and bull-floated or darbied.
2. Use stiff brushes, brooms, or rakes to produce a profile depth of 1/4 inch (6 mm) in one direction.
3. Apply scratch finish to surfaces to receive concrete floor toppings to receive mortar setting beds for bonded cementitious floor finishes.

C. Float Finish:

1. When bleedwater sheen has disappeared and concrete surface has stiffened sufficiently to permit operation of specific float apparatus, consolidate concrete surface with power-driven floats or by hand floating if area is small or inaccessible to power-driven floats.
2. Repeat float passes and re-straightening until surface is left with a uniform, smooth, granular texture and complies with ACI 117 (ACI A117M) tolerances for conventional concrete.
3. Apply float finish to surfaces to receive trowel finish.

D. Trowel Finish:

1. After applying float finish, apply first troweling and consolidate concrete by hand or power-driven trowel.
2. Continue troweling passes and restraighten until surface is free of trowel marks and uniform in texture and appearance.

3. Grind smooth any surface defects that would telegraph through applied coatings or floor coverings.
4. Do not add water to concrete surface.
5. Do not apply hard-troweled finish to concrete, which has a total air content greater than 3 percent.
6. Apply a trowel finish to surfaces exposed to view or to be covered with resilient flooring, carpet, ceramic or quarry tile set over a cleavage membrane, paint, or another thin-film-finished coating system.
7. Finish and measure surface, so gap at any point between concrete surface and an unleveled, freestanding, 10-ft.- long straightedge resting on two high spots and placed anywhere on the surface does not exceed 3/16 inch.

E. Trowel and Fine-Broom Finish: Apply a first trowel finish to surfaces indicated on Drawings where ceramic or quarry tile is to be installed by either thickset or thin set method. While concrete is still plastic, slightly scarify surface with a fine broom perpendicular to main traffic route.

1. Coordinate required final finish with Architect before application.
2. Comply with flatness and levelness tolerances for trowel-finished floor surfaces.

F. Broom Finish: Apply a broom finish to exterior concrete platforms, steps, ramps, and locations indicated on Drawings.

1. Immediately after float finishing, slightly roughen trafficked surface by brooming with fiber-bristle broom perpendicular to main traffic route.
2. Coordinate required final finish with Architect before application.

G. Slip-Resistive Finish: Before final floating, apply slip-resistive finish to concrete stair treads, platforms, ramps as indicated on Drawings

1. Apply in accordance with manufacturer's written instructions and as follows:

a. Uniformly spread 25 lb./100 sq. ft. of dampened slip-resistive over surface in one or two applications.
b. Tamp aggregate flush with surface, but do not force below surface.
c. After broadcasting and tamping, apply float finish.
d. After curing, lightly work surface with a steel wire brush or an abrasive stone and water to expose slip-resistive.

3.7 INSTALLATION OF MISCELLANEOUS CONCRETE ITEMS

A. Filling In:

1. Fill in holes and openings left in concrete structures after Work of other trades is in place unless otherwise indicated.
2. Mix, place, and cure concrete, as specified, to blend with in-place construction.
3. Provide other miscellaneous concrete filling indicated or required to complete the Work.

B. Curbs: Provide monolithic finish to interior curbs by stripping forms while concrete is still green and by steel-troweling surfaces to a hard, dense finish with corners, intersections, and terminations slightly rounded.

C. Equipment Bases and Foundations:

1. Coordinate sizes and locations of concrete bases with actual equipment provided.
2. Construct concrete bases 6 inches high unless otherwise indicated on Drawings, and extend base not less than 6 inches (150 mm) in each direction beyond the maximum dimensions of supported equipment unless otherwise indicated on Drawings, or unless required for seismic anchor support.
3. Minimum Compressive Strength: 4000 psi at 28 days.
4. Install dowel rods to connect concrete base to concrete floor. Unless otherwise indicated, install dowel rods on 18-inch (450-mm) centers around the full perimeter of concrete base.
5. For supported equipment, install epoxy-coated anchor bolts that extend through concrete base and anchor into structural concrete substrate.
6. Prior to pouring concrete, place and secure anchorage devices.

    a. Use setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.
    b. Cast anchor-bolt insert into bases.
    c. Install anchor bolts to elevations required for proper attachment to supported equipment.

D. Steel Pan Stairs: Provide concrete fill for steel pan stair treads, landings, and associated items.

1. Cast-in inserts and accessories, as shown on Drawings.
2. Screed, tamp, and trowel finish concrete surfaces.

3.8 CONCRETE CURING

A. Protect freshly placed concrete from premature drying and excessive cold or hot temperatures.

1. Comply with ACI 301 (ACI 301M) and ACI 306.1 for cold weather protection during curing.
2. Comply with ACI 301 (ACI 301M) and ACI 305.1 (ACI 305.1M) for hot-weather protection during curing.
3. Maintain moisture loss no more than 0.2 lb/sq. ft. x h (1 kg/sq. m x h), calculated in accordance with ACI 305.1, before and during finishing operations.

B. Curing Formed Surfaces: Comply with ACI 308.1 (ACI 308.1M) as follows:

1. Cure formed concrete surfaces, including underside of beams, supported slabs, and other similar surfaces.
2. Cure concrete containing color pigments in accordance with color pigment manufacturer's instructions.
3. If forms remain during curing period, moist cure after loosening forms.
4. If removing forms before end of curing period, continue curing for remainder of curing period, as follows:

    a. Continuous Fogging: Maintain standing water on concrete surface until final setting of concrete.
    b. Continuous Sprinkling: Maintain concrete surface continuously wet.
    c. Absorptive Cover: Pre-dampen absorptive material before application; apply additional water to absorptive material to maintain concrete surface continuously wet.
    d. Water-Retention Sheeting Materials: Cover exposed concrete surfaces with sheeting material, taping, or lapping seams.

e. Membrane-Forming Curing Compound: Apply uniformly in continuous operation by power spray or roller in accordance with manufacturer's written instructions.

1) Recoat areas subject to heavy rainfall within three hours after initial application.
2) Maintain continuity of coating and repair damage during curing period.

C. Curing Unformed Surfaces: Comply with ACI 308.1 (ACI 308.1M) as follows:

1. Begin curing immediately after finishing concrete.
2. Interior Concrete Floors:

a. Floors to Receive Floor Coverings Specified in Other Sections: Contractor has option of the following:

1) Absorptive Cover: As soon as concrete has sufficient set to permit application without marring concrete surface, install prewetted absorptive cover over entire area of floor.

a) Lap edges and ends of absorptive cover not less than 12 inches (300 mm).
b) Maintain absorptive cover water saturated, and in place, for duration of curing period, but not less than seven days.

2) Moisture-Retaining-Cover Curing: Cover concrete surfaces with moisture-retaining cover for curing concrete, placed in widest practicable width, with sides and ends lapped at least 12 inches (300 mm), and sealed by waterproof tape or adhesive.

a) Immediately repair any holes or tears during curing period, using cover material and waterproof tape.
b) Cure for not less than seven days.

3) Ponding or Continuous Sprinkling of Water: Maintain concrete surfaces continuously wet for not less than seven days, utilizing one, or a combination of, the following:

a) Water.
b) Continuous water-fog spray.

b. Floors to Receive Penetrating Liquid Floor Treatments: Contractor has option of the following:

1) Absorptive Cover: As soon as concrete has sufficient set to permit application without marring concrete surface, install prewetted absorptive cover over entire area of floor.

a) Lap edges and ends of absorptive cover not less than 12 inches (300 mm).
b) Maintain absorptive cover water saturated, and in place, for duration of curing period, but not less than seven days.

2) Moisture-Retaining-Cover Curing: Cover concrete surfaces with moisture-retaining cover for curing concrete, placed in widest practicable width, with

sides and ends lapped at least 12 inches (300 mm), and sealed by waterproof tape or adhesive.

a) Immediately repair any holes or tears during curing period, using cover material and waterproof tape.
b) Cure for not less than seven days.

3) Ponding or Continuous Sprinkling of Water: Maintain concrete surfaces continuously wet for not less than seven days, utilizing one, or a combination of, the following:

a) Water.
b) Continuous water-fog spray.

c. Floors to Receive Polished Finish: Contractor has option of the following:

1) Absorptive Cover: As soon as concrete has sufficient set to permit application without marring concrete surface, install prewetted absorptive cover over entire area of floor.

a) Lap edges and ends of absorptive cover not less than 12 inches (300 mm).
b) Maintain absorptive cover water saturated, and in place, for duration of curing period, but not less than seven days.

2) Ponding or Continuous Sprinkling of Water: Maintain concrete surfaces continuously wet for not less than seven days, utilizing one, or a combination of, the following:

a) Water.
b) Continuous water-fog spray.

d. Floors to Receive Chemical Stain:

1) As soon as concrete has sufficient set to permit application without marring concrete surface, install curing paper over entire area of floor.
2) Install curing paper square to building lines, without wrinkles, and in a single length without end joints.
3) Butt sides of curing paper tight; do not overlap sides of curing paper.
4) Leave curing paper in place for duration of curing period, but not less than 28 days.

e. Floors to Receive Urethane Flooring:

1) As soon as concrete has sufficient set to permit application without marring concrete surface, install prewetted absorptive cover over entire area of floor.
2) Rewet absorptive cover, and cover immediately with polyethylene moisture-retaining cover with edges lapped 6 inches (150 mm) and sealed in place.
3) Secure polyethylene moisture-retaining cover in place to prohibit air from circulating under polyethylene moisture-retaining cover.
4) Leave absorptive cover and polyethylene moisture-retaining cover in place for duration of curing period, but not less than 28 days.

f. Floors to Receive Curing Compound:

1) Apply uniformly in continuous operation by power spray or roller in accordance with manufacturer's written instructions.
2) Recoat areas subjected to heavy rainfall within three hours after initial application.
3) Maintain continuity of coating, and repair damage during curing period.

4) Removal: After curing period has elapsed, remove curing compound without damaging concrete surfaces by method recommended by curing compound manufacturer unless manufacturer certifies curing compound does not interfere with bonding of floor covering used on Project.

g. Floors to Receive Curing and Sealing Compound:

1) Apply uniformly to floors and slabs indicated in a continuous operation by power spray or roller in accordance with manufacturer's written instructions.
2) Recoat areas subjected to heavy rainfall within three hours after initial application.
3) Repeat process 24 hours later, and apply a second coat. Maintain continuity of coating, and repair damage during curing period.

3.9 TOLERANCES

A. Conform to ACI 117 (ACI 117M).

3.10 APPLICATION OF LIQUID FLOOR TREATMENTS

A. Penetrating Liquid Floor Treatment: Prepare, apply, and finish penetrating liquid floor treatment in accordance with manufacturer's written instructions.

1. Remove curing compounds, sealers, oil, dirt, laitance, and other contaminants and complete surface repairs.
2. Do not apply to concrete that is less than seven days' old.
3. Apply liquid until surface is saturated, scrubbing into surface until a gel forms; rewet; and repeat brooming or scrubbing.
4. Rinse with water; remove excess material until surface is dry.
5. Apply a second coat in a similar manner if surface is rough or porous.

B. Sealing Coat: Uniformly apply a continuous sealing coat of curing and sealing compound to hardened concrete by power spray or roller in accordance with manufacturer's written instructions.

3.11 FIELD QUALITY CONTROL

A. Special Inspections: Owner will engage a special inspector to perform field tests and inspections and prepare testing and inspection reports.

B. Testing Agency: Owner will engage a qualified testing and inspecting agency to perform tests and inspections and to submit reports.

1. Testing agency to be responsible for providing curing container for composite samples on Site and verifying that field-cured composite samples are cured in accordance with ASTM C31/C31M.
2. Testing agency to immediately report to Architect, Contractor, and concrete manufacturer any failure of Work to comply with Contract Documents.
3. Testing agency shall report results of tests and inspections, in writing, to Owner, Architect, Contractor, and concrete manufacturer within 48 hours of inspections and tests.

    a. Test reports to include reporting requirements of ASTM C31/C31M, ASTM C39/C39M, and ACI 301, including the following as applicable to each test and inspection:

        1) Project name.
        2) Name of testing agency.
        3) Names and certification numbers of field and laboratory technicians performing inspections and testing.
        4) Name of concrete manufacturer.
        5) Date and time of inspection, sampling, and field testing.
        6) Date and time of concrete placement.
        7) Location in Work of concrete represented by samples.
        8) Date and time sample was obtained.
        9) Truck and batch ticket numbers.
        10) Design compressive strength at 28 days.
        11) Concrete mixture designation, proportions, and materials.
        12) Field test results.
        13) Information on storage and curing of samples before testing, including curing method and maximum and minimum temperatures during initial curing period.
        14) Type of fracture and compressive break strengths at seven days and 28 days.

C. Batch Tickets: For each load delivered, submit three copies of batch delivery ticket to testing agency, indicating quantity, mix identification, admixtures, design strength, aggregate size, design air content, design slump at time of batching, and amount of water that can be added at Project site.

D. Inspections:

1. Headed bolts and studs.
2. Verification of use of required design mixture.
3. Concrete placement, including conveying and depositing.
4. Curing procedures and maintenance of curing temperature.
5. Verification of concrete strength before removal of shores and forms from beams and slabs.
6. Batch Plant Inspections: On a random basis, as determined by Architect.

E. Concrete Tests: Testing of composite samples of fresh concrete obtained in accordance with ASTM C 172/C 172M shall be performed in accordance with the following requirements:

1. Testing Frequency: Obtain one composite sample for each day's pour of each concrete mixture exceeding 5 cu. yd. (4 cu. m), but less than 25 cu. yd. (19 cu. m), plus one set for each additional 50 cu. yd. (38 cu. m) or fraction thereof.

a. When frequency of testing provides fewer than five compressive-strength tests for each concrete mixture, testing to be conducted from at least five randomly selected batches or from each batch if fewer than five are used.

2. Slump: ASTM C143/C143M:

   a. One test at point of placement for each composite sample, but not less than one test for each day's pour of each concrete mixture.
   b. Perform additional tests when concrete consistency appears to change.

3. Slump Flow: ASTM C1611/C1611M:

   a. One test at point of placement for each composite sample, but not less than one test for each day's pour of each concrete mixture.
   b. Perform additional tests when concrete consistency appears to change.

4. Air Content: ASTM C231/C231M pressure method, for normal-weight concrete.

   a. One test for each composite sample, but not less than one test for each day's pour of each concrete mixture.

5. Concrete Temperature: ASTM C1064/C1064M:

   a. One test hourly when air temperature is 40 deg F (4.4 deg C) and below or 80 deg F (27 deg C) and above, and one test for each composite sample.

6. Compression Test Specimens: ASTM C31/C31M:

   a. Cast and laboratory cure two sets of standard cylinder specimens for each composite sample.

7. Compressive-Strength Tests: ASTM C39/C39M.

   a. Test one set of two laboratory-cured specimens at seven days and one set of two specimens at 28 days.
   b. A compressive-strength test to be the average compressive strength from a set of two specimens obtained from same composite sample and tested at age indicated.

8. When strength of field-cured cylinders is less than 85 percent of companion laboratory-cured cylinders, Contractor to evaluate operations and provide corrective procedures for protecting and curing in-place concrete.
9. Strength of each concrete mixture will be satisfactory if every average of any three consecutive compressive-strength tests equals or exceeds specified compressive strength, and no compressive-strength test value falls below specified compressive strength by more than 500 psi (3.4 MPa) if specified compressive strength is 5000 psi (34.5 MPa), or no compressive strength test value is less than 10 percent of specified compressive strength if specified compressive strength is greater than 5000 psi (34.5 MPa).
10. Nondestructive Testing: Impact hammer, sonoscope, or other nondestructive device may be permitted by Architect but will not be used as sole basis for approval or rejection of concrete.
11. Additional Tests:

a. Testing and inspecting agency to make additional tests of concrete when test results indicate that slump, air entrainment, compressive strengths, or other requirements have not been met, as directed by Architect.
b. Testing and inspecting agency may conduct tests to determine adequacy of concrete by cored cylinders complying with ASTM C42/C42M or by other methods as directed by Architect.

1) Acceptance criteria for concrete strength to be in accordance with ACI 301 (ACI 301M), Section 1.6.6.3.

12. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.
13. Correct deficiencies in the Work that test reports and inspections indicate do not comply with the Contract Documents.

F. Measure floor and slab flatness and levelness in accordance with ASTM E1155 (ASTM E1155M) within 24 hours of completion of floor finishing and promptly report test results to Architect.

3.12 PROTECTION

A. Protect concrete surfaces as follows:

1. Protect from petroleum stains.
2. Diaper hydraulic equipment used over concrete surfaces.
3. Prohibit vehicles from interior concrete slabs.
4. Prohibit use of pipe-cutting machinery over concrete surfaces.
5. Prohibit placement of steel items on concrete surfaces.
6. Prohibit use of acids or acidic detergents over concrete surfaces.
7. Protect liquid floor treatment from damage and wear during the remainder of construction period. Use protective methods and materials, including temporary covering, recommended in writing by liquid floor treatments installer.
8. Protect concrete surfaces scheduled to receive surface hardener or polished concrete finish using Floor Slab Protective Covering.

END OF SECTION 033000

SECTION 03 35 46 - CONCRETE SEALER

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Exposed concrete slabs where concrete sealer is indicated.

1.02 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Maintenance data.

1.03 QUALITY ASSURANCE

A. Installer Qualifications: An employer of workers trained and approved by manufacturer with minimum five years documented experience.

1.04 PROJECT CONDITIONS

A. Limitations: Proceed with application only when the following existing substrate conditions permit sealer to be applied according to manufacturers' written instructions and warranty requirements:
   1. Ambient temperature is above 40 deg F.
   2. Concrete surfaces and mortar have cured for more than 28 days.

1.05 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer and Applicator agree to repair or replace materials that fail to maintain water repellency within specified warranty period.
   1. Warranty Period: Five years from date of Substantial Completion.

PART 2 - PRODUCTS

2.01 CONCRETE SEALER

A. Penetrating Liquid Floor Treatment: Clear, chemically reactive, waterborne solution of inorganic silicate or siliconate materials and proprietary components; odorless; colorless; that penetrates, hardens, and densifies concrete surfaces.
   1. Acceptable Manufacturer’s: Subject to the requirements indicated:
      a. Curecrete Distribution Inc.; Ashford Formula.
      b. Burke by Edoco; Titan Hard.
      c. ChemMasters; Chemisil Plus.
      d. Euclid Chemical Company (The); Euco Diamond Hard.
   2. Flammability: Self-extinguishing.
   3. Finish: Non-slip finish. Coefficient of friction: 0.6 wet, 0.8 dry.

PART 3 - EXECUTION

3.01 PREPARATION

A. Clean substrate of substances that might interfere with penetration or performance of concrete sealer.
   1. Concrete: Remove oil, curing compounds, laitance, and other substances that could prevent adhesion or penetration of concrete sealer.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 APPLICATION

A. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect the substrate before application of concrete sealer and to instruct Applicator on the product and application method to be used.

B. Concrete Sealer: Prepare, apply, and finish penetrating liquid floor treatment according to manufacturer's written instructions.
   1. Do not apply to concrete that is less than number of days' old recommended by sealer manufacturer in writing.
   2. Apply liquid until surface is saturated, scrubbing into surface until a gel forms; rewet; and repeat brooming or scrubbing. Rinse with water; remove excess material until surface is dry. Apply a second coat in a similar manner if surface is rough or porous.

C. Apply on horizontal surfaces of indicated interior exposed concrete slabs not receiving other finishes.

3.03 CLEANING

A. Immediately clean concrete sealer from adjoining surfaces and surfaces soiled or damaged by concrete sealer application as work progresses. Repair damage caused by concrete sealer application. Comply with manufacturer's written cleaning instructions.

END OF SECTION

SECTION 04 20 00 - UNIT MASONRY

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes unit masonry assemblies for brick veneer infill consisting of the following:
   1. Face brick
   2. Mortar and grout.
   3. Ties and anchors.
   4. Miscellaneous masonry accessories.

B. Related Sections include the following:
   1. Section 07 92 00 - Joint Sealants: Sealing control and joints in unit masonry.
   2. Section 07 62 00 - Sheet Metal Flashing and Trim: Flashing.

1.2 DEFINITIONS

A. Reinforced Masonry: Masonry containing reinforcing steel in grouted cells.

1.3 PERFORMANCE REQUIREMENTS

A. Provide unit masonry that develops indicated net-area compressive strengths (f'_m) at 28 days.

B. Determine net-area compressive strength (f'_m) of masonry from average net-area compressive strengths of masonry units and mortar types (unit-strength method) according to Tables 1 and 2 in TMS 602 or Table 21-D in the Uniform Building Code.

1.4 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Shop Drawings: For the following:
   1. Masonry Units: Show sizes, profiles, coursing, and locations of special shapes.

C. Samples for Verification: For each type and color of the following:
   1.
   2. Face brick, in the form of straps of five or more bricks.
   3. Pigmented and colored-aggregate mortar. Make Samples using same sand and mortar ingredients to be used on Project. Label Samples to indicate types and amounts of pigments used.
   4. Weep holes/vents.
   5. Accessories embedded in masonry.

D. Qualification Data: For testing agency.

E. Material Certificates: Include statements of material properties indicating compliance with requirements including compliance with standards and type designations within standards. Provide for each type and size of the following:
   1. Masonry units.
      a. Include material test reports substantiating compliance with requirements.
      b. For bricks, include size-variation data verifying that actual range of sizes falls within specified tolerances.
      c. For exposed brick, include material test report for efflorescence according to ASTM C 67.

d. For surface-coated brick, include material test report for durability of surface appearance after 50-cycles of freezing and thawing per ASTM C 67 or a list of addresses of buildings in Project's area where proposed brick has been used successfully and with a history of durability.

2. Cementitious materials. Include brand, type, and name of manufacturer.
3. Preblended, dry mortar mixes. Include description of type and proportions of ingredients.
4. Grout mixes. Include description of type and proportions of ingredients.
5. Reinforcing bars.
6. Joint reinforcement.
7. Anchors, ties, and metal accessories.

F. Mix Designs: For each type of mortar and grout. Include description of type and proportions of ingredients.
   1. Include test reports, per ASTM C 780. for mortar mixes required to comply with property specification.
   2. Include test reports, per ASTM C 1019 for grout mixes required to comply with compressive strength requirement.

G. Statement of Compressive Strength of Masonry: For each combination of masonry unit type and mortar type, provide statement of average net-area compressive strength of masonry units, mortar type, and resulting net-area compressive strength of masonry determined according to Tables 1 and 2 in TMS 602 or Table 21-D in the Uniform Building Code.

H. Cold-Weather Procedures: Detailed description of methods, materials, and equipment to be used to comply with cold-weather requirements.

1.5 QUALITY ASSURANCE

A. Testing Agency Qualifications: An independent agency qualified according to ASTM C 1093 for testing indicated, as documented according to ASTM E 548 at the expense of the Owner.

B. Source Limitations for Masonry Units: Obtain exposed masonry units of a uniform texture and color, or a uniform blend within the ranges accepted for these characteristics, through one source from a single manufacturer for each product required.

C. Source Limitations for Mortar Materials: Obtain mortar ingredients of a uniform quality, including color for exposed masonry, from a single manufacturer for each cementitious component and from one source or producer for each aggregate.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Store masonry units on elevated platforms in a dry location. If units are not stored in an enclosed location, cover tops and sides of stacks with waterproof sheeting, securely tied. If units become wet, do not install until they are dry.

B. Store cementitious materials on elevated platforms, under cover, and in a dry location. Do not use cementitious materials that have become damp.

C. Deliver preblended, dry mortar mix in moisture-resistant containers designed for lifting and emptying into dispensing silo. Store preblended, dry mortar mix in delivery containers on elevated platforms, under cover, and in a dry location or in a metal dispensing silo with weatherproof cover.

D. Store masonry accessories, including metal items, to prevent corrosion and accumulation of dirt and oil.

1.7 PROJECT CONDITIONS

A. Protection of Masonry: During construction, cover tops of walls, projections, and sills with waterproof sheeting at end of each day's work. Cover partially completed masonry when construction is not in progress.
   1. Extend cover a minimum of 24 inches down both sides and hold cover securely in place.
   2. Where 1 wythe of multiwythe masonry walls is completed in advance of other wythes, secure cover a minimum of 24 inches down face next to unconstructed wythe and hold cover in place.

B. Stain Prevention: Prevent grout, mortar, and soil from staining the face of masonry to be left exposed or painted. Immediately remove grout, mortar, and soil that come in contact with such masonry.
   1. Protect base of walls from rain-splashed mud and from mortar splatter by spreading coverings on ground and over wall surface.
   2. Protect sills, ledges, and projections from mortar droppings.
   3. Protect surfaces of window and door frames, as well as similar products with painted and integral finishes, from mortar droppings.
   4. Turn scaffold boards near the wall on edge at the end of each day to prevent rain from splashing mortar and dirt onto completed masonry.

C. Cold-Weather Requirements: Do not use frozen materials or materials mixed or coated with ice or frost. Do not build on frozen substrates. Remove and replace unit masonry damaged by frost or by freezing conditions. Comply with cold-weather construction requirements contained in the Florida Building Code.
   1. Cold-Weather Cleaning: Use liquid cleaning methods only when air temperature is 40 deg F and above and will remain so until masonry has dried, but not less than 7 days after completing cleaning.

D. Hot-Weather Requirements: Comply with hot-weather construction requirements contained in the Florida Building Code.

PART 2 - PRODUCTS

2.1 MANUFACTURER

A. General: Provide shapes indicated and as follows:
   1. For ends of sills and caps and for similar applications that would otherwise expose unfinished brick surfaces, provide units without cores or frogs and with exposed surfaces finished.
   2. Provide special shapes for applications where stretcher units cannot accommodate special conditions, including those at corners, movement joints, bond beams, sashes, and lintels.
   3. Provide special shapes for applications requiring brick of size, form, color, and texture on exposed surfaces that cannot be produced by sawing.
   4. Provide special shapes for applications where shapes produced by sawing would result in sawed surfaces being exposed to view.
   5. Where shown to match existing, provide brick matching color and range.

2.2 BRICK MASONRY (FACE BRICK)

A. Basis of Design: Cherokee Brick
   1. Series/Color: To be selected by Architect.

B. Acceptable manufacturers:
   1. Meridian Brick and Masonry Supply
   2. Echelon Masonry

C Face Brick: ASTM C 216 Grade SW; Type: FBS
1. Unit Compressive Strength: Provide units with minimum average net-area compressive strength of 3000 psi.
2. Initial Rate of Absorption: Less than 30 g/30 sq. in. per minute when tested per ASTM C 67.
3. Efflorescence: Provide brick that has been tested according to ASTM C 67 and is rated "not effloresced."
4. Size (Actual Dimensions): 3-5/8 inches wide by 2-1/4 inches high by 7-5/8 inches long.

D Masonry Joint Reinforcement for Single-Wythe Masonry: Either ladder or truss type with single pair of side rods.

2.3 TIES AND ANCHORS

A. Materials: Provide ties and anchors specified in subsequent paragraphs that are made from materials that comply with eight subparagraphs below, unless otherwise indicated.
1. Hot-Dip Galvanized, Carbon-Steel Wire: ASTM A 82; with ASTM A 153/A 153M, Class B-2 coating.

B. Wire Ties, General: Unless otherwise indicated, size wire ties to extend at least halfway through veneer but with at least 5/8-inch cover on outside face. Outer ends of wires are bent 90 degrees and extend 2 inches parallel to face of veneer.

C. Adjustable Masonry-Veneer Anchors
1. General: Provide anchors that allow vertical adjustment but resist tension and compression forces perpendicular to plane of wall, for attachment over sheathing to wood or metal studs, and as follows:
a. Structural Performance Characteristics: Capable of withstanding a 100-lbf load in both tension and compression without deforming or developing play in excess of 0.05 inch.
b. Wire Ties: Triangular-, rectangular-, or T-shaped wire ties fabricated from 0.188-inch-0.25-inch-diameter, hot-dip galvanized steel wire.
c. Acceptable Products:
1) Dayton Superior Corporation, Dur-O-Wal Division
2) Heckmann Building Products Inc.
3) Hohmann & Barnard, Inc.
4) Wire-Bond.

2.4 EMBEDDED FLASHING MATERIALS

A. Metal Flashing: Provide metal flashing SMACNA's "Architectural Sheet Metal Manual " and as follows:
1. Fabricate continuous flashings in sections 96 inches long minimum, but not exceeding 12 feet. Provide splice plates at joints of formed, smooth metal flashing.
2. Fabricate through-wall flashing with snap-lock receiver on exterior face where indicated to receive counterflashing.
3. Fabricate through-wall flashing with drip edge where indicated. Fabricate by extending flashing 1/2 inch out from wall, with outer edge bent down 30 degrees and hemmed.
4. Fabricate through-wall flashing with sealant stop where indicated. Fabricate by bending metal back on itself 3/4 inch at exterior face of wall and down into joint 3/8 inch to form a stop for retaining sealant backer rod.

2.5 MISCELLANEOUS MASONRY ACCESSORIES

A. Compressible Filler: Pre-molded filler strips complying with ASTM D 1056, Grade 2A1; compressible up to 35 percent; of width and thickness indicated; formulated from neoprene urethane or PVC.

B. Preformed Control-Joint Gaskets: Made from styrene-butadiene-rubber compound, complying with ASTM D 2000, Designation M2AA-805 or PVC, complying with ASTM D 2287, Type PVC-65406] and designed to fit standard sash block and to maintain lateral stability in masonry wall; size and configuration as indicated.

C. Bond-Breaker Strips: Asphalt-saturated, organic roofing felt complying with ASTM D 226, Type I (No. 15 asphalt felt).

D. Weep/Vent Products: Use one of the following, unless otherwise indicated:
   1. Wicking Material: Absorbent rope, made from UV-resistant synthetic fiber, 1/4 to 3/8 inch in diameter, in length required to produce 2-inch exposure on exterior and 18 inches in cavity between wythes. Use only for weeps.
   2. Mesh Weep/Vent: Free-draining mesh; made from polyethylene strands, full height and width of head joint and depth 1/8 inch less than depth of outer wythe; in color selected from manufacturer's standard.
      a. Acceptable Products:
         1) Mortar Net USA, Ltd.; Mortar Net Weep Vents.

2.6 MASONRY CLEANERS

A. Proprietary Acidic Cleaner: Manufacturer's standard-strength cleaner designed for removing mortar/grout stains, efflorescence, and other new construction stains from new masonry without discoloring or damaging masonry surfaces. Use product expressly approved for intended use by cleaner manufacturer and manufacturer of masonry units being cleaned.
   1. Acceptable Manufacturers:
      a. Diedrich Technologies, Inc.
      b. EaCo Chem, Inc.
      c. ProSoCo, Inc.

2.7 MORTAR AND GROUT MIXES

A. General: Do not use admixtures, including pigments, air-entraining agents, accelerators, retarders, water-repellent agents, antifreeze compounds, or other admixtures, unless otherwise indicated.
   1. Do not use calcium chloride in mortar or grout.
   2. Limit cementitious materials in mortar to portland cement and lime.
   3. Limit cementitious materials in mortar for exterior and reinforced masonry to portland cement, and lime.

B. Preblended, Dry Mortar Mix: Furnish dry mortar ingredients in form of a preblended mix. Measure quantities by weight to ensure accurate proportions, and thoroughly blend ingredients before delivering to Project site.

C. Grout for Unit Masonry: Match existing grout. Comply with UBC Standard 21-19.
   1. Use grout of type indicated or, if not otherwise indicated, of type (fine or coarse) that will comply with Table 21-C in the Uniform Building Code for dimensions of grout spaces and pour height.
   2. Provide grout with a slump of 8 to 11 inches as measured according to ASTM C 143/C 143M.
   3. Color: Match existing grout.

2.8 SOURCE QUALITY CONTROL

A. Owner will engage a qualified independent testing agency to perform source quality-control testing indicated below:
   1. Payment for these services will be made by Owner.

2. Retesting of materials failing to comply with specified requirements shall be done at Contractor's expense.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of work.
   1. For the record, prepare written report, endorsed by Installer, listing conditions detrimental to performance of work.
   2. Verify that foundations are within tolerances specified.
   3. Verify that reinforcing dowels are properly placed.

B. Before installation, examine rough-in and built-in construction for piping systems to verify actual locations of piping connections.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION, GENERAL

A. Thickness: Build cavity and composite walls and other masonry construction to full thickness shown.

B. Use full-size units without cutting if possible. If cutting is required to provide a continuous pattern or to fit adjoining construction, cut units with motor-driven saws; provide clean, sharp, unchipped edges. Allow units to dry before laying unless wetting of units is specified. Install cut units with cut surfaces and, where possible, cut edges concealed.

C. Select and arrange units for exposed unit masonry to produce a uniform blend of colors and textures.
   1. Mix units from several pallets or cubes as they are placed.

D. Wetting of Brick: Wet brick before laying if initial rate of absorption exceeds 30 g/30 sq. in. per minute when tested per ASTM C 67. Allow units to absorb water so they are damp but not wet at time of laying.

E. Comply with construction tolerances in ACI 530.1/ASCE 6/TMS 602 and with the following:
   1. For conspicuous vertical lines, such as external corners, door jambs, reveals, and control joints, do not vary from plumb by more than 1/8 inch in 10 feet, 1/4 inch in 20 feet, or 1/2 inch maximum.
   2. For vertical alignment of exposed head joints, do not vary from plumb by more than 1/4 inch in 10 feet, or 1/2 inch maximum.
   3. For conspicuous horizontal lines, such as lintels, sills, parapets, and reveals, do not vary from level by more than 1/8 inch in 10 feet, 1/4 inch in 20 feet, or 1/2 inch maximum.
   4. For exposed bed joints, do not vary from thickness indicated by more than plus or minus 1/8 inch, with a maximum thickness limited to 1/2 inch. Do not vary from bed-joint thickness of adjacent courses by more than 1/8 inch.
   5. For exposed head joints, do not vary from thickness indicated by more than plus or minus 1/8 inch. Do not vary from adjacent bed-joint and head-joint thicknesses by more than 1/8 inch.
   6. For faces of adjacent exposed masonry units, do not vary from flush alignment by more than 1/16 inch except due to warpage of masonry units within tolerances specified for warpage of units.

7. For exposed bed joints and head joints of stacked bond, do not vary from a straight line by more than 1/16 inch from one masonry unit to the next.

3.3 LAYING MASONRY WALLS

A. Lay out walls in advance for accurate spacing of surface bond patterns with uniform joint thicknesses and for accurate location of openings, movement-type joints, returns, and offsets. Avoid using less-than-half-size units, particularly at corners, jambs, and, where possible, at other locations.

B. Bond Pattern for Exposed Masonry: Unless otherwise indicated, lay exposed masonry bond pattern indicated on Drawings; do not use units with less than nominal 4-inch horizontal face dimensions at corners or jambs.

C. Stopping and Resuming Work: Stop work by racking back units in each course from those in course below; do not tooth. When resuming work, clean masonry surfaces that are to receive mortar, remove loose masonry units and mortar, and wet brick if required before laying fresh masonry.

D. Fill space between steel frames and masonry solidly with mortar, unless otherwise indicated.

E. Fill cores in hollow s with grout 24 inches under bearing plates, beams, lintels, posts, and similar items, unless otherwise indicated.

3.4 MORTAR BEDDING AND JOINTING

A. Lay hollow brick and s as follows:
   1. With face shells fully bedded in mortar and with head joints of depth equal to bed joints.
   2. With webs fully bedded in mortar in all courses of piers, columns, and pilasters.
   3. With webs fully bedded in mortar in grouted masonry, including starting course on footings.
   4. With entire units, including areas under cells, fully bedded in mortar at starting course on footings where cells are not grouted.

B. Tool exposed joints to match existing unless otherwise indicated.

3.5 MASONRY JOINT REINFORCEMENT

A. General: Install entire length of longitudinal side rods in mortar with a minimum cover of 5/8 inch on exterior side of walls, 1/2 inch elsewhere. Lap reinforcement a minimum of 6 inches.
   1. Space reinforcement not more than 16 inches o.c.
   2. Space reinforcement not more than 8 inches o.c. in foundation walls and parapet walls.
   3. Provide reinforcement not more than 8 inches above and below wall openings and extending 12 inches beyond openings.
      a. Reinforcement above is in addition to continuous reinforcement.

B. Interrupt joint reinforcement at control and joints, unless otherwise indicated.

C. Provide continuity at wall intersections by using prefabricated T-shaped units.

D. Provide continuity at corners by using prefabricated L-shaped units.

E. Cut and bend reinforcing units as directed by manufacturer for continuity at corners, returns, offsets, column fireproofing, pipe enclosures, and other special conditions.

3.6 CONTROL JOINTS

A. General: Install control and joint materials in unit masonry as masonry progresses. Do not allow materials to span control joints without provision to allow for in-plane wall or partition movement.

B. Provide horizontal, pressure-relieving joints by either leaving an air space or inserting a compressible filler of width required for installing sealant and backer rod specified in Division 07 Section 07 92 00 - Joint Sealants, but not less than 3/8 inch.
   1. Locate horizontal, pressure-relieving joints beneath shelf angles supporting masonry.

3.7 FLASHING, WEEP HOLES, CAVITY DRAINAGE, AND VENTS

A. General: Install embedded flashing and weep holes in masonry at shelf angles, lintels, ledges, other obstructions to downward flow of water in wall, and where indicated. Install vents at shelf angles, ledges, and other obstructions to upward flow of air in cavities, and where indicated.
   ~~1.~~ At masonry-veneer walls, extend flashing through veneer, across air space behind veneer, and up face of sheathing at least 8 inches.
   2. Cut flexible flashing off flush with face of wall after masonry wall construction is completed.

B. Install weep holes in head joints in exterior wythes of first course of masonry immediately above embedded flashing and as follows:
   1. Use specified weep/vent products or open head joints to form weep holes.
   2. Use wicking material to form weep holes above flashing under brick sills. Turn wicking down at lip of sill to be as inconspicuous as possible.
   3. Space weep holes 24 inches o.c., unless otherwise indicated.
   4. Cover cavity side of weep holes with plastic insect screening at cavities insulated with loose-fill insulation.

C. Place cavity drainage material in cavities to comply with configuration requirements for cavity drainage material in Part 2 "Miscellaneous Masonry Accessories" Article.

D. Install vents in head joints in exterior wythes at spacing indicated. Use specified weep/vent products or open head joints to form vents.
   1. Close cavities off vertically and horizontally with blocking in manner indicated. Install through-wall flashing and weep holes above horizontal blocking.

3.8 FIELD QUALITY CONTROL

A. Inspectors: Owner will engage qualified independent inspectors to perform inspections and prepare reports. Allow inspectors access to scaffolding and work areas, as needed to perform inspections.
   1. Place grout only after inspectors have verified compliance of grout spaces and grades, sizes, and locations of reinforcement.

B. Testing Agency: Owner will engage a qualified independent testing and inspecting agency to perform field tests and inspections indicated below and prepare test reports:
   1. Payment for these services will be made by Owner.
   2. Retesting of materials failing to comply with specified requirements shall be done at Contractor's expense.

C. Testing Frequency: One set of tests for each 5000 sq. ft. of wall area or portion thereof.

D. Mortar Test (Property Specification): For each mix provided, per UBC Standard 21-16. Test mortar for mortar air content and compressive strength.

E. Grout Test (Compressive Strength): For each mix provided, per UBC Standard 21-18.

3.9 REPAIRING, POINTING, AND CLEANING

A. Remove and replace masonry units that are loose, chipped, broken, stained, or otherwise damaged or that do not match adjoining units. Install new units to match adjoining units; install in fresh mortar, pointed to eliminate evidence of replacement.

B. Pointing: During the tooling of joints, enlarge voids and holes, except weep holes, and completely fill with mortar. Point up joints, including corners, openings, and adjacent construction, to provide a neat, uniform appearance. Prepare joints for sealant application, where indicated.

C. In-Progress Cleaning: Clean unit masonry as work progresses by dry brushing to remove mortar fins and smears before tooling joints.

D. Final Cleaning: After mortar is thoroughly set and cured, clean exposed masonry as follows:
   1. Remove large mortar particles by hand with wooden paddles and nonmetallic scrape hoes or chisels.
   2. Test cleaning methods on sample wall panel; leave one-half of panel uncleaned for comparison purposes. Obtain Architect's approval of sample cleaning before proceeding with cleaning of masonry.
   3. Clean brick by bucket-and-brush hand-cleaning method described in BIA Technical Notes 20.
   4. Clean existing masonry where indicated in Drawings.

3.10 MASONRY WASTE DISPOSAL

A. Salvageable Materials: Unless otherwise indicated, excess masonry materials are Contractor's property. At completion of unit masonry work, remove from Project site.

B. Waste Disposal as Fill Material: Dispose of clean masonry waste, including excess or soil-contaminated sand, waste mortar, and broken masonry units, by crushing and mixing with fill material as fill is placed.
   1. Crush masonry waste to less than 4 inches in each dimension.
   2. Mix masonry waste with at least two parts of specified fill material for each part of masonry waste. Fill material is specified in Section 31 20 00 - Earthwork.
   3. Do not dispose of masonry waste as fill within 18 inches of finished grade.

C. Excess Masonry Waste: Remove excess clean masonry waste that cannot be used as fill, as described above, and other masonry waste, and legally dispose of off Owner's property.

END OF SECTION

SECTION 051200 - STRUCTURAL STEEL FRAMING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Structural steel.
2. Shrinkage-resistant grout.

B. Related Requirements:

1. Section 051213 "Architecturally Exposed Structural Steel Framing" for additional requirements for architecturally exposed structural steel.

1.2 DEFINITIONS

A. Structural Steel: Elements of the structural frame indicated on Drawings and as described in ANSI/AISC 303.

1.3 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

1.4 ACTION SUBMITTALS

A. Product Data:

1. Structural-steel materials.
2. High-strength, bolt-nut-washer assemblies.
3. Anchor rods.
4. Threaded rods.
5. Shop primer.
6. Galvanized-steel primer.
7. Galvanized repair paint.
8. Shrinkage-resistant grout.

B. Shop Drawings: Show fabrication and erection of structural-steel components. Shop drawings shall be signed and sealed by a specialty professional engineer licensed in the state of Georgia.

C. Delegated Design Submittal: For structural-steel connections indicated on Drawings to comply with design loads, include analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

1.5 INFORMATIONAL SUBMITTALS

A. Welding certificates.

B. Mill test reports for structural-steel materials, including chemical and physical properties.

C. Source quality-control reports.

D. Field quality-control reports.

1.6 QUALITY ASSURANCE

A. Fabricator Qualifications: A qualified fabricator that participates in the AISC Quality Certification Program and is designated an AISC-Certified Plant, Category BU or is accredited by the IAS Fabricator Inspection Program for Structural Steel (Acceptance Criteria 172).

B. Installer Qualifications: A qualified Installer who participates in the AISC Quality Certification Program and is designated an AISC-Certified Erector, Category ACSE.

C. Welding Qualifications: Qualify procedures and personnel in accordance with AWS D1.1/D1.1M.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Comply with applicable provisions of the following specifications and documents:

1. ANSI/AISC 303.
2. ANSI/AISC 360.
3. RCSC's "Specification for Structural Joints Using High-Strength Bolts."

B. Connection Design Information:

Design connections and final configuration of member reinforcement at connections in accordance with ANSI/AISC 303 by fabricator's qualified professional engineer.

C. Moment Connections: Type FR, fully restrained.

D. Construction: Combined system of moment frame and braced frame.

2.2 STRUCTURAL-STEEL MATERIALS

A. W-Shapes: ASTM A992 Grade 50.

B. Channels, Angles: ASTM A36/A36M.

C. Plate and Bar: ASTM A36/A36M.

D. Cold-Formed Hollow Structural Sections**:** ASTM A500 Grade B structural tubing.

E. Steel Pipe: ASTM A53/A53M, Type E or Type S, Grade B.

F. Welding Electrodes: Comply with AWS requirements.

2.3 BOLTS AND CONNECTORS

A. High-Strength A325 Bolts, Nuts, and Washers: ASTM F3125/F3125M, Grade A325 (Grade A325M), Type 1, heavy-hex steel structural bolts.

2.4 RODS

A. Headed Anchor Rods: ASTM F1554, Grade 55, weldable, straight.

1. Finish: Plain.

B. Threaded Rods: ASTM A193/A193M, Grade B7.

1. Finish: Plain.

2.5 FORGED-STEEL STRUCTURAL HARDWARE

A. Clevises and Turnbuckles: Made from cold-finished carbon-steel bars, ASTM A108, AISI C-1035.

2.6 PRIMER

A. Steel Primer:

1. Comply with Section 099113 "Exterior Painting" and Section 099123 "Interior Painting.
2. SSPC-Paint 23, latex primer.
3. Fabricator's standard lead- and chromate-free, nonasphaltic, rust-inhibiting primer complying with MPI#79 and compatible with topcoat.

B. Galvanized-Steel Primer: MPI#80.

1. Etching Cleaner: MPI#25, for galvanized steel.
2. Galvanizing Repair Paint: SSPC-Paint 20.

2.7 SHRINKAGE-RESISTANT GROUT

A. Metallic, Shrinkage-Resistant Grout: ASTM C1107/C1107M, factory-packaged, metallic aggregate grout, mixed with water to consistency suitable for application and a 30-minute working time.

2.8 FABRICATION

A. Structural Steel: Fabricate and assemble in shop to greatest extent possible. Fabricate in accordance with ANSI/AISC 303 and to ANSI/AISC 360.

2.9 SHOP CONNECTIONS

A. High-Strength Bolts: Shop install high-strength bolts in accordance with RCSC's "Specification for Structural Joints Using High-Strength Bolts" for type of bolt and type of joint specified.

1. Joint Type: Snug tightened.

B. Weld Connections: Comply with AWS D1.1/D1.1M for tolerances, appearances, welding procedure specifications, weld quality, and methods used in correcting welding work.

2.10 GALVANIZING

A. Hot-Dip Galvanized Finish: Apply zinc coating by the hot-dip process to structural steel in accordance with ASTM A123/A123M.

1. Fill vent and drain holes that are exposed in the finished Work unless they function as weep holes, by plugging with zinc solder and filing off smooth.

2.11 SHOP PRIMING

A. Shop prime steel surfaces, except the following:

1. Surfaces embedded in concrete or mortar. Extend priming of partially embedded members to a depth of 2 inches.
2. Surfaces to be field welded.
3. Surfaces of high-strength bolted, slip-critical connections.
4. Surfaces to receive sprayed fire-resistive materials (applied fireproofing).
5. Galvanized surfaces unless indicated to be painted.
6. Surfaces enclosed in interior construction.

B. Surface Preparation of Steel: Clean surfaces to be painted. Remove loose rust and mill scale and spatter, slag, or flux deposits. Prepare surfaces in accordance with the following specifications and standards:

1. SSPC-SP 2.
2. SSPC-SP 3.
3. SSPC-SP 7 (WAB)/NACE WAB-4.
4. SSPC-SP 6 (WAB)/NACE WAB-3.

C. Surface Preparation of Galvanized Steel: Prepare galvanized-steel surfaces for shop priming by thoroughly cleaning steel of grease, dirt, oil, flux, and other foreign matter, and treating with etching cleaner or in accordance with SSPC-SP 16.

D. Priming: Immediately after surface preparation, apply primer in accordance with manufacturer's written instructions and at rate recommended by SSPC to provide a minimum dry film thickness of 1.5 mils (0.038 mm). Use priming methods that result in full coverage of joints, corners, edges, and exposed surfaces.

2.12 SOURCE QUALITY CONTROL

A. Testing Agency: Owner will engage a qualified testing agency to perform shop tests and inspections.

1. Allow testing agency access to places where structural-steel work is being fabricated or produced to perform tests and inspections.
2. Bolted Connections: Inspect and test shop-bolted connections in accordance with RCSC's "Specification for Structural Joints Using High-Strength Bolts."
3. Welded Connections: Visually inspect shop-welded connections in accordance with AWS D1.1/D1.1M and the following inspection procedures, at testing agency's option:

    a. Liquid Penetrant Inspection: ASTM E165/E165M.
    b. Magnetic Particle Inspection: ASTM E709; performed on root pass and on finished weld. Cracks or zones of incomplete fusion or penetration are not accepted.
    c. Ultrasonic Inspection: ASTM E164.
    d. Radiographic Inspection: ASTM E94/E94M.

4. In addition to visual inspection, test and inspect shop-welded shear stud connectors in accordance with requirements in AWS D1.1/D1.1M.
5. Prepare test and inspection reports.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify, with certified steel erector present, elevations of concrete- and masonry-bearing surfaces and locations of anchor rods, bearing plates, and other embedments for compliance with requirements.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 ERECTION

A. Set structural steel accurately in locations and to elevations indicated and in accordance with ANSI/AISC 303 and ANSI/AISC 360.

B. Baseplates Bearing Plates and Leveling Plates: Clean concrete- and masonry-bearing surfaces of bond-reducing materials, and roughen surfaces prior to setting plates. Clean bottom surface of plates.

1. Set plates for structural members on wedges, shims, or setting nuts as required.
2. Weld plate washers to top of baseplate.
3. Snug-tighten anchor rods after supported members have been positioned and plumbed. Do not remove wedges or shims but, if protruding, cut off flush with edge of plate before packing with grout.
4. Promptly pack shrinkage-resistant grout solidly between bearing surfaces and plates, so no voids remain. Neatly finish exposed surfaces; protect grout and allow to cure.

C. Maintain erection tolerances of structural steel within ANSI/AISC 303.

3.3 FIELD CONNECTIONS

A. High-Strength Bolts: Install high-strength bolts in accordance with RCSC's "Specification for Structural Joints Using High-Strength Bolts" for bolt and joint type specified.

1. Joint Type: Snug tightened.

B. Weld Connections: Comply with AWS D1.1/D1.1M for tolerances, appearances, welding procedure specifications, weld quality, and methods used in correcting welding work.

1. Comply with ANSI/AISC 303 and ANSI/AISC 360 for bearing, alignment, adequacy of temporary connections, and removal of paint on surfaces adjacent to field welds.

3.4 FIELD QUALITY CONTROL

A. Special Inspections: Owner will engage a special inspector to perform the following special inspections:

1. Verify structural-steel materials and inspect steel frame joint details.
2. Verify weld materials and inspect welds.
3. Verify connection materials and inspect high-strength bolted connections.

B. Testing Agency: Owner will engage a qualified testing agency to perform tests and inspections.

1. Bolted Connections: Inspect and test bolted connections in accordance with RCSC's "Specification for Structural Joints Using High-Strength Bolts."
2. Welded Connections: Visually inspect field welds in accordance with AWS D1.1/D1.1M.

a. In addition to visual inspection, test and inspect field welds in accordance with AWS D1.1/D1.1M and the following inspection procedures, at testing agency's option:

1) Liquid Penetrant Inspection: ASTM E165/E165M.
2) Magnetic Particle Inspection: ASTM E709; performed on root pass and on finished weld. Cracks or zones of incomplete fusion or penetration are not accepted.

3.5

1) Ultrasonic Inspection: ASTM E164.
2) Radiographic Inspection: ASTM E94/E94M.

END OF SECTION 051200

SECTION 05 50 00 - METAL FABRICATIONS

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:
   1. Shelf angles.
   2. Steel framing support sectional doors.
   3. Steel framing for overhead coiling doors.

B. Products furnished, but not installed, under this Section include the following:
   1. Loose steel lintels.
   2. Anchor bolts, steel pipe sleeves, and wedge-type inserts indicated to be cast into concrete or built into unit masonry.

C. Related Sections include the following:
   1. Section 03 3000 - Cast-in-Place Concrete: Installing anchor bolts, steel pipe sleeves, wedge-type inserts and other items indicated to be cast into concrete.
   2. Section 04 2100 – Unit Masonry: Installing loose lintels, anchor bolts, and other items indicated to be built into unit masonry.
   3. Section 05 1200 - Structural Steel Framing.
   4. Section 08 3613 – Sectional Doors

1.2 PERFORMANCE REQUIREMENTS

A. Thermal Movements: Provide exterior metal fabrications that allow for thermal movements resulting from the following maximum change (range) in ambient and surface temperatures by preventing buckling, opening of joints, overstressing of components, failure of connections, and other detrimental effects. Base engineering calculation on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.
   1. Temperature Change (Range): 120 deg F, ambient; 180 deg F, material surfaces.

1.3 SUBMITTALS

A. Shop Drawings: Show fabrication and installation details for metal fabrications.
   1. Include plans, elevations, sections, and details of metal fabrications and their connections. Show anchorage and accessory items.
   2. Provide templates for anchors and bolts specified for installation under other Sections.
   3. For installed products indicated to comply with design loads, include structural analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

B. Qualification Data: For professional engineer.

1.4 QUALITY ASSURANCE

A. Welding: Qualify procedures and personnel according to the following:
   1. AWS D1.1, "Structural Welding Code--Steel."
   2. AWS D1.2, "Structural Welding Code--Aluminum."
   3. AWS D1.3, "Structural Welding Code--Sheet Steel."
   4. AWS D1.6, "Structural Welding Code--Stainless Steel."

1.5 PROJECT CONDITIONS

A. Field Measurements: Verify actual locations of walls and other construction contiguous with metal fabrications by field measurements before fabrication and indicate measurements on Shop Drawings.
   1. Provide allowance for trimming and fitting at site.

1.6 COORDINATION

A. Coordinate installation of anchorages for metal fabrications. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.

B. Coordinate installation of steel weld plates and angles for casting into concrete that are specified in this Section but required for work of another Section. Deliver such items to Project site in time for installation.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

2.2 METALS, GENERAL

A. Metal Surfaces, General: Provide materials with smooth, flat surfaces, unless otherwise indicated. For metal fabrications exposed to view in the completed Work, provide materials without seam marks, roller marks, rolled trade names, or blemishes.

2.3 FERROUS METALS

A. Steel Plates, Shapes, and Bars: ASTM A 36/A 36M.

2.4 SHELF ANGLES

A. Fabricate shelf angles from steel angles of sizes indicated and for attachment to concrete framing. Provide horizontally slotted holes to receive 3/4-inch bolts, spaced not more than 6 inches from ends and 24 inches o.c., unless otherwise indicated.
   1. Provide mitered and welded units at corners.
   2. Provide open joints in shelf angles at expansion and control joints. Make open joint approximately 2 inches larger than expansion or control joint.

B. For cavity walls, provide vertical channel brackets to support angles from backup masonry and concrete.

C. Prime shelf angles located in exterior walls with zinc-rich primer.

D. Furnish wedge-type concrete inserts, complete with fasteners, to attach shelf angles to cast-in-place concrete.

2.5 FINISHES, GENERAL

A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.

B. Finish metal fabrications after assembly.

2.6 STEEL AND IRON FINISHES

A. Galvanizing: Hot-dip galvanize items as indicated to comply with applicable standard listed below:
   1. ASTM A 123/A 123M, for galvanizing steel and iron products.
   2. ASTM A 153/A 153M, for galvanizing steel and iron hardware.

B. Preparation for Shop Priming: Prepare uncoated ferrous-metal surfaces to comply with minimum requirements indicated below for SSPC surface preparation specifications and environmental exposure conditions of installed metal fabrications:
   1. Exteriors (SSPC Zone 1B)[and Items Indicated to Receive Zinc-Rich Primer]: SSPC-SP 6/NACE No. 3, "Commercial Blast Cleaning."

C. Shop Priming: Apply shop primer to uncoated surfaces of metal fabrications, except those with galvanized finishes and those to be embedded in concrete, sprayed-on fireproofing, or masonry, unless otherwise indicated. Comply with SSPC-PA 1, "Paint Application Specification No. 1: Shop, Field, and Maintenance Painting of Steel," for shop painting.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Cutting, Fitting, and Placement: Perform cutting, drilling, and fitting required for installing metal fabrications. Set metal fabrications accurately in location, alignment, and elevation; with edges and surfaces level, plumb, true, and free of rack; and measured from established lines and levels.

B. Fit exposed connections accurately together to form hairline joints. Weld connections that are not to be left as exposed joints but cannot be shop welded because of shipping size limitations. Do not weld, cut, or abrade surfaces of exterior units that have been hot-dip galvanized after fabrication and are for bolted or screwed field connections.

C. Field Welding: Comply with the following requirements:
   1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
   2. Obtain fusion without undercut or overlap.
   3. Remove welding flux immediately.
   4. At exposed connections, finish exposed welds and surfaces smooth and blended so no roughness shows after finishing and contour of welded surface matches that of adjacent surface.

D. Fastening to In-Place Construction: Provide anchorage devices and fasteners where metal fabrications are required to be fastened to in-place construction. Provide threaded fasteners for use with concrete and masonry inserts, toggle bolts, through bolts, lag bolts, wood screws, and other connectors.

E. Provide temporary bracing or anchors in formwork for items that are to be built into concrete, masonry, or similar construction.

F. Corrosion Protection: Coat concealed surfaces of aluminum that will come into contact with grout, concrete, masonry, wood, or dissimilar metals with a heavy coat of bituminous paint.

3.2 ADJUSTING AND CLEANING

A. Touchup Painting: Immediately after erection, clean field welds, bolted connections, and abraded areas. Paint uncoated and abraded areas with the same material as used for shop painting to comply with SSPC-PA 1 for touching up shop-painted surfaces.
   1. Apply by brush or spray to provide a minimum 2.0-mil dry film thickness.

END OF SECTION

SECTION 05 51 00 – METAL STAIRS

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Steel stairs fabricated from steel shapes which are not a part of building structural systems.

1.2 RELATED SECTIONS:

A. 05 12 00 - Structural Steel Framing
B. 05 50 00 – Metal Fabrications
C. 05 52 13 – Pipe and Tube Railings.

1.3 REFERENCES:

A. American Institute of Steel Construction (AISC):
1. Steel Construction Manual, 15th Edition.
2. Specification for Structural Joints Using High Strength Bolts, Approved by the Research Council for Structural Connections of the Engineering Foundation, August 1, 2014 and endorsed by the AISC.
3. AISC 303-16 Code of Standard Practice for Steel Buildings and Bridges, June 15,2016.

B. American Society for Testing and Materials (ASTM):
1. ASTM A36-14 Standard Specification for Structural Steel.
2. ASTM A253-10 Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-coated Welded and Seamless Steel Pipe.
3. ASTM A325-14 Standard Specification for High Strength Bolts for Structural Steel Joints.
4. ASTM A500/A500M-21 Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Round and Shapes.
5. ASTM A501-07 Standard Specification for Hot-Formed Welded and Seamless Carbon Steel Structural Tubing
6. ASTM A563-15 Standard Specification for Carbon and Alloy Steel Nuts.
7. ASTM A568-17a Standard Specification for Steel, Sheet, Carbon, Structural, and High-Strength, Low-Alloy, Hot-Rolled and Cold-Rolled, General Requirements
8. ASTM A992-11 Standard Specification for Structural Steel Shapes.
9. ASTM A1008-16 Standard Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, Solution Hardened, and Bake Hardenable.
10. ASTM A1011-17a Standard Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, and Ultra-High Strength
11. ASTM F436-19 Standard Specification for Hardened Steel Washers.
12. ASTM F959-17a Standard Specification for Compressible - Washer - Type Direct Tension Indicator for Use with Structural Fasteners.
13. ASTM F1554-18ae1 Standard Specification for Anchor Bolts, Steel, 36, 55 and 105 KSI Yield Strength.
14. ASTM F1852-11 Standard Specification for "Twist Off" Type Tension Control Structural Bolt / Nut / Washer / Assemblies, Steel, Heat Treated, 120 / 105 KSI Minimum Tensile Strength.

C. American Welding Society (AWS):
   1. AWS D1.4/D1.4M-17 Structural Welding Code - Steel.

D. Steel Structures Painting Council (SSPC):
   1. SSPC Painting Manual Volume 2, Systems and Specifications, 2011 Edition.

1.4 SUBMITTALS:

A. Submit under provisions of Section 01 33 00 Submittal Procedures.

B. Shop Drawings: Submit Shop Drawings for fabrication and erection of stair work that include but are not limited to the following.
   1. Indicate profiles, sizes, spacing, and locations of structural members and openings.
   2. Connections.
   3. Indicate welds by standard AWS symbols. Show size length and type of each weld.
   4. Provide setting drawings, templates, and directions for installation of anchor bolts and other anchorages.
   5. Show anchorage and accessory items.
   6. Do not make Shop Drawings using reproductions of or making reference to Contract Drawings.
   7. Provide signed and sealed Shop Drawings prepared under the supervision of a Professional Engineer registered in the state of Washington experienced in steel stairdesign.

C. Submit design calculations for the stairs with the Shop Drawings.
   1. Design stairs to resist an allowable concentrated live load of 300 lbs on any 4 x 4 area of stair tread or 100 lbs per square foot distributed live load whichever is more severe.
   2. Provide signed and sealed design calculations demonstrating conformance with the specified performance requirements, that have been performed by a Professional Engineer registered in the state of Washington experienced in steel stairdesign.

D. Welders' Certificates: Submit welders' certificates for each welder to be employed on this project. Certificates to indicate welder has been tested on type of weld in last 12 months.

1.5 QUALITY ASSURANCE

A. Fabricate structural steel members in accordance with AISC - Steel Construction Manual, 16th Edition.

B. Field measurements:
   1. Take field measurements prior to preparation of Shop Drawings and fabrication, where possible, to insure fitting of work, however, do not delay job progress.
   2. Allow for trimming and fitting wherever taking of field measurements before fabrication might delay work.

1.6 QUALIFICATIONS

A. Welder: Employ welders on the Work that have successfully qualified for the welding positions required in accordance with Chapter 5 "Qualification," AWS D1.1 Qualification, within the last 12 months. Welders are required to carry proof of their qualification on their person.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Acceptable manufacturers subject to the conditions described herein:
   1. American Stair.
   2. Lapeyre Stair
   3. Stair Corporation

2.2 MATERIALS:

A. Structural Steel Shapes
   1. W-Shapes: ASTM A992, Grade 50.
   2. M-Shapes: ASTM A36.
   3. S-Shapes: ASTM A36.
   4. HP-Shapes: ASTM A36.
   5. Channels: ASTM A36.
   6. Angles: ASTM A36.
   7. Structural Tees: ASTM A992, Grade 50.

B. Structural Steel Plates and Bars: ASTM A36.

Cold Formed Steel Tubing: ASTM A500, Grade C.

C. Hot Formed Steel Tubing: ASTM A501. Type E or S, Grade B.

D. Pipe: ASTM A53 Type E or S, Grade B.

E. High Strength Bolts: All material, domestic manufacture, marked with lot identification.
   1. High strength bolts:
      a. Standard bolts: ASTM F3125 Gr. A325, A490, F1852 or F2280., type I.
      b. Alternate design bolts: Conforming to ASTM F1852.
         1) NSS Industries, Rapid Tension Bolts.
         2) Le Jeune Bolt Company, Tension Control Bolts.
         3) Bethlehem Steel Corporation, Load Indicator Bolt.
         4) Substitutions: Under provisions of Section 01 25 13 Product Substitution Procedures.
   2. Nuts: ASTM A563.
   3. Washers:
      a. Hardened steel washers: ASTM F436.
      b. Direct tension indicator washer (Load Indicator Washer): ASTM F959.

F. Anchor Rods: ASTM F1554, Grade 36.

G. Electrodes for welding in accordance with AWS D1.1.

H. Hot-rolled carbon steel sheets and strips: ASTM A568 and ASTM A1011; Grade B.

I. Cold-rolled carbon steel sheets: ASTM A1008.

J. Standard bolts and nuts: ASTM A325, Grade A, regular hexagon head. Nuts meeting ASTM A563, Hex Grade C.

K. Machine screws: Cadmium plated steel.

L. Shop Paint and Touch-Up Primer
   1. Shop paint for interior steel:
      a. Type: Modified soya oil alkyd resin - lead and chromate free.

b. Solids Content: 55%

2. Shop paint for exterior steel:
   a. Vehicle type: Inorganic Ethyl Silicate (self-curing).
   b. Pigment type: Zinc dust plus colorant (green).
   c. Pigment content: 85% Zinc dry film by weight.
   d. Solids content: 79% by weight, 71% by volume packing density ratio of wet to dry film.

2.3 FABRICATION:

A. General: In accordance with the References.

B. Workmanship: Use materials of size indicated. Work to dimensions shown on approved Shop Drawings using proven details of fabrication and support. Use materials indicated for the various components of work.

C. Metal Surfaces:
   1. For fabrication of steel stair work which will be exposed to view, use only materials which are smooth and free of surface blemishes including pitting, seam marks, roller marks, rolled trade names, and roughness.
   2. Remove such blemishes by grinding or by welding and grinding prior to cleaning, treating, and application of surface finishes including zinc coatings.

D. Form work true to line and level with accurate angles and surfaces and straight sharp edges.
   1. Ease exposed edges to radius of approximately 1/32 inches.
   2. Form bent-metal corners to smallest radius possible without causing grain separation or otherwise impairing work.

E. Welded corners and seams continuously and in accordance with recommendations of AWS. Grind exposed welds smooth and flush, to match and blend with adjoining surfaces.

F. Provide for anchorage of type shown on approved Shop Drawings coordinated with supporting structure. Fabricate and space anchoring devices as required providing adequate support.

G. Remove scale, rust and other deleterious materials before applying shop primer. Apply one shop coat of metal primer to fabricated metal items.

H. Use welding for joining pieces together, unless otherwise shown.
   1. Fabricate units so that bolts and other fastenings do not appear on finish surfaces.
   2. Make joints true and tight.
   3. Provide continuous welds, ground smooth where exposed.

I. Construct stair units to conform to sizes and arrangements shown.
   1. Construct entire assembly to support minimum live load of 100 lbs./sq. ft.
   2. Provide metal framing, hangers, struts, clips, brackets, bearing plates and other components as required for support of stairs and platforms.
   3. Erect stair work to line, plumb, square and true with runs registering level with floor and platform levels.

J. Provide brackets and bearing surfaces as required to anchor and contain the stairs on the supporting structure.

K. Fabricate stringers of structural steel channels or plates, or combination thereof. Provide closures for exposed ends of stringers.

L. Construct platforms of structural steel channel headers and miscellaneous framing members, as shown. Bolt headers to stringers and newels. Bolt framing members to stringers and headers.

M. Metal pan units:
1. Form metal pans of No. 14 gauge structural steel sheet. Shape pans to conform to configuration shown on Contract Drawings.
2. Construct riser and subtread metal pans with steel angle supporting brackets, welded to stringers. Secure metal pans to brackets with rivets or welds.
3. Secure sub-platform metal pans to platform frames with welds.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that field conditions are acceptable and are ready to receive work.

3.2 PREPARATION

A. When field welding is required, clean and strip primed steel items to bare metal.

B. Supply items required to be cast into concrete and embedded in masonry with setting templates.

3.3 INSTALLATION

A. Install components plumb and level, accurately fitted, free from distortion or defects.

B. Provide anchors, plates, angles, hangers, and struts required for connecting stairs to structure.

C. Allow for erection loads, and for sufficient temporary bracing to maintain true alignment until completion of erection and installation of permanent attachments.

D. Provide welded field joints where specifically indicated on drawings. Perform field welding in accordance with AWS D1.1.

E. Other field joints may be either welded or bolted provided the result complies with the limitations specified for jointing quality levels.

F. Field bolt and weld to match shop bolting and welding. Conceal bolts and screws whenever possible. Where not concealed, use flush countersunk fastenings.

G. Mechanically fasten joints butted tight, flush, and hairline. Grind welds smooth and flush.

H. Obtain approval prior to site cutting or creating adjustments not scheduled.

I. After erection, prime welds, abrasions, and surfaces not shop primed or galvanized, except surfaces to be in contact with concrete.

3.4 ERECTION TOLERANCES

A. Maximum Variation From Plumb: 1/4 inch per story, non-cumulative.

B. Maximum Offset From True Alignment: 1/4 inch.

END OF SECTION

SECTION 05 52 13 - PIPE AND TUBE RAILINGS

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:
   1. Steel pipe railing.
      a. Painted.

1.2 PERFORMANCE REQUIREMENTS

A. Structural Performance: Provide railings capable of withstanding the effects of gravity loads and the following loads and stresses within limits and under conditions indicated:
   1. Handrails:
      a. Uniform load of 50 lbf/ ft. applied in any direction.
      b. Concentrated load of 200 lbf applied in any direction.
      c. Uniform and concentrated loads need not be assumed to act concurrently.

B. Thermal Movements: Provide exterior railings that allow for thermal movements resulting from the following maximum change (range) in ambient and surface temperatures by preventing buckling, opening of joints, overstressing of components, failure of connections, and other detrimental effects. Base engineering calculation on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.

C. Control of Corrosion: Prevent galvanic action and other forms of corrosion by insulating metals and other materials from direct contact with incompatible materials.

1.3 SUBMITTALS

A. Product Data: For the following:
   1. Grout, anchoring cement, and paint products.

B. Shop Drawings: Include plans, elevations, sections, details, and attachments to other work.

C. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, according to ASTM E 894 and ASTM E 935.

1.4 QUALITY ASSURANCE

A. Source Limitations: Obtain each type of railing through one source from a single manufacturer.

1.5 PROJECT CONDITIONS

A. Field Measurements: Verify actual locations of walls and other construction contiguous with railings by field measurements before fabrication and indicate measurements on Shop Drawings.

1.6 COORDINATION AND SCHEDULING

A. Coordinate installation of anchorages for railings. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.

B. Schedule installation so wall attachments are made only to completed walls. Do not support railings temporarily by any means that do not satisfy structural performance requirements.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Basis of Design: R & B Wagner

B. Acceptable Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   1. Steel Pipe and Tube Railings:
      a. Pisor Industries, Inc.
      b. Sharpe Products.
      c. Gerdau Ameristeel

2.2 METALS, GENERAL

A. Metal Surfaces, General: Provide materials with smooth surfaces, without seam marks, roller marks, rolled trade names, stains, discolorations, or blemishes.

B. Brackets, Flanges, and Anchors: Cast or formed metal of same type of material and finish as supported rails, unless otherwise indicated.

2.3 STEEL AND IRON

A. Pipe: ASTM A 53/A 53M, Type F or Type S, Grade A, Standard Weight (Schedule 40), unless another grade and weight are required by structural loads.
   1. Provide galvanized finish for exterior installations and where indicated.

B. Plates, Shapes, and Bars: ASTM A 36/A 36M.

C. Castings: Either gray or malleable iron, unless otherwise indicated.
   1. Gray Iron: ASTM A 48/A 48M, Class 30, unless another class is indicated or required by structural loads.
   2. Malleable Iron: ASTM A 47/A 47M.

2.4 FASTENERS

A. General: Provide the following:
   1. Steel Railings: Plated steel fasteners complying with ASTM B 633, Class Fe/Zn 25 for electrodeposited zinc coating.
   2. Aluminum Railings: Type 304 stainless-steel fasteners.

B. Fasteners for Anchoring Railings to Other Construction: Select fasteners of type, grade, and class required to produce connections suitable for anchoring railings to other types of construction indicated and capable of withstanding design loads.

2.5 MISCELLANEOUS MATERIALS

A. Universal Shop Primer: Fast-curing, lead- and chromate-free, universal modified-alkyd primer complying with MPI#79.

B. Shop Primer for Galvanized Steel: Zinc-dust, zinc-oxide primer formulated for priming zinc-coated steel and for compatibility with finish paint systems indicated, and complying with SSPC-Paint 5.

2.6 FABRICATION

A. General: Fabricate railings to comply with requirements indicated for design, dimensions, member sizes and spacing, details, finish, and anchorage, but not less than that required to support structural loads.

B. Assemble railings in the shop to greatest extent possible to minimize field splicing and assembly. Disassemble units only as necessary for shipping and handling limitations. Clearly mark units for reassembly and coordinated installation. Use connections that maintain structural value of joined pieces.

C. Cut, drill, and punch metals cleanly and accurately. Remove burrs and ease edges to a radius of approximately 1/32 inch, unless otherwise indicated. Remove sharp or rough areas on exposed surfaces.

D. Form work true to line and level with accurate angles and surfaces.

E. Fabricate connections that will be exposed to weather in a manner to exclude water. Provide weep holes where water may accumulate.

F. Cut, reinforce, drill, and tap as indicated to receive finish hardware, screws, and similar items.

G. Connections: Fabricate railings with welded connections, unless otherwise indicated.

H. Welded Connections: Cope components at connections to provide close fit, or use fittings designed for this purpose. Weld all around at connections, including at fittings.
   1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
   2. Obtain fusion without undercut or overlap.
   3. Remove flux immediately.
   4. At exposed connections, finish exposed surfaces smooth and blended so no roughness shows after finishing and welded surface matches contours of adjoining surfaces.

I. Close exposed ends of railing members with prefabricated end fittings.

J. Provide wall returns at ends of wall-mounted handrails, unless otherwise indicated. Close ends of returns unless clearance between end of rail and wall is 1/4 inch or less.

K. Brackets, Flanges, Fittings, and Anchors: Provide wall brackets, flanges, miscellaneous fittings, and anchors to interconnect railing members to other work, unless otherwise indicated.
   1. At brackets and fittings fastened to plaster or gypsum board partitions, provide fillers made from crush-resistant material, or other means to transfer wall loads through wall finishes to structural supports and prevent bracket or fitting rotation and crushing of substrate.

2.7 FINISHES, GENERAL

A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.

B. Provide exposed fasteners with finish matching appearance, including color and texture, of railings.

2.8 STEEL AND IRON FINISHES

A. Galvanized Railings:
   1. Hot-dip galvanize exterior steel and iron railings, including hardware, after fabrication.

2. Comply with ASTM A 123/A 123M for hot-dip galvanized railings.
3. Comply with ASTM A 153/A 153M for hot-dip galvanized hardware.

B. Fill vent and drain holes that will be exposed in the finished Work, unless indicated to remain as weep holes, by plugging with zinc solder and filing off smooth.

C. For galvanized railings, provide hot-dip galvanized fittings, brackets, fasteners, sleeves, and other ferrous components.

D. For nongalvanized steel railings, provide nongalvanized ferrous-metal fittings, brackets, fasteners, and sleeves, except galvanize anchors to be embedded in exterior concrete or masonry.

E. Preparation for Shop Priming: After galvanizing, thoroughly clean railings of grease, dirt, oil, flux, and other foreign matter, and treat with metallic-phosphate process.

F. Apply shop primer to prepared surfaces of railings, unless otherwise indicated. Comply with requirements in SSPC-PA 1, "Paint Application Specification No. 1: Shop, Field, and Maintenance Painting of Steel," for shop painting. Primer need not be applied to surfaces to be embedded in concrete or masonry.

G. Finish: Painted. Color selected by Architect.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine gypsum board assemblies, where reinforced to receive anchors, to verify that locations of concealed reinforcements have been clearly marked for Installer. Locate reinforcements and mark locations if not already done.

3.2 INSTALLATION, GENERAL

A. Fit exposed connections together to form tight, hairline joints.

B. Perform cutting, drilling, and fitting required for installing railings. Set railings accurately in location, alignment, and elevation; measured from established lines and levels and free of rack.
1. Do not weld, cut, or abrade surfaces of railing components that have been coated or finished after fabrication and that are intended for field connection by mechanical or other means without further cutting or fitting.
2. Set posts plumb within a tolerance of 1/16 inch in 3 feet.

3.3 ANCHORING RAILING ENDS

A. Anchor railing ends to metal surfaces with flanges bolted to metal surfaces and connected to railing ends using nonwelded connections.

3.4 ATTACHING HANDRAILS TO WALLS

A. Attach handrails to wall with wall brackets. Provide brackets with 1-1/2-inch clearance from inside face of handrail and finished wall surface.
1. Use type of bracket with predrilled hole for exposed bolt anchorage.

B. Locate brackets as indicated or, if not indicated, at spacing required to support structural loads.

C. Secure wall brackets to building construction as follows:

1. For steel-framed gypsum board partitions, fasten brackets with toggle bolts installed through flanges of steel framing or through concealed steel reinforcements.

3.5 ADJUSTING AND CLEANING

A. Touchup Painting: Cleaning and touchup painting of field welds, bolted connections, and abraded areas of shop paint are specified in Division 09 painting Sections.

3.6 PROTECTION

A. Protect finishes of railings from damage during construction period with temporary protective coverings approved by railing manufacturer. Remove protective coverings at time of Substantial Completion.

B. Restore finishes damaged during installation and construction period so no evidence remains of correction work. Return items that cannot be refinished in the field to the shop; make required alterations and refinish entire unit, or provide new units.

END OF SECTION

SECTION 06 1053 - MISCELLANEOUS ROUGH CARPENTRY

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:
   1. Rooftop equipment bases and support curbs.
   2. Wood blocking, furring, nailers.

B. Related Sections include the following:
   1. Section 06 1600 Sheathing.

1.2 SUBMITTALS

A. Product Data: For each type of process and factory-fabricated product. Indicate component materials and dimensions and include construction and application details.
   1. Include data for wood-preservative treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Indicate type of preservative used and net amount of preservative retained.
   2. Include data for fire-retardant treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Include physical properties of treated materials based on testing by a qualified independent testing agency.

1.3 DELIVERY, STORAGE, AND HANDLING

A. Stack lumber flat with spacers between each bundle to provide air circulation. Provide for air circulation around stacks and under coverings.

B. Deliver interior wood materials that are to be exposed to view only after building is enclosed and weatherproof, wet work other than painting is dry, and HVAC system is operating and maintaining temperature and humidity at occupancy levels.

PART 2 - PRODUCTS

2.1 WOOD PRODUCTS, GENERAL

A. Lumber: DOC PS 20 and applicable rules of grading agencies indicated. If no grading agency is indicated, provide lumber that complies with the applicable rules of any rules-writing agency certified by the ALSC Board of Review. Provide lumber graded by an agency certified by the ALSC Board of Review to inspect and grade lumber under the rules indicated.
   1. Factory mark each piece of lumber with grade stamp of grading agency.

2.2 FIRE-RETARDANT-TREATED MATERIALS

A. General: Comply with performance requirements in AWPA C20 (lumber.
   1. Use treatment that does not promote corrosion of metal fasteners.
   2. Use Exterior type for exterior locations and where indicated.

B. Identify fire-retardant-treated wood with appropriate classification marking of testing and inspecting agency acceptable to authorities having jurisdiction.

C. Application: Treat all miscellaneous carpentry, unless otherwise indicated.
   1. Framing for raised platforms.
   2. Concealed blocking.

2.3 MISCELLANEOUS LUMBER

A. General: Provide miscellaneous lumber indicated and lumber for support or attachment of other construction, including the following:
   1. Blocking.
   2. Nailers.
   3. Rooftop equipment bases and support curbs.
   4. Cants.
   5. Furring.
   6. Grounds.

2.4 FASTENERS

A. General: Provide fasteners of size and type indicated that comply with requirements specified in this Article for material and manufacture.
   1. Where carpentry is exposed to weather, in ground contact, pressure-preservative treated, or in area of high relative humidity, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M.

B. Nails, Brads, and Staples: ASTM F 1667.

C. Power-Driven Fasteners: NES NER-272.

D. Wood Screws: ASME B18.6.1.

E. Screws for Fastening to Cold-Formed Metal Framing: ASTM C 954, except with wafer heads and reamer wings, length as recommended by screw manufacturer for material being fastened.

F. Lag Bolts: ASME B18.2.1.

G. Bolts: Steel bolts complying with ASTM A 307, Grade A; with ASTM A 563 hex nuts and, where indicated, flat washers.

H. Expansion Anchors: Anchor bolt and sleeve assembly of material indicated below with capability to sustain, without failure, a load equal to 6 times the load imposed when installed in unit masonry assemblies and equal to 4 times the load imposed when installed in concrete as determined by testing per ASTM E 488 conducted by a qualified independent testing and inspecting agency.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Set carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit carpentry to other construction; scribe and cope as needed for accurate fit. Locate[furring,] nailers, blocking, [grounds,]and similar supports to comply with requirements for attaching other construction.

B. Framing Standard: Comply with AF&PA's "Details for Conventional Wood Frame Construction," unless otherwise indicated.

C. Do not splice structural members between supports, unless otherwise indicated.

D. Provide blocking and framing as indicated and as required to support facing materials, fixtures, specialty items, and trim.
   1. Provide metal clips for fastening gypsum board or lath at corners and intersections where framing or blocking does not provide a surface for fastening edges of panels. Space clips not more than 16 inches o.c.

E. Provide fire blocking in furred spaces, stud spaces, and other concealed cavities as indicated and as follows:

F. Comply with AWPA M4 for applying field treatment to cut surfaces of preservative-treated lumber.
   1. Use inorganic boron for items that are continuously protected from liquid water.
   2. Use copper naphthenate for items not continuously protected from liquid water.

G. Securely attach carpentry work to substrate by anchoring and fastening as indicated, complying with the following:

3.2 WOOD BLOCKING, AND NAILER INSTALLATION

A. Install where indicated and where required for attaching other work. Form to shapes indicated and cut as required for true line and level of attached work. Coordinate locations with other work involved.

B. Attach items to substrates to support applied loading. Recess bolts and nuts flush with surfaces, unless otherwise indicated.

3.3 WOOD FURRING INSTALLATION

A. Install level and plumb with closure strips at edges and openings. Shim with wood as required for tolerance of finish work.

3.4 PROTECTION

A. Protect wood that has been treated with inorganic boron (SBX) from weather. If, despite protection, inorganic boron-treated wood becomes wet, apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label.

B. Protect rough carpentry from weather. If, despite protection, rough carpentry becomes wet, apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label.

END OF SECTION

SECTION 06 16 00 – SHEATHING

1.1 SUMMARY

A. This Section includes the following:
   1. Wall sheathing.
   2. Flexible flashing at openings in sheathing.
   3. Sheathing joint and penetration treatment.

B. Related Sections include the following:
   1. Section 061053 - Miscellaneous Rough Carpentry.

1.2 SUBMITTALS

A. Product Data: For each type of process and factory-fabricated product. Indicate component materials and dimensions and include construction and application details.
   1. Include data for wood-preservative treatment from chemical treatment manufacturer and certification by treating plant that treated plywood complies with requirements. Indicate type of preservative used and net amount of preservative retained.
   2. For products receiving a waterborne treatment, include statement that moisture content of treated materials was reduced to levels specified before shipment to Project site.
   3. Include copies of warranties from chemical treatment manufacturers for each type of treatment.
   4. For building wrap, include data on air-/moisture-infiltration protection based on testing according to referenced standards.

1.3 QUALITY ASSURANCE

A. Fire-Test-Response Characteristics: For assemblies with fire-resistance ratings, provide materials and construction identical to those of assemblies tested for fire resistance per ASTM E 119 by a testing and inspecting agency acceptable to authorities having jurisdiction.
   1. Fire-Resistance Ratings: Indicated by design designations from UL's "Fire Resistance Directory."

1.4 DELIVERY, STORAGE, AND HANDLING

A. Stack plywood and other panels flat with spacers between each bundle to provide air circulation. Provide for air circulation around stacks and under coverings.

PART 2 - PRODUCTS

2.1 WALL SHEATHING

A. Exterior Grade Plywood Wall Sheathing: ASTM C 1177/1177M.
   1. Type and Thickness: Type X, 5/8 inch thick.

2.2 FIRE-RETARDANT-TREATED PLYWOOD

A. General: Comply with performance requirements in AWPA C27.
   1. Use treatment that does not promote corrosion of metal fasteners.
   2. Use Exterior type for exterior locations and where indicated.

B. Kiln-dry material after treatment to a maximum moisture content of 15 percent. Do not use material that is warped or does not comply with requirements for untreated material.

C. Identify fire-retardant-treated plywood with appropriate classification marking of UL, U.S. Testing, Timber Products Inspection, or another testing and inspecting agency acceptable to authorities having jurisdiction.
   1. Roof and wall sheathing within 48 inches of fire walls.

2.3 FASTENERS

A. General: Provide fasteners of size and type indicated that comply with requirements specified in this Article for material and manufacture.
   1. For wall sheathing, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M.

B. Nails, Brads, and Staples: FS FF-N-105.

C. Power-Driven Fasteners: NES NER-272.

D. Wood Screws: ASME B18.6.1.

E. Lag Bolts: ANSI B18.2.1

F. Bolts: Steel bolts complying with ASTM A 307, Grade A; with ASTM A 563 hex nuts and where indicated, flat washers.

2.4 MISCELLANEOUS MATERIALS

A. Adhesives for Field Gluing Panels to Framing: Formulation complying with ASTM D 3498 that is approved for use with type of construction panel indicated by manufacturers of both adhesives and panels.
   1. Use adhesives that have a VOC content of 70 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Do not use materials with defects that impair quality of sheathing or pieces that are too small to use with minimum number of joints or optimum joint arrangement.

B. Cut panels at penetrations, edges, and other obstructions of work; fit tightly against abutting construction, unless otherwise indicated.

C. Securely attach to substrate by fastening as indicated, complying with the following:
   1. NES NER-272 for power-driven fasteners.
   2. Table 2304.9.1, "Fastening Schedule," in ICC's "International Building Code."

D. Coordinate wall sheathing installation with flashing and joint-sealant installation so these materials are installed in sequence and manner that prevent exterior moisture from passing through completed assembly.

E. Do not bridge building expansion joints; cut and space edges of panels to match spacing of structural support elements.

F. Coordinate sheathing installation with installation of materials installed over sheathing so sheathing is not exposed to precipitation or left exposed at end of the workday when rain is forecast.

3.2 PLYWOOD SHEATHING INSTALLATION

A. Comply with GA-253 and with manufacturer's written instructions.

B. Apply fasteners so heads bear tightly against face of sheathing boards but do not cut into facing.

C. Horizontal Installation: Install sheathing with V-grooved edge down and tongue edge up. what's it rightInterlock tongue with groove to bring long edges in contact with edges of adjacent boards without forcing. Abut ends of boards over centers of studs, and stagger end joints of adjacent boards not less than one stud spacing. Attach boards at perimeter and within field of board to each steel stud.
   1. Space fasteners approximately 8 inches o.c. and set back a minimum of 3/8 inch from edges and ends of boards.

D. Vertical Installation: Install board vertical edges centered over studs. Abut ends and edges of each board with those of adjacent boards. Attach boards at perimeter and within field of board to each stud.
   1. Space fasteners approximately 8 inches o.c. and set back a minimum of 3/8 inch from edges and ends of boards.

3.3 FLEXIBLE FLASHING INSTALLATION

A. Apply flexible flashing where indicated to comply with manufacturers written instructions.
   1. Prime substrates as recommended by flashing manufacturer.
   2. Lap seams and junctures with other materials at least 4 inches, except that at flashing flanges of other construction, laps need not exceed flange width.
   3. Lap flashing over weather-resistant building paper at bottom and sides of openings.
   4. Lap weather-resistant building paper over flashing at heads of openings.
   5. After flashing has been applied, roll surfaces with a hard rubber or metal roller to ensure that flashing is completely adhered to substrates.

3.4 PROTECTION

A. Protect sheathing by covering exposed exterior surface of sheathing with weather-resistant sheathing paper securely fastened to framing. Apply covering immediately after sheathing is installed.

END OF SECTION

SECTION 07 14 16 - COLD FLUID-APPLIED WATERPROOFING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Below grade waterproofing.
   2. Molded Drainage Panels.

1.2 SUBMITTALS

A. Shop Drawings: Show locations and extent of waterproofing. Include details for substrate joints and cracks, sheet flashings, penetrations, inside and outside corners, tie-ins with adjoining waterproofing, and other termination conditions.

B. Qualification Data: For Installer.

C. Product Test Reports: For waterproofing, based on evaluation of comprehensive tests performed by a qualified testing agency.

D. Warranty: Sample of special warranty.

1.3 QUALITY ASSURANCE

A. Installer Qualifications: A firm that is approved or acceptable to waterproofing manufacturer for installation of waterproofing required for this Project.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Deliver liquid materials to Project site in original containers with seals unbroken, labeled with manufacturer's name, product brand name and type, date of manufacture, shelf life, and directions for storing and mixing with other components.

B. Protect stored materials from direct sunlight.

1.5 PROJECT CONDITIONS

A. Environmental Limitations: Apply waterproofing within the range of ambient and substrate temperatures recommended by waterproofing manufacturer. Do not apply waterproofing to a damp or wet substrate, when relative humidity exceeds 85 percent, or when temperatures are less than 5 deg F (3 deg C) above dew point.
   1. Do not apply waterproofing in snow, rain, fog or mist, or when such weather conditions are imminent during application and curing period.

B. Maintain adequate ventilation during application and curing of waterproofing materials.

1.6 WARRANTY

A. Special Manufacturer's Warranty: Manufacturer's standard form in which waterproofing manufacturer and Installer agree to repair or replace waterproofing that does not comply with requirements or that fails to remain watertight within specified warranty period.
   1. Failure includes, but is not limited to, failure of waterproofing due to failure of substrate prepared and treated according to requirements or formation of new joints and cracks in substrate that exceed 1/16 inch (1.6 mm) in width.
   2. Warranty Period: Five years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 BELOW GRADE VERTICAL WATERPROOFING

A. Description: Water borne Spray Applied asphalt emulsion modified blended with synthetic polymers and special additives complying with ASTM C836/0836M.

B. Manufacturers: Comply with ASTM C 836 and with manufacturer's written physical requirements.
   1. Basis of Design: Carlisle Coatings & Waterproofing: Barrithane VP.
      a. Drainage Panels: Carlisle Coatings & Waterproofing – MiraDrain 6000XL
      b. Adhesive: Carlisle Coatings & Waterproofing – Cav-Grip
   2. Acceptable Products: Subject to compliance with requirements:
      a. Henry Company
      b. W. R. Meadows.

2.2 AUXILIARY MATERIALS

A. General: Provide auxiliary materials recommended by manufacturer to be compatible with one another and with waterproofing, as demonstrated by waterproofing manufacturer, based on testing and field experience.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements and other conditions affecting performance.
   1. Verify that concrete has cured and aged for minimum time period recommended by waterproofing manufacturer.
   2. Verify that substrate is visibly dry and free of moisture. Test for capillary moisture by plastic sheet method according to ASTM D 4263.
   3. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION AT TERMINATIONS AND PENETRATIONS

A. Prime substrate unless otherwise instructed by waterproofing manufacturer.

3.3 WATERPROOFING APPLICATION

A. Apply waterproofing according to ASTM C 898 and manufacturer's written instructions.

B. Start installing waterproofing in presence of manufacturer's technical representative.

3.4 FIELD QUALITY CONTROL

A. Owner will engage an independent testing agency to observe flood testing and examine underside of decks and terminations for evidence of leaks during flood testing.

3.5 CURING, PROTECTION, AND CLEANING

A. Cure waterproofing according to manufacturer's written recommendations, taking care to prevent contamination and damage during application stages and curing.
   1. Do not permit foot or vehicular traffic on unprotected membrane.

B. Protect waterproofing from damage and wear during remainder of construction period.

C. Clean spillage and soiling from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction.

END OF SECTION

SECTION 07 21 00 –BUILDING INSULATION

1.1 SUMMARY

A. This Section includes the following:
   1. Perimeter insulation under slab on grade.
   2. Concealed building insulation.
   3. Sound attenuation insulation.
   4. Miscellaneous insulating materials.

B. Related Sections include the following:
   1. Section 05 1200 – Structural Steel
   2. Section 03 3000 – Cast-in-Place Concrete.
   3. Section 09 2900 – Gypsum Board.: Installation in metal-framed assemblies of insulation specified by referencing this Section.
   4. Section 230700 - Mechanical Insulation.

1.2 DEFINITIONS

A. Mineral-Fiber Insulation: Insulation composed of slag-wool fibers, or glass fibers; produced in boards and blanket with latter formed into batts (flat-cut lengths) or rolls.

B. Thermal Break: An element of low thermal conductivity placed in an assembly to reduce or prevent the flow of thermal energy between conductive materials.

C. Sound Transmission Class Rating (STC): Measurement used to calculate the effectiveness of soundproofing materials in reducing sound transmission between rooms**.**

1.3 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Samples for Verification: Full-size units for each type of exposed insulation indicated.

C. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency for insulation products.

1.4 QUALITY ASSURANCE

A. Source Limitations: Obtain each type of building insulation through one source from a single manufacturer.

B. Acoustic Performance Criteria: ANSI S12.60-2002 Acoustical Performance Criteria Design Requirements and Guidelines for Schools. Sound insulation shall achieve the minimum STC Ratings when separating a core learning space from an existing space:
   1. STC-45 if the adjacent space is a corridor, stair, office, or conference room.
   2. STC-50 if the adjacent space is another core learning space.
   3. STC-53 if the adjacent space is a restroom.
   4. STC-60 if adjacent space is mechanical equipment room, cafeteria, or gymnasium.

C. Fire-Test-Response Characteristics: Provide insulation and related materials with the fire-test-response characteristics indicated, as determined by testing identical products per test method

indicated below by UL or another testing and inspecting agency acceptable to authorities having jurisdiction. Identify materials with appropriate markings of applicable testing and inspecting agency.

1. Surface-Burning Characteristics: ASTM E 84.
2. Fire-Resistance Ratings: ASTM E 119.
3. Combustion Characteristics: ASTM E 136.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Protect insulation materials from physical damage and from deterioration by moisture, soiling, and other sources. Store inside and in a dry location. Comply with manufacturer's written instructions for handling, storing, and protecting during installation.

B. Protect plastic insulation as follows:
1. Do not expose to sunlight, except to extent necessary for period of installation and concealment.
2. Protect against ignition at all times. Do not deliver plastic insulating materials to Project site before installation time.
3. Complete installation and concealment of plastic materials as rapidly as possible in each area of construction.

PART 2 - PRODUCTS

2.1 CONCEALED BLANKET BUILDING INSULATION/ SOUND INSULATION

A. Manufacturer:
1. Basis of Design: Owens Corning Insulating Systems
a. Type: Fiberglas Insulation; Unfaced.
b. R-value: R-30.

B. Acceptable Manufacturers: Subject to compliance with requirements:
1. Fibrex Insulations Inc.
2. Thermafiber.

2.2 SLAG-WOOL-FIBER/ROCK-WOOL-FIBER BLANKET INSULATION

A. Manufacturers:
1. Fibrex Insulations Inc.
2. Owens Corning.
3. Thermafiber.

B. Unfaced, Slag-Wool-Fiber/Rock-Wool-Fiber Blanket Insulation: ASTM C 665, Type I (blankets without membrane facing); consisting of fibers; with maximum flame-spread and smoke-developed indexes of 25 and 50, respectively; passing ASTM E 136 for combustion characteristics.

2.3 PERIMETER INSULATION

A. Manufacturer:
1. Basis of Design: Owens Corning Foam Insulation: Extruded Polystyrene Insulation
a. Thickness: 2-1/2 inches thick (R-11+).

B. Acceptable Manufacturers: Subject to compliance with requirements

1. Dow Chemical Company.
2. Insulfoam Company.

2.5 MISCELLANEOUS INSULATING MATERIALS

A. Description: Closed cell insulating materials for mechanical piping.

1. Basis of Design: Grainger: Thermacel # 4NLN8.
    a. Polyolefin insulating sheets.
    b. Thickness: 36 inches x 48 inches.
2. Acceptable manufacturers:
    a. Armacell
    b. Carousell

3. Contact Adhesive
    a. Grainger K-Flex #4VZR8.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates and conditions, with Installer present, for compliance with requirements of Sections in which substrates and related work are specified and for other conditions affecting performance.
    1. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Clean substrates of substances harmful to insulation or vapor retarders, including removing projections capable of puncturing vapor retarders or of interfering with insulation attachment.

3.3 INSTALLATION, GENERAL

A. Comply with insulation manufacturer's written instructions applicable to products and application indicated.

B. Install insulation that is undamaged, dry, and unsoiled and that has not been left exposed at any time to ice, rain, and snow.

C. Extend insulation in thickness indicated to envelop entire area to be insulated. Cut and fit tightly around obstructions and fill voids with insulation. Remove projections that interfere with placement.

D. Water-Piping Coordination: If water piping is located within insulated exterior walls, coordinate location of piping to ensure that it is placed on warm side of insulation and insulation encapsulates piping.

E. For preformed insulating units, provide sizes to fit applications indicated and selected from manufacturer's standard thicknesses, widths, and lengths. Apply single layer of insulation units to produce thickness indicated unless multiple layers are otherwise shown or required to make up total thickness.

3.4 INSTALLATION OF PERIMETER INSULATION

A. On vertical surfaces, set insulation units in adhesive applied according to manufacturer's written instructions. Use adhesive recommended by insulation manufacturer.
   1. If not otherwise indicated, extend insulation a minimum of 24 inches below exterior grade line.

B. On horizontal surfaces, loosely lay insulation units according to manufacturer's written instructions. Stagger end joints and tightly abut insulation units.

C. Protect top surface of horizontal insulation from damage during concrete work by applying protection course with joints butted.

3.5 INSTALLATION OF GENERAL BUILDING INSULATION

A. Apply insulation units to substrates by method indicated, complying with manufacturer's written instructions. If no specific method is indicated, bond units to substrate with adhesive or use mechanical anchorage to provide permanent placement and support of units.

B. Seal joints between foam-plastic insulation units by applying adhesive, mastic, or sealant to edges of each unit to form a tight seal as units are shoved into place. Fill voids in completed installation with adhesive, mastic, or sealant as recommended by insulation manufacturer.

END OF SECTION

SECTION 07 26 16 – VAPOR BARRIER

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Application of an under-slab vapor barrier where indicated on Drawings.

1.02 RELATED SECTIONS

A. Section 03 30 00 – Cast in Place Concrete.

B. Section 09 6519 - Resilient Tile Flooring.

1.03 REFERENCES

A. ASTM D1709 - 09 Standard Test Methods for Impact Resistance of Plastic Film by the Free-Falling Dart Method.

B. ASTM E96 - Standard Test Methods for Water Vapor Transmission of Materials.

C. ASTM E154 - Standard Test Methods for Water Vapor Barriers Used in Contact with Earth Under Concrete Slabs.

D. ASTM E1643 - Standard Practice for Installation of Water Vapor Barriers Used in Contact with Earth or Granular Fill Under Concrete Slabs.

E. ASTM E1745 - Standard Specification for Plastic Water Vapor Barriers Used in Contact with Soil or Granular Fill Under Concrete Slabs.

F. ASTM F1249-01 Standard Test Method for Water Vapor Transmission Rate Through Plastic Film and Sheeting Using a Modulated Infrared Sensor.

1.04 SUBMITTALS

A. Submit manufacturer's product data and application instructions.

1.05 QUALITY ASSURANCE

A. Use an experienced installer and adequate number of skilled personnel who are thoroughly trained and experienced in the application of the vapor barrier.

B. Obtain vapor barrier materials from a single manufacturer regularly engaged in manufacturing the product.

C. Provide products which comply with all state and local regulations controlling use of volatile organic compounds (VOCs).

1.06 PRECONSTRUCTION MEETING

A. Pre-Construction Meeting: Convene one week prior to installation of underslab vapour barrier. Attendees to be as follows: - Architect, Engineer, General Contractor, Vapor Barrier Installer, and Vapor Barrier Manufacturer to discuss the application in detail.

1.07 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.

B. Store materials in a clean, dry area in accordance with manufacturer's instructions.

C. Protect materials during handling and application to prevent damage or contamination.

D. Ensure membrane is stamped with manufacturer’s name, product name, and membrane thickness at intervals of no more than 85” (220 cm).

1.08 ENVIRONMENTAL REQUIREMENTS

A. Product not intended for uses subject to abuse or permanent exposure to the elements.

B. Do not apply on frozen ground.

PART 2 PRODUCTS

2.01 MANUFACTURER

A. Basis of Design: W. R. Meadows.- Sealtight Perminator
   1. Polyolefin based resin chemical.
   2. Thickness: 4mil**.**
B. Acceptable Manufacturer: Subject to compliance with requirements:
   1. Global Plastic Sheeting
   2. Insolation Solutions

2.02 MATERIALS

A. Plastic Vapor Barrier
   1. Vapor barrier membrane shall be manufactured from virgin polyolefin resins and shall meet or exceed all requirements of ASTM E1745, Class A.
      a. Maximum Water Vapor Permeance (ASTM E154 Sections 7, 8, 11, 12, 13, by ASTM E96, Method B or ASTM F1249)
         i. As received: 0.0183 perms.
         ii. After Wetting and Drying: 0.0219 perms.
         iii. Resistance to Plastic Flow and Temperature: 0.0197 perms.
         iv. Effect Low Temperature and Flexibility: 0.0212 perms
         v. Resistance to Deterioration from Organisms and Substances in Contacting Soil: 0.0198 perms.
      b. Puncture Resistance (ASTM D1709): >3,500 grams.
      c. Tensile Strength ASTM E154, Section 9: 52 Lb. Force/Inch.

2.03 ACCESSORIES

A. Seam Tape

1. High Density Polyethylene Tape with pressure sensitive adhesive. Minimum width 4” (100 mm).
   a. Perminator Tape by W.R. Meadows.

B. Pipe Collars
1. Construct pipe collars from vapor barrier material and pressure sensitive tape per manufacturer’s instructions.

PART 3 EXECUTION

3.01 SURFACE PREPARATION

A. Prepare surfaces in accordance with manufacturer’s instructions.

B. Level, tamp, or roll earth or granular material beneath the slab base.

3.02 EXAMINATION

A. Examine surfaces to receive membrane. Notify architect if surfaces are not acceptable. Do not begin surface preparation or application until unacceptable conditions have been corrected.

3.03 APPLICATION

A. Install the vapor barrier membrane in accordance with manufacturer’s instructions and ASTM E 1643–98.

B. Unroll vapor barrier with the longest dimension parallel with the direction of the pour.

C. Lap vapor barrier over footings and seal to foundation walls.

D. Overlap joints 6” (152 mm) and seal with manufacturer’s tape.

E. Seal all penetrations (including pipes) with manufacturer’s pipe boot.

F. No penetration of the vapor barrier is allowed except for reinforcing steel and permanent utilities.

G. Repair damaged areas by cutting patches of vapor barrier, overlapping damaged area 6” (152 mm) and taping all four sides with tape.

END OF SECTION

SECTION 07 2726 - FLUID-APPLIED MEMBRANE AIR BARRIERS

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:
   1. Fluid Applied High-Build Vapor-Permeable Air Barrier.

1.2 DEFINITIONS

A. ABAA: Air Barrier Association of America.

B. Air Barrier Assembly: The collection of air barrier materials and auxiliary materials applied to an opaque wall, including joints and junctions to abutting construction, to control air movement through the wall.

1.3 SUBMITTALS

A. Manufacturer’s product date, product literature, or a letter from the manufacturer verifying the location where the materials or products are harvested, extracted or manufactured within the State of Georgia.

B. Deliverable checklist from Section 2.3 of Energy Efficiency and Sustainable Construction Standards for State Buildings “Georgia Peach-Green Building Rating System provided at Final Acceptance.

C. Product Data: Include manufacturer's written instructions for evaluating, preparing, and treating substrate; technical data; and tested physical and performance properties of air barrier.

D. Shop Drawings: Show locations and extent of air barrier. Include details for substrate joints and cracks, counterflashing strip, penetrations, inside and outside corners, terminations, and tie-ins with adjoining construction.
   1. Include details of interfaces with other materials that form part of air barrier.
   2. Include details of mockups.

E. Product Certificates: For air barriers, certifying compatibility of air barrier and accessory materials with Project materials that connect to or that come in contact with the barrier; signed by product manufacturer.

F. Qualification Data: For Applicator.

G. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, for air barriers.

1.4 ASSURANCE

A. Mockups: Before beginning installation of air barrier, build mockups of exterior wall assembly 150 sq. ft., incorporating backup wall construction, external cladding, window, door frame and sill, insulation, and flashing to demonstrate surface preparation, crack and joint treatment, and sealing of gaps, terminations, and penetrations of air barrier membrane.
   1. Coordinate construction of mockup to permit inspection by Owner's testing agency of air barrier before external insulation and cladding is installed.

2. Include junction with roofing membrane, building corner condition [and foundation wall intersection.
3. If Architect determines mockups do not comply with requirements, reconstruct mockups and apply air barrier until mockups are approved.
4. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Store liquid materials in their original undamaged packages in a clean, dry, protected location and within temperature range required by air barrier manufacturer.

B. Remove and replace liquid materials that cannot be applied within their stated shelf life.

C. Store rolls according to manufacturer's written instructions.

D. Protect stored materials from direct sunlight.

1.6 PROJECT CONDITIONS

A. Environmental Limitations: Apply air barrier within the range of ambient and substrate temperatures recommended by air barrier manufacturer. Protect substrates from environmental conditions that affect performance of air barrier. Do not apply air barrier to a damp or wet substrate or during snow, rain, fog, or mist.

PART 2 - PRODUCTS

2.1 HIGH BUILD FLUID-APPLIED VAPOR PERMEABLE AIR BARRIER

A. Fluid-Applied, Vapor-Permeable Membrane Air Barrier: Elastomeric, modified bituminous membrane with an installed dry film thickness of 35 mils.
1. Modified Bituminous Type:
a. Acceptable Products: Subject to compliance with requirements, provide one of the following:
1) Henry Company; Air-Bloc 17 MR
2) Hohmann & Barnard, Inc.: Textroflash Liquid VP.
3) Meadows, W. R. Inc.: Air-shield LMP

2. Synthetic Polymer Type:
a. Acceptable Products: Subject to compliance with requirements, provide one of the following:
1) W.R. Grace | Perm-A-Barrier.
2) Henry Company; Air-Bloc 31
3) Tremco Incorporated: Exo Air 230.

2.2 AUXILIARY MATERIALS

A. General: Auxiliary materials recommended by air barrier manufacturer for intended use and compatible with air barrier membrane. Liquid-type auxiliary materials shall comply with VOC limits of authorities having jurisdiction.

1. All transition tape/strips to overlap 3 inches.

B. Primer: Liquid waterborne primer recommended for substrate by manufacturer of air barrier material.

C. Counterflashing Strip: Install at all through wall flashing, modified bituminous, 40-mil- thick, self-adhering sheet consisting of 32 mils of rubberized asphalt laminated to an 8-mil- thick, cross-laminated polyethylene film with release liner backing.

D. Butyl Strip: Vapor-retarding, 30- to 40-mil- thick, self-adhering; polyethylene-film-reinforced top surface laminated to layer of butyl adhesive with release liner backing.
   1. Install at waterproofing membrane transitions.

E. Modified Bituminous Strip: Vapor-retarding, 40-mil- thick, smooth-surfaced, self-adhering; consisting of 36 mils of rubberized asphalt laminated to a 4-mil- thick polyethylene film with release liner backing.

F. Joint Reinforcing Strip: Air barrier manufacturer's glass-fiber-mesh tape.
   1. Install before installation of fluid applied membrane air barrier and at the following locations:
      a. Material seams.
      b. All sheathing joints and corners.

G. Substrate Patching Membrane: Manufacturer's standard trowel-grade substrate filler.

H. Adhesive and Tape: Air barrier manufacturer's standard adhesive and pressure-sensitive adhesive tape.
   1. Perimeter tape-flex strip at transitions between under-slab membranes/crystalline and fluid applied vapor barriers.

I. Stainless-Steel Sheet: ASTM A 240/A 240M, Type 304, 0.0250 inch thick, and Series 300 stainless-steel fasteners.

J. Sprayed Polyurethane Foam Sealant: 1- or 2-component, foamed-in-place, polyurethane foam sealant, 1.5 to 2.0 lb/cu. ft density; flame spread index of 25 or less according to ASTM E 162; with primer and noncorrosive substrate cleaner recommended by foam sealant manufacturer.

K. Adhesive-Coated Transition Strip: Vapor-permeable, 17-mil- thick, self-adhering strip consisting of an adhesive coating over a permeable laminate with a permeance of 37 perms.

L. Elastomeric Flashing Sheet: ASTM D 2000, 2BC415 to 3BC620, minimum 50- to 65-mil- thick, cured sheet neoprene with manufacturer's recommended contact adhesives and lap sealant with stainless-steel termination bars and fasteners.

M. Preformed Silicone-Sealant Extrusion: Manufacturer's standard system consisting of cured low-modulus silicone extrusion, sized to fit opening widths, with a single-component, **moisture cured adhesive** sealant for bonding extrusions to substrates.

N. Joint Sealant: ASTM C 920, single-component, **Type S**, Grade NS, **Class 25** Use NT related to exposure, and, as applicable to joint substrates indicated. Comply with Division 07 Section "Joint Sealants."

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements and other conditions affecting performance.
   1. Verify that substrates are sound and free of oil, grease, dirt, excess mortar, or other contaminants.
   2. Verify that concrete has cured and aged for minimum time period recommended by air barrier manufacturer.
   3. Verify that concrete is visibly dry and free of moisture. Test for capillary moisture by plastic sheet method according to ASTM D 4263.
   4. Verify that masonry joints are flush and completely filled with mortar.
   5. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 SURFACE PREPARATION

A. Clean, prepare, treat, and seal substrate according to manufacturer's written instructions. Provide clean, dust-free, and dry substrate for air barrier application.

B. Mask off adjoining surfaces not covered by air barrier to prevent spillage and overspray affecting other construction.

C. Remove grease, oil, bitumen, form-release agents, paints, curing compounds, and other penetrating contaminants or film-forming coatings from concrete.

D. Remove fins, ridges, mortar, and other projections and fill honeycomb, aggregate pockets, holes, and other voids in concrete with substrate patching membrane.

E. Remove excess mortar from masonry ties, shelf angles, and other obstructions.

F. At changes in substrate plane, apply sealant or termination mastic beads at sharp corners and edges to form a smooth transition from one plane to another.

G. Cover gaps in substrate plane and form a smooth transition from one substrate plane to another with stainless-steel sheet mechanically fastened to structural framing to provide continuous support for air barrier.

3.3 JOINT TREATMENT

A. Concrete and Masonry: Prepare, treat, rout, and fill joints and cracks in substrate according to ASTM C 1193 and air barrier manufacturer's written instructions. Remove dust and dirt from joints and cracks complying with ASTM D 4258 before coating surfaces.
   1. Prime substrate and apply a single thickness of preparation coat strip extending a minimum of 3 inches along each side of joints and cracks. Apply a double thickness of air barrier membrane and embed a joint reinforcing strip in preparation coat.

B. Gypsum Sheathing: Fill joints greater than 1/4 inch with sealant according to ASTM C 1193 and with air barrier manufacturer's written instructions. Apply first layer of fluid air barrier membrane at joints. Tape joints with joint reinforcing strip after first layer is dry. Apply a second layer of fluid air barrier membrane over joint reinforcing strip.

3.4 TRANSITION STRIP INSTALLATION

A. Install strips, transition strips, and auxiliary materials according to air barrier manufacturer's written instructions to form a seal with adjacent construction and maintain a continuous air barrier.

1. Coordinate the installation of air barrier with installation of roofing membrane and base flashing to ensure continuity of air barrier with roofing membrane.
2. Install modified bituminous strip on roofing membrane or base flashing so that a minimum of 3 inches of coverage is achieved over both substrates.

B. Apply primer to substrates at required rate and allow to dry. Limit priming to areas that will be covered by air barrier sheet in same day. Reprime areas exposed for more than 24 hours.
1. Prime glass-fiber-surfaced gypsum sheathing with number of prime coats needed to achieve required bond, with adequate drying time between coats.

C. Connect and seal exterior wall air barrier membrane continuously to roofing membrane air barrier, concrete below-grade structures, floor-to floor construction, exterior glazing and window systems, glazed curtain-wall systems, storefront systems, exterior louvers, exterior door framing, and other construction used in exterior wall openings, using accessory materials.

D. At end of each working day, seal top edge of strips and transition strips to substrate with termination mastic.

E. Apply joint sealants forming part of air barrier assembly within manufacturer's recommended application temperature ranges. Consult manufacturer when sealant cannot be applied within these temperature ranges.

F. Wall Openings: Prime concealed perimeter frame surfaces of windows, curtain walls, storefronts, and doors. Apply modified bituminous transition strip so that a minimum of 3 inches of coverage is achieved over both substrates. Maintain 3 inches of full contact over firm bearing to perimeter frames with not less than 1 inch of full contact.
1. Modified Bituminous Transition Strip: Roll firmly to enhance adhesion.
2. Elastomeric Flashing Sheet: Apply adhesive to wall, frame, and flashing sheet. Install flashing sheet and termination bars, fastened at 6 inches o.c. Apply lap sealant over exposed edges and on cavity side of flashing sheet.
3. Preformed Silicone-Sealant Extrusion: Set in full bed of silicone sealant applied to walls, frame, and membrane.

G. Fill gaps in perimeter frame surfaces of windows, curtain walls, storefronts, and doors, and miscellaneous penetrations of air barrier membrane with foam sealant.

H. Seal top of through-wall flashings to air barrier with an additional 6-inch- wide, modified bituminous strip.

I. Seal exposed edges of strips at seams, cuts, penetrations, and terminations not concealed by metal counterflashings or ending in reglets with termination mastic.

J. Repair punctures, voids, and deficient lapped seams in strips and transition strips. Slit and flatten fishmouths and blisters. Patch with transition strips extending 6 inches beyond repaired areas in strip direction.

3.5 AIR BARRIER MEMBRANE INSTALLATION

A. Apply air barrier membrane to form a seal with strips and transition strips and to achieve a continuous air barrier according to air barrier manufacturer's written instructions.

B. Apply air barrier membrane within manufacturer's recommended application temperature ranges.

C. Apply primer to substrates at required rate and allow to dry. Limit priming to areas that will be covered by air barrier sheet in same day. Reprime areas exposed for more than 24 hours.

1. Prime glass-fiber-surfaced gypsum sheathing with number of prime coats needed to achieve required bond, with adequate drying time between coats.

D. Apply a continuous unbroken air barrier to substrates according to the following minimum thickness. Apply membrane in full contact around protrusions such as masonry ties.
   1. Vapor-Permeable Membrane Air Barrier: 20-mil wet film thickness.

E. Apply strip and transition strip a minimum of 1 inch onto cured air membrane or strip and transition strip over cured air membrane overlapping 3 inches onto each surface according to air barrier manufacturer's written instructions.

F. Do not cover air barrier until it has been tested and inspected by Owner's testing agency.

G. Correct deficiencies in or remove air barrier that does not comply with requirements; repair substrates and reapply air barrier components.

3.6 FIELD QUALITY CONTROL

A. Testing Agency: Owner will engage a qualified testing agency to perform tests and inspections and prepare test reports.

B. Inspections: Air barrier materials and installation are subject to inspection for compliance with requirements. Inspections may include the following:
   1. Continuity of air barrier system has been achieved throughout the building envelope with no gaps or holes.
   2. Continuous structural support of air barrier system has been provided.
   3. Masonry and concrete surfaces are smooth, clean and free of cavities, protrusions, and mortar droppings.
   4. Site conditions for application temperature and dryness of substrates have been maintained.
   5. Maximum exposure time of materials to UV deterioration has not been exceeded.
   6. Surfaces have been primed, if applicable.
   7. Laps in strips and transition strips have complied with minimum requirements and have been shingled in the correct direction (or mastic has been applied on exposed edges), with no fishmouths.
   8. Termination mastic has been applied on cut edges.
   9. Strips and transition strips have been firmly adhered to substrate.
   10. Compatible materials have been used.
   11. Transitions at changes in direction and structural support at gaps have been provided.
   12. Connections between assemblies (membrane and sealants) have complied with requirements for cleanliness, preparation and priming of surfaces, structural support, integrity, and continuity of seal.
   13. All penetrations have been sealed.

C. Tests: Testing to be performed will be determined by Owner's testing agency from among the following tests:

D. Remove and replace deficient air barrier components and retest as specified above.

3.7 CLEANING AND PROTECTION

A. Protect air barrier system from damage during application and remainder of construction period, according to manufacturer's written instructions.
   1. Protect air barrier from exposure to UV light and harmful weather exposure as required by manufacturer. Remove and replace air barrier exposed for more than 30 days.

2. Protect air barrier from contact with creosote, uncured coal-tar products, TPO, EPDM, flexible PVC membranes, and sealants not approved by air barrier manufacturer.

B. Clean spills, stains, and soiling from construction that would be exposed in the completed work using cleaning agents and procedures recommended by manufacturer of affected construction.

C. Remove masking materials after installation.

END OF SECTION 072726

SECTION 07 41 13 – FORMED METAL ROOF AND WALL PANELS

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and other contract documents, listed in the agreement between the Owner and Contractor, apply to this section.

1.2 SUMMARY

A. Section includes:

1. Preformed metal wall panels.
2. Preformed metal roof panels.

1.3 ADMINISTRATIVE REQUIREMENTS

A. Pre-installation Conference: Conduct conference at project site.

B. Coordination:

1. Coordinate sizes and locations of roof curbs, equipment supports, and roof penetrations with actual equipment provided.
2. Coordinate metal panel installation with rain drainage work, flashing, trim, construction of soffits, and other adjoining work to provide a leak proof, secure, and noncorrosive installation.

1.4 SUBMITTALS

A. Product Data:

1. Include construction details, material descriptions, dimensions of individual components and profiles and finishes for each type of panel and accessory.

B. Shop Drawings:

1. Include fabrication and installation layouts of metal panels; details of edge conditions, joints, panel profiles, corners, anchorages, attachment system, trim, flashings, closures, accessories and special details.
2. Accessories: Include details of the flashing, trim, and anchorage systems, at a scale of not less than 1-1/2 inches per 12 inches.

C. Samples:

1. Metal Panels: 12 inches long by actual panel width. Include fasteners, closures, and other metal panel accessories.

D. Qualification Data: For Installer.

E. Product Test Reports: For each product, for tests performed by a qualified testing agency.

F. Filed quality – control reports.

G. Sample Warranties: For special warranties.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: An entity that employs installers and supervisors who have a minimum of 3 years' experience in the installation of metal roof / wall panels.

B. Mockups: Build mockup; to verify selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for fabrication and installation.

1.6 DELIVERY, STORAGE AND HANDLING

A. Deliver components, metal panels and other manufactured items so as not to be damaged or deformed. Package metal panels for protection during transportation and handling.

B. Store metal panels in a manner to prevent bending, warping, twisting and surface damage.

C. Stack metal panels horizontally on platforms or pallets, covered with suitable weather tight and ventilated covering. Store metal panels to ensure dryness with positive slope for drainage of water. Do not store metal panels in contact with other materials that might cause staining, denting or other surface damage.

D. Retain strippable protective covering on metal panels during installation.

1.7 FIELD CONDITIONS

A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit assembly of metal panels to be performed according to manufacturers' written instructions and warranty requirements.

1.8 WARRANTY

A. MANUFACTURER'S PRODUCT WARRANTY

1. Manufacturer's standard coating performance warranty, as available for specified installation and environmental conditions. (Contact a WSMR Representative to determine actual warranty criteria)

B. CONTRACTORS WARRANTY

1. Warrant panels, flashings, sealants, fasteners, and accessories against defective materials and/ or workmanship, to remain watertight and weatherproof with normal usage for
two (2) years following Project Substantial Completion date.

PART 2 – PRODUCTS

2.1 MANUFACTURER

2.2 METAL ROOF AND WALL PANELS

A. PBR Panel; Exposed Fastener Metal Panels: metal panel consisting of formed metal sheet with trapezoidal major ribs with intermediate stiffening ribs symmetrically placed between major ribs, installed by lapping edges of adjacent panels.

1. Metal Panel Designation: PBR Panel
2. ASTM A653 Galvanized G-90 Minimum

a. Nominal Thickness: [22 gauge], [24 Gauge]
b. Exterior Finish Available In: Galvanized G-90

3. Grade of Steel:

a. 24 Gauge – Grade 50
b. 22 Gauge – Grade 50

4. Major- Rib Spacing: 12 inches on center
5. Panel Coverage: 36 inches.
6. Panel Height: 1.25 inches

2.3 ACCESSORIES

A. Self-Adhering, High- Temperature Underlayment: Provide self-adhering, cold applied, sheet underlayment, a minimum of 30 mils thick, specifically designed to withstand high metal temperatures beneath metal roofing. Provide primer when recommended by underlayment manufacturer.

1. Thermal Stability: Stable after testing at 220 deg F; ASTM D 1970.
2. Low- Temperature Flexibility: Passes after testing at minus 20 deg F; ASTM D 1970.

B. Miscellaneous Metal Sub framing and Furring: ASTM C 645; cold formed, metallic- coated steel sheet, ASTM A 653/ A 653M, G90 coating designation or ASTM A 792/ A 792M, Class AZ55 aluminum- zinc alloy coating designation unless otherwise indicated. Provide manufacture's standard sections as required for support and alignment of metal panel system.

C. Panel accessories: Provide components required for a complete, weather tight panel system including trim, clips, flashings, sealants, gaskets, fillers, closure strips, and similar items. Match material and finish of metal panels unless otherwise indicated.

1. Closures: Provide closures at eaves and ridges, fabricated of same metal as metal panels.
2. Backing Plates; Provide metal backing plates at panel end splices, fabricated from material recommended by manufacturer.
3. Closure Strips: Closed-cell, expanded, cellular, rubber or cross linked, polyolefin-foam or closed-cell laminated polyethylene; minimum I -inch-thick, flexible closure strips; cut or pre-molded to match metal panel profile. Provide closure strips where indicated or necessary to ensure weather tight construction.

D. Flashing and Trim: Provide flashing and trim formed from same material as metal panels as required to seal against weather and to provide finished appearance. Finish flashing and trim with same finish systems adjacent metal panels.

E. Panel Fasteners: Self-tapping screws designed to withstand design loads. Provide EPDM or

PVC sealing washers for exposed fasteners.

F. Panel Sealants: Provide sealant type recommended by manufacturers that are compatible with panel materials, are non-staining and do not damage panel finish.

G. Metal Protection: When dissimilar metals contact each other or corrosive substrates, protect against galvanic.

2.4 FABRICATION

A. General: Fabricate and finish metal panels and accessories at the factory, by manufacturers Standard procedures and processes, as necessary to fulfill indicated performance requirements demonstrated by laboratory testing. Comply with indicated profiles and with dimensional and structural requirements.

B. Provide panel profile, including major ribs and intermediate stiffening ribs, if any, for full length of panel.

C. Sheet Metal Flashing and Trim: Fabricate flashing and trim to comply with manufacturer's recommendations and recommendation in SMACNA's "Architectural Sheet Metal Manual" that apply to design, dimensions, metal, and other characteristics of item indicated.

2.5 FINISHES

A. Protect mechanical and painted finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

B. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one- half of the range of approved Samples. Noticeable variations in same piece are unacceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

C. Steel Panels Finish:

1. ASTM A653 Galvanized G-90

PART 3- EXECUTION

3.1 EXAMINATION

A. Examine substrates, area, and conditions, with installer present, for compliance with requirements for installation tolerances, metal panel supports, and other conditions affecting performance of the work.

1. Examine primary and secondary roof framing to verify that rafters, purlins, angles, channels, and other structural panel support members and anchorages have been installed within alignment tolerances required by metal roof panel manufacturer.

2. Examine solid roof sheathing to verify that sheathing joints are supported by framing or blocking and that installation is within flatness tolerances required by metal roof panel manufacture.

a. Verify that air or water-resistive barriers have been installed over sheathing or backing

substrate to prevent air infiltration or water penetration.

B. Examine roughing-in for components and systems penetrating metal panels to verify actual locations of penetrations relative to seam locations of metal panels before installation.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Miscellaneous Supports: Install sub framing, furring and other miscellaneous panel support members and anchorage according to ASTM C 754 and metal panel manufacturer's written recommendations.

3.3 UNDERLAYMENT INSTALLATION

A. Self- Adhering Sheet Underlayment: Apply primer if required by manufacturer. Comply with temperature restrictions of underlayment manufacturer for installation. Apply at locations indicated on Drawings, wrinkle free, in shingle fashion to shed water, and with end laps of not less than 6 inches staggered 24 inches between courses. Overlap side edges not less than 3- ½ inches. Roll laps with roller. Cover underlayment within 14 days.

B. Felt Underlayment: Apply at locations indicated [below] [on drawings], in shingle fashion to shed water. And with lapped joints of not less than 2 inches.

1. Apply over the entire roof surface.
2. Apply on roof not covered by self- adhering sheet underlayment. Lap over edges of self-adhering sheet underlayment not less than 3 inches, in shingle fashion to shed water.

C. Slip Sheet: Apply slip sheet over underlayment before installing metal roof panels.

D. Flashings: Install flashings to cover underlayment to comply with requirements specified in Section 076200 " Sheet Metal Flashing and Trim."

3.4 METAL PANEL INSTALLATION

A. General: Install metal panels according to manufacturer's written instructions in orientation, sizes, and locations indicated. Install panels perpendicular to supports unless otherwise indicated. Anchor metal panels and other components of the work securely in place, with provisions for thermal and structural movement.

1. Shim or otherwise plumb substrates receiving metal panels.
2. Flash and seal metal panels at perimeter of all openings. Fasten with self-tapping screws. do not begin installation until air or water- resistive barriers and flashings that are concealed by metal panels are installed.
3. Install screw fasteners in predrilled holes.
4. Locate and space fastenings in uniform vertical and horizontal alignment.
5. Install flashing and trim as metal panel work proceeds.
6. Locate panel splices over, but not attached to, structural supports. Stagger panel splices and end laps to avoid a four – panel lap splice condition.
7. Align bottoms of metal panels and fasten with blind rivets, bolts, or self- tapping screws. Fasten flashings and trim around openings and similar elements with self-tapping screws.
8. Provide weather tight escutcheons for pipe—and conduit- penetrating panels.

B. Fasteners:

1. Steel Panels: Use galvanized steel fasteners.

C. Metal Protection: When dissimilar metals contact each other or corrosive substrates, protect against galvanic action.

D. Lap-Seam Metal Panels: Fasten metal panels to supports with fasteners at each lapped joint at location and spacing recommended by manufacturer.

1. Lap ribbed or fluted sheets one full rib. Apply panels and associated items true to line for neat and weather tight enclosure.
2. Provide metal backed washers under heads of exposed fasteners bearing on weather side of metal panels.
3. Locate and space exposed fasteners in uniform vertical and horizontal alignment. Use proper tools to obtain controlled uniform compression for positive seal without rupture of washer.
4. Install screw fasteners with power tools having controlled torque adjusted to compress Washer tightly without damage to washer, screw threads or panels. Install screws in predrilled holes.
5. Flash and seal pans with weather closures at perimeter of all openings.

E. Accessory Installation: install accessories with positive anchorage to building and weather tight Mounting, and provide for thermal expansion. Coordinate installation with flashings and other components.

1. Install components, required for a complete metal panel system including trim, copings, corners, seam covers, flashings, sealants, gaskets, fillers, closure strips and similar items. Provide types indicated by metal wall panel manufacturer; or, if not indicated, provide types recommended by metal panel manufacturer.

F. Flashing and Trim: Comply with performance requirements manufacturer's written installation instructions, and SMACNA's "Architectural Sheet Metal Manual." Provide concealed fasteners where possible, and set units true to line and level. Install work with laps, joints and seams that are permanently watertight.

1. Install exposed flashing and trim that is without buckling and tool marks, and that is true to line and levels indicated, with exposed edges folded back to form hems. Install sheet metal flashing and trim to fit substrates and achieve waterproof performance.

2. Expansion Provisions: Provide for thermal expansion of exposed flashing and trim. Space movement joint at a maximum of 10 feet with no joints allowed within 24 inches of corner or intersection. Where lapped expansion provisions cannot be used or would not be sufficiently waterproof, form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with mastic sealant (concealed within joints).

3.5 ERECTION TOLERANCES

A. Installation Tolerances: Shim and align metal panel units within installed tolerance of ¼ inch in 20 feet on slope and location lines and within 1/8- inch offset of adjoining faces and of alignment of matching profiles.

3.6 CLEANING AND PROTECTION

A. Remove temporary protective coverings and strippable films, if any, as metal panels are installed, unless otherwise indicated in manufacturer's written installation instructions, On completion of metal panel installation, clean finished surfaces as recommended by metal panel manufacturer, Maintain in a clean condition during construction.

B. Replace metal panels that have been damaged.

END OF SECTION

SECTION 07 62 00 - SHEET METAL FLASHING AND TRIM

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes flashing and sheet metal including assemblies listed below along with supplementary items necessary for installation.
   1. Roof drainage sheet metal fabrications.
   2. Low slope roof sheet metal fabrications.
   3. Equipment support flashing.

B. Related Sections include the following:
   1. Section 03 30 00 - Cast-in-Place Concrete: Installing reglets.
   2. Section 04 20 00 – Unit Masonry: Installing through-wall flashing, reglets, and other sheet metal flashing and trim.
   3. Section 06 10 53 – Miscellaneous Rough Carpentry for wood nailers, curbs, and blocking.
   4. Section 07 7200 - Roof Accessories: Set-on-type curbs, equipment supports, roof hatches, vents, and other manufactured roof accessory units.
   5. Section 07 9200- Joint Sealants: Field-applied sheet metal flashing and trim sealants.

1.2 PERFORMANCE REQUIREMENTS

A. General: Install sheet metal flashing and trim to withstand wind loads, structural movement, thermally induced movement, and exposure to weather without failing, rattling, leaking, and fastener disengagement.

B. Fabricate and install roof edge flashing and copings capable of resisting the following forces according to recommendations in FMG Loss Prevention Data Sheet 1-49:
   1. Wind Zone 1: For velocity pressures of 21 to 30 lbf/sq. ft.: 60-lbf/sq. ft. perimeter uplift force, 90-lbf/sq. ft. corner uplift force, and 30-lbf/sq. ft. outward force.

C. Thermal Movements: Provide sheet metal flashing and trim that allow for thermal movements resulting from the following maximum change (range) in ambient and surface temperatures by preventing buckling, opening of joints, hole elongation, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Provide clips that resist rotation and avoid shear stress as a result of sheet metal and trim thermal movements.

D. Base engineering calculation on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.
   1. Temperature Change (Range): 120 deg F, ambient; 180 deg F, material surfaces.

E. Water Infiltration: Provide sheet metal flashing and trim that do not allow water infiltration to building interior.

1.3 SUBMITTALS

A. Manufacturer’s product data, product literature, or a letter from the manufacturer verifying the location where the materials or products are harvested, extracted or manufactured within the State of Georgia.

B. Deliverable checklist from Section 2.3 of Energy Efficiency and Sustainable Construction Standards for State Buildings “Georgia Peach-Green Building Rating System” provided at Final Acceptance.

C. Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.

D. Shop Drawings: Show layouts of sheet metal flashing and trim, including plans and elevations. Distinguish between shop- and field-assembled work. Include the following:
   1. Identify material, thickness, weight, and finish for each item and location in Project.
   2. Details for forming sheet metal flashing and trim, including profiles, shapes, seams, and dimensions.
   3. Details for fastening, joining, supporting, and anchoring sheet metal flashing and trim, including fasteners, clips, cleats, and attachments to adjoining work.
   4. Details of expansion-joint covers, including showing direction of expansion and contraction.

E. Samples for Verification: For each type of exposed finish required, prepared on Samples of size indicated below:
   1. Sheet Metal Flashing: 12 inches long. Include fasteners, cleats, clips,] closures, and other attachments.
   2. Trim: 12 inches long. Include fasteners and other exposed accessories.
   3. Accessories: Full-size Sample.

1.4 QUALITY ASSURANCE

A. Sheet Metal Flashing and Trim Standard: Comply with SMACNA's "Architectural Sheet Metal Manual." Conform to dimensions and profiles shown unless more stringent requirements are indicated.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Deliver sheet metal flashing materials and fabrications undamaged. Protect sheet metal flashing and trim materials and fabrications during transportation and handling.

B. Unload, store, and install sheet metal flashing materials and fabrications in a manner to prevent bending, warping, twisting, and surface damage.

C. Stack materials on platforms or pallets, covered with suitable weathertight and ventilated covering. Do not store sheet metal flashing and trim materials in contact with other materials that might cause staining, denting, or other surface damage.

1.6 COORDINATION

A. Coordinate installation of sheet metal flashing and trim with interfacing and adjoining construction to provide a leakproof, secure, and noncorrosive installation.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. In other Part 2 articles where titles below introduce lists, the following requirements apply to product selection:
   1. Products: Subject to compliance with requirements, provide one of the products specified.
   2. Manufacturers: Subject to compliance with requirements, provide products by one of the manufacturers specified.

2.2 SHEET METALS

A. Aluminum Sheet: ASTM B 209, Alloy 3003, 3004, 3105, or 5005, Temper suitable for forming and structural performance required, but not less than H14, finished as follows:
   1. Anodized Finish: Apply the following coil-anodized finish:
      a. Class II, Clear Anodic Finish: AA-M12C22A31 (Mechanical Finish: nonspecular as fabricated; Chemical Finish: etched, medium matte; Anodic Coating: Architectural Class II, clear coating 0.010 mm or thicker) complying with AAMA 611.

2.3 MISCELLANEOUS MATERIALS

A. General: Provide materials and types of fasteners, solder, welding rods, protective coatings, separators, sealants, and other miscellaneous items as required for complete sheet metal flashing and trim installation.

B. Fasteners: Wood screws, annular threaded nails, self-tapping screws, self-locking rivets and bolts, and other suitable fasteners designed to withstand design loads.
   1. Exposed Fasteners: Heads matching color of sheet metal by means of plastic caps or factory-applied coating.
   2. Fasteners for Flashing and Trim: Blind fasteners or self-drilling screws, gasketed, with hex washer head.
   3. Blind Fasteners: High-strength aluminum or stainless-steel rivets.
   4. Spikes and Ferrules: Same material as gutter; with spike with ferrule matching internal gutter width.

C. Solder for Copper: ASTM B 32, Grade Sn50, 50 percent tin and 50 percent lead.

D. Solder for Lead-Coated Copper: ASTM B 32, Grade Sn60, 60 percent tin and 40 percent lead.

E. Solder for Stainless Steel: ASTM B 32, Grade Sn60, with acid flux of type recommended by stainless-steel sheet manufacturer.

F. Solder for Zinc-Tin Alloy-Coated Stainless Steel: ASTM B 32, 100 percent tin.

G. Solder for Lead: ASTM B 32, Grade Sn50, 50 percent tin and 50 percent lead.

H. Solder for Zinc: ASTM B 32, 60 percent lead and 40 percent tin with low antimony, as recommended by manufacturer.

I. Sealing Tape: Pressure-sensitive, 100 percent solids, polyisobutylene compound sealing tape with release-paper backing. Provide permanently elastic, nonsag, nontoxic, nonstaining tape.

J. Elastomeric Sealant: ASTM C 920, elastomeric polyurethane polymer sealant; of type, grade, class, and use classifications required to seal joints in sheet metal flashing and trim and remain watertight.

K. Epoxy Seam Sealer: Two-part, noncorrosive, aluminum seam-cementing compound, recommended by aluminum manufacturer for exterior nonmoving joints, including riveted joints.

L. Bituminous Coating: Cold-applied asphalt mastic, SSPC-Paint 12, compounded for 15-mil dry film thickness per coat. Provide inert-type noncorrosive compound free of asbestos fibers, sulfur components, and other deleterious impurities.

M. Asphalt Roofing Cement: ASTM D 4586, asbestos free, of consistency required for application.

2.4 MANUFACTURED SHEET METAL FLASHING AND TRIM

A. Through-Wall Ribbed Sheet Metal Flashing: Manufacture through-wall sheet metal flashing for embedment in masonry with ribs at 3-inch intervals along length of flashing to provide an integral mortar bond Manufacture through-wall flashing with snaplock receiver on exterior face to receive counterflashing.

B. Reglets: Units of type, material, and profile indicated, formed to provide secure interlocking of separate reglet and counterflashing pieces, and compatible with flashing indicated with factory-mitered and -welded corners and junctions.
   1. Manufacturers:
      a. Cheney Flashing Company, Inc.
      b. Fry Reglet Corporation.
      c. Heckmann Building Products Inc.
      d. Hickman, W. P. Company.
      e. Keystone Flashing Company, Inc.
      f. Sandell Manufacturing Company, Inc.
   2. Material: Aluminum, 0.024 inch thick and Galvanized steel, 0.0217 inch thick.
   3. Surface-Mounted Type: Provide with slotted holes for fastening to substrate, with neoprene or other suitable weatherproofing washers, and with channel for sealant at top edge.
   4. Masonry Type: Provide with offset top flange for embedment in masonry mortar joint.
   5. Flexible Flashing Retainer: Provide resilient plastic or rubber accessory to secure flexible flashing in reglet where clearance does not permit use of standard metal counterflashing or where Drawings show reglet without metal counterflashing.
   6. Counterflashing Wind-Restraint Clips: Provide clips to be installed before counterflashing to prevent wind uplift of counterflashing lower edge.

2.5 FABRICATION, GENERAL

A. General: Custom fabricate sheet metal flashing and trim to comply with recommendations in SMACNA's "Architectural Sheet Metal Manual" that apply to design, dimensions, metal, and other characteristics of item indicated. Shop fabricate items where practicable. Obtain field measurements for accurate fit before shop fabrication.

B. Fabricate sheet metal flashing and trim in thickness or weight needed to comply with performance requirements, but not less than that specified for each application and metal.

C. Fabricate sheet metal flashing and trim without excessive oil canning, buckling, and tool marks and true to line and levels indicated, with exposed edges folded back to form hems.
   1. Seams for Aluminum: Fabricate nonmoving seams with flat-lock seams. Form seams and seal with epoxy seam sealer. Rivet joints for additional strength.
   2. Seams for Other Than Aluminum: Fabricate nonmoving seams in accessories with flat-lock seams. Tin edges to be seamed, form seams, and solder.

D. Sealed Joints: Form non-expansion but movable joints in metal to accommodate elastomeric sealant to comply with SMACNA recommendations.

E. Expansion Provisions: Where lapped or bayonet-type expansion provisions in the Work cannot be used, form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with elastomeric sealant concealed within joints.

F. Conceal fasteners and expansion provisions where possible on exposed-to-view sheet metal flashing and trim, unless otherwise indicated.

G. Fabricate cleats and attachment devices from same material as accessory being anchored or from compatible, noncorrosive metal.
   1. Thickness: As recommended by SMACNA's "Architectural Sheet Metal Manual" and FMG Loss Prevention Data Sheet 1-49 for application but not less than thickness of metal being secured.

2.6 MISCELLANEOUS SHEET METAL FABRICATIONS

A. Equipment Support Flashing: Fabricate from the following material:
   1. Galvanized Steel: 0.0276 inch thick.

2.7 FINISHES

A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.

B. Protect mechanical and painted finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

C. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, to verify actual locations, dimensions and other conditions affecting performance of work.
   1. Verify that substrate is sound, dry, smooth, clean, sloped for drainage, and securely anchored.
   2. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION, GENERAL

A. General: Anchor sheet metal flashing and trim and other components of the Work securely in place, with provisions for thermal and structural movement. Use fasteners, solder, welding rods, protective coatings, separators, sealants, and other miscellaneous items as required to complete sheet metal flashing and trim system.
   1. Torch cutting of sheet metal flashing and trim is not permitted.

B. Metal Protection: Where dissimilar metals will contact each other or corrosive substrates, protect against galvanic action by painting contact surfaces with bituminous coating or by other permanent separation as recommended by fabricator or manufacturers of dissimilar metals.
   1. Coat side of uncoated aluminum sheet metal flashing and trim with bituminous coating where flashing and trim will contact wood, ferrous metal, or cementitious construction.
   2. Underlayment: Where installing metal flashing directly on cementitious or wood substrates, install a course of felt underlayment and cover with a slip sheet or install a course of polyethylene underlayment.
   3. Bed flanges in thick coat of asphalt roofing cement where required for waterproof performance.

C. Install exposed sheet metal flashing and trim without excessive oil canning, buckling, and tool marks.

D. Install sheet metal flashing and trim true to line and levels indicated. Provide uniform, neat seams with minimum exposure of solder, welds, and elastomeric sealant.

E. Install sheet metal flashing and trim to fit substrates and to result in watertight performance. Verify shapes and dimensions of surfaces to be covered before fabricating sheet metal.

1. Space cleats not more than 12 inches apart. Anchor each cleat with two fasteners. Bend tabs over fasteners.

F. Expansion Provisions: Provide for thermal expansion of exposed flashing and trim. Space movement joints at a maximum of 10 feet with no joints allowed within 24 inches of corner or intersection. Where lapped or bayonet-type expansion provisions cannot be used or would not be sufficiently watertight, form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with elastomeric sealant concealed within joints.

G. Fasteners: Use fasteners of sizes that will penetrate substrate not less than 1-1/4 inches for nails and not less than 3/4 inch for wood screws.
1. Galvanized or Prepainted, Metallic-Coated Steel: Use stainless-steel fasteners.
2. Aluminum: Use aluminum or stainless-steel fasteners.
3. Copper: Use copper, hardware bronze, or stainless-steel fasteners.
4. Stainless Steel: Use stainless-steel fasteners.

H. Seal joints with elastomeric sealant as required for watertight construction.
1. Where sealant-filled joints are used, embed hooked flanges of joint members not less than 1 inch into sealant. Form joints to completely conceal sealant. When ambient temperature at time of installation is moderate, between 40 and 70 deg F, set joint members for 50 percent movement either way. Adjust setting proportionately for installation at higher ambient temperatures. Do not install sealant-type joints at temperatures below 40 deg F.
2. Prepare joints and apply sealants to comply with requirements in Division 07 Section "Joint Sealants."

I. Soldered Joints: Clean surfaces to be soldered, removing oils and foreign matter. Pretin edges of sheets to be soldered to a width of 1-1/2 inches except where pretinned surface would show in finished Work.
1. Stainless-Steel Soldering: Pretin edges of uncoated sheets to be soldered using solder recommended for stainless steel and phosphoric acid flux. Promptly wash off acid flux residue from metal after soldering.
2. Do not use open-flame torches for soldering. Heat surfaces to receive solder and flow solder into joints. Fill joints completely. Completely remove flux and spatter from exposed surfaces.

J. Aluminum Flashing: Rivet or weld joints in uncoated aluminum where necessary for strength.

K. Conductor Heads: Anchor securely to wall with elevation of conductor head rim 1 inch below scupper gutter discharge.

L. Splash Pans: Install where downspouts discharge on low-sloped roofs. Set in asphalt roofing cement compatible with roofing membrane.

3.3 ROOF FLASHING INSTALLATION

A. General: Install sheet metal roof flashing and trim to comply with performance requirements[, sheet metal manufacturer's written installation instructions,] and SMACNA's "Architectural Sheet Metal Manual." Provide concealed fasteners where possible, set units true to line, and level as indicated. Install work with laps, joints, and seams that will be permanently watertight.

B. Roof Edge Flashing: Anchor to resist uplift and outward forces according to recommendations in FMG Loss Prevention Data Sheet 1-49 for specified wind zone and as indicated.
   1. Interlock bottom edge of roof edge flashing with continuous cleats anchored to substrate at 16-inch centers.

C. Copings: Anchor to resist uplift and outward forces according to recommendations in FMG Loss Prevention Data Sheet 1-49 for specified wind zone and as indicated.
   1. Interlock exterior bottom edge of coping with continuous cleats anchored to substrate at 24-inch centers.
   2. Anchor interior leg of coping with screw fasteners and washers at 24-inch centers.

D. Counterflashing: Coordinate installation of counterflashing with installation of base flashing. Insert counterflashing in reglets or receivers and fit tightly to base flashing. Extend counterflashing 4 inches over base flashing. Lap counterflashing joints a minimum of 4 inches and bed with elastomeric sealant.
   1. Secure in a waterproof manner by means of snap-in installation and sealant or lead wedges and sealant.

E. Roof-Penetration Flashing: Coordinate installation of roof-penetration flashing with installation of roofing and other items penetrating roof. Install flashing as follows:
   1. Turn lead flashing down inside vent piping, being careful not to block vent piping with flashing.
   2. Seal with elastomeric sealant and clamp flashing to pipes penetrating roof except for lead flashing on vent piping.

3.4 ROOF DRAINAGE SYSTEM INSTALLATION

A. General: Install sheet metal roof drainage items to produce complete roof drainage system according to SMACNA recommendations and as indicated. Coordinate installation of roof perimeter flashing with installation of roof drainage system.

B. Parapet Scuppers: Install scuppers where indicated through parapet. Continuously support scupper, set to correct elevation, and seal flanges to interior wall face, over cants or tapered edge strips, and under roofing membrane.
   1. Anchor scupper closure trim flange to exterior wall and seal or solder to scupper.
   2. Loosely lock front edge of scupper with conductor head.
   3. Seal or solder exterior wall scupper flanges into back of conductor head.

C. Conductor Heads: Anchor securely to wall with elevation of conductor head rim 1 inch below scupper discharge.

3.5 WALL FLASHING INSTALLATION

A. General: Install sheet metal wall flashing to intercept and exclude penetrating moisture according to SMACNA recommendations and as indicated. Coordinate installation of wall flashing with installation of wall-opening components such as windows, doors, and louvers.

B. Through-Wall Flashing: Installation of manufactured through-wall flashing is specified in Division 04 Section 04 20 00 - Unit Masonry."

C. Reglets: Installation of reglets is specified in Division 03 30 00 - Cast-in-Place Concrete 04 Section 04 20 00 - Unit Masonry.

3.6 MISCELLANEOUS FLASHING INSTALLATION

A. Equipment Support Flashing: Coordinate installation of equipment support flashing with installation of roofing and equipment. Weld or seal flashing with elastomeric sealant to equipment support member.

3.7 CLEANING AND PROTECTION

A. Clean exposed metal surfaces of substances that interfere with uniform oxidation and weathering.

B. Clean and neutralize flux materials. Clean off excess solder and sealants.

C. Remove temporary protective coverings and strippable films as sheet metal flashing and trim are installed. On completion of installation, clean finished surfaces, including removing unused fasteners, metal filings, pop rivet stems, and pieces of flashing. Maintain in a clean condition during construction.

D. Replace sheet metal flashing and trim that have been damaged or that have deteriorated beyond successful repair by finish touchup or similar minor repair procedures.

END OF SECTION 07 6200

SECTION 07 72 00 - ROOF ACCESSORIES

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:
   1. Equipment supports.
   2. Fixed ladder with safety cage and security ladder guard.

1.2 SUBMITTALS

A. Product Data: For each type of roof accessory indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.

B. Shop Drawings: Show fabrication and installation details for roof accessories. Show layouts of roof accessories including plans and elevations. Indicate dimensions, weights, loadings, required clearances, method of field assembly, and components. Include plans, elevations, sections, details, and attachments to other work.

C. Coordination Drawings: Roof plans, drawn to scale, and coordinating penetrations and roof-mounted items. Show the following:
   1. Size and location of roof accessories specified in this Section.
   2. Method of attaching roof accessories to roof or building structure.
   3. Other roof-mounted items including mechanical and electrical equipment, ductwork, piping, and conduit.

D. Samples: For each type of exposed factory-applied color finish required and for each type of roof accessory indicated, prepared on Samples of size to adequately show color.

E. Warranty: Special warranty specified in this Section.

1.3 QUALITY ASSURANCE

A. Sheet Metal Standard: Comply with SMACNA's "Architectural Sheet Metal Manual" details for fabrication of units, including flanges and cap flashing to coordinate with type of roofing indicated.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Pack, handle, and ship roof accessories properly labeled in heavy-duty packaging to prevent damage.

1.5 PROJECT CONDITIONS

A. Field Measurements: Verify required openings for each type of roof accessory by field measurements before fabrication and indicate measurements on Shop Drawings.

1.6 COORDINATION

A. Coordinate layout and installation of roof accessories with roofing membrane and base flashing and interfacing and adjoining construction to provide a leakproof, weathertight, secure, and noncorrosive installation.

1. With Architect's approval, adjust location of roof accessories that would interrupt roof drainage routes.

1.7 WARRANTY

A. Special Warranty on Painted Finishes: Manufacturer's standard form in which manufacturer agrees to repair finish or replace roof accessories that show evidence of deterioration of factory-applied finishes within specified warranty period.
   1. Fluoropolymer Finish: Deterioration includes, but is not limited to, the following:
      a. Color fading more than 5 Hunter units when tested according to ASTM D 2244.
      b. Chalking in excess of a No. 8 rating when tested according to ASTM D 4214.
      c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.
   2. Finish Warranty Period: 20 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 METAL MATERIALS

A. Aluminum Sheet: ASTM B 209, alloy and temper recommended by manufacturer for type of use and mill finish.
   1. Class II, Clear Anodic Finish: AA-M12C22A31 (Mechanical Finish: Nonspecular as fabricated; Chemical Finish: Etched, medium matte; Anodic Coating: Architectural Class II, clear coating 0.010 mm or thicker) complying with AAMA 611.

2.2 MISCELLANEOUS MATERIALS

A. Wood Nailers: Softwood lumber, pressure treated with waterborne preservatives for aboveground use, complying with AWPA C2; not less than 1-1/2 inches thick.

2.3 EQUIPMENT SUPPORTS

A. Equipment Supports: Provide metal equipment supports, internally reinforced and capable of supporting superimposed live and dead loads, including equipment loads and other construction to be supported. Fabricate with welded or sealed mechanical corner joints, with stepped integral metal cant raised to the thickness of roof insulation and integral formed mounting flange at perimeter bottom. Coordinate dimensions with rough-in information or Shop Drawings of equipment to be supported.
   1. Acceptable Manufacturers:
      a. Pate Company (The).
      b. Roof Products & Systems Corporation.
      c. Thaler Metal Industries Ltd.
      d. ThyCurb; Div. of Thybar Corporation.
   2. Material: Galvanized, 0.079 inch thick.
   3. Factory-install continuous wood nailers 3-1/2 inches wide at tops of equipment supports.
   4. Metal Counterflashing: Manufacturer's standard removable counterflashing, fabricated of same metal and finish as equipment support.
   5. Fabricate units to minimum height of 12 inches, unless otherwise indicated.

2.6 ROOF ACCES LADDER WITH SAFETY CAGE/WALKTHRU HANDRAILS

A. Basis of Design: Cotterman Series F20WC.
   1. Heavy duty assemblies
   2. 14 rungs ladder;
   3. Stand-off mounting brackets.

4. Finish: Gray powder finish

B. Acceptable manufacturers
   1. Precision Ladders
   2. D.C. Graves

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, to verify actual locations, dimensions, and other conditions affecting performance of work.
   1. Verify that substrate is sound, dry, smooth, clean, sloped for drainage, and securely anchored and is ready to receive roof accessories.
   2. Verify dimensions of roof openings for roof accessories.
   3. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. General: Install roof accessories according to manufacturer's written instructions. Anchor roof accessories securely in place and capable of resisting forces specified. Use fasteners, separators, sealants, and other miscellaneous items as required for completing roof accessory installation. Install roof accessories to resist exposure to weather without failing, rattling, leaking, and fastener disengagement.

B. Install roof accessories to fit substrates and to result in watertight performance.

C. Metal Protection: Where dissimilar metals will contact each other or corrosive substrates, protect against galvanic action by painting contact surfaces with bituminous coating or by other permanent separation as recommended by manufacturer.
   1. Coat concealed side of [uncoated aluminum] [stainless-steel] roof accessories with bituminous coating where in contact with wood, ferrous metal, or cementitious construction.
   2. Underlayment: Where installing exposed-to-view components of roof accessories directly on cementitious or wood substrates, install a course of felt underlayment and cover with a slip sheet, or install a course of polyethylene underlayment.
   3. Bed flanges in thick coat of asphalt roofing cement where required by roof accessory manufacturers for waterproof performance.

D. Install roof accessories level, plumb, true to line and elevation, and without warping, jogs in alignment, excessive oil canning, buckling, or tool marks.

E. Equipment Support Installation:
   1. Set equipment support so top surface of equipment support is level.

F. Seal joints with elastomeric sealant as required by manufacturer of roof accessories.

3.3 TOUCH UP

A. Touch up factory-primed surfaces with compatible primer ready for field painting in accordance with Division 09 painting Sections.

B. Galvanized Surfaces: Clean field welds, bolted connections, and abraded areas and repair galvanizing to comply with ASTM A 780.

3.4 CLEANING

A. Clean exposed surfaces according to manufacturer's written instructions.

END OF SECTION

SECTION 07 81 23 - INTUMESCENT FIREPROOFING

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes mastic and intumescent fire-resistive coatings at interior build out spaces.
   1. Water based.

1.2 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

   1. Review products, design ratings, restrained and unrestrained conditions, thicknesses, and other performance requirements.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Shop Drawings: Framing plans or schedules, or both, indicating the following:

   1. Extent of fireproofing for each construction and fire-resistance rating.
   2. Applicable fire-resistance design designations of a qualified testing and inspecting agency acceptable to authorities having jurisdiction.
   3. Minimum fireproofing thicknesses needed to achieve required fire-resistance rating of each structural component and assembly.
   4. Treatment of fireproofing after application.

C. Samples: For each exposed product and for each color and texture specified, 6 inches (102 mm) square in size.

1.4 INFORMATIONAL SUBMITTALS

A. Qualification Data: For Installer and testing agency.

B. Product Certificates: For each type of fireproofing.

C. Evaluation Reports: For fireproofing, from ICC-ES.

D. Field quality-control reports.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: A firm or individual certified, licensed, or otherwise qualified by fireproofing manufacturer as experienced and with sufficient trained staff to install manufacturer's products according to specified requirements.

B. Mockups: Build mockups to verify selections made under Sample submittals and to demonstrate aesthetic effects and to set quality standards for materials and execution.

1. Build mockup of each required finish as shown on Drawings.
2. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
3. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.6 FIELD CONDITIONS

A. Environmental Limitations: Do not apply fireproofing when ambient or substrate temperature is 50 deg F (10 deg C) or lower unless temporary protection and heat are provided to maintain temperature at or above this level for 24 hours before, during, and for 24 hours after product application.

B. Ventilation: Ventilate building spaces during and after application of fireproofing, providing complete air exchanges according to manufacturer's written instructions. Use natural means or, if they are inadequate, forced-air circulation until fireproofing dries thoroughly.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Assemblies: Provide fireproofing, including auxiliary materials, according to requirements of each fire-resistance design and manufacturer's written instructions.

B. Source Limitations: Obtain fireproofing for each fire-resistance design from single source.

C. Fire-Resistance Design: Indicated on Drawings, tested according to ASTM E119 or UL 263; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

1. Steel members are to be considered unrestrained unless specifically noted otherwise.

D. Asbestos: Provide products containing no detectable asbestos.

2.2 MASTIC AND INTUMESCENT FIRE-RESISTIVE COATINGS

A. INTERIOR APPLICATION
1. Basis of Design: ALBI Protective Coatings – Albi Clad TF+

B. Acceptable Manufacturers: Subject to compliance with the requirements.
1. International Protective Coatings.
2. Isolatek International.

C. APPLICATION:
1. Thickness: As required for fire-resistance design indicated, measured according to requirements of fire-resistance design.

2. Surface-Burning Characteristics: Comply with ASTM E84; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

    a. Flame-Spread Index: Exterior 15; Interior 5.
    b. Smoke-Developed Index: Exterior 40; Interior 35.

3. Hardness: Interior 67, Type D durometer, according to ASTM D2240; Exterior 65-70 SHORE D.
4. Finish: As selected by Architect from manufacturer's standard finishes.

2.3 AUXILIARY MATERIALS

A. General: Provide auxiliary materials that are compatible with fireproofing and substrates and are approved by UL or another testing and inspecting agency acceptable to authorities having jurisdiction for use in fire-resistance designs indicated.

B. Substrate Primers: Primers approved by fireproofing manufacturer and complying with required fire-resistance design by UL or another testing and inspecting agency acceptable to authorities having jurisdiction.

C. Topcoat: Suitable for application over applied fireproofing; of type recommended in writing by fireproofing manufacturer for each fire-resistance design.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for substrates and other conditions affecting performance of the Work and according to each fire-resistance design.

1. Verify that substrates are free of dirt, oil, grease, release agents, rolling compounds, mill scale, loose scale, incompatible primers, paints, and encapsulants, or other foreign substances capable of impairing bond of fireproofing with substrates under conditions of normal use or fire exposure.
2. Verify that objects penetrating fireproofing, including clips, hangers, support sleeves, and similar items, are securely attached to substrates.
3. Verify that substrates receiving fireproofing are not obstructed by ducts, piping, equipment, or other suspended construction that will interfere with fireproofing application.

B. Conduct tests according to fireproofing manufacturer's written instructions to verify that substrates are free of substances capable of interfering with bond.

C. Prepare written report, endorsed by Installer, listing conditions detrimental to performance of the Work.

D. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Cover other work subject to damage from fallout or overspray of fireproofing materials during application.

B. Clean substrates of substances that could impair bond of fireproofing.

C. Prime substrates where included in fire-resistance design and where recommended in writing by fireproofing manufacturer unless compatible shop primer has been applied and is in satisfactory condition to receive fireproofing.

D. For applications visible on completion of Project, repair substrates to remove surface imperfections that could affect uniformity of texture and thickness in finished surface of fireproofing. Remove minor projections and fill voids that would telegraph through fire-resistive products after application.

3.3 APPLICATION

A. Construct fireproofing assemblies that are identical to fire-resistance design indicated and products as specified, tested, and substantiated by test reports; for thickness, primers, topcoats, finishing, and other materials and procedures affecting fireproofing work.

B. Comply with fireproofing manufacturer's written instructions for mixing materials, application procedures, and types of equipment used to mix, convey, and apply fireproofing; as applicable to particular conditions of installation and as required to achieve fire-resistance ratings indicated.

C. Coordinate application of fireproofing with other construction to minimize need to cut or remove fireproofing.

1. Do not begin applying fireproofing until clips, hangers, supports, sleeves, and other items penetrating fireproofing are in place.
2. Defer installing ducts, piping, and other items that would interfere with applying fireproofing until application of fireproofing is completed.

D. Install auxiliary materials as required, as detailed, and according to fire-resistance design and fireproofing manufacturer's written instructions for conditions of exposure and intended use. For auxiliary materials, use attachment and anchorage devices of type recommended in writing by fireproofing manufacturer.

E. Spray apply fireproofing to maximum extent possible. After the spraying operation in each area, complete the coverage by trowel application or other placement method recommended in writing by fireproofing manufacturer.

F. Extend fireproofing in full thickness over entire area of each substrate to be protected.

G. Install body of fireproofing in a single course unless otherwise recommended in writing by fireproofing manufacturer.

H. Provide a uniform finish complying with description indicated for each type of fireproofing material and matching finish approved for required mockups.

I. Cure fireproofing according to fireproofing manufacturer's written instructions.

J. Do not install enclosing or concealing construction until after fireproofing has been applied, inspected, and tested and corrections have been made to deficient applications.

K. Finishes: Where indicated, apply fireproofing to produce the following finishes:

1. Manufacturer's Standard Finishes: Finish according to manufacturer's written instructions for each finish selected.
2. Spray-Textured Finish: Finish left as spray applied with no further treatment.
3. Rolled, Spray-Textured Finish: Even finish produced by rolling spray-applied finish with a damp paint roller to remove drippings and excessive roughness.

3.4 FIELD QUALITY CONTROL

A. Special Inspections: Owner will engage a qualified special inspector to perform the following special inspections:

1. Test and inspect as required by the IBC As indicated on Schedule of Special Inspections.

B. Perform the tests and inspections of completed Work in successive stages. Do not proceed with application of fireproofing for the next area until test results for previously completed applications of fireproofing show compliance with requirements. Tested values must equal or exceed values as specified and as indicated and required for approved fire-resistance design.

C. Fireproofing will be considered defective if it does not pass tests and inspections.

1. Remove and replace fireproofing that does not pass tests and inspections, and retest.
2. Apply additional fireproofing, per manufacturer's written instructions, where test results indicate insufficient thickness, and retest.

D. Prepare test and inspection reports.

3.5 CLEANING, PROTECTING, AND REPAIRING

A. Cleaning: Immediately after completing spraying operations in each containable area of Project, remove material overspray and fallout from surfaces of other construction and clean exposed surfaces to remove evidence of soiling.

B. Protect fireproofing, according to advice of manufacturer and Installer, from damage resulting from construction operations or other causes, so fireproofing is without damage or deterioration at time of Substantial Completion.

C. As installation of other construction proceeds, inspect fireproofing and repair damaged areas and fireproofing removed due to work of other trades.

D. Repair fireproofing damaged by other work before concealing it with other construction.

E. Repair fireproofing by reapplying it using same method as original installation or using manufacturer's recommended trowel-applied product.

END OF SECTION

SECTION 07 84 13 - PENETRATION FIRESTOPPING

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes through-penetration firestop systems for penetrations through fire-resistance-rated constructions, including both empty openings and openings containing penetrating items.

B. Related Sections include the following:
   1. Division 22 and 23 Sections specifying duct and piping penetrations.
   2. Division 26 and 27 Sections specifying cable and conduit penetrations.

1.2 PERFORMANCE REQUIREMENTS

A. General: For penetrations through fire-resistance-rated constructions, including both empty openings and openings containing penetrating items, provide through-penetration firestop systems that are produced and installed to resist spread of fire according to requirements indicated, resist passage of smoke and other gases, and maintain original fire-resistance rating of construction penetrated.

B. Rated Systems: Provide through-penetration firestop systems with the following ratings determined per ASTM E 814 or UL 1479:
   1. T-Rated Systems: For the following conditions, provide through-penetration firestop systems with T-ratings indicated, as well as F-ratings, where systems protect penetrating items exposed to potential contact with adjacent materials in occupiable floor areas:
      a. Penetrations located outside wall cavities.
      b. Penetrations located outside fire-resistance-rated shaft enclosures.

C. For through-penetration firestop systems exposed to view, traffic, moisture, and physical damage, provide products that, after curing, do not deteriorate when exposed to these conditions both during and after construction.
   1. For piping penetrations for plumbing and wet-pipe sprinkler systems, provide moisture-resistant through-penetration firestop systems.
   2. For floor penetrations with annular spaces exceeding 4 inches in width and exposed to possible loading and traffic, provide firestop systems capable of supporting floor loads involved, either by installing floor plates or by other means.
   3. For penetrations involving insulated piping, provide through-penetration firestop systems not requiring removal of insulation.

1.3 SUBMITTALS

A. Manufacturer’s product data, product literature or a letter from the manufacturer verifying the location where the materials or products are harvested, extracted or manufactured within the State of Georgia.

B. Deliverable checklist from Section 2.3 of Energy Efficiency and Sustainable Construction Standards for State Buildings “Georgia Peach-Green Building Rating System” provided at Final

C. Product Data: For each type of product indicated. Acceptance.

D. Shop Drawings: For each through-penetration firestop system, show each type of construction condition penetrated, relationships to adjoining construction, and type of penetrating item.

Include firestop design designation of qualified testing and inspecting agency that evidences compliance with requirements for each condition indicated.

1. Submit documentation, including illustrations, from a qualified testing and inspecting agency that is applicable to each through-penetration firestop system configuration for construction and penetrating items.

E. Through-Penetration Firestop System Schedule: Indicate locations of each through-penetration firestop system, along with the following information:
   1. Types of penetrating items.
   2. Types of constructions penetrated, including fire-resistance ratings and, where applicable, thicknesses of construction penetrated.
   3. Through-penetration firestop systems for each location identified by firestop design designation of qualified testing and inspecting agency.

F. Qualification Data: For Installer.

G. Product Certificates: For through-penetration firestop system products, signed by product manufacturer.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: A firm that has been approved by FMG according to FMG 4991, "Approval of Firestop Contractors."

B. Installation Responsibility: Assign installation of through-penetration firestop systems in Project to a single qualified installer.

C. Source Limitations: Obtain through-penetration firestop systems, for each kind of penetration and construction condition indicated, through one source from a single manufacturer.

D. Fire-Test-Response Characteristics: Provide through-penetration firestop systems that comply with the following requirements and those specified in Part 1 "Performance Requirements" Article:
   1. Firestopping tests are performed by a qualified testing and inspecting agency. A qualified testing and inspecting agency is UL, or another agency performing testing and follow-up inspection services for firestop systems acceptable to Design Professional.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Deliver through-penetration firestop system products to Project site in original, unopened containers or packages with intact and legible manufacturers' labels identifying product and manufacturer, date of manufacture, lot number, shelf life if applicable, qualified testing and inspecting agency's classification marking applicable to Project, curing time, and mixing instructions for multicomponent materials.

B. Store and handle materials for through-penetration firestop systems to prevent their deterioration or damage due to moisture, temperature changes, contaminants, or other causes.

1.6 PROJECT CONDITIONS

A. Environmental Limitations: Do not install through-penetration firestop systems when ambient or substrate temperatures are outside limits permitted by through-penetration firestop system manufacturers or when substrates are wet due to rain, frost, condensation, or other causes.

B. Ventilate through-penetration firestop systems per manufacturer's written instructions by natural means or, where this is inadequate, forced-air circulation.

1.7 COORDINATION

A. Coordinate construction of openings and penetrating items to ensure that through-penetration firestop systems are installed according to specified requirements.

B. Coordinate sizing of sleeves, openings, core-drilled holes, or cut openings to accommodate through-penetration firestop systems.

C. Notify Owner's inspecting agency at least seven days in advance of through-penetration firestop system installations; confirm dates and times on days preceding each series of installations.

D. Do not cover up through-penetration firestop system installations that will become concealed behind other construction until each installation has been examined by Owner's inspecting agency and building inspector.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Products: Subject to compliance with requirements, provide one of the through-penetration firestop systems indicated for each application on Drawings, that are produced by one of the following manufacturers:
1. A/D Fire Protection Systems Inc.
2. Grace, W. R. & Co. - Conn.
3. Hilti, Inc.
4. Johns Manville.
5. NUCO Inc.
6. 3M; Fire Protection Products Division.
7. Tremco; Sealant/Weatherproofing Division.
8. USG Corporation.

2.2 FIRESTOPPING, GENERAL

A. Compatibility: Provide through-penetration firestop systems that are compatible with one another; with the substrates forming openings; and with the items, if any, penetrating through-penetration firestop systems, under conditions of service and application, as demonstrated by through-penetration firestop system manufacturer based on testing and field experience.

2.3 FILL MATERIALS

A. General: Provide through-penetration firestop systems containing the types of fill materials indicated. Fill materials are those referred to in directories of referenced testing and inspecting agencies as "fill," "void," or "cavity" materials.

B. Latex Sealants: Single-component latex formulations that after cure do not re-emulsify during exposure to moisture.

C. Firestop Devices: Factory-assembled collars formed from galvanized steel and lined with intumescent material sized to fit specific diameter of penetrant.

D. Intumescent Composite Sheets: Rigid panels consisting of aluminum-foil-faced elastomeric sheet bonded to galvanized steel sheet.

E. Intumescent Putties: Nonhardening dielectric, water-resistant putties containing no solvents, inorganic fibers, or silicone compounds.

F. Intumescent Wrap Strips: Single-component intumescent elastomeric sheets with aluminum foil on one side.

G. Silicone Foams: Multicomponent, silicone-based liquid elastomers that, when mixed, expand and cure in place to produce a flexible, non-shrinking foam.

H. Silicone Sealants: Single-component, silicone-based, neutral-curing elastomeric sealants of grade indicated below:
   1. Grade: Pourable (self-leveling) formulation for openings in floors and other horizontal surfaces, and nonsag formulation for openings in vertical and other surfaces requiring a nonslumping, gunnable sealant, unless indicated firestop system limits use to nonsag grade for both opening conditions.

2.4 MIXING

A. For those products requiring mixing before application, comply with through-penetration firestop system manufacturer's written instructions for accurate proportioning of materials, water (if required), type of mixing equipment, selection of mixer speeds, mixing containers, mixing time, and other items or procedures needed to produce products of uniform quality with optimum performance characteristics for application indicated.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates and conditions, with Installer present, for compliance with requirements for opening configurations, penetrating items, substrates, and other conditions affecting performance of work.
   1. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Surface Cleaning: Clean out openings immediately before installing through-penetration firestop systems to comply with firestop system manufacturer's written instructions and with the following requirements:
   1. Remove from surfaces of opening substrates and from penetrating items foreign materials that could interfere with adhesion of through-penetration firestop systems.
   2. Clean opening substrates and penetrating items to produce clean, sound surfaces capable of developing optimum bond with through-penetration firestop systems. Remove loose particles remaining from cleaning operation.
   3. Remove laitance and form-release agents from concrete.

B. Priming: Prime substrates where recommended in writing by through-penetration firestop system manufacturer using that manufacturer's recommended products and methods. Confine primers to areas of bond; do not allow spillage and migration onto exposed surfaces.

C. Masking Tape: Use masking tape to prevent through-penetration firestop systems from contacting adjoining surfaces that will remain exposed on completion of Work and that would otherwise be permanently stained or damaged by such contact or by cleaning methods used to remove smears from firestop system materials. Remove tape as soon as possible without disturbing firestop system's seal with substrates.

3.3 THROUGH-PENETRATION FIRESTOP SYSTEM INSTALLATION

A. General: Install through-penetration firestop systems to comply with Part 1 "Performance Requirements" Article and with firestop system manufacturer's written installation instructions and published drawings for products and applications indicated.

B. Install forming/damming/backing materials and other accessories of types required to support fill materials during their application and in the position needed to produce cross-sectional shapes and depths required to achieve fire ratings indicated.

C. Install fill materials for firestop systems by proven techniques to produce the following results:
   1. Fill voids and cavities formed by openings, forming materials, accessories, and penetrating items as required to achieve fire-resistance ratings indicated.
   2. Apply materials so they contact and adhere to substrates formed by openings and penetrating items.
   3. For fill materials that will remain exposed after completing Work, finish to produce smooth, uniform surfaces that are flush with adjoining finishes.

3.4 IDENTIFICATION

A. Identify through-penetration firestop systems with preprinted metal or plastic labels. Attach labels permanently to surfaces adjacent to and within 6 inches of edge of the firestop systems so that labels will be visible to anyone seeking to remove penetrating items or firestop systems. Use mechanical fasteners for metal labels. For plastic labels, use self-adhering type with adhesives capable of permanently bonding labels to surfaces on which labels are placed and, in combination with label material, will result in partial destruction of label if removal is attempted. Include the following information on labels:
   1. The words "Warning - Through-Penetration Firestop System - Do Not Disturb. Notify Building Management of Any Damage."
   2. Contractor's name, address, and phone number.
   3. Through-penetration firestop system designation of applicable testing and inspecting agency.
   4. Date of installation.
   5. Through-penetration firestop system manufacturer's name.
   6. Installer's name.

3.5 FIELD QUALITY CONTROL

A. Inspecting Agency: Owner will engage a qualified, independent inspecting agency to inspect through-penetration firestops. Independent inspecting agency shall comply with ASTM E 2174 requirements including those related to qualifications, conducting inspections, and preparing test reports.

B. Where deficiencies are found, repair or replace through-penetration firestop systems so they comply with requirements.

C. Proceed with enclosing through-penetration firestop systems with other construction only after inspection reports are issued and firestop installations comply with requirements.

3.6 CLEANING AND PROTECTING

A. Clean off excess fill materials adjacent to openings as Work progresses by methods and with cleaning materials that are approved in writing by through-penetration firestop system manufacturers and that do not damage materials in which openings occur.

B. Provide final protection and maintain conditions during and after installation that ensure that through-penetration firestop systems are without damage or deterioration at time of Substantial

Completion. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated through-penetration firestop systems immediately and install new materials to produce systems complying with specified requirements.

END OF SECTION

SECTION 07 92 00 - JOINT SEALANTS

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes joint sealants for the following applications:
   1. Exterior joints in the following vertical surfaces and horizontal non-traffic surfaces:
      a. Control and expansion joints in unit masonry
      b. Joints between different materials .

   2. Interior joints in the following vertical surfaces and horizontal nontraffic surfaces:
      a. Tile control and expansion joints.
      b. Perimeter joints between interior wall surfaces and frames of interior doors and windows.
      c. Joints between plumbing fixtures and adjoining walls, floors, and counters.

B. Related Sections include the following:
   1. Section 08 4113 – Aluminum Framed Entrances and Storefronts.
   2. Section 08 8000 – Glazing: Glazing sealants.
   3. Section 09 2900 - Gypsum Board: Sealing perimeter joints of gypsum board partitions to reduce sound transmission.
   4. Section 09 3000 – Tiling: Sealing tile joints.

1.2 PERFORMANCE REQUIREMENTS

A. Provide elastomeric joint sealants that establish and maintain watertight and airtight continuous joint seals without staining or deteriorating joint substrates.

B. Provide joint sealants for interior applications that establish and maintain airtight and water-resistant continuous joint seals without staining or deteriorating joint substrates.

1.3 SUBMITTALS

A. Product Data: For each type of product indicated.

PART 2 - PRODUCTS

2.1 ELASTOMERIC JOINT SEALANTS

A. Elastomeric Sealants: Comply with ASTM C 920 and other requirements indicated for each liquid-applied chemically curing sealant specified, including those referencing ASTM C 920 classifications for type, grade, class, and uses related to exposure and joint substrates.

B. Single Component, Non-sag, polyurethane.
   1. Basis of Design: W.R. Meadows: Pourthane NS
   2. Acceptable Manufacturers:
      a. Sika, Inc.: Sikaflex.
      b. Tremco, Inc.: Vulkem 116

2.2 ACOUSTICAL JOINT SEALANTS

A. Acoustical Sealant for Exposed and Concealed Joints: Manufacturer's standard nonsag, paintable, nonstaining latex sealant complying with ASTM C 834 and the following:
   1. Product effectively reduces airborne sound transmission through perimeter joints and openings in building construction as demonstrated by testing representative assemblies according to ASTM E 90.

B. Basis of Design: Green Glue Noise Proofing Sealant

C. Acceptable manufacturer's: Subject to compliance with requirements:
   1. Products:
      a. Pecora Corporation; AC-20 FTR Acoustical and Insulation Sealant.
      b. United States Gypsum Co.; SHEETROCK Acoustical Sealant.
      c. Tremco: Tremco Acoustical Sealants.

2.3 JOINT-SEALANT BACKING

A. General: Provide sealant backings of material and type that are nonstaining; are compatible with joint substrates, sealants, primers, and other joint fillers; and are approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.

B. Cylindrical Sealant Backings: ASTM C 1330, Type C (closed-cell material with a surface skin)
   1. Basis of Design: W. R. Meadows: Kool Rod
   2. Acceptable Manufacturers: Subject to compliance with requirements.
      a. Sika, Inc
      b. Tremco, Inc.

2.4 PREFORMED JOINT SEALANTS

A. Preformed Foam Sealant: Manufacturer's standard preformed, precompressed, open-cell foam sealant that is manufactured from high-density urethane foam impregnated with a nondrying, water-repellent agent; is factory produced in precompressed sizes in roll or stick form to fit joint widths indicated; is coated on one side with a pressure-sensitive adhesive and covered with protective wrapping; develops a watertight and airtight seal when compressed to the degree specified by manufacturer; and complies with the following:
   1. Basis of Design: W. R. Meadows, Inc.: Ceramar
      a. ASTM D 5249, Type 2.
   2. Acceptable Products: Subject to compliance with requirements.
      a. EMSEAL Joint Systems, Ltd.; Emseal 25V.
      b. illbruck Sealant Systems, Inc.; Wilseal 600.
      c. Polytite Manufacturing Corporation; Polytite B.
   3. Properties: Permanently elastic, mildew resistant, nonmigratory, nonstaining, and compatible with joint substrates and other joint sealants.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine joints indicated to receive joint sealants, with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting joint-sealant performance.

B. Refer to manufacturer's firestop systems for installation of firestopping sealants.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint-sealant manufacturer's written instructions and the following requirements:
   1. Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant, including dust, paints (except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer), old joint sealants, oil, grease, waterproofing, water repellents, water, surface dirt, and frost.
   2. Clean porous joint substrate surfaces by brushing, grinding, blast cleaning, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealants. Remove loose particles remaining after cleaning operations above by vacuuming or blowing out joints with oil-free compressed air. Porous joint substrates include the following:
      a. Concrete.
      b. Masonry.
      c. Unglazed surfaces of ceramic tile.
   3. Remove laitance and form-release agents from concrete.
   4. Clean nonporous surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants. Nonporous joint substrates include the following:
      a. Metal.
      b. Glass.
      c. Glazed surfaces of ceramic tile.

B. Joint Priming: Prime joint substrates, where recommended in writing by joint-sealant manufacturer, based on preconstruction joint-sealant-substrate tests or prior experience. Apply primer to comply with joint-sealant manufacturer's written instructions. Confine primers to areas of joint-sealant bond; do not allow spillage or migration onto adjoining surfaces.

C. Masking Tape: Use masking tape where required to prevent contact of sealant with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

3.3 INSTALLATION OF JOINT SEALANTS

A. General: Comply with joint-sealant manufacturer's written installation instructions for products and applications indicated, unless more stringent requirements apply.

B. Sealant Installation Standard: Comply with recommendations in ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.

C. Acoustical Sealant Application Standard: Comply with recommendations in ASTM C 919 for use of joint sealants in acoustical applications as applicable to materials, applications, and conditions indicated.

D. Firestopping Sealants: Comply with ASTM E-84.

E. Install sealant backings of type indicated to support sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.
   1. Do not leave gaps between ends of sealant backings.
   2. Do not stretch, twist, puncture, or tear sealant backings.

3. Remove absorbent sealant backings that have become wet before sealant application and replace them with dry materials.

F. Install bond-breaker tape behind sealants where sealant backings are not used between sealants and backs of joints.

G. Install sealants using proven techniques that comply with the following and at the same time backings are installed:
   1. Place sealants so they directly contact and fully wet joint substrates.
   2. Completely fill recesses in each joint configuration.
   3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.

H. Installation of Preformed Tapes: Install according to manufacturer's written instructions.

I. Installation of Preformed Foam Sealants: Install each length of sealant immediately after removing protective wrapping, taking care not to pull or stretch material, producing seal continuity at ends, turns, and intersections of joints. For applications at low ambient temperatures where expansion of sealant requires acceleration to produce seal, apply heat to sealant in compliance with sealant manufacturer's written instructions.

3.4 FIELD QUALITY CONTROL

A. Field-Adhesion Testing: Field test joint-sealant adhesion to joint substrates as follows:
   1. Extent of Testing: Test completed elastomeric sealant joints as follows:
      a. Perform 10 tests for the first 1000 feet of joint length for each type of elastomeric sealant and joint substrate.
      b. Perform 1 test for each 1000 feet of joint length thereafter or 1 test per each floor per elevation.
   2. Inspect tested joints and report on the following:
      a. Whether sealants in joints connected to pulled-out portion failed to adhere to joint substrates or tore cohesively. Include data on pull distance used to test each type of product and joint substrate. Compare these results to determine if adhesion passes sealant manufacturer's field-adhesion hand-pull test criteria.
      b. Whether sealants filled joint cavities and are free of voids.
      c. Whether sealant dimensions and configurations comply with specified requirements.
   3. Record test results in a field-adhesion-test log. Include dates when sealants were installed, names of persons who installed sealants, test dates, test locations, whether joints were primed, adhesion results and percent elongations, sealant fill, sealant configuration, and sealant dimensions.
   4. Repair sealants pulled from test area by applying new sealants following same procedures used originally to seal joints. Ensure that original sealant surfaces are clean and that new sealant contacts original sealant.

B. Evaluation of Field Test Results: Sealants not evidencing adhesive failure from testing or noncompliance with other indicated requirements will be considered satisfactory. Remove sealants that fail to adhere to joint substrates during testing or to comply with other requirements. Retest failed applications until test results prove sealants comply with indicated requirements.

3.5 CLEANING

A. Clean off excess sealant or sealant smears adjacent to joints as the Work progresses by methods and with cleaning materials approved in writing by manufacturers of joint sealants and of products in which joints occur.

3.6 PROTECTION

A. Protect joint sealants during and after curing period from contact with contaminating substances and from damage resulting from construction operations or other causes so sealants are without deterioration or damage at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated joint sealants immediately so installations with repaired areas are indistinguishable from original work.

END OF SECTION

SECTION 07 95 00 - EXPANSION CONTROL

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:
   1. Architectural joint systems for building interiors.
   2. Architectural joint systems for building exteriors.
   3. Architectural joint systems for roofs.

B. Related Sections include the following:
   1. Section 03 30 00 - Cast-in-Place Concrete: Cast-in architectural-joint-system frames furnished, but not installed, in this Section.
   2. Section 04 20 00 - Unit Masonry: Masonry wall joint systems.
   3. Section 07 62 00 - Sheet Metal Flashing and Trim: Sheet metal wall joint systems.
   4. Section 07 92 00 - Joint Sealants: Liquid-applied joint sealants.

1.2 DEFINITIONS

A. Maximum Joint Width: Widest linear gap a joint system tolerates and in which it performs its designed function without damaging its functional capabilities.

B. Minimum Joint Width: Narrowest linear gap a joint system tolerates and in which it performs its designed function without damaging its functional capabilities.

C. Movement Capability: Value obtained from the difference between widest and narrowest widths of a joint opening typically expressed in numerical values (mm or inches) or a percentage (plus or minus) of nominal value of joint width.

D. Nominal Joint Width: The width of the linear opening specified in practice and in which the joint system is installed.

1.3 SUBMITTALS

A. Shop Drawings: Provide the following for each joint system specified:
   1. Placement Drawings: Include line diagrams showing plans, elevations, sections, details, splices, blockout requirement, entire route of each joint system, and attachments to other work. Where joint systems change planes, provide isometric or clearly detailed drawing depicting how components interconnect.

B. Samples for Verification: For each type of architectural joint system indicated.
   1. Full width by 6 inches long, for each system required.

C. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, for current products.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: An employer of workers trained and approved by manufacturer.

B. Source Limitations: Obtain interior architectural joint systems through one source from a single manufacturer.

C. Product Options: Drawings indicate size, profiles, and dimensional requirements of architectural joint systems and are based on the specific systems indicated. Refer to Division 01 Section 01 60 00 - Product Requirements.
   1. Do not modify intended aesthetic effects, as judged solely by Architect, except with Architect's approval. If modifications are proposed, submit comprehensive explanatory data to Architect for review.

D. Accessibility Requirements: Comply with applicable provisions in [the U.S. Architectural & Transportation Barriers Compliance Board's "Americans with Disabilities Act (ADA), Accessibility Guidelines (ADAAG)"] [and] [ICC A117.1].
   1. Hose Stream Test: Wall-to-wall and wall-to-ceiling assemblies shall be subjected to hose stream testing.

1.5 COORDINATION

A. Coordinate installation of exterior wall joint systems with roof expansion assemblies to ensure that wall transitions are watertight. Roof expansion assemblies are specified in Division 07.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Aluminum: ASTM B 221, Alloy 6063-T5 for extrusions; ASTM B 209, Alloy 6061-T6 for sheet and plate.
   1. Apply manufacturer's standard protective coating on aluminum surfaces to be placed in contact with cementitious materials.
   2. Mill Finish: AA-M10 (Mechanical Finish: as fabricated, unspecified).
   3. Class II, Clear Anodic Finish: AA-M12C22A31 (Mechanical Finish: nonspecular as fabricated; Chemical Finish: etched, medium matte; Anodic Coating: Architectural Class II, clear coating 0.010 mm or thicker) complying with AAMA 611.

B. Stainless Steel: ASTM A 666, Type 304 for plates, sheet, and strips.
   1. Remove tool and die marks and stretch lines or blend into finish.
   2. Finish: No. 2B, bright, cold-rolled, unpolished.
      a. Grind and polish surfaces to produce uniform, directionally textured, polished finish indicated, free of cross scratches. Run grain with long dimension of each piece.
      b. When polishing is completed, passivate and rinse surfaces. Remove embedded foreign matter and leave surfaces chemically clean.

C. Elastomeric Seals: Preformed elastomeric membranes or extrusions to be installed in metal frames.

D. Compression Seals: ASTM E 1612; preformed rectangular elastomeric extrusions having internal baffle system and designed to function under compression.

E. Moisture Barrier: Flexible elastomeric material, [PVC , minimum 30 mils thick] [EPDM, minimum 45 mils thick] [Santoprene].

F. Accessories: Manufacturer's standard anchors, clips, fasteners, set screws, spacers, and other accessories compatible with material in contact, as indicated or required for complete installations.

2.2 ARCHITECTURAL JOINT SYSTEMS, GENERAL

A. General: Provide architectural joint systems of design, basic profile, materials, and operation indicated. Provide units with capability to accommodate variations in adjacent surfaces.

1. Furnish units in longest practicable lengths to minimize field splicing. Install with hairline mitered corners where joint changes direction or abuts other materials.
2. Include factory-fabricated closure materials and transition pieces, tee-joints, corners, curbs, cross-connections, and other accessories as required to provide continuous joint systems.

B. Design architectural joint systems for the following size and movement characteristics:
1. Nominal Joint Width: As indicated on Drawings.
2. Maximum Joint Width: As indicated on Drawings.
3. Minimum Joint Width: As indicated on Drawings.
4. Type of Movement: As indicated on Drawings

2.3 ARCHITECTURAL JOINT SYSTEMS FOR BUILDING INTERIORS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
1. Architectural Art Mfg., Inc.
2. Balco, Inc.
3. Construction Specialties, Inc.
4. JointMaster/InPro Corporation.
5. Michael Rizza Company, LLC.
6. MM Systems Corporation.
7. Nystrom, Inc.
8. Watson Bowman Acme Corp.

B. Floor-to-Floor Joint Systems:
1. Type: Cover plate.
a. Exposed Metal: Stainless steel.
1) Finish: Manufacturer's standard finish.

2.4 ARCHITECTURAL JOINT SYSTEMS

A. Basis of Design: Inpro Corporation
1. Building Exterior: 615 Series
a. Finish: Selected by Architect.

B. Basis of Design: Architectural Art Manufacturing
1. Part No: 10-11-21
2. Finish: Stainless Steel.

C. Acceptable Manufacturers: Subject to compliance with requirements, provide products by one of the following:
1. Architectural Art Mfg., Inc.
2. Balco, Inc.
3. Capital Services.
4. Construction Specialties, Inc.
5. EMSEAL Joint Systems, Ltd.
6. E-Poxy Engineered Materials, LLC.
7. Erie Metal Specialties.
8. LymTal International, Inc.
9. Nystrom, Inc.

2.5 FINISHES

A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.

B. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

C. Appearance of Finished Work: Noticeable variations in same piece are not acceptable.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine surfaces and blockouts where architectural joint systems will be installed for installation tolerances and other conditions affecting performance of work.
   1. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Prepare substrates according to architectural joint system manufacturer's written instructions.

B. Repair concrete slabs and blockouts using manufacturer's recommended repair grout of compressive strength adequate for anticipated structural loadings.

C. Coordinate and furnish anchorages, setting drawings, and instructions for installing joint systems. Provide fasteners of metal, type, and size to suit type of construction indicated and to provide for secure attachment of joint systems.

3.3 INSTALLATION

A. Comply with manufacturer's written instructions for storing, handling, and installing architectural joint assemblies and materials unless more stringent requirements are indicated.

B. Metal Frames: Perform cutting, drilling, and fitting required to install joint systems.
   1. Install in true alignment and proper relationship to joints and adjoining finished surfaces measured from established lines and levels.
   2. Adjust for differences between actual structural gap and nominal design gap due to ambient temperature at time of installation. Notify Architect where discrepancies occur that will affect proper joint installation and performance.
   3. Cut and fit ends to accommodate thermal expansion and contraction of metal without buckling of frames.
   4. Locate in continuous contact with adjacent surfaces.
   5. Standard-Duty Systems: Shim to level where required. Support underside of frames continuously to prevent vertical deflection when in service.

C. Compression Seals: Apply adhesive or lubricant adhesive as recommended by manufacturer to both [sides of slabs before installing compression seals.

D. Foam Seals: Install with adhesive recommended by manufacturer.

E. Terminate exposed ends of joint assemblies with field- or factory-fabricated termination devices.

3.4 PROTECTION

A. Do not remove protective covering until finish work in adjacent areas is complete. When protective covering is removed, clean exposed metal surfaces to comply with manufacturer's written instructions.

B. Protect the installation from damage by work of other Sections. Where necessary due to heavy construction traffic, remove and properly store cover plates or seals and install temporary protection over joints. Reinstall cover plates or seals prior to Substantial Completion of the Work.

END OF SECTION

SECTION 08 11 13 - HOLLOW METAL DOORS AND FRAMES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Exterior hollow metal doors and frames
   2. Interior hollow metal door frames.
      a. Rated and non-rated.

B. Related Sections:
   1. Section 08 71 00 - Door Hardware.
   2. Section 09 91 00 - Painting: Field painting hollow metal doors and frames.

1.2 DEFINITIONS

A. Minimum Thickness: Minimum thickness of base metal without coatings.

B. Custom Hollow Metal Work: Hollow metal work fabricated according to ANSI/NAAMM-HMMA 861.

1.3 SUBMITTALS

A. Product Data: For each type of product indicated. Include construction details, material descriptions, core descriptions and finishes.

B. Shop Drawings: Include the following:
   1. Elevations of each door design.
   2. Details of doors, including vertical and horizontal edge details and metal thicknesses.
   3. Frame details for each frame type, including dimensioned profiles and metal thicknesses.
   4. Locations of reinforcement and preparations for hardware.
   5. Details of each different wall opening condition.
   6. Details of anchorages, joints, field splices, and connections.
   7. Details of accessories.

C. Samples for Verification:
   1. For each type of exposed finish required, prepared on Samples of not less than 3 by 5 inches.
   2. For the following items, prepared on Samples about 12 by 12 inches to demonstrate compliance with requirements for quality of materials and construction:
      a. Doors: Show vertical-edge, top, and bottom construction; core construction; and hinge and other applied hardware reinforcement. Include separate section showing glazing if applicable.
      b. Frames: Show profile, corner joint, floor and wall anchors, and silencers. Include separate section showing fixed hollow metal panels and glazing if applicable.

D. Other Action Submittals:
   1. Schedule: Provide a schedule of hollow metal work prepared by or under the supervision of supplier, using same reference numbers for details and openings as those on Drawings. Coordinate with door hardware schedule.

E. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, for each type of hollow metal door and frame assembly.

1.4 QUALITY ASSURANCE

A. Source Limitations: Obtain hollow metal work from single source from single manufacturer.

B. Fire-Rated Door Assemblies: Assemblies complying with NFPA 80 that are listed and labeled by a qualified testing agency, for fire-protection ratings indicated, based on testing as close to neutral pressure as possible] according to NFPA 252.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Deliver hollow metal work palletized, wrapped, or crated to provide protection during transit and Project-site storage. Do not use non-vented plastic.
   1. Provide additional protection to prevent damage to finish of factory-finished units.

B. Deliver welded frames with two removable spreader bars across bottom of frames, tack welded to jambs and mullions.

C. Store hollow metal work under cover at Project site. Place in stacks of five units maximum in a vertical position with heads up, spaced by blocking, on minimum 4-inch- high wood blocking. Do not store in a manner that traps excess humidity.
   1. Provide minimum 1/4-inch space between each stacked door to permit air circulation.

1.6 PROJECT CONDITIONS

A. Field Measurements: Verify actual dimensions of openings by field measurements before fabrication.

1.7 COORDINATION

A. Coordinate installation of anchorages for hollow metal frames. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors. Deliver such items to Project site in time for installation.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Basis of Design: Republic Doors and Frames
   a. Interior Doors: Style F.
   b. Interior Frames: Profile indicated on drawings.

B. Acceptable Manufacturers: Subject to compliance with requirements, provide products by one of the following for interior door frames:
   1. Amweld Building Products, LLC.
   2. Ceco Door Products; an Assa Abloy Group company.
   3. Curries Company; an Assa Abloy Group company.
   4. Deansteel Manufacturing Company, Inc.
   5. Fleming Door Products Ltd.; an Assa Abloy Group company.
   6. Pioneer Industries.
   7. Security Metal Products.
   8. Steelcraft: an Ingersoll Rand Company.

C. Basis of Design: Republic Doors and Frames

1. Exterior Doors: Style G
2. Exterior Door Frame: Profile indicated on Drawings.

D. Manufacturers: Subject to compliance with requirements, provide products by one of the following for exterior door and frames:

1. Karpen Steel Custom Doors & Frames.
2. Kewanee Corporation (The).
3. Mesker Door Inc.
4. Pioneer Industries, Inc.
5. Security Metal Products Corp.
6. Steelcraft; an Ingersoll-Rand company.

2.2 MATERIALS

A. Cold-Rolled Steel Sheet: ASTM A 1008/A 1008M, Commercial Steel (CS), Type B; suitable for exposed applications.

B. Hot-Rolled Steel Sheet: ASTM A 1011/A 1011M, Commercial Steel (CS), Type B; free of scale, pitting, or surface defects; pickled and oiled.

C. Metallic-Coated Steel Sheet: ASTM A 653/A 653M, Commercial Steel (CS), Type B; with minimum A40 and G60 or A60 metallic coating.

D. Frame Anchors: ASTM A 591/A 591M, Commercial Steel (CS), 40Z coating designation; mill phosphatized.
1. For anchors built into exterior walls, steel sheet complying with ASTM A 1008/A 1008M or ASTM A 1011/A 1011M, hot-dip galvanized according to ASTM A 153/A 153M, Class B.

E. Inserts, Bolts, and Fasteners: Hot-dip galvanized according to ASTM A 153/A 153M.

F. Powder-Actuated Fasteners in Concrete: Fastener system of type suitable for application indicated, fabricated from corrosion-resistant materials, with clips or other accessory devices for attaching hollow metal frames of type indicated.

G. Grout: ASTM C 476, except with a maximum slump of 4 inches, as measured according to ASTM C 143/C 143M.

H. Mineral-Fiber Insulation: ASTM C 665, Type I (blankets without membrane facing); consisting of fibers manufactured from slag or rock wool with 6- to 12-lb/cu. ft. density; with maximum flame-spread and smoke-development indexes of 25 and 50, respectively; passing ASTM E 136 for combustion characteristics.

I. Bituminous Coating: Cold-applied asphalt mastic, SSPC-Paint 12, compounded for 15-mil dry film thickness per coat. Provide inert-type noncorrosive compound free of asbestos fibers, sulfur components, and other deleterious impurities.

2.3 INTERIOR DOOR FRAMES

A. Construct interior doors frames to comply with the standards indicated for materials, fabrication, hardware locations, hardware reinforcement, tolerances, and clearances, and as specified.

B. Heavy-Duty Frames: SDI A250.8, Level 2 at locations indicated in the Door Schedule.

1. Physical Performance: Level B according to SDI A250.4.
2. Doors:
   a. Type: As indicated on Door Schedule.
   b. Thickness: 1-3/4 inches.
   c. Face: Metallic coated, cold rolled steel sheet, minimum thickness of 0.042 inch.
   d. Edge Construction: Model 2; Seamless.
   e. Core: Manufacturer's standard kraft-paper honeycomb, polystyrene, polyurethane, polyisocyanurate, mineral boar, vertical stiffener core at manufacturer's discretion.
3. Frames

   a. Materials: Metallic-coated steel sheet, minimum thickness of 0.053 inch.
   b. Side-lite and Transom Frames: Fabricated from same thickness material as adjacent door frame.
   c. Construction: Full profile welded.

4. Exposed Finish: Prime.

2.4 EXTERIOR HOLLOW METAL DOORS AND FRAMES

A. General: Comply with ANSI/SDI A250.8 and with details indicated for type and profile.

B. Construct exterior doors and frames to comply with the standards indicated for materials, fabrication, hardware locations, hardware reinforcement, and tolerances.

C. HMDR-1, Maximum-Duty Doors and Frames: SDI A250.8, Level 4. At locations indicated in the Door and Frame Schedule.

1. Physical Performance: Level A according to SDI A250.4.

D. Doors:

1. Type: As indicated in the Door and Frame Schedule.
2. Thickness: 1-3/4 inches.
3. Face: Metallic-coated steel, sheet, minimum thickness of 0.067 inch, with minimum A40.
4. Edge: Construction: Model 2, Seamless.
5. Top Edge Closures: Close top edges of door with flush closures of same material as face sheets. Seal joints against water penetration.
6. Bottom Edges: Close bottom edges of doors where required for attachment of weather stripping with end closures or channels of same material as face sheets. Provide weep-hole openings in bottom of exterior doors to permit moisture to escape.
7. Core: Manufacturer's standard.
8. Fire-rated Core: Manufacturer's standard core for fire-rated doors.

E. Frames:

1. Materials: Metallic-coated steel sheet, minimum thickness of 0.067 inch, with minimum A40 coating.
2. Construction: Full profile welded.
3. Exposed Finish: Prime.
4. Paint Colors: As indicated on Drawings.

F. Hardware Reinforcement: Fabricate according to ANSI/SDI A250.6 with reinforcement plates from same material as frames.

2.5 FRAME ANCHORS

A. Jamb Anchors:
   1. Masonry Type: Adjustable strap-and-stirrup or T-shaped anchors to suit frame size, not less than 0.042inch thick, with corrugated or perforated straps not less than 2 inches wide by 10 inches long; or wire anchors not less than 0.177 inch thick.
   2. Postinstalled Expansion Type for In-Place Concrete or Masonry: Minimum 3/8-inch-diameter bolts with expansion shields or inserts. Provide pipe spacer from frame to wall, with throat reinforcement plate, welded to frame at each anchor location.

B. Floor Anchors: Formed from same material as frames, not less than 0.042 inch thick, and as follows:
   1. Monolithic Concrete Slabs: Clip-type anchors, with two holes to receive fasteners.
   2. Separate Topping Concrete Slabs: Adjustable-type anchors with extension clips, allowing not less than 2-inch height adjustment. Terminate bottom of frames at finish floor surface.

2.6 ACCESSORIES

A. Ceiling Struts: Minimum 1/4-inch-thick by 1-inch- wide steel.

B. Grout Guards: Formed from same material as frames, not less than 0.016 inch thick.

2.7 FABRICATION

A. Fabricate hollow metal work to be rigid and free of defects, warp, or buckle. Accurately form metal to required sizes and profiles, with minimum radius for thickness of metal. Where practical, fit and assemble units in manufacturer's plant. To ensure proper assembly at Project site, clearly identify work that cannot be permanently factory assembled before shipment.

B. Tolerances: Fabricate hollow metal work to tolerances indicated in SDI 117 and ANSI/NAAMM-HMMA 861.

C. Hollow Metal Frames: Where frames are fabricated in sections due to shipping or handling limitations, provide alignment plates or angles at each joint, fabricated of same thickness metal as frames.
   1. Welded Frames: Weld flush face joints continuously; grind, fill, dress, and make smooth, flush, and invisible.
   2. Provide countersunk, flat- or oval-head exposed screws and bolts for exposed fasteners unless otherwise indicated.
   3. Grout Guards: Weld guards to frame at back of hardware mortises in frames to be grouted.
   4. Floor Anchors: Weld anchors to bottom of jambs and mullions with at least four spot welds per anchor.
   5. Jamb Anchors: Provide number and spacing of anchors as follows:
      a. Stud-Wall Type: Locate anchors not more than 18 inches from top and bottom of frame. Space anchors not more than 32 inches o.c. and as follows:
         1) Three anchors per jamb up to 60 inches high.
         2) Four anchors per jamb from 60 to 90 inches high.
         3) Five anchors per jamb from 90 to 96 inches high.
         4) Five anchors per jamb plus 1 additional anchor per jamb for each 24 inches or fraction thereof above 96 inches high.
         5) Two anchors per head for frames above 42 inches wide and mounted in metal-stud partitions.
      b. Compression Type: Not less than two anchors in each jamb.

c. Postinstalled Expansion Type: Locate anchors not more than 6 inches from top and bottom of frame. Space anchors not more than 26 inches o.c.

6. Door Silencers: Except on weather-stripped doors, drill stops to receive door silencers as follows. Keep holes clear during construction.
   a. Single-Door Frames: Drill stop in strike jamb to receive three door silencers.
   b. Double-Door Frames: Drill stop in head jamb to receive two door silencers.

D. Fabricate concealed stiffeners, edge channels, and hardware reinforcement from either cold- or hot-rolled steel sheet.

E. Hardware Preparation: Factory prepare hollow metal work to receive templated mortised hardware; include cutouts, reinforcement, mortising, drilling, and tapping according to the Door Hardware Schedule and templates furnished as specified in Section 08 71 00 - Door Hardware.
   1. Locate hardware as indicated, or if not indicated, according to ANSI/SDI A250.8 and ANSI/NAAMM-HMMA 861.
   2. Reinforce doors and frames to receive non-templated, mortised and surface-mounted door hardware.
   3. Comply with applicable requirements in ANSI/SDI A250.6 and ANSI/DHI A115 Series specifications for preparation of hollow metal work for hardware.
   4. Coordinate locations of conduit and wiring boxes for electrical connections with Division 26 Sections.

2.8 STEEL FINISHES

A. Prime Finish: Apply manufacturer's standard primer immediately after cleaning and pretreating.
   1. Shop Primer: Manufacturer's standard, fast-curing, lead- and chromate-free primer complying with ANSI/SDI A250.10 acceptance criteria; recommended by primer manufacturer for substrate; compatible with substrate and field-applied coatings despite prolonged exposure.

B. Factory-Applied Paint Finish: Manufacturer's standard, complying with ANSI/SDI A250.3 for performance and acceptance criteria.

2.9 Color and Gloss: As selected by Architect from manufacturer's full range.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

B. Examine roughing-in for embedded and built-in anchors to verify actual locations before frame installation.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Remove welded-in shipping spreaders installed at factory. Restore exposed finish by grinding, filling, and dressing, as required to make repaired area smooth, flush, and invisible on exposed faces.

B. Prior to installation, adjust and securely brace welded hollow metal frames for squareness, alignment, twist, and plumbness to the following tolerances:
   1. Squareness: Plus or minus 1/16 inch, measured at door rabbet on a line 90 degrees from jamb perpendicular to frame head.
   2. Alignment: Plus or minus 1/16 inch, measured at jambs on a horizontal line parallel to plane of wall.
   3. Twist: Plus or minus 1/16 inch, measured at opposite face corners of jambs on parallel lines, and perpendicular to plane of wall.
   4. Plumbness: Plus or minus 1/16 inch, measured at jambs on a perpendicular line from head to floor.

C. Drill and tap doors and frames to receive non-templated, mortised, and surface-mounted door hardware.

3.3 INSTALLATION

A. General: Install hollow metal work plumb, rigid, properly aligned, and securely fastened in place; comply with Drawings and manufacturer's written instructions.

B. Hollow Metal Frames: Install hollow metal frames of size and profile indicated. Comply with ANSI/SDI A250.11 and HMMA 840.
   1. Set frames accurately in position, plumbed, aligned, and braced securely until permanent anchors are set. After wall construction is complete, remove temporary braces, leaving surfaces smooth and undamaged.
      a. At fire-protection-rated openings, install frames according to NFPA 80.
      b. Where frames are fabricated in sections because of shipping or handling limitations, field splice at approved locations by welding face joint continuously; grind, fill, dress, and make splice smooth, flush, and invisible on exposed faces.
      c. Install frames with removable glazing stops located on secure side of opening.
      d. Install door silencers in frames before grouting.
      e. Remove temporary braces necessary for installation only after frames have been properly set and secured.
      f. Check plumbness, squareness, and twist of frames as walls are constructed. Shim as necessary to comply with installation tolerances.
      g. Field apply bituminous coating to backs of frames that are filled with grout containing antifreezing agents.
   2. Floor Anchors: Provide floor anchors for each jamb and mullion that extends to floor, and secure with postinstalled expansion anchors.
   3. Metal-Stud Partitions: Solidly pack mineral-fiber insulation behind frames.
   4. Masonry Walls: Coordinate installation of frames to allow for solidly filling space between frames and masonry with grout.
   5. Ceiling Struts: Extend struts vertically from top of frame at each jamb to overhead structural supports or substrates above frame unless frame is anchored to masonry or to other structural support at each jamb. Bend top of struts to provide flush contact for securing to supporting construction. Provide adjustable wedged or bolted anchorage to frame jamb members.
   6. Installation Tolerances: Adjust hollow metal door frames for squareness, alignment, twist, and plumb to the following tolerances:
      a. Squareness: Plus or minus 1/16 inch, measured at door rabbet on a line 90 degrees from jamb perpendicular to frame head.
      b. Alignment: Plus or minus 1/16 inch, measured at jambs on a horizontal line parallel to plane of wall.
      c. Twist: Plus or minus 1/16 inch, measured at opposite face corners of jambs on parallel lines, and perpendicular to plane of wall.

d. Plumbness: Plus or minus 1/16 inch, measured at jambs at floor.

3.4 ADJUSTING AND CLEANING

A. Final Adjustments: Check and readjust operating hardware items immediately before final inspection. Leave work in complete and proper operating condition. Remove and replace defective work, including hollow metal work that is warped, bowed, or otherwise unacceptable.

B. Remove grout and other bonding material from hollow metal work immediately after installation.

C. Prime-Coat Touchup: Immediately after erection, sand smooth rusted or damaged areas of prime coat and apply touchup of compatible air-drying, rust-inhibitive primer.

D. Metallic-Coated Surfaces: Clean abraded areas and repair with galvanizing repair paint according to manufacturer's written instructions.

END OF SECTION

SECTION 0814 16 – FLUSH WOOD DOORS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Interior solid-core door faces, rated and non-rated.

B. Related Sections:
   1. Section 081113 – Hollow Metal Doors and Frames.
   2. Section 087100 - Door Hardware.

1.2 SUBMITTALS

A. Product Data: For solid core wood door indicated. Include details of core and edge construction and trim for openings. Include factory-finishing specifications.

B. Shop Drawings: Indicate location, size, and hand of each door; elevation of each kind of door; construction details not covered in Product Data; location and extent of hardware blocking; and other pertinent data.
   1. Indicate dimensions and locations of mortises and holes for hardware.
   2. Indicate dimensions and locations of cutouts.
   3. Indicate requirements for veneer matching.
   4. Indicate doors to be factory finished and finish requirements.
   5. Indicate fire-protection ratings for fire-rated doors.

C. Samples for Initial Selection: For factory-finished doors.

D. Samples for Verification:
   1. Factory finishes applied to actual door face materials, approximately 8 by 10 inches, for each material and finish. For each wood species and transparent finish, provide set of three samples showing typical range of color and grain to be expected in the finished work.
   2. Corner sections of doors, approximately 8 by 10 inches, with door faces and edges representing actual materials to be used.
      a. Provide samples for each species of veneer and solid lumber required.
      b. Provide samples for each color, texture, and pattern of plastic laminate required.
      c. Finish veneer-faced door samples with same materials proposed for factory-finished doors.
   3. Louver blade and frame sections, 6 inches long, for each material and finish specified.
   4. Frames for light openings, 6 inches long, for each material, type, and finish required.

E. Warranty: Sample of special warranty.

1.3 QUALITY ASSURANCE

A. Source Limitations: Obtain flush wood doors from single manufacturer.

B. Quality Standard: In addition to requirements specified, comply with WDMA I.S.1-A, "Architectural Wood Flush Doors." Or WI
   1. Provide AWI Quality Certification Labels or an AWI letter of licensing for Project indicating that doors comply with requirements of grades specified.

C. Fire-Rated Wood Doors: Doors complying with NFPA 80 that are listed and labeled by a qualified testing agency, for fire-protection ratings indicated, based on testing at as close to neutral pressure as possible according to UL 10B.

1. Temperature-Rise Limit: At vertical exit enclosures and exit passageways, provide doors that have a maximum transmitted temperature end point of not more than 450 deg F above ambient after 30 minutes of standard fire-test exposure.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Comply with requirements of referenced standard and manufacturer's written instructions.

B. Package doors individually in plastic bags or cardboard cartons.

C. Mark each door on top and bottom rail with opening number used on Shop Drawings.

1.5 PROJECT CONDITIONS

A. Environmental Limitations: Do not deliver or install doors until spaces are enclosed and weathertight, wet work in spaces is complete and dry, and HVAC system is operating and maintaining temperature between 5 0 and 90 deg F and relative humidity between 30 and 50 percent during the remainder of the construction period.

1.6 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace doors that fail in materials or workmanship within specified warranty period.
   1. Failures include, but are not limited to, the following:
      a. Warping (bow, cup, or twist) more than 1/4 inch in a 42-by-84-inch section.
      b. Telegraphing of core construction in face veneers exceeding 0.01 inch in a 3-inch span.
   2. Warranty shall also include installation and finishing that may be required due to repair or replacement of defective doors.
   3. Warranty Period for Interior Doors: Life of installation.

PART 2 - PRODUCTS

2.1 FIVE-PLY FLUSH WOOD VENEER-FACED DOORS FOR TRANSPARENT FINISH

A. Basis of Design: VT Industries Architectural Doors or approved equal.

2.2 DOOR CONSTRUCTION, GENERAL

A. Interior Solid-Core Doors.

1. Performance Grade: WDMA IA Heavy Duty.
   1. Grade: Premium.

2. Species: Walnut #261718C (Custom).

3. Cut: Plain sliced (flat sliced).

4. Match between Veneer leaves: Slip match.

5. Assembly of Veneer leaves on Door Faces: Center-balance match.

6. Pair and Set Match: Provide for doors hung in same opening separated only by mullions.

7. Room Match: Match door faces within each separate room or area of building. Corridor faced do not need to match where they are separated by 20 feet or more.

8. Exposed Vertical and Top Edges: Same species as faces or compatible species – Architectural Woodwork Standards edge Type A.

10. Fire-Rated Single Doors: Provide edge construction with intumescent seals concealed by outer stile. Comply with specified requirements for exposed vertical edges.

11. Fire-Rated Pairs of Doors: Provide fire-retardant stiles that are listed and labeled for applications indicated without formed-steel edges and astragals. Provide stiles with concealed intumescent seals. Comply with specified requirements or exposed edges.

12. Mineral-Core Doors: At hinge stiles, provide laminated edge construction with improved screw-holding capability and split resistance.

13. Screw Holding Capability: 475 lbf in accordance with WDMA T.M. 10.

14. Core for Non-Rated Doors: ANSI A208.1, Grad LD-1 or Grade LD-2 particleboard.
    a. Blocking: Provide wood blocking in particle-board core doors as follows:
        1) 5-inch top rail blocking in doors indicated to have closers.
        2) 5-inch bottom-rail blocking, in exterior doors and doors indicated to have kick, mop, or armor plates.
        3) 5-inch mid-rail blocking, in doors indicated to have exit devices.

15. Provide doors with glued-wood stave or WDA I.S. 10 structural-composite lumber cores instead of particleboard cores for doors scheduled to receive exit devices in Section 087100 Door Hardware.

16. Core for Fire-Rated Doors: As required to achieve fire-protection rating indicated n Drawings.

17. Blocking for Mineral Core Doors: Provide composite blocking with improved screw-holding capability approved for use in doors o fire-protection ratings indicated on Drawings as follows:
    a. 5-inch top rail blocking.
    b. 5-inch bottom-rail blocking, in doors indicated to have protection plates.
    c. 5-inch midrail blocking in doors indicated to have armor plates.
    d. 5-inch midrail blocking in doors indicated to have exit devices.

18. Construction: Five plies, hot-pressed bonded (vertical and horizontal edging is bonded to core), with entire unit abrasive planed before veneering.

2.3 FABRICATION

A. Factory fit doors to suit frame-opening sizes indicated. Comply with clearance requirements of referenced quality standard for fitting unless otherwise indicated.
    1. Comply with requirements in NFPA 80 for fire-rated doors.

B. Factory machine doors for hardware that is not surface applied. Locate hardware to comply with DHI-WDHS-3. Comply with final hardware schedules, door frame Shop Drawings, DHI A115-W series standards, and hardware templates.
    1. Coordinate with hardware mortises in metal frames to verify dimensions and alignment before factory machining.
    2. Metal Astragals: Factory machine astragals and formed-steel edges for hardware for pairs of fire-rated doors.

C. Openings: Cut and trim openings through doors in factory.
    1. Light Openings: Trim openings with moldings of material and profile indicated.
    2. Louvers: Factory install louvers in prepared openings.

2.4 FACTORY FINISHING

A. General: Comply with referenced quality standard for factory finishing. Complete fabrication, including fitting doors for openings and machining for hardware that is not surface applied, before finishing.
    1. Finish faces, all four edges, edges of cutouts, and mortises. Stains and fillers may be omitted on bottom edges, edges of cutouts, and mortises.

B. Finish doors at factory that are indicated to receive transparent finish. Field finish doors indicated to receive opaque finish.

C. Transparent Finish:
   1. Grade: Premium.
   2. Finish: AWI same as specified for doors.
   3. Staining: As selected by Architect from manufacturer's full range.
   4. Effect: Filled finish
   5. Sheen: Semi-gloss.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine doors and installed door frames before hanging doors.
   1. Verify that frames comply with indicated requirements for type, size, location, and swing characteristics and have been installed with level heads and plumb jambs.
   2. Reject doors with defects.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. Operations: No more than 5lbs of pressure required to open restroom doors.

B. Hardware: For installation, see Division 08 Section 08 71 00 - Door Hardware.

C. Installation Instructions: Install doors to comply with manufacturer's written instructions and the referenced quality standard, and as indicated.
   1. Install fire-rated doors in corresponding fire-rated frames according to NFPA 80.

D. Factory-Fitted Doors: Align in frames for uniform clearance at each edge.

E. Factory-Finished Doors: Restore finish before installation if fitting or machining is required at Project site.

3.3 ADJUSTING

A. Operation: Re-hang or replace doors that do not swing or operate freely.

B. Finished Doors: Replace doors that are damaged or that do not comply with requirements. Doors may be repaired or refinished if work complies with requirements and shows no evidence of repair or refinishing.

END OF SECTION

SECTION 08 33 23 – OVERHEAD COILING DOORS

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following types of electric motor-operated overhead coiling doors:
   1. Service doors.
      a. Insulated and non-insulated.

B. Related Sections include the following:
   1. Section 05 50 00 - Metal Fabrications: Miscellaneous steel supports.
   2. Section 08 71 00 - Door Hardware: Lock cylinders and keying.
   3. Division 26 Sections for electrical service and connections for powered operators and accessories.

1.2 DEFINITIONS

A. Operation Cycle: One cycle of a door is complete when it is moved from the closed position to the fully open position and returned to the closed position.

1.3 PERFORMANCE REQUIREMENTS

A. Structural Performance: Provide overhead coiling doors capable of withstanding the effects of gravity loads and the following loads and stresses without evidencing permanent deformation of door components:
   1. Wind Load: Uniform pressure (velocity pressure) of 20 lbf/sq. ft., acting inward and outward.
   2. Impact Test for Flying Debris: Comply with ASTM E 1996, tested according to ASTM E 1886.
      a. Level of Protection: Basic Protection.
      b. Wind Zone One: 110 mph, pressure test to 1/2 and 1-1/2 x design pressure (positive and negative).

B. Operation-Cycle Requirements: Provide overhead coiling door components and operators capable of operating for not less than 20,000 cycles and for 10 cycles per day.

1.4 SUBMITTALS

A. Product Data: For each type and size of overhead coiling door and accessory. Include the following:
   1. Summary of forces and loads on walls and jambs.
   2. Fire-Rated Doors: Include description of fire-release system including testing and resetting instructions.

B. Shop Drawings: For special components and installations not dimensioned or detailed in manufacturer's product data.

C. Samples for Verification: Of each type of exposed finish required, prepared on Samples of size indicated below.
   1. Curtain Slats: 12 inches long.
   2. Bottom Bar: 6 inches long.

3. Guides: 6 inches long.
4. Brackets: 6 inches square.
5. Hood: 6 inches square.

D. Qualification Data: For Installer.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: Manufacturer's authorized representative who is trained and approved for both installation and maintenance of units required for this Project.

B. Source Limitations: Obtain overhead coiling doors through one source from a single manufacturer.
1. Obtain operators and controls from overhead coiling door manufacturer.

C. Fire-Test-Response Characteristics: Provide assemblies complying with NFPA 80 that are identical to door and frame assemblies tested for fire-test-response characteristics per UL 10b and NFPA 252, and that are listed and labeled for fire ratings indicated by UL, FMG, ITS, or another testing and inspecting agency acceptable to authorities having jurisdiction.

D. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Basis of Design: Overhead Corp Door Inc.
1. Model 631 (Non-insulated)
a. Sizes: 8 x 10; 8 x 8; 8'x 9; 10 x 10
b. Material: 22 ga steel.
c. Slat: C187; Galvanized; Painted
Color: W h i t e
2. Model 625 (Insulated)
a. Size: 8 x .
b. Material: 24 ga steel.
c. Slat: F-265; Galvanized; Painted.
3. Face of Wall Mount
4. Motor Size: As recommended by door manufacturer.

B. Manufacturer: Subject to compliance with requirements, provide products by one of the following:
1. Alpine Overhead Doors, Inc.
2. Atlas Door; Div. of Clopay Building Products Company, Inc.
3. Cookson Company.
4. Cornell Iron Works Inc.
5. Dynamic Closures Corporation.
6. Mahon Door Corporation.
7. McKeon Rolling Steel Door Company, Inc.
8. Metro Door.

9. Pacific Rolling Doors Co.
10. Raynor.

2.2 DOOR CURTAIN MATERIALS AND CONSTRUCTION

A. Door Curtains: Fabricate overhead coiling door curtain of interlocking slats, designed to withstand wind loading indicated, in a continuous length for width of door without splices. Unless otherwise indicated, provide slats of thickness and mechanical properties recommended by door manufacturer for performance, size, and type of door indicated, and as follows:
   1. Steel Door Curtain Slats: Zinc-coated (galvanized), cold-rolled structural steel (SS) sheet; complying with ASTM A 653/A 653M, G90 (Z275) coating designation.
      a. Minimum Base-Metal (Uncoated) Thickness: 0.0209 inch.
      b. Flat profile slats.
   2. Aluminum Door Curtain Slats: ASTM B 209 or ASTM B 221, alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated.
      a. Aluminum Extrusion Thickness: Not less than 0.051 inch.
      b. Flat profile slats.

B. Endlocks and Windlocks for Service Doors: Malleable-iron casings galvanized after fabrication, secured to curtain slats with galvanized rivets or high-strength nylon. Provide locks on not less than alternate curtain slats for curtain alignment and resistance against lateral movement.

C. Bottom Bar for Service Doors: Consisting of 2 angles, each not less than 1-1/2 by 1-1/2 by 1/8 inch thick; galvanized, stainless-steel, or aluminum extrusions to suit type of curtain slats.

D. Curtain Jamb Guides for Service Doors: Fabricate curtain jamb guides of steel angles or channels and angles, with sufficient depth and strength to retain curtain, to allow curtain to operate smoothly, and to withstand loading. Build up units with not less than 3/16- inch- thick galvanized steel sections complying with ASTM A 36/A 36M and ASTM A 123/A 123M. Slot bolt holes for guide adjustment. Provide removable stops on guides to prevent overtravel of curtain, and a continuous bar for holding windlocks.

2.3 HOODS AND ACCESSORIES

A. Hood: Form to act as weatherseal and entirely enclose coiled curtain and operating mechanism at opening head. Contour to fit end brackets to which hood is attached. Roll and reinforce top and bottom edges for stiffness. Provide closed ends for surface- mounted hoods and provide fascia for any portion of between-jamb mounting projecting beyond wall face. Provide intermediate support brackets as required to prevent sagging.
   1. Fabricate hoods for stainless-steel doors of minimum 0.025-inch- thick stainless-steel sheet, Type 304, complying with ASTM A 666.
   2. Include automatic drop baffle to guard against passage of smoke or flame.
   3. Shape: Square.

B. Integral Frame, Hood, and Fascia: Provide welded assemblies of the following sheet metal:

1. Fabricate from minimum 0.064-inch- thick, hot-dip galvanized steel sheet with G90 zinc coating, complying with ASTM A 653/A 653M.

C. Integral Sills: Fabricate sills as integral part of frame assembly of same sheet metal; 0.078- inch minimum thickness.

D. Smoke Seals: Provide UL-listed and -tested smoke-seal perimeter gaskets.

E. Push/Pull Handles: For push-up-operated or emergency-operated doors, provide galvanized steel lifting handles on each side of door.
1. Provide pull-down straps or pole hooks for doors more than 84 inches high.

F. Slide Bolt: Fabricate with side-locking bolts to engage through slots in tracks for locking by padlock, located on both left and right jamb sides, operable from coil side.

G. If door unit is power operated, provide safety interlock switch to disengage power supply when door is locked.
1. Replaceable fusible links with temperature rise and melting point of 165 deg F; interconnected and mounted on both sides of door opening.
2. Manufacturer's standard UL-labeled smoke detector and door-holder-release devices.
3. Manufacturer's standard UL-labeled heat detector and door-holder-release devices.
4. Building fire alarm and detection system and door-holder-release devices.

2.4 COUNTERBALANCING MECHANISM

A. General: Counterbalance doors by means of adjustable-tension, steel helical torsion spring mounted around a steel shaft and contained in a spring barrel connected to door curtain with barrel rings. Use grease-sealed bearings or self-lubricating graphite bearings for rotating members.

B. Counterbalance Barrel: Fabricate spring barrel of hot-formed, structural-quality, welded or seamless carbon-steel pipe, of sufficient diameter and wall thickness to support rolled- up curtain without distortion of slats and to limit barrel deflection to not more than 0.03 in./ft. of span under full load.

C. Provide spring balance of one or more oil-tempered, heat-treated steel helical torsion springs. Size springs to counterbalance weight of curtain, with uniform adjustment accessible from outside barrel. Provide cast-steel barrel plugs to secure ends of springs to barrel and shaft.

D. Fabricate torsion rod for counterbalance shaft of cold-rolled steel, sized to hold fixed spring ends and carry torsional load.

E. Brackets: Provide mounting brackets of manufacturer's standard design, either cast iron or cold-rolled steel plate.

2.5 ELECTRIC DOOR OPERATORS

A. General: Provide electric door operator assembly of size and capacity recommended and provided by door manufacturer for door **and operation-cycle requirements** specified, with electric motor and factory-prewired motor controls, starter, gear- reduction unit, solenoid-operated brake, clutch, remote-control stations, control

devices, integral gearing for locking door, and accessories required for proper operation.

B. Comply with NFPA 70.

C. Disconnect Device: Provide hand-operated disconnect or mechanism for automatically engaging chain and sprocket operator and releasing brake for emergency manual operation while disconnecting motor without affecting timing of limit switch. Mount disconnect and operator so they are accessible from floor level. Include interlock device to automatically prevent motor from operating when emergency operator is engaged.

D. Design operator so motor may be removed without disturbing limit-switch adjustment and without affecting emergency auxiliary operator.

2.6 FINISHES, GENERAL

A. General: Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.

B. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

PART 3 - EXECUTION

3.1 INSTALLATION

A. General: Install coiling doors and operating equipment complete with necessary hardware, jamb and head molding strips, anchors, inserts, hangers, and equipment supports.

3.2 ADJUSTING

A. Lubricate bearings and sliding parts; adjust doors to operate easily, free of warp, twist, or distortion and with weathertight fit around entire perimeter.

3.3 DEMONSTRATION

A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain overhead coiling doors. Refer to Division 01 Section 01 78 23 – Operations and Maintenance Data.

END OF SECTION

SECTION 08 36 13 - SECTIONAL OVERHEAD DOORS

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes manually operated sectional overhead doors.

B. Related Sections include the following:
   1. Division 09 painting Sections for field-applied paint finish.

1.2 DEFINITIONS

A. Operation Cycle: One cycle of a door is complete when it is moved from the closed position to the fully open position and returned to the closed position.

1.3 PERFORMANCE REQUIREMENTS

A. Structural Performance: Provide sectional overhead doors capable of withstanding the effects of gravity loads and the following loads and stresses without evidencing permanent deformation of door components:
   1. Wind Loads: Determine loads based on the following minimum design wind pressures:
      a. Uniform pressure (velocity pressure) of 20 lbf/sq. ft. acting inward and outward.
   2. Air Infiltration: Maximum rate not more than indicated when tested according to ASTM E 283.
      a. Maximum Rate: 0.08 cfm at 15 mph.
   3. Impact Test for Flying Debris: Comply with ASTM E 1996, tested according to ASTM E 1886.
      a. Level of Protection: Basic Protection.
      b. Wind Zone One: 110 mph, pressure test to 3/4 and 1-1/2 x design pressure (positive and negative).

B. Operation-Cycle Requirements: Provide sectional overhead door components and operators capable of operating for not less than 10,000 cycles.

1.4 SUBMITTALS

A. Product Data: For each type and size of sectional overhead door and accessory. Include the following:
   1. Summary of forces and loads on walls and jambs.

B. Shop Drawings: For special components and installations not dimensioned or detailed in manufacturer's product data.

C. Samples for Verification: For each type of exposed finish required, prepared on Samples of size indicated below.
   1. Frame: 6 inches long.
   2. Panel: 6 inches square.

D. Qualification Data: For Installer.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: Manufacturer's authorized representative who is trained and approved for both installation and maintenance of units required for this Project.

B. Source Limitations: Obtain sectional overhead doors through one source from a single manufacturer.

C. Product Options: Drawings indicate size, profiles, and dimensional requirements of sectional overhead doors and accessories and are based on the specific system indicated. Other manufacturers' systems with equal performance and dimensional characteristics may be considered. Refer to Division 01 Section "Product Requirements."

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Basis of Design: Overhead Door Company: Model No. 420
   1. Steel doors with insulated steel panels.
   2. Size: 8’-0” x 10’-0”.

B. Acceptable Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   1. Amarr Garage Doors
   2. General American Door Company
   3. Wayne-Dalton Corp

2.2 STEEL DOOR SECTIONS

A. Construct door sections including face sheets and frames from zinc-coated (galvanized), cold-rolled, commercial steel (CS) sheet, complying with ASTM A 653/A 653M, G60 coating designation.
   1. Minimum Base-Metal (Uncoated) Thickness for Section Faces: 0.053 inch.
   2. Exterior-Section Face: Flat.

B. Fabricate door panels from a single sheet to provide sections not more than 24 inches high and nominally 2 inches deep. Roll horizontal meeting edges to a continuous, interlocking, keyed, rabbeted, shiplap, or tongue-in-groove weathertight seal, with a reinforcing flange return.
   1. For insulated doors, provide door sections with continuous thermal-break construction, separating faces of door.

C. Enclose open sections with channel end stiles formed from not less than 0.064-inch- thick galvanized steel sheet and weld end stiles to door section in place. Provide intermediate stiles formed from not less than 0.064-inch- thick galvanized steel sheet, cut to door section profile, and welded in place.
   1. Stile Spacing: Not more than 48 inches apart.

D. Reinforce sections with continuous horizontal and diagonal reinforcement, as required to stiffen door and for wind loading. Provide galvanized steel bars, struts, trusses, or strip steel, formed to depth and bolted or welded in place.

E. Provide reinforcement for hardware attachment.

F. Thermal Insulation: Insulate inner core of steel sections with door manufacturer's standard polyurethane insulation, foamed in place to completely fill inner core of section and pressure bonded to face sheets to prevent delamination under wind load, and with maximum flame-spread and smoke-developed indexes of 75 and 450, respectively, according to ASTM E 84. Enclose insulation completely within steel sections that incorporate the following inside facing material, with no exposed insulation material evident:

G. Fabricate sections so finished door assembly is rigid and aligned, with tight hairline joints and free of warp, twist, and deformation.

H. Finish: Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
   1. Surface Preparation: Clean galvanized surfaces with nonpetroleum solvent so surfaces are free of oil and other contaminants.
      a. Pretreat zinc-coated steel, after cleaning, with a conversion coating of type suited to organic coating applied over it.
   2. Apply manufacturer's standard primer and finish coats to interior- and exterior-door faces after forming, according to coating manufacturer's written instructions for application, thermosetting, and minimum dry film thickness.

2.3 TRACKS, SUPPORTS, AND ACCESSORIES

A. Tracks: Manufacturer's standard, galvanized steel track system, sized for door size and weight, designed for lift type indicated and clearances shown, and complying with ASTM A 653/A 653M for minimum G60 zinc coating. Provide complete track assembly including brackets, bracing, and reinforcement for rigid support of ball-bearing roller guides for required door type and size. Slot vertical sections of track spaced at 2 inches apart for door-drop safety device. Slope tracks at proper angle from vertical or design to ensure tight closure at jambs when door unit is closed. Weld or bolt to track supports.
   1. Provide tracks configured for the following lift types:
      a. Standard.
      b. Low headroom.
      c. High.
      d. Follow the roof slope.
      e. Vertical.
      f. Vertical with no breakaway.

B. Track Reinforcement and Supports: Galvanized steel track reinforcement and support members, complying with ASTM A 36/A 36M and ASTM A 123/A 123M. Secure, reinforce, and support tracks as required for door size and weight to provide strength and rigidity without sag, sway, and vibration during opening and closing of doors.
   1. Support and attach tracks to opening jambs with continuous angle welded to tracks and attached to wall. Support horizontal (ceiling) tracks with continuous angle welded to track and supported by laterally braced attachments to overhead structural members at curve and end of tracks.
      a. Repair galvanized coating on tracks according to ASTM A 780.

C. Weatherseals: Replaceable, adjustable, continuous, compressible weather-stripping gaskets of flexible vinyl, rubber, or neoprene fitted to bottom and top of overhead door.
   1. Provide continuous flexible seals at door jambs for a weathertight installation.

2.4 HARDWARE

A. General: Provide heavy-duty, corrosion-resistant hardware, with hot-dip galvanized, stainless-steel, or other corrosion-resistant fasteners, to suit door type.

B. Hinges: Heavy-duty galvanized steel hinges of not less than 0.0747-inch- thick, uncoated steel at each end stile and at each intermediate stile, according to manufacturer's written recommendations for door size. Attach hinges to door sections through stiles and rails with bolts and lock nuts or lock washers and nuts. Use rivets or self-tapping fasteners where access to nuts is not possible. Provide double-end hinges where required, for doors exceeding 16 feet in width, unless otherwise recommended by door manufacturer.

C. Rollers: Heavy-duty rollers with steel ball bearings in case-hardened steel races, mounted with varying projections to suit slope of track. Extend roller shaft through both hinges where double hinges are required. Provide 3-inch- diameter roller tires for 3-inch- wide track and 2-inch-diameter roller tires for 2-inch- wide track.
   1. Tire Material: Case-hardened steel.

D. Push/Pull Handles: For push-up-operated or emergency-operated doors, provide galvanized steel lifting handles on each side of door.

E. Slide Bolt: Fabricate with side-locking bolts to engage through slots in tracks for locking by padlock, located on single-jamb side, operable from inside only.

F. Chain Lock Keeper: Suitable for padlock.

2.5 COUNTERBALANCE MECHANISM

A. Torsion Spring: Counterbalance mechanism consisting of adjustable-tension torsion springs fabricated from oil-tempered-steel wire complying with ASTM A 229/A 229M, Class II, mounted on a cross-header tube or steel shaft. Connect to door with galvanized aircraft-type lift cables with cable safety factor of at least 5 to 1. Provide springs calibrated for a minimum of 10,000 cycles.

B. Cable Drums: Cast-aluminum or gray-iron casting cable drums grooved to receive cable. Mount counterbalance mechanism with manufacturer's standard ball-bearing brackets at each end of shaft. Provide one additional midpoint bracket for shafts up to 16 feet long and two additional brackets at one-third points to support shafts more than 16 feet long unless closer spacing is recommended by door manufacturer.

C. Cable Safety Device: Include a spring-loaded, steel or bronze cam mounted to bottom door roller assembly on each side and designed to automatically stop door if either cable breaks.

D. Bracket: Provide anchor support bracket as required to connect stationary end of spring to the wall and to level shaft and prevent sag.

E. Provide a spring bumper at each horizontal track to cushion door at end of opening operation.

2.6 MANUAL DOOR OPERATORS

A. Push-up Operation: Lift handles and pull rope for raising and lowering doors, operating with a maximum 25-lbf lift or pull.

PART 3 - EXECUTION

3.1 INSTALLATION

A. General: Install door, track, and operating equipment complete with necessary hardware, jamb and head molding strips, anchors, inserts, hangers, and equipment supports according to Shop Drawings, manufacturer's written instructions, and as specified.

B. Fasten vertical track assembly to framing, spaced not less than 24 inches apart. Hang horizontal track from structural overhead framing with angle or channel hangers fastened to framing by welding or bolting or both. Provide sway bracing, diagonal bracing, and reinforcement as required for rigid installation of track and door-operating equipment.

3.2 ADJUSTING

A. Lubricate bearings and sliding parts; adjust doors to operate easily, free from warp, twist, or distortion and with weathertight fit around entire perimeter.

B. Touch-up Painting: Immediately after welding galvanized track to track supports, clean field welds and abraded galvanized surfaces and repair galvanizing to comply with ASTM A 780.

3.3 DEMONSTRATION

A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain sectional overhead doors. Refer to Division 01 Section 01 79 00 - Demonstration and Training.

END OF SECTION

SECTION 08 41 13 - ALUMINUM-FRAMED ENTRANCES AND STOREFRONTS

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:
   1. Exterior aluminum-framed storefronts.
      a. Glazing is retained mechanically with gaskets on four sides.
   2. Exterior manual-swing narrow stile doors.

1.2 PERFORMANCE REQUIREMENTS

A. General: Provide aluminum-framed systems, including anchorage, capable of withstanding, without failure, the effects of the following:
   1. Structural loads.
   2. Thermal movements.
   3. Movements of supporting structure indicated on Drawings including, but not limited to, story drift and deflection from uniformly distributed and concentrated live loads.
   4. Dimensional tolerances of building frame and other adjacent construction.
   5. Failure includes the following:
      a. Deflection exceeding specified limits.
      b. Thermal stresses transferred to building structure.
      c. Framing members transferring stresses, including those caused by thermal and structural movements, to glazing.
      d. Noise or vibration created by wind and thermal and structural movements.
      e. Loosening or weakening of fasteners, attachments, and other components.
      f. Sealant failure.
      g. Failure of operating units to function properly.

B. Structural Loads:
   1. Wind Loads: As indicated on Structural Drawings.
   2. Seismic Loads: As indicated on Structural Drawings.

C. Deflection of Framing Members:
   1. Deflection Normal to Wall Plane: Limited to 1/175 of clear span for spans up to 13 feet 6 inches and to 1/240 of clear span plus 1/4 inch for spans greater than 13 feet 6 inches or an amount that restricts edge deflection of individual glazing lites to 3/4 inch, whichever is less.
   2. Deflection Parallel to Glazing Plane: Limited to 1/360 of clear span or 1/8 inch, whichever is smaller.

D. Structural-Test Performance: Provide aluminum-framed systems tested according to ASTM E 330 as follows:
   1. When tested at positive and negative wind-load design pressures, systems do not evidence deflection exceeding specified limits.
   2. When tested at 150 percent of positive and negative wind-load design pressures, systems, including anchorage, do not evidence material failures, structural distress, and permanent deformation of main framing members exceeding 0.2 percent of span.
   3. Test Durations: As required by design wind velocity but not less than 10 seconds.

E. Thermal Movements: Provide aluminum-framed systems that allow for thermal movements resulting from the following maximum change (range) in ambient and surface temperatures.

Base engineering calculation on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.
1. Temperature Change (Range): 120 deg F, ambient; 180 deg F, material surfaces.

F. Air Infiltration: Provide aluminum-framed systems with maximum air leakage through fixed glazing and framing areas of[0.06 cfm/sq. ft. of fixed wall area when tested according to ASTM E 283 at a minimum static-air-pressure difference of 1.57 lbf/sq. ft..

G. Water Penetration Under Static Pressure: Provide aluminum-framed systems that do not evidence water penetration through fixed glazing and framing areas when tested according to ASTM E 331 at a minimum static-air-pressure difference of 20 percent of positive wind-load design pressure, but not less than 6.24 lbf/sq. ft..

H. Water Penetration Under Dynamic Pressure: Provide aluminum-framed systems that do not evidence water leakage through fixed glazing and framing areas when tested according to AAMA 501.1 under dynamic pressure equal to 20 percent of positive wind-load design pressure, but not less than 6.24 lbf/sq. ft.
1. Maximum Water Leakage: No uncontrolled water penetrating systems or appearing on systems' normally exposed interior surfaces from sources other than condensation]. Water controlled by flashing and gutters that is drained to exterior and cannot damage adjacent materials or finishes is not considered water leakage.

I. Condensation Resistance: Provide aluminum-framed systems with fixed glazing and framing areas having condensation-resistance factor (CRF) of not less than [53] when tested according to AAMA 1503.1.

J. Average Thermal Conductance: Provide aluminum-framed systems with fixed glazing and framing areas having average U-factor of not more than 0.69 Btu/sq. ft. x h x deg F tested according to AAMA 1503.

K. Sound Transmission: Provide aluminum-framed systems with fixed glazing and framing areas having minimum STC [32 according to ASTM E 413 and an OITC 26 according to ASTM E 1332, as determined by testing according to ASTM E 90.

1.3 SUBMITTALS

A. Manufacturer’s product data, product literature, or a letter from the manufacturer verifying the location where the materials or products are harvested, extracted or manufactured within the State of Georgia.

B. Deliverable checklist from Section 2.3 of Energy Efficiency and Sustainable Construction Standards for State Buildings “Georgia peach-Green Building Rating System” provided at Final Acceptane.

C. Product Data: Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for each type of product indicated.

D. Shop Drawings: For aluminum-framed systems. Include plans, elevations, sections, details, and attachments to other work.
1. Include structural analysis data signed and sealed by the qualified professional engineer responsible for their preparation.
2. For entrances, include hardware schedule and indicate operating hardware types, functions, quantities, and locations.

E. Samples for Initial Selection: For units with factory-applied color finishes.

F. Samples for Verification: For each type of exposed finish required, in manufacturer's standard sizes.

G. Fabrication Sample: Of each vertical-to-horizontal intersection of systems, made from 12-inch lengths of full-size components and showing details of the following:
   1. Joinery.
   2. Anchorage.
   3. Expansion provisions.
   4. Glazing.
   5. Flashing and drainage.

H. Qualification Data: For Installer.

I. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, for aluminum-framed systems.

J. Field quality-control test and inspection reports.

K. Maintenance Data: For aluminum-framed systems to include in maintenance manuals.

L. Warranties: Special warranties specified in this Section.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: Capable of assuming engineering responsibility and performing work of this Section and who is acceptable to manufacturer.
   1. Engineering Responsibility: Preparation of data for aluminum-framed systems including Shop Drawings based on testing and engineering analysis of manufacturer's standard units in assemblies similar to those indicated for this Project and submission of reports of tests performed on manufacturer's standard assemblies.

B. Testing Agency Qualifications: An independent agency qualified according to ASTM E 699 for testing indicated.

C. Product Options: Information on Drawings and in Specifications establishes requirements for systems' aesthetic effects and performance characteristics. Aesthetic effects are indicated by dimensions, arrangements, alignment, and profiles of components and assemblies as they relate to sightlines, to one another, and to adjoining construction. Performance characteristics are indicated by criteria subject to verification by one or more methods including preconstruction testing, field testing, and in-service performance.
   1. Do not modify intended aesthetic effects, as judged solely by Architect, except with Architect's approval. If modifications are proposed, submit comprehensive explanatory data to Architect for review.

D. Accessible Entrances: Comply with the U.S. Architectural & Transportation Barriers Compliance Board's "Americans with Disabilities Act (ADA), Accessibility Guidelines for Buildings and Facilities (ADAAG)."

E. Welding: Qualify procedures and personnel according to AWS D1.2, "Structural Welding Code--Aluminum."

F. Mockups: Build mockups to demonstrate aesthetic effects and set quality standards for fabrication and installation.
   1. Build mockup of typical wall area as shown on Drawings.
   2. Field testing shall be performed on mockups according to requirements in Part 3 "Field Quality Control" Article.

1.5 PROJECT CONDITIONS

A. Field Measurements: Verify actual locations of structural supports for aluminum-framed systems by field measurements before fabrication and indicate measurements on Shop Drawings.

1.6 WARRANTY

A. Special Assembly Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of aluminum-framed systems that do not comply with requirements or that deteriorate as defined in this Section within specified warranty period.
   1. Failures include, but are not limited to, the following:
      a. Structural failures including, but not limited to, excessive deflection.
      b. Noise or vibration caused by thermal movements.
      c. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
      d. Water leakage through fixed glazing and framing areas.
      e. Failure of operating components to function properly.
   2. Warranty Period: Ten (10) years from date of final shipment.
   3. Finish: Warranty period shall be for 10 years from date of final shipment

PART 2 - PRODUCTS

2.1 EXTERIOR STOREFRONT

A. Basis of Design: Kawneer | TriFab 451T.
   1. Frame: 2” x 4-1/2”; Thermally broken; tested in accordance with AAMA 505
      a. Screw spline system.
   2. Bottom Rail: 10 inches.
   3. Top Rail: 8 inches.
   4. Standard Hardware.
   5. Center Glazed; screw spline system.

B. Acceptable Manufacturers: Subject to compliance with requirements:
   1. YKK AP America
   2. Arch Aluminum and Glass.
   3. Kawneer

C. Framing members: Manufacturer’s extruded or formed-aluminum framing members of thick ness required and reinforced as required to support imposed loads.
   1. Exterior Framing Construction: Thermally broken.
   2. Glazing System: Retained mechanically with gasket on both sides.
   3. Glazing Pane: Front
   4. Finish: Color anodic finish; Clear anodized.
   5. Fabrication method: Field fabricated stick system.
   6. Aluminum: Alloy and temper recommended by manufacturer for type of use and and finish indicated.
   7. Steel Reinforcement: As required by manufacturer.
   8. Backer plates: Manufacturer’s standard, continuous backer plates for framing members, if not integral, where framing abuts adjacent construction. Provide aluminum only “snap-in” fillers.
   9. Brackets and Reinforcement: Manufacturer’s standard high-strength aluminum with non-staining non-ferrous shims for aligning system components.

2.2 ENTRANCE DOOR SYSTEMS

A. Manufacturer’s standard glazed entrance doors for manual-swing or automatic operation.
B. Basis of Design: Same as storefront above.

1. Door Construction: 1-3/4 inch overall thickness, with minimum 0.125 inch thick, extruded aluminum tubular rail and stile members. Mechanically fasten corners with reinforcing brack ets that are deeply penetrated and fillet welded of that incorporate concealed tie rods.
2. Thermal Construction: High performance plastic connectors separate aluminum members exposed to the exterior from members exposed to the interior.
3. Door Design: Narrow stile: 2-1/8-inch nominal width.
4. Glazing stops and Gaskets: Square, snap-on, extruded aluminum stops and pr-formed gaskets.
5. Provide non-removable glazing stops on outside of door.

2.3 ACCESSORIES:

A. Install flashing tape recommended by frame manufacturer.

B. Bond Breaker Tape: Manufacturers standard TFE fluorocarbon or polyethylene material to which sealants will not develop adhesion.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of work.
   1. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. General:
   1. Comply with manufacturer's written instructions.
   2. Do not install damaged components.
   3. Fit joints to produce hairline joints free of burrs and distortion.
   4. Rigidly secure nonmovement joints.
   5. Install anchors with separators and isolators to prevent metal corrosion and electrolytic deterioration.
   6. Seal joints watertight, unless otherwise indicated.

B. Metal Protection:
   1. Where aluminum will contact dissimilar metals, protect against galvanic action by painting contact surfaces with primer or by applying sealant or tape or installing nonconductive spacers as recommended by manufacturer for this purpose.
   2. Where aluminum will contact concrete or masonry, protect against corrosion by painting contact surfaces with bituminous paint.

C. Install components to drain water passing joints, condensation occurring within framing members, and moisture migrating within the system to exterior.

D. Set continuous sill members and flashing in full sealant bed as specified in Division 07 Section "Joint Sealants" and to produce weathertight installation.

E. Install components plumb and true in alignment with established lines and grades, without warp or rack.

F. Install glazing as specified in Division 08 Section 08 80 00 - Glazing.
   1. Structural-Sealant Glazing:

a. Prepare surfaces that will contact structural sealant according to sealant manufacturer's written instructions to ensure compatibility and adhesion. Preparation includes, but is not limited to, cleaning and priming surfaces.
b. Install weatherseal sealant according to Division 07 Section "Joint Sealants" and according to sealant manufacturer's written instructions to produce weatherproof joints. Install joint filler behind sealant as recommended by sealant manufacturer.

G. Entrances: Install to produce smooth operation and tight fit at contact points.
1. Exterior Entrances: Install to produce tight fit at weather stripping and weathertight closure.
2. Field-Installed Hardware: Install surface-mounted hardware according to hardware manufacturers' written instructions using concealed fasteners to greatest extent possible.

H. Install perimeter joint sealants as specified in Division 07 Section 07 92 00 - Joint Sealants and to produce weathertight installation.

I. Erection Tolerances: Install aluminum-framed systems to comply with the following maximum tolerances:
1. Location and Plane: Limit variation from true location and plane to 1/8 inch in 12 feet; 1/4 inch over total length.
2. Alignment:
a. Where surfaces abut in line, limit offset from true alignment to 1/16 inch.
b. Where surfaces meet at corners, limit offset from true alignment to 1/32 inch.
3. Diagonal Measurements: Limit difference between diagonal measurement to 1/8 inch.

3.3 FIELD QUALITY CONTROL

A. Testing Agency: Engage a qualified independent testing and inspecting agency to perform field tests and inspections and prepare test reports.
1. Water-Spray Test: Before installation of interior finishes has begun, areas designated by Architect shall be tested according to AAMA 501.2 and shall not evidence water penetration.
2. Perform tests in each test area as directed by Architect. Perform at least three tests on the curtain walls and storefronts, prior to 10, 35, and 70 percent completion. Perform the first test on the mockup.

B. Repair or remove work where test results and inspections indicate that it does not comply with specified requirements.

C. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.

D. Prepare test and inspection reports.

3.4 ADJUSTING

A. Entrances: Adjust operating hardware for smooth operation according to hardware manufacturers' written instructions.
1. For doors accessible to people with disabilities, adjust closers to provide a 3-second closer sweep period for doors to move from a 70-degree open position to 3 inches from the latch measured to the leading door edge.

END OF SECTION

SECTION 08 51 13 –FIBERGLASS CLAD WINDOWS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Fiberglass windows with aluminum interior cover.

1.2 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include construction details, material descriptions, glazing and fabrication methods, dimensions of individual components and profiles, hardware, and finishes for wood windows.

B. Sustainable Design Submittals:

1. Chain-of-Custody Certificates: For certified wood products. Include statement of costs.
2. Chain-of-Custody Qualification Data: For manufacturer and vendor.

C. Shop Drawings: For fiberglass windows.

1. Include plans, elevations, sections, hardware, accessories, insect screens, operational clearances, and details of installation, including anchor, flashing, and sealant installation.

D. Samples: For each exposed product and for each specified, 2 by 4 inches (50 by 100 mm) in size.

E. Samples for Initial Selection: For units with factory-applied color finishes.

1. Include Samples of hardware and accessories involving color selection.

F. Samples for Verification: For wood windows and components required, prepared on Samples of size indicated below:

1. Exposed Finishes: 2 by 4 inches (50 by 100 mm).
2. Exposed Hardware: Full-size units.

G. Product Schedule: For wood windows. Use same designations indicated on Drawings.

1.4 INFORMATIONAL SUBMITTALS

A. Qualification Data: For Installer.

B. Product Test Reports: For each type of wood window, for tests performed by a qualified testing agency.

C. Field quality-control reports.

D. Sample Warranties: For manufacturer's warranties.

1.5 QUALITY ASSURANCE

A. Manufacturer Qualifications: A qualified manufacturer that is certified for chain of custody by an FSC-accredited certification body.

B. Vendor Qualifications: A vendor that is certified for chain of custody by an FSC-accredited certification body.

C. Installer Qualifications: An installer acceptable to wood window manufacturer or supplier for installation of units required for this Project.

D. Mockups: Build mockups to verify selections made under Sample submittals, to demonstrate aesthetic effects, and to set quality standards for materials and execution.

1. Build mockup of typical wall area as shown on Drawings.
2. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
3. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.6 WARRANTY

A. Manufacturer's Warranty: Manufacturer agrees to repair or replace wood windows that fail in materials or workmanship within specified warranty period.

1. Failures include, but are not limited to, the following:

a. Failure to meet performance requirements.
b. Structural failures including excessive deflection, water leakage, and air infiltration.
c. Faulty operation of movable sash and hardware.
d. Deterioration of materials and finishes beyond normal weathering.
e. Failure of insulating glass.

2. Warranty Period:

a. Window: 10 years from date of Substantial Completion.
b. Fiberglass-Cladding Finish: 20 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 SOURCE LIMITATIONS

A. Obtain wood windows from single source from single manufacturer.

2.2 WINDOW PERFORMANCE REQUIREMENTS

A. Product Standard: Comply with AAMA/WDMA/CSA 101/I.S.2/A440 for definitions and minimum standards of performance, materials, components, accessories, and fabrication unless more stringent requirements are indicated.

1. Window Certification: WDMA certified with label attached to each window.

2.3 WOOD WINDOWS

A. Basis-of-Design Product: Marvin Windows:Signature Modern | Modern Direct Glaze
1. Profile: Rectangle | Square P4.0.

2. Acceptable Manufacturer’s:

a. EAGLE Window & Door, Inc.; an Andersen Window & Door company.
b. Sierra Pacific.

B. Operating Types: Provide the following operating types in locations indicated on Drawings:
1. Single hung.
2. Fixed.

C. Certified Wood: Wood products shall be certified as "FSC Pure" in accordance with FSC STD-01-001 and FSC STD-40-004.

D. Frames and Sashes: Fine-grained wood lumber complying with AAMA/WDMA/CSA 101/I.S.2/A440; kiln dried to a moisture content of not more than 12 percent at time of fabrication; free of visible finger joints on linear members, blue stain, knots, pitch pockets, and surface checks larger than 1/32 inch (0.8 mm) deep by 2 inches (51 mm) wide; water-repellent preservative treated.

1. Exterior Finish: Fiberglass-clad wood.

a. Fiberglass Finish: Manufacturer's standard fluoropolymer two-coat system with fluoropolymer color topcoat containing not less than 70 percent PVDF resin by weight and complying with AAMA 2605.
b. Custom color as selected by Architect.

2. Interior Finish: Manufacturer's standard color-coated finish.

E. Glazing System: Manufacturer's standard factory-glazing system that produces weathertight seal.

1. Dual Pane Glazing:

a. Exterior Lite: Insulating-glass unit.

1) Tint or Pattern: Clear.
2) Kind: Fully tempered, ASTM C1048

b. Interior Lite: Glass.

1) Tint or Pattern: Clear.
2) Kind: Fully tempered, ASTM C1048,

c. Lites: Three.
d. Filling: Fill space between glass lites with air

F. Hardware, General: Provide manufacturer's standard hardware fabricated from Fiberglass, stainless steel, carbon steel complying with AAMA 907, or other corrosion-resistant material compatible with adjacent materials; designed to smoothly operate, tightly close, and securely lock windows, and sized to accommodate sash weight and dimensions.

1. Exposed Hardware Color and Finish: As selected by Architect from manufacturers standard color and finishes..

G. Hung Window Hardware:

1. Counterbalancing Mechanism: Complying with AAMA 902, concealed, of size and capacity to hold sash stationary at any open position.
2. Locks and Latches: Allow unobstructed movement of the sash across adjacent sash in direction indicated and operated from the inside only.
3. Tilt Hardware: Releasing tilt latch allows sash to pivot about horizontal axis to facilitate cleaning exterior surfaces from the interior.

H. Weather Stripping: Provide full-perimeter weather stripping for each operable sash unless otherwise indicated.

I. Fasteners: Noncorrosive and compatible with window members, trim, hardware, anchors, and other components.

1. Exposed Fasteners: Do not use exposed fasteners to greatest extent possible. For application of hardware, use fasteners that match finish hardware being fastened.

2.4 ACCESSORIES

A. Dividers (False Muntins): Provide divider grilles in designs indicated for each sash lite.

1. Quantity and Type: See drawings.
2. Material: Manufacturer's standard.
3. Pattern: As indicated on Drawings
4. Profile: As selected by Architect from manufacturer's full range.
5. Color: As selected by Architect from manufacturer's full range.

2.5 INSECT SCREENS

A. General: Fabricate insect screens to integrate with window frame. Provide screen for each operable exterior sash. Screen wickets are not permitted.

1. Type and Location: Half, outside for single-hung sashes.

B. Fiberglass Frames: Manufacturer's standard Fiberglass alloy complying with SMA 1004 or SMA 1201. Fabricate frames with mitered or coped joints or corner extrusions, concealed fasteners, and removable PVC spline/anchor concealing edge of frame.

1. Tubular Framing Sections and Cross Braces: Roll formed from Fiberglass sheet.
2. Finish for Exterior Screens: Matching color and finish of cladding.

2.6 FABRICATION

A. Fabricate wood windows in sizes indicated. Include a complete system for installing and anchoring windows.

B. Glaze wood windows in the factory.

C. Weather strip each operable sash to provide weathertight installation.

D. Mullions: Provide mullions and cover plates, matching window units, complete with anchors for support to structure and installation of window units. Allow for erection tolerances and provide for movement of window units due to thermal expansion and building deflections. Provide mullions and cover plates capable of withstanding design wind loads of window units.

E. Window Assemblies: Provide operating and fixed units in configuration indicated. Provide window frames, sashes, hardware, and other trim and components necessary for a complete, secure, and weathertight installation, including the following:

1. Angled mullion posts with interior and exterior trim.
2. Angled interior and exterior extension and trim.
3. Clear oak head and seat boards.
4. Top and bottom plywood platforms.
5. Exterior head and sill casings and trim.
6. Support brackets.

F. Complete fabrication, assembly, finishing, hardware application, and other work in the factory to greatest extent possible. Disassemble components only as necessary for shipment and installation. Allow for scribing, trimming, and fitting at Project site.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine openings, substrates, structural support, anchorage, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

B. Verify rough opening dimensions, levelness of sill plate, and operational clearances.

C. Examine wall flashings, vapor retarders, water and weather barriers, and other built-in components to ensure weathertight window installation.

D. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. Comply with manufacturer's written instructions for installing windows, hardware, accessories, and other components. For installation procedures and requirements not addressed in manufacturer's written instructions, comply with installation requirements in ASTM E2112.

B. Install windows level, plumb, square, true to line, without distortion, anchored securely in place to structural support, and in proper relation to wall flashing and other adjacent construction to produce weathertight construction.

C. Separate Fiberglass and other corrodible surfaces from sources of corrosion or electrolytic action (dissimilar materials, treated lumber, etc.) at the points of contact with other materials.

D. For fin method of attachment, integrate window system installation with exterior water-resistant barrier using flashing/sealant tape. Apply and integrate flashing/sealant tape with water-resistant barrier using watershed principles in accordance with window manufacturer's written instructions.

E. Place interior seal around window perimeter to maintain continuity of building thermal and air barrier using insulating-foam sealant.

F. Seal window to exterior wall cladding with sealant and related backing materials at perimeter of assembly.

G. Leave windows closed and locked.

3.3 FIELD QUALITY CONTROL

A. Testing Agency: Owner will engage a qualified testing agency to perform tests and inspections.

1. Testing and inspecting agency will interpret tests and state in each report whether tested work complies with or deviates from requirements.

B. Testing Services: Testing and inspecting of installed windows shall take place as follows:

1. Testing Methodology: Testing of windows for air infiltration and water resistance shall be performed in accordance with AAMA 502.
2. Air-Infiltration Testing:

    a. Test Pressure: That required to determine compliance with AAMA/WDMA/CSA 101/I.S.2/A440 performance class indicated.
    b. Allowable Air-Leakage Rate: 1.5 times the applicable AAMA/WDMA/CSA 101/I.S.2/A440 rate for product type and performance class rounded down to one decimal place.

3. Water-Resistance Testing:

    a. Test Pressure: Two-thirds times test pressure required to determine compliance with AAMA/WDMA/CSA 101/I.S.2/A440 performance grade indicated.
    b. Allowable Water Infiltration: No water penetration.

4. Testing Extent: Three mock-up windows of each type as selected by Architect and a qualified independent testing and inspecting agency. Windows shall be tested after perimeter sealants have cured.
5. Test Reports: Prepared in accordance with AAMA 502.

C. Windows will be considered defective if they do not pass tests and inspections.

D. Prepare test and inspection reports.

3.4 ADJUSTING, CLEANING, AND PROTECTION

A. Adjust operating sashes and hardware for a tight fit at contact points and weather stripping for smooth operation and weathertight closure.

B. Clean exposed surfaces immediately after installing windows. Remove excess sealants, glazing materials, dirt, and other substances.

1. Keep protective films and coverings in place until final cleaning.

C. Remove and replace sashes if glass has been broken, chipped, cracked, abraded, or damaged during construction period.

D. Protect window surfaces from contact with contaminating substances resulting from construction operations. If contaminating substances do contact window surfaces, remove contaminants immediately in accordance with manufacturer's written instructions.

END OF SECTION

SECTION 087100 - DOOR HARDWARE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes commercial door hardware for the following:

1. Swinging doors.
2. Sliding doors.
3. Other doors to the extent indicated.

B. Door hardware includes, but is not necessarily limited to, the following:

1. Mechanical door hardware.
2. Cylinders specified for doors in other sections.

C. Related Sections:

1. Division 08 Section “Hollow Metal Doors and Frames”.
2. Division 08 Section “Aluminum-Framed Entrances and Storefronts”.

D. Codes and References: Comply with the version year adopted by the Authority Having Jurisdiction.

1. ANSI A117.1 - Accessible and Usable Buildings and Facilities.
2. ICC/IBC - International Building Code.
3. NFPA 70 - National Electrical Code.
4. NFPA 80 - Fire Doors and Windows.
5. NFPA 101 - Life Safety Code.
6. NFPA 105 - Installation of Smoke Door Assemblies.
7. State Building Codes, Local Amendments.

E. Standards: All hardware specified herein shall comply with the following industry standards as applicable. Any undated reference to a standard shall be interpreted as referring to the latest edition of that standard:

1. ANSI/BHMA Certified Product Standards - A156 Series.
2. UL10C - Positive Pressure Fire Tests of Door Assemblies.
3. ANSI/UL 294 - Access Control System Units.
4. UL 305 - Panic Hardware.

5. ANSI/UL 437- Key Locks.

1.3 SUBMITTALS

A. Product Data: Manufacturer's product data sheets including installation details, material descriptions, dimensions of individual components and profiles, operational descriptions and finishes.

B. Door Hardware Schedule: Prepared by or under the supervision of supplier, detailing fabrication and assembly of door hardware, as well as procedures and diagrams. Coordinate the final Door Hardware Schedule with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of door hardware.

1. Format: Comply with scheduling sequence and vertical format in DHI's "Sequence and Format for the Hardware Schedule."

2. Organization: Organize the Door Hardware Schedule into door hardware sets indicating complete designations of every item required for each door or opening. Organize door hardware sets in same order as in the Door Hardware Sets at the end of Part 3. Submittals that do not follow the same format and order as the Door Hardware Sets will be rejected and subject to resubmission.

3. Content: Include the following information:

   a. Type, style, function, size, label, hand, and finish of each door hardware item.
   b. Manufacturer of each item.
   c. Fastenings and other pertinent information.
   d. Location of door hardware set, cross-referenced to Drawings, both on floor plans and in door and frame schedule.
   e. Explanation of abbreviations, symbols, and codes contained in schedule.
   f. Mounting locations for door hardware.
   g. Door and frame sizes and materials.
   h. Warranty information for each product.

4. Submittal Sequence: Submit the final Door Hardware Schedule at earliest possible date, particularly where approval of the Door Hardware Schedule must precede fabrication of other work that is critical in the Project construction schedule. Include Product Data, Samples, Shop Drawings of other work affected by door hardware, and other information essential to the coordinated review of the Door Hardware Schedule.

C. Keying Schedule: After a keying meeting with the owner has taken place prepare a separate keying schedule detailing final instructions. Submit the keying schedule in electronic format. Include keying system explanation, door numbers, key set symbols, hardware set numbers and special instructions. Owner must approve submitted keying schedule prior to the ordering of permanent cylinders/cores.

D. Informational Submittals:

1. Product Test Reports: Indicating compliance with cycle testing requirements, based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified independent testing agency.

E. Operating and Maintenance Manuals: Provide manufacturers operating and maintenance manuals for each item comprising the complete door hardware installation in quantity as required in Division 01, Closeout Procedures.

1.4 QUALITY ASSURANCE

A. Manufacturers Qualifications: Engage qualified manufacturers with a minimum 5 years of documented experience in producing hardware and equipment similar to that indicated for this Project and that have a proven record of successful in-service performance.

B. Certified Products: Where specified, products must maintain a current listing in the Builders Hardware Manufacturers Association (BHMA) Certified Products Directory (CPD).

C. Installer Qualifications: A minimum 3 years documented experience installing both standard and electrified door hardware similar in material, design, and extent to that indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.

D. Door Hardware Supplier Qualifications: Experienced commercial door hardware distributors with a minimum 5 years documented experience supplying both mechanical and electromechanical hardware installations comparable in material, design, and extent to that indicated for this Project. Supplier recognized as a factory direct distributor by the manufacturers of the primary materials with a warehousing facility in Project's vicinity. Supplier to have on staff a certified Architectural Hardware Consultant (AHC) available during the course of the Work to consult with Contractor, Architect, and Owner concerning both standard and electromechanical door hardware and keying.

E. Source Limitations: Obtain each type and variety of door hardware specified in this section from a single source unless otherwise indicated.

1. Electrified modifications or enhancements made to a source manufacturer's product line by a secondary or third party source will not be accepted.

F. Each unit to bear third party permanent label demonstrating compliance with the referenced standards.

G. Keying Conference: Conduct conference to comply with requirements in Division 01 Section "Project Meetings." Keying conference to incorporate the following criteria into the final keying schedule document:

1. Function of building, purpose of each area and degree of security required.
2. Plans for existing and future key system expansion.
3. Requirements for key control storage and software.
4. Installation of permanent keys, cylinder cores and software.
5. Address and requirements for delivery of keys.

H. Pre-Submittal Conference: Conduct coordination conference in compliance with requirements in Division 01 Section "Project Meetings" with attendance by representatives of Supplier(s), Installer(s), and Contractor(s) to review proper methods and the procedures for receiving, handling, and installing door hardware.

1. Prior to installation of door hardware, conduct a project specific training meeting to instruct the installing contractors' personnel on the proper installation and adjustment of their respective products. Product training to be attended by installers of door hardware (including electromechanical hardware) for aluminum, hollow metal and wood doors. Training will include the use of installation manuals, hardware schedules, templates and physical product samples as required.
2. Inspect and discuss electrical roughing-in, power supply connections, and other preparatory work performed by other trades.
3. Review sequence of operation narratives for each unique access controlled opening.
4. Review and finalize construction schedule and verify availability of materials.
5. Review the required inspecting, testing, commissioning, and demonstration procedures

I. At completion of installation, provide written documentation that components were applied to manufacturer's instructions and recommendations and according to approved schedule.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Inventory door hardware on receipt and provide secure lock-up and shelving for door hardware delivered to Project site. Do not store electronic access control hardware, software or accessories at Project site without prior authorization.

B. Tag each item or package separately with identification related to the final Door Hardware Schedule, and include basic installation instructions with each item or package.

C. Deliver, as applicable, permanent keys, cylinders, cores, access control credentials, software and related accessories directly to Owner via registered mail or overnight package service. Instructions for delivery to the Owner shall be established at the "Keying Conference".

1.6 COORDINATION

A. Templates: Obtain and distribute to the parties involved templates for doors, frames, and other work specified to be factory prepared for installing standard and electrified hardware. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing hardware to comply with indicated requirements.

B. Door and Frame Preparation: Doors and corresponding frames are to be prepared, reinforced and pre-wired (if applicable) to receive the installation of the specified electrified, monitoring, signaling and access control system hardware without additional in-field modifications.

1.7 WARRANTY

A. General Warranty: Reference Division 01, General Requirements. Special warranties specified in this Article shall not deprive Owner of other rights Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by Contractor under requirements of the Contract Documents.

B. Warranty Period: Written warranty, executed by manufacturer(s), agreeing to repair or replace components of standard and electrified door hardware that fails in materials or workmanship within

specified warranty period after final acceptance by the Owner. Failures include, but are not limited to, the following:

1. Structural failures including excessive deflection, cracking, or breakage.
2. Faulty operation of the hardware.
3. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
4. Electrical component defects and failures within the systems operation.

C. Standard Warranty Period: One year from date of Substantial Completion, unless otherwise indicated.

D. Special Warranty Periods:
1. Seven years for heavy duty cylindrical (bored) locks and latches.
2. Twenty five years for manual overhead door closer bodies.

1.8 MAINTENANCE SERVICE

A. Maintenance Tools and Instructions: Furnish a complete set of specialized tools and maintenance instructions as needed for Owner's continued adjustment, maintenance, and removal and replacement of door hardware.

PART 2 - PRODUCTS

2.1 SCHEDULED DOOR HARDWARE

A. General: Provide door hardware for each door to comply with requirements in Door Hardware Sets and each referenced section that products are to be supplied under.

B. Designations: Requirements for quantity, item, size, finish or color, grade, function, and other distinctive qualities of each type of door hardware are indicated in the Door Hardware Sets at the end of Part 3. Products are identified by using door hardware designations, as follows:

1. Named Manufacturer's Products: Product designation and manufacturer are listed for each door hardware type required for the purpose of establishing requirements. Manufacturers' names are abbreviated in the Door Hardware Schedule.

C. Substitutions: Requests for substitution and product approval for inclusive mechanical and electromechanical door hardware in compliance with the specifications must be submitted in writing and in accordance with the procedures and time frames outlined in Division 01, Substitution Procedures. Approval of requests is at the discretion of the architect, owner, and their designated consultants.

2.2 HANGING DEVICES

A. Hinges: ANSI/BHMA A156.1 certified butt hinges with number of hinge knuckles and other options as specified in the Door Hardware Sets.

1. Quantity: Provide the following hinge quantity:

    a. Two Hinges: For doors with heights up to 60 inches.
    b. Three Hinges: For doors with heights 61 to 90 inches.
    c. Four Hinges: For doors with heights 91 to 120 inches.
    d. For doors with heights more than 120 inches, provide 4 hinges, plus 1 hinge for every 30 inches of door height greater than 120 inches.

2. Hinge Size: Provide the following, unless otherwise indicated, with hinge widths sized for door thickness and clearances required:

    a. Widths up to 3’0”: 4-1/2” standard or heavy weight as specified.
    b. Sizes from 3’1” to 4’0”: 5” standard or heavy weight as specified.

3. Hinge Weight and Base Material: Unless otherwise indicated, provide the following:

    a. Exterior Doors: Heavy weight, non-ferrous, ball bearing or oil impregnated bearing hinges unless Hardware Sets indicate standard weight.
    b. Interior Doors: Standard weight, steel, ball bearing or oil impregnated bearing hinges unless Hardware Sets indicate heavy weight.

4. Hinge Options: Comply with the following:

    a. Non-removable Pins: With the exception of electric through wire hinges, provide set screw in hinge barrel that, when tightened into a groove in hinge pin, prevents removal of pin while door is closed; for the all out-swinging lockable doors.

5. Manufacturers:

    a. Hager Companies (HA).
    b. McKinney (MK).

2.3 CYLINDERS AND KEYING

A. General: Cylinder manufacturer to have minimum (10) years experience designing secured master key systems and have on record a published security keying system policy.

B. Source Limitations: Obtain each type of keyed cylinder and keys from the same source manufacturer as locksets and exit devices, unless otherwise indicated.

C. Cylinder Types: Original manufacturer cylinders able to supply the following cylinder formats and types:

1. Threaded mortise cylinders with rings and cams to suit hardware application.
2. Rim cylinders with back plate, flat-type vertical or horizontal tailpiece, and raised trim ring.
3. Bored or cylindrical lock cylinders with tailpieces as required to suit locks.
4. Tubular deadlocks and other auxiliary locks.
5. Mortise and rim cylinder collars to be solid and recessed to allow the cylinder face to be flush and be free spinning with matching finishes.

6. Keyway: Match Facility Standard.

D. Keying System: Each type of lock and cylinders to be factory keyed.

1. Supplier shall conduct a "Keying Conference" to define and document keying system instructions and requirements.
2. Furnish factory cut, nickel-silver large bow permanently inscribed with a visual key control number as directed by Owner.
3. New System: Key locks to a new key system as directed by the Owner.

E. Key Quantity: Provide the following minimum number of keys:

1. Change Keys per Cylinder: Two (2)
2. Master Keys (per Master Key Level/Group): Five (5).
3. Construction Keys (where required): Ten (10).

F. Construction Keying: Provide construction master keyed cylinders.

G. Key Registration List (Bitting List):

1. Provide keying transcript list to Owner's representative in the proper format for importing into key control software.
2. Provide transcript list in writing or electronic file as directed by the Owner.

2.4 KEY CONTROL

A. Key Control Cabinet: Provide a key control system including envelopes, labels, and tags with self-locking key clips, receipt forms, 3-way visible card index, temporary markers, permanent markers, and standard metal cabinet. Key control cabinet shall have expansion capacity of 150% of the number of locks required for the project.

1. Manufacturers:

    a. Lund Equipment (LU).
    b. MMF Industries (MM).
    c. Telkee (TK).

2.5 LOCK AND LATCH STRIKES

A. Strikes: Provide manufacturer's standard strike with strike box for each latch or lock bolt, with curved lip extended to protect frame, finished to match door hardware set, unless otherwise indicated, and as follows:

1. Flat-Lip Strikes: For locks with three-piece antifriction latchbolts, as recommended by manufacturer.
2. Extra-Long-Lip Strikes: For locks used on frames with applied wood casing trim.
3. Aluminum-Frame Strike Box: Provide manufacturer's special strike box fabricated for aluminum framing.

4. Double-lipped strikes: For locks at double acting doors. Furnish with retractable stop for rescue hardware applications.

B. Standards: Comply with the following:

1. Strikes for Mortise Locks and Latches: BHMA A156.13.
2. Strikes for Bored Locks and Latches: BHMA A156.2.
3. Strikes for Auxiliary Deadlocks: BHMA A156.36.
4. Dustproof Strikes: BHMA A156.16.

2.6 CONVENTIONAL EXIT DEVICES

A. General Requirements: All exit devices specified herein shall meet or exceed the following criteria:

1. At doors not requiring a fire rating, provide devices complying with NFPA 101 and listed and labeled for "Panic Hardware" according to UL305. Provide proper fasteners as required by manufacturer including sex nuts and bolts at openings specified in the Hardware Sets.

2. Where exit devices are required on fire rated doors, provide devices complying with NFPA 80 and with UL labeling indicating "Fire Exit Hardware". Provide devices with the proper fasteners for installation as tested and listed by UL. Consult manufacturer's catalog and template book for specific requirements.

3. Except on fire rated doors, provide exit devices with hex key dogging device to hold the pushbar and latch in a retracted position. Provide optional keyed cylinder dogging on devices where specified in Hardware Sets.

4. Devices must fit flat against the door face with no gap that permits unauthorized dogging of the push bar. The addition of filler strips is required in any case where the door light extends behind the device as in a full glass configuration.

5. Flush End Caps: Provide flush end caps made of architectural metal in the same finish as the devices as in the Hardware Sets. Plastic end caps will not be acceptable.

6. Lever Operating Trim: Where exit devices require lever trim, furnish manufacturer's heavy duty escutcheon trim with threaded studs for thru-bolts.

   a. Lock Trim Design: As indicated in Hardware Sets, provide finishes and designs to match that of the specified locksets.
   b. Where function of exit device requires a cylinder, provide a cylinder (Rim or Mortise) as specified in Hardware Sets.

7. Vertical Rod Exit Devices: Where surface or concealed vertical rod exit devices are used at interior openings, provide as less bottom rod (LBR) unless otherwise indicated. Provide dust proof strikes where thermal pins are required to project into the floor.

8. Narrow Stile Applications: At doors constructed with narrow stiles, or as specified in Hardware Sets, provide devices designed for maximum 2" wide stiles.

9. Dummy Push Bar: Nonfunctioning push bar matching functional push bar.

10. Rail Sizing: Provide exit device rails factory sized for proper door width application.

11. Through Bolt Installation: For exit devices and trim as indicated in Door Hardware Sets.

B. Security Push Rail Exit Devices (Heavy Duty): ANSI/BHMA A156.3, Grade 1 Certified Products Directory (CPD) listed rim panic and fire exit hardware devices furnished in the functions specified in the Hardware Sets. Exit device latch to be constructed of high grade, heat treated, corrosion resistant nickel steel alloy, and have a full 3/4" throw projection with slide action positive deadlocking.

1. Static Load Force Resistance: Minimum 3000 lbs certified independent tested.

2. Manufacturers:

   a. Corbin Russwin Hardware (RU) - ED4000S / ED5000S Series.
   b. Yale (YA) - 7050 Series.

2.7 DOOR CLOSERS

A. All door closers specified herein shall meet or exceed the following criteria:

1. General: Door closers to be from one manufacturer, matching in design and style, with the same type door preparations and templates regardless of application or spring size. Closers to be non-handed with full sized covers.

2. Standards: Closers to comply with UL-10C for Positive Pressure Fire Test and be U.L. listed for use of fire rated doors.

3. Size of Units: Comply with manufacturer's written recommendations for sizing of door closers depending on size of door, exposure to weather, and anticipated frequency of use. Where closers are indicated for doors required to be accessible to the Americans with Disabilities Act, provide units complying with ANSI ICC/A117.1.

4. Closer Arms: Provide heavy duty, forged steel closer arms unless otherwise indicated in Hardware Sets.

5. Closers shall not be installed on exterior or corridor side of doors; where possible install closers on door for optimum aesthetics.

6. Closer Accessories: Provide door closer accessories including custom templates, special mounting brackets, spacers and drop plates as required for proper installation. Provide through-bolt and security type fasteners as specified in the hardware sets.

B. Door Closers, Surface Mounted (Heavy Duty): ANSI/BHMA A156.4, Grade 1 Certified Products Directory (CPD) listed surface mounted, heavy duty door closers with complete spring power adjustment, sizes 1 thru 6; and fully operational adjustable according to door size, frequency of use, and opening force. Closers to be rack and pinion type, one piece cast iron or aluminum alloy body construction, with adjustable backcheck and separate non-critical valves for closing sweep and latch speed control. Provide non-handed units standard.

1. Manufacturers:

    a. Corbin Russwin Hardware (RU) - DC6000 Series.
    b. Norton Rixson (NO) - 7500 Series.
    c. Sargent Manufacturing (SA) - 351 Series.
    d. Yale Commercial(YA) - 4400 Series.

C. Door Closers, Surface Mounted (Unitrol): ANSI/BHMA A156.4, Grade 1 Certified Products Directory (CPD) listed surface mounted closers with door stop mechanism to absorb dead stop shock on arm and top hinge. Hold-open arms to have a spring loaded mechanism in addition to shock absorber assembly. Arms to be provided with rigid steel main arm and secondary arm lengths proportional to the door width.

1. Manufacturers:

    a. Corbin Russwin Hardware (RU) - Unitrol Series.
    b. Norton Rixson (NO) - Unitrol Series.
    c. Yale Commercial(YA) - Unitrol Series.

2.8 ARCHITECTURAL TRIM

A. Door Protective Trim

1. General: Door protective trim units to be of type and design as specified below or in the Hardware Sets.

2. Size: Fabricate protection plates (kick, armor, or mop) not more than 2" less than door width (LDW) on stop side of single doors and 1” LDW on stop side of pairs of doors, and not more than 1" less than door width on pull side. Coordinate and provide proper width and height as required where conflicting hardware dictates. Height to be as specified in the Hardware Sets.

3. Where plates are applied to fire rated doors with the top of the plate more than 16” above the bottom of the door, provide plates complying with NFPA 80. Consult manufacturer’s catalog and template book for specific requirements for size and applications.

4. Protection Plates: ANSI/BHMA A156.6 certified protection plates (kick, armor, or mop), fabricated from the following:

    a. Stainless Steel: 300 grade, 050-inch thick.

5. Options and fasteners: Provide manufacturer's designated fastener type as specified in the Hardware Sets. Provide countersunk screw holes.

6. Manufacturers:

    a. Hiawatha, Inc. (HI).
    b. Rockwood (RO).
    c. Trimco (TC).

2.9 DOOR STOPS AND HOLDERS

A. General: Door stops and holders to be of type and design as specified below or in the Hardware Sets.

B. Door Stops and Bumpers: ANSI/BHMA A156.16, Grade 1 certified door stops and wall bumpers. Provide wall bumpers, either convex or concave types with anchorage as indicated, unless floor or other types of door stops are specified in Hardware Sets. Do not mount floor stops where they will impede traffic. Where floor or wall bumpers are not appropriate, provide overhead type stops and holders.

1. Manufacturers:

    a. Hiawatha, Inc. (HI).
    b. Rockwood (RO).
    c. Trimco (TC).

2.10 ARCHITECTURAL SEALS

A. General: Thresholds, weatherstripping, and gasket seals to be of type and design as specified below or in the Hardware Sets. Provide continuous weatherstrip gasketing on exterior doors and provide smoke, light, or sound gasketing on interior doors where indicated. At exterior applications provide non-corrosive fasteners and elsewhere where indicated.

B. Smoke Labeled Gasketing: Assemblies complying with NFPA 105 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for smoke control ratings indicated, based on testing according to UL 1784.

1. Provide smoke labeled perimeter gasketing at all smoke labeled openings.

C. Fire Labeled Gasketing: Assemblies complying with NFPA 80 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire ratings indicated, based on testing according to UL-10C.

1. Provide intumescent seals as indicated to meet UL10C Standard for Positive Pressure Fire Tests of Door Assemblies, and NPFA 252, Standard Methods of Fire Tests of Door Assemblies.

D. Sound-Rated Gasketing: Assemblies that are listed and labeled by a testing and inspecting agency, for sound ratings indicated.

E. Replaceable Seal Strips: Provide only those units where resilient or flexible seal strips are easily replaceable and readily available from stocks maintained by manufacturer.

F. Manufacturers:

1. National Guard Products (NG).
2. Pemko (PE).
3. Reese Enterprises, Inc. (RE).

2.11 FABRICATION

A. Fasteners: Provide door hardware manufactured to comply with published templates generally prepared for machine, wood, and sheet metal screws. Provide screws according to manufacturers recognized installation standards for application intended.

2.12 FINISHES

A. Standard: Designations used in the Hardware Sets and elsewhere indicate hardware finishes complying with ANSI/BHMA A156.18, including coordination with traditional U.S. finishes indicated by certain manufacturers for their products.

B. Provide quality of finish, including thickness of plating or coating (if any), composition, hardness, and other qualities complying with manufacturer's standards, but in no case less than specified by referenced standards for the applicable units of hardware

C. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine scheduled openings, with Installer present, for compliance with requirements for installation tolerances, labeled fire door assembly construction, wall and floor construction, and other conditions affecting performance.

B. Notify architect of any discrepancies or conflicts between the door schedule, door types, drawings and scheduled hardware. Proceed only after such discrepancies or conflicts have been resolved in writing.

3.2 PREPARATION

A. Hollow Metal Doors and Frames: Comply with ANSI/DHI A115 series.

B. Wood Doors: Comply with ANSI/DHI A115-W series.

3.3 INSTALLATION

A. Install each item of mechanical and electromechanical hardware and access control equipment to comply with manufacturer's written instructions and according to specifications.

1. Installers are to be trained and certified by the manufacturer on the proper installation and adjustment of fire, life safety, and security products including: hanging devices; locking devices; closing devices; and seals.

B. Mounting Heights: Mount door hardware units at heights indicated in following applicable publications, unless specifically indicated or required to comply with governing regulations:

1. Standard Steel Doors and Frames: DHI's "Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames."
2. DHI TDH-007-20: Installation Guide for Doors and Hardware.
3. Where indicated to comply with accessibility requirements, comply with ANSI A117.1 "Accessibility Guidelines for Buildings and Facilities."
4. Provide blocking in drywall partitions where wall stops or other wall mounted hardware is located.

C. Retrofitting: Install door hardware to comply with manufacturer's published templates and written instructions. Where cutting and fitting are required to install door hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation of surface protective trim units with finishing work specified in Division 9 Sections. Do not install surface-mounted items until finishes have been completed on substrates involved.

D. Thresholds: Set thresholds for exterior and acoustical doors in full bed of sealant complying with requirements specified in Division 7 Section "Joint Sealants."

E. Storage: Provide a secure lock up for hardware delivered to the project but not yet installed. Control the handling and installation of hardware items so that the completion of the work will not be delayed by hardware losses before and after installation.

3.4 FIELD QUALITY CONTROL

A. Field Inspection (Punch Report): Reference Division 01 Sections “Closeout Procedures”. Produce project punch report for each installed door opening indicating compliance with approved submittals and verification hardware is properly installed, operating and adjusted. Include list of items to be completed and corrected, indicating the reasons or deficiencies causing the Work to be incomplete or rejected.

3.5 ADJUSTING

A. Initial Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.

3.6 CLEANING AND PROTECTION

A. Protect all hardware stored on construction site in a covered and dry place. Protect exposed hardware installed on doors during the construction phase. Install any and all hardware at the latest possible time frame.

B. Clean adjacent surfaces soiled by door hardware installation.

C. Clean operating items as necessary to restore proper finish. Provide final protection and maintain conditions that ensure door hardware is without damage or deterioration at time of owner occupancy.

3.7 DEMONSTRATION

A. Instruct Owner's maintenance personnel to adjust, operate, and maintain mechanical and electromechanical door hardware.

3.8 DOOR HARDWARE SETS

A. The hardware sets represent the design intent and direction of the owner and architect. They are a guideline only and should not be considered a detailed hardware schedule. Discrepancies, conflicting hardware and missing items should be brought to the attention of the architect with corrections made prior to the bidding process. Omitted items not included in a hardware set should be scheduled with the appropriate additional hardware required for proper application and functionality.

1. Quantities listed are for each pair of doors, or for each single door.

2. The supplier is responsible for handing and sizing all products.

3. Where multiple options for a piece of hardware are given in a single line item, the supplier shall provide the appropriate application for the opening.

4. At existing openings with new hardware the supplier shall field inspect existing conditions prior to the submittal stage to verify the specified hardware will work as required. Provide alternate solutions and proposals as needed.

B. Manufacturer’s Abbreviations:

1. MK - McKinney
2. YA - Yale
3. RO - Rockwood
4. PE - Pemko
5. OT - Other

Hardware Sets

Set: 1.0
Doors: 116
Description: EXTERIOR NIGHTLATCH EXIT w/ STOP ARM CLOSER

4	Hinge, Full Mortise, Hvy Wt	T4A3386 NRP	US32D	MK
1	Rim Exit Device, Nightlatch	7155 MO627F ECK1	630	YA
2	Core/ Cylinder	as required	630	YA
1	Surface Closer	UNI4400	689	YA
1	Kick Plate	K1050 10" high CSK BEV	US32D	RO
1	Threshold	271A x Length Required x MSES25SS		PE
1	Gasketing	303AS (Head & Jambs)		PE
1	Rain Guard	346C x Width of Header		PE
1	Sweep	3452CNB		PE

Set: 2.0
Doors: 110
Description: CLASSROOM EXIT

3	Hinge, Full Mortise	TA2714	US26D	MK
1	Rim Exit Device, Classroom	7155 MO626F ECK1	630	YA
2	Core/ Cylinder	as required	630	YA
1	Surface Closer	4400 (Reg or P/A)	689	YA
1	Kick Plate	K1050 10" high CSK BEV	US32D	RO
1	Stop	403 or 441CU	US26D	RO
1	Gasketing	S88BL		PE

Set: 3.0
Doors: 206
Description: STOREROOM w/ CLOSER

3	Hinge, Full Mortise	TA2714	US26D	MK
1	Storeroom or Closet Lock	MO 5405LN	626	YA
1	Core/ Cylinder	as required	630	YA
1	Surface Closer	4400 (Reg or P/A)	689	YA
1	Kick Plate	K1050 10" high CSK BEV	US32D	RO
1	Stop	403 or 441CU	US26D	RO
1	Gasketing	S88BL		PE

Set: 4.0
Doors: 210, 211, 212, 214, 215, 216, 217, 218, 219
Description: OFFICE

3	Hinge, Full Mortise	TA2714	US26D	MK
1	Entry Lock	MO 5404LN	626	YA
1	Core/ Cylinder	as required	630	YA
1	Stop	403 or 441CU	US26D	RO
1	Gasketing	S88BL		PE

Set: 5.0
Doors: 115, 115A, 115B, 117
Description: CLASSROOM w/ HOLD OPEN CLOSER

3	Hinge, Full Mortise	TA2714	US26D	MK
1	Classroom Lock	MO 5408LN	626	YA
1	Core/ Cylinder	as required	630	YA
1	Surface Closer w/ Hold Open	4410	689	YA
1	Kick Plate	K1050 10" high CSK BEV	US32D	RO
1	Stop	403 or 441CU	US26D	RO
1	Gasketing	S88BL		PE

Set: 6.0
Doors: 118

Description: CLASSROOM w/ CLOSER, GASKETING, THRESHOLD, DOOR BOTTOM

3	Hinge, Full Mortise	TA2714	US26D	MK
1	Classroom Lock	MO 5408LN	626	YA
1	Core/ Cylinder	as required	630	YA
1	Surface Closer	4400 (Reg or P/A)	689	YA
1	Kick Plate	K1050 10" high CSK BEV	US32D	RO
1	Stop	403 or 441CU	US26D	RO
1	Threshold	151A x MSES25SS x Length Required		PE
1	Gasketing	303AS (Head & Jambs)		PE
1	Door Bottom	411ARL x Length Required		PE

Set: 7.0
Doors: 119, 213
Description: CLASSROOM w/ CLOSER

3	Hinge, Full Mortise	TA2714	US26D	MK
1	Classroom Lock	MO 5408LN	626	YA
1	Core/ Cylinder	as required	630	YA
1	Surface Closer	4400 (Reg or P/A)	689	YA
1	Kick Plate	K1050 10" high CSK BEV	US32D	RO
1	Stop	403 or 441CU	US26D	RO
1	Gasketing	S88BL		PE

Set: 8.0
Doors: 110A, 112A, 112B, 116A, 117A, 117B, 117C, 118A
Description: OVERHEAD

1	Core/ Cylinder	as required	630	YA
1	Hardware	Balance of Hardware Provided By Door Manufacturer		OT

END OF SECTION 087100

SECTION 08 80 00 - GLAZING

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes glazing for the following products and applications, including those specified in other Sections where glazing requirements are specified by reference to this Section:
   1. Doors.
   2. Glazed entrances and storefronts.
   3. Interior borrowed lites.
   4. Aluminum windows.
   5. Glazing sealants and accessories.

B. Related Sections include the following:
   1. Section 07 9200 – Joint Sealants.
   2. Section 08 1113 – Hollow Metal Doors and Frames.
   3. Section 08 4113 – Aluminum Framed Entrances and Storefront.

1.2 DEFINITIONS

A. Manufacturers of Glass Products: Firms that produce primary glass, fabricated glass, or both, as defined in referenced glazing publications.

B. Glass Thicknesses: Indicated by thickness designations in millimeters according to ASTM C 1036.

C. Interspace: Space between lites of an insulating-glass unit that contains dehydrated air or a specified gas.

D. Deterioration of Coated Glass: Defects developed from normal use that are attributed to the manufacturing process and not to causes other than glass breakage and practices for maintaining and cleaning coated glass contrary to manufacturer's written instructions. Defects include peeling, cracking, and other indications of deterioration in metallic coating.

E. Deterioration of Insulating Glass: Failure of hermetic seal under normal use that is attributed to the manufacturing process and not to causes other than glass breakage and practices for maintaining and cleaning insulating glass contrary to manufacturer's written instructions. Evidence of failure is the obstruction of vision by dust, moisture, or film on interior surfaces of glass.

1.3 PERFORMANCE REQUIREMENTS

A. General: Provide glazing systems capable of withstanding normal thermal movement and wind and impact loads (where applicable) without failure, including loss or glass breakage attributable to the following: defective manufacture, fabrication, and installation; failure of sealants or gaskets to remain watertight and airtight; deterioration of glazing materials; or other defects in construction.

B. Glass Design: Glass thickness designations indicated are minimums and are for detailing only. Confirm glass thicknesses by analyzing Project loads and in-service conditions. Provide glass lites in the thickness designations indicated for various size openings, but not less than thicknesses and in strengths (annealed or heat treated) required to meet or exceed the following criteria:

1. Glass Thicknesses: Select minimum glass thicknesses to comply with ASTM E 1300, according to the following requirements:
   a. Design Wind Loads: Determine design wind loads applicable to Project from basic wind speed indicated in miles per hour at 33 feet above grade, according to ASCE 7, "Minimum Design Loads for Buildings and Other Structures": Section 6.5, "Method 2-Analytical Procedure," based on mean roof heights above grade indicated on Drawings.
   b. Minimum Glass Thickness for Exterior Lites: Not less than 6 mm.
   c. Thickness of Tinted and Heat-Absorbing Glass: Provide the same thickness for each tint color indicated throughout Project.

C. Thermal Movements: Provide glazing that allows for thermal movements resulting from the following maximum change (range) in ambient and surface temperatures acting on glass framing members and glazing components. Base engineering calculation on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.
   1. Temperature Change (Range): 120 deg F, ambient; 180 deg F, material surfaces.

D. Thermal and Optical Performance Properties: Provide glass with performance properties specified based on manufacturer's published test data, as determined according to procedures indicated below:
   1. For insulating-glass units, properties are based on units of thickness indicated for overall unit and for each lite.
   2. Center-of-Glass Values: Based on using LBL-44789 WINDOW 5.0 computer program for the following methodologies:
      a. U-Factors: NFRC 100 expressed as Btu/ sq. ft. x h x deg F.
      b. Solar Heat Gain Coefficient: NFRC 200.
      c. Solar Optical Properties: NFRC 300.

1.4 SUBMITTALS

A. Product Data: For each glass product and glazing material indicated.

B. Samples: For the following products, in the form of 12-inch- square Samples for glass and of 12-inch- long Samples for sealants. Install sealant Samples between two strips of material representative in color of the adjoining framing system.

C. Glazing Schedule: Use same designations indicated on Drawings for glazed openings in preparing a schedule listing glass types and thicknesses for each size opening and location.

D. Product Certificates: Signed by manufacturers of glass and glazing products certifying that products furnished comply with requirements.
   1. For solar-control low-e-coated glass, provide documentation demonstrating that manufacturer of coated glass is certified by coating manufacturer.

E. Qualification Data: For installers.

F. Preconstruction Adhesion and Compatibility Test Report: From glazing sealant manufacturer indicating glazing sealants were tested for adhesion to glass and glazing channel substrates and for compatibility with glass and other glazing materials.

G. Product Test Reports: For each of the following types of glazing products:
   1. Tempered glass.
   2. Insulating glass.
   3. Clear float glass
   4. Glazing sealants.
   5. Glazing gaskets.

H. Warranties: Special warranties specified in this Section.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: An experienced installer who has completed glazing similar in material, design, and extent to that indicated for this Project; whose work has resulted in glass installations with a record of successful in-service performance; and who employs glass installers for this Project who are certified under the National Glass Association's Certified Glass Installer Program.

B. Source Limitations for Glass Sputter-Coated with Solar-Control Low-E Coatings: Where solar-control low-e coatings of a primary glass manufacturer that has established a certified fabricator program is specified, obtain sputter-coated solar-control low-e-coated glass in fabricated units from a manufacturer that is certified by coated-glass manufacturer.

C. Source Limitations for Glazing Accessories: Obtain glazing accessories through one source from a single manufacturer for each product and installation method indicated.

D. Glazing for Fire-Rated Door Assemblies: Glazing for assemblies that comply with NFPA 80 and that are listed and labeled by a testing and inspecting agency for fire-protection ratings indicated, based on testing according to NFPA 252.

E. Insulating-Glass Certification Program: Permanently marked either on spacers or on at least one component lite of units with appropriate certification label of the following testing and inspecting agency:
   1. Insulating Glass Certification Council.

F. Mockups: Build mockups to verify selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.
   1. Build mockups in the location and of the size indicated or, if not indicated, as directed by Architect.

PART 2 - PRODUCTS

2.1 GLASS PRODUCTS

A. Basis of Design: PPG Solarban 70
   1. Solar Control Low E Insulating Glass Units.
   2. Thickness: 1 inch.
   3. Tinted Glass:
   4. Reflective Glass:

B. Acceptable Manufacturers: Subject to compliance with requirements.
   1. Viracon
   2. AGC Glass Company North America.

2.2 WIRED GLASS

A. Wired Glass: ASTM C 1036, Type II (patterned and wired flat glass), Class 1 (clear), Quality-Q-6; and of form and mesh pattern specified.

2.3 FLOAT GLASS

2.4 GLAZING ACCESSORIES

A. General: Obtain from single source from single manufacturer for each product and installation method.

PART 3 EXECUTION

3.1 EXAMINATION

A. Examine framing glazing, with Installer present, for compliance with the following:
1. Manufacturing and installation tolerances, including those for size, squareness, and offsets at corners.
2. Presence and functioning of weep system.
3. Minimum required face or edge clearances.
4. Effective sealing between joints of glass-framing members.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Clean glazing channels and other framing members receiving glass immediately before glazing.
1. Remove coatings not firmly bonded to substrates.

3.3 GLAZING, GENERAL

A. Comply with combined written instructions of manufacturers of glass, sealants, gaskets, and other glazing materials, unless more stringent requirements are indicated, including those in referenced glazing publications.

B Glazing channel dimensions, as indicated on Drawings, provide necessary bite on glass, minimum edge and face clearances, and adequate sealant thicknesses, with reasonable tolerances. Adjust as required by Project conditions during installation.

C. Protect glass edges from damage during handling and installation. Remove damaged glass from Project site and legally dispose of off Project site. Damaged glass is glass with edge damage or other imperfections that, when installed, could weaken glass and impair performance and appearance.

D. Apply primers to joint surfaces where required for adhesion of sealants, as determined by preconstruction sealant-substrate testing.

E. Install setting blocks in sill rabbets, sized and located to comply with referenced glazing publications, unless otherwise required by glass manufacturer. Set blocks in thin course of compatible sealant suitable for heel bead.

F. Do not exceed edge pressures stipulated by glass manufacturers for installing glass lites.

G. Provide spacers for glass lites where length plus width is larger than 50 inches as follows:
1. Locate spacers directly opposite each other on both inside and outside faces of glass. Install correct size and spacing to preserve required face clearances, unless gaskets and glazing tapes are used that have demonstrated ability to maintain required face clearances and to comply with system performance requirements.
2. Provide 1/8-inch minimum bite of spacers on glass and use thickness equal to sealant width. With glazing tape, use thickness slightly less than final compressed thickness of tape.

H. Provide edge blocking where indicated or needed to prevent glass lites from moving sideways in glazing channel, as recommended in writing by glass manufacturer and according to requirements in referenced glazing publications.

I. Set glass lites in each series with uniform pattern, draw, bow, and similar characteristics.

J. Square cut wedge-shaped gaskets at corners and install gaskets in a manner recommended by gasket manufacturer to prevent corners from pulling away; seal corner joints and butt joints with sealant recommended by gasket manufacturer.

2.5 SEALANT GLAZING

A. Install continuous spacers, or spacers combined with cylindrical sealant backing, between glass lites and glazing stops to maintain glass face clearances and to prevent sealant from extruding into glass channel and blocking weep systems until sealants cure. Secure spacers or spacers and backings in place and in position to control depth of installed sealant relative to edge clearance for optimum sealant performance.

B. Force sealants into glazing channels to eliminate voids and to ensure complete wetting or bond of sealant to glass and channel surfaces.

C. Tool exposed surfaces of sealants to provide a substantial wash away from glass.

2.6 CLEANING AND PROTECTION

A. Protect exterior glass from damage immediately after installation by attaching crossed streamers to framing held away from glass. Do not apply markers to glass surface. Remove nonpermanent labels, and clean surfaces.

B. Protect glass from contact with contaminating substances resulting from construction operations, including weld splatter. If, despite such protection, contaminating substances do come into contact with glass, remove substances immediately as recommended by glass manufacturer.

C. Examine glass surfaces adjacent to or below exterior concrete and other masonry surfaces at frequent intervals during construction, but not less than once a month, for buildup of dirt, scum, alkaline deposits, or stains; remove as recommended in writing by glass manufacturer.

D. Remove and replace glass that is broken, chipped, cracked, or abraded or that is damaged from natural causes, accidents, and vandalism, during construction period.

E. Wash glass on both exposed surfaces in each area of Project not more than four days before date scheduled for inspections that establish date of Substantial Completion. Wash glass as recommended in writing by glass manufacturer.

END OF SECTION

SECTION 09 22 16 – NON-STRUCTURAL METAL FRAMING

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes non-load-bearing steel framing members for the following applications:
   1. Interior framing systems (e.g., supports for partition walls, furring, etc.).
   2. Interior suspension systems (e.g., supports for ceilings, etc.).

1.2 SUBMITTALS

A. Product data for each type product indicated.

1.3 QUALITY ASSURANCE

A. Fire-Test-Response Characteristics: For fire-resistance-rated assemblies that incorporate non-load-bearing steel framing, provide materials and construction identical to those tested in assembly indicated according to ASTM E 119 by an independent testing agency.

B. STC-Rated Assemblies: For STC-rated assemblies, provide materials and construction identical to those tested in assembly indicated according to ASTM E 90 and classified according to ASTM E 413 by an independent testing agency.

PART 2 - PRODUCTS

2.1 FRAMING SYSTEMS

A. Framing Members, General: Comply with ASTM C 754 for conditions indicated.
   1. Steel Sheet Components: Comply with ASTM C 645 requirements for metal, unless otherwise indicated.
   2. Protective Coating: ASTM A 653/A 653M, G40 hot-dip galvanized, unless otherwise indicated.

B. Studs and Tracks: ASTM C645.
   1. Products: Subject to compliance with requirements provide one of the following:
      a. Clark Dietrich Building Systems: SLP-TRK Slotted Deflection Track.
      b. MBA Building Supplies;
      c. Steel Network, Inc.: VertiClip SLD Series;
      d. Telling Industries: Veritcal Slip Track.
   2. Minimum Base Steel Thickness: 0.0329 inches.
   3. Depth: As indicated on the drrawings.

C. Oversize Vertical Steel Studs and Track
   1. Products: Subject to compliance with requirements provide:
      Basis of Design: Clark Dietrich Building Systems: ProSTUD 33; 600PDS125-33.
   2. Minimum Base-Steel Thickness: 0.0346 inch.
   3. Minimum Spacing: 16 inches o.c.
   4. Minimum Depth: 6 inches.
   5. Yield Strength: 33ksi.

D Firestop Tracks: Top track manufactured to allow partition heads to expand and contract with movement of structure while remaining continuity of fire-resistive rated assembly indicated; thick ness not less than indicated for studs and in width to accommodate depth of studs.
1. Products: Subject to compliance with requirements, provide one of the following:
    a. Fire Trak Corp.; Fire Trak System.
    b. Metal-Lite, Inc.: The System.
    c. Blaze Frame

E. Flat Strap and Backing Plate: Steel Sheet for blocking and bracing in length and width indicated.
1. Minimum Base-Steel Thickness: 0.0598 inches.

F. Cold-Rolled Channel Bridging: Steel, 0.0538 inch minimum base-steel thickness, with minimum ½-inch wide flanges.
1. Depth: 1-1/2-inches.
2. Clip Angle: Not less than 1-1/2 by 1-1/2 inches, 0.068-inch thick, galvanized steel.

G. Hat-Shaped, Rigid Furring Channels: ASTM C645.
1. Minimum Base-Steel Thickness: 0.0179 inch.
2. Depth: 7/8 inch.

H. Resilient Furring Channels: 1/2 -inch deep, steel sheet members designed to reduce sound transmission.
1. Manufacturers: Subject to compliance with requirements, provide products by the following:
    a. MRI Steel Framing LLC;
    b. ClarkDietrich Building Systems
    c. Scafco Steel Stud Company.
2. Configuration: Asymmetrical or hat shaped.

I. Cold-Rolled Furring Channels: 0.053-inch uncoated steel thickness, with minimum ½-inch wide flanges.
1. Depth: As indicated on Drawings.
2. Furring Brackets: Adjustable, corrugated-edge-type steel sheet with minimum uncoated steel thickness of 0.0329 inch.

J. Tie Wire: ASTM A 641/A 641M, Class 1 zinc coating, soft temper, 0.0625-inch- diameter wire, or double strand of 0.0475-inch- diameter wire.

K. Z-Shaped Furring Channels: With slotted or non-slotted web, face flange of 1-1/4 inches, wall attachment flange of 7/8 inch minimum uncoated steel thickness of 0.0179-inch, and depth re quired to fit insulation thickness indicated.
1. Manufacturers: Subject to compliance with requirements, provide products by the following:
    a. MRI Steel Framing, LLC
    b. ClarkDietrich Building System
    c. Steel Network.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas and substrates, with Installer present, and including welded hollow-metal frames, cast-in anchors, and structural framing, for compliance with requirements and other conditions affecting performance.

1. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Suspended Assemblies: Coordinate installation of suspension systems with installation of overhead structure to ensure that inserts and other provisions for anchorages to building structure have been installed to receive hangers at spacing required to support the Work and that hangers will develop their full strength.
   1. Furnish concrete inserts and other devices indicated to other trades for installation in advance of time needed for coordination and construction.

B. Coordination with Sprayed Fire-Resistive Materials:
   1. Before sprayed fire-resistive materials are applied, attach offset anchor plates or ceiling runners (tracks) to surfaces indicated to receive sprayed fire-resistive materials. Where offset anchor plates are required, provide continuous plates fastened to building structure not more than 24 inches o.c.
   2. After sprayed fire-resistive materials are applied, remove them only to extent necessary for installation of non-load-bearing steel framing. Do not reduce thickness of fire-resistive materials below that required for fire-resistance ratings indicated. Protect adjacent fire-resistive materials from damage.

3.3 INSTALLATION, GENERAL

A. Installation Standard: ASTM C 754, except comply with framing sizes and spacing indicated.
   1. Gypsum Board Assemblies: Also comply with requirements in ASTM C 840 that apply to framing installation.

B. Install supplementary framing, and blocking to support fixtures, equipment services, heavy trim, grab bars, toilet accessories, furnishings, or similar construction.

C. Install bracing at terminations in assemblies.

D. Do not bridge building control and expansion joints with non-load-bearing steel framing members. Frame both sides of joints independently.

3.4 INSTALLING SUSPENSION SYSTEMS

A. Install suspension system components in sizes and spacings indicated on Drawings, but not less than those required by referenced installation standards for assembly types and other assembly components indicated.

B. Isolate suspension systems from building structure where they abut or are penetrated by building structure to prevent transfer of loading imposed by structural movement.

C. Suspend hangers from building structure as follows:
   1. Install hangers plumb and free from contact with insulation or other objects within ceiling plenum that are not part of supporting structural or suspension system.
      a. Splay hangers only where required to miss obstructions and offset resulting horizontal forces by bracing, countersplaying, or other equally effective means.
   2. Where width of ducts and other construction within ceiling plenum produces hanger spacings that interfere with locations of hangers required to support standard suspension system members, install supplemental suspension members and hangers in the form of trapezes or equivalent devices.
      a. Size supplemental suspension members and hangers to support ceiling loads within performance limits established by referenced installation standards.

3. Wire Hangers: Secure by looping and wire tying, either directly to structures or to inserts, eye screws, or other devices and fasteners that are secure and appropriate for substrate, and in a manner that will not cause hangers to deteriorate or otherwise fail.
4. Flat Hangers: Secure to structure, including intermediate framing members, by attaching to inserts, eye screws, or other devices and fasteners that are secure and appropriate for structure and hanger, and in a manner that will not cause hangers to deteriorate or otherwise fail.
5. Do not attach hangers to steel roof deck.
6. Do not attach hangers to permanent metal forms. Furnish cast-in-place hanger inserts that extend through forms.
7. Do not connect or suspend steel framing from ducts, pipes, or conduit.

D. Fire-Resistance-Rated Assemblies: Wire tie furring channels to supports.

E. Seismic Bracing: Sway-brace suspension systems with hangers used for support.

F. Grid Suspension Systems: Attach perimeter wall track or angle where grid suspension systems meet vertical surfaces. Mechanically join main beam and cross-furring members to each other and butt-cut to fit into wall track.

G. Installation Tolerances: Install suspension systems that are level to within1[/8 inch in 12 feet measured lengthwise on each member that will receive finishes and transversely between parallel members that will receive finishes.

3.5 INSTALLING FRAMED ASSEMBLIES

A. Where studs are installed directly against exterior masonry walls or dissimilar metals at exterior walls, install isolation strip between studs and exterior wall.

B. Install studs so flanges within framing system point in same direction.
1. Space studs as follows:
   a. Single-Layer Application: 16 inches o.c., unless otherwise indicated.
   b. Multilayer Application: 16 inches o.c., unless otherwise indicated.
   c. Tile backing panels: 16 inches o.c., unless otherwise indicated.

C. Install tracks (runners) at floors and overhead supports. Extend framing full height to structural supports or substrates above suspended ceilings, except where partitions are indicated to terminate at suspended ceilings. Continue framing around ducts penetrating partitions above ceiling.
1. Slip-Type Head Joints: Where framing extends to overhead structural supports, install to produce joints at tops of framing systems that prevent axial loading of finished assemblies.
2. Door Openings: Screw vertical studs at jambs to jamb anchor clips on door frames; install runner track section (for cripple studs) at head and secure to jamb studs.
   a. Install two studs at each jamb, unless otherwise indicated.
   b. Install cripple studs at head adjacent to each jamb stud, with a minimum 1/2-inch clearance from jamb stud to allow for installation of control joint in finished assembly.
3. Other Framed Openings: Frame openings other than door openings the same as required for door openings, unless otherwise indicated. Install framing below sills of openings to match framing required above door heads.
4. Fire-Resistance-Rated Partitions: Install framing to comply with fire-resistance-rated assembly indicated and support closures and to make partitions continuous from floor to underside of solid structure.
   a. Firestop Track: Where indicated, install to maintain continuity of fire-resistance-rated assembly indicated.
5. Sound-Rated Partitions: Install framing to comply with sound-rated assembly indicated.

D. Z-Furring Members:
   1. Erect insulation (specified in Division 07 Section "Thermal Insulation") vertically and hold in place with Z-furring members spaced 24 inches 600 mm o.c.
   2. Except at exterior corners, securely attach narrow flanges of furring members to wall with concrete stub nails, screws designed for masonry attachment, or powder-driven fasteners spaced 24 inches o.c.
   3. At exterior corners, attach wide flange of furring members to wall with short flange extending beyond corner; on adjacent wall surface, screw-attach short flange of furring channel to web of attached channel. At interior corners, space second member no more than 12 inches from corner and cut insulation to fit.

E. Installation Tolerance: Install each framing member so fastening surfaces vary not more than 1/8 inch from the plane formed by faces of adjacent framing.

END OF SECTION

SECTION 09 29 00 – GYPSUM BOARD

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:
   1. Interior gypsum board.
      a. Walls and Ceilings.

1.2 SUBMITTALS

A. Product data for all types indicated.

1.3 QUALITY ASSURANCE

A. Fire-Resistance-Rated Assemblies: For fire-resistance-rated assemblies, provide materials and construction identical to those tested in assembly indicated according to ASTM E 119 by an independent testing agency.

B. STC-Rated Assemblies: For STC-rated assemblies, provide materials and construction identical to those tested in assembly indicated according to ASTM E 90 and classified according to ASTM E 413 by an independent testing agency.

PART 2 - PRODUCTS

2.1 PANELS, GENERAL

A. Size: Provide in maximum lengths and widths available that will minimize joints in each area and that correspond with support system indicated. Establish Level 5 drywall finish.

2.2 INTERIOR GYPSUM BOARD
   1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
      a. American Gypsum Co.
      b. BPB America Inc.
      c. Lafarge North America Inc.
      d. National Gypsum Company.
      e. PABCO Gypsum.
      f. Temple.
      g. USG Corporation.

B. Type X:
   1. Thickness: 5/8 inch ; ½ inch.
   2. Long Edges: Tapered.

C. Ceiling Type: Manufactured to have more sag resistance than regular-type gypsum board.
   1. ASTM C 1396/C 13396M.
   2. Thickness: 1/2 inch.
   3. Long Edges: Tapered.

2.3 TRIM ACCESSORIES

A. Interior Trim: ASTM C 1047.
   1. Material: Galvanized or aluminum-coated steel sheet, rolled zinc, plastic, or paper-faced galvanized steel sheet.
   2. Shapes:
      a. Cornerbead.
      b. Bullnose bead.
      c. LC-Bead: J-shaped; exposed long flange receives joint compound.
      d. L-Bead: L-shaped; exposed long flange receives joint compound.
      e. U-Bead: J-shaped; exposed short flange does not receive joint compound.
      f. Expansion (control) joint.
      g. Curved-Edge Cornerbead: With notched or flexible flanges.

B. Sound Attenuation Blankets: ASTM C 665, Type I (blankets without membrane facing) produced by combining thermosetting resins with mineral fibers manufactured from glass, slag wool, or rock wool.
   1. Fire-Resistance-Rated Assemblies: Comply with mineral-fiber requirements of assembly.

C. Acoustical Sealant: As specified in Division 07 Section 079200 -Joint Sealants.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas and substrates, with Installer present, and including welded hollow-metal frames, cast-in anchors, and structural framing, for compliance with requirements and other conditions affecting performance.
   1. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Suspended Assemblies: Coordinate installation of suspension systems with installation of overhead structure to ensure that inserts and other provisions for anchorages to building structure have been installed to receive hangers at spacing required to support the Work and that hangers will develop their full strength.
   1. Furnish concrete inserts and other devices indicated to other trades for installation in advance of time needed for coordination and construction.

B. Coordination with Sprayed Fire-Resistive Materials:
   1. Before sprayed fire-resistive materials are applied, attach offset anchor plates or ceiling runners (tracks) to surfaces indicated to receive sprayed fire-resistive materials. Where offset anchor plates are required, provide continuous plates fastened to building structure not more than 24 inches o.c.
   2. After sprayed fire-resistive materials are applied, remove them only to extent necessary for installation of non-load-bearing steel framing. Do not reduce thickness of fire-resistive materials below that required for fire-resistance ratings indicated. Protect adjacent fire-resistive materials from damage.

3.3 INSTALLATION, GENERAL

A. Installation Standard: ASTM C 754, except comply with framing sizes and spacing indicated.
   1. Gypsum Board Assemblies: Also comply with requirements in ASTM C 840 that apply to framing installation.

B. Install supplementary framing, and blocking to support fixtures, equipment services, heavy trim, grab bars, toilet accessories, furnishings, or similar construction.

C. Install bracing at terminations in assemblies.

D. Do not bridge building control and expansion joints with non-load-bearing steel framing members. Frame both sides of joints independently.

3.4 FINISHING GYPSUM BOARD

A. General: Treat gypsum board joints, interior angles, edge trim, control joints, penetrations, fastener heads, surface defects, and elsewhere as required to prepare gypsum board surfaces for decoration. Promptly remove residual joint compound from adjacent surfaces.

B. Prefill open joints**,** rounded or beveled edges**,** and damaged surface areas.

C. Apply joint tape over gypsum board joints, except those with trim having flanges not intended for tape.

D. Gypsum Board Finish Levels: Finish panels to levels indicated below and according to ASTM C 840:
1. Level 1: Ceiling plenum areas, concealed areas, and where indicated.
2. Level 2: Panels that are substrate for tile.
3. Level 3: Where indicated on Drawings.
4. Level 4: At panel surfaces that will be exposed to view, unless otherwise indicated] .
   a. Primer and its application to surfaces are specified in other Division 09 Sections.
5. Level 5: Where graphics applied and where indicated on Drawings.
   a. Primer and its application to surfaces are specified in other Division 09 Sections.

3.5 INSTALLING SUSPENSION SYSTEMS

A. Install suspension system components in sizes and spacings indicated on Drawings, but not less than those required by referenced installation standards for assembly types and other assembly components indicated.

B. Isolate suspension systems from building structure where they abut or are penetrated by building structure to prevent transfer of loading imposed by structural movement.

C. Suspend hangers from building structure as follows:
1. Install hangers plumb and free from contact with insulation or other objects within ceiling plenum that are not part of supporting structural or suspension system.
   a. Splay hangers only where required to miss obstructions and offset resulting horizontal forces by bracing, countersplaying, or other equally effective means.
2. Where width of ducts and other construction within ceiling plenum produces hanger spacings that interfere with locations of hangers required to support standard suspension system members, install supplemental suspension members and hangers in the form of trapezes or equivalent devices.
   a. Size supplemental suspension members and hangers to support ceiling loads within performance limits established by referenced installation standards.
3. Wire Hangers: Secure by looping and wire tying, either directly to structures or to inserts, eye screws, or other devices and fasteners that are secure and appropriate for substrate, and in a manner that will not cause hangers to deteriorate or otherwise fail.
4. Flat Hangers: Secure to structure, including intermediate framing members, by attaching to inserts, eye screws, or other devices and fasteners that are secure and appropriate for structure and hanger, and in a manner that will not cause hangers to deteriorate or otherwise fail.

5. Do not attach hangers to steel roof deck.
6. Do not attach hangers to permanent metal forms. Furnish cast-in-place hanger inserts that extend through forms.
7. Do not connect or suspend steel framing from ducts, pipes, or conduit.

D. Fire-Resistance-Rated Assemblies: Wire tie furring channels to supports.

E. Seismic Bracing: Sway-brace suspension systems with hangers used for support.

F. Grid Suspension Systems: Attach perimeter wall track or angle where grid suspension systems meet vertical surfaces. Mechanically join main beam and cross-furring members to each other and butt-cut to fit into wall track.

G. Installation Tolerances: Install suspension systems that are level to within1[/8 inch in 12 feet measured lengthwise on each member that will receive finishes and transversely between parallel members that will receive finishes.

3.6 INSTALLING FRAMED ASSEMBLIES

A. Where studs are installed directly against exterior masonry walls or dissimilar metals at exterior walls, install isolation strip between studs and exterior wall.

B. Install studs so flanges within framing system point in same direction.
1. Space studs as follows:
   a. Single-Layer Application: 16 inches o.c., unless otherwise indicated.
   b. Multilayer Application: 16 inches o.c., unless otherwise indicated.
   c. Tile backing panels: 16 inches o.c., unless otherwise indicated.

C. Install tracks (runners) at floors and overhead supports. Extend framing full height to structural supports or substrates above suspended ceilings, except where partitions are indicated to terminate at suspended ceilings. Continue framing around ducts penetrating partitions above ceiling.
1. Slip-Type Head Joints: Where framing extends to overhead structural supports, install to produce joints at tops of framing systems that prevent axial loading of finished assemblies.
2. Door Openings: Screw vertical studs at jambs to jamb anchor clips on door frames; install runner track section (for cripple studs) at head and secure to jamb studs.
   a. Install two studs at each jamb, unless otherwise indicated.
   b. Install cripple studs at head adjacent to each jamb stud, with a minimum 1/2-inch clearance from jamb stud to allow for installation of control joint in finished assembly.
3. Other Framed Openings: Frame openings other than door openings the same as required for door openings, unless otherwise indicated. Install framing below sills of openings to match framing required above door heads.
4. Fire-Resistance-Rated Partitions: Install framing to comply with fire-resistance-rated assembly indicated and support closures and to make partitions continuous from floor to underside of solid structure.
   a. Firestop Track: Where indicated, install to maintain continuity of fire-resistance-rated assembly indicated.
5. Sound-Rated Partitions: Install framing to comply with sound-rated assembly indicated.

D. Direct Furring:
1. Screw to wood framing.
2. Attach to concrete or masonry with stub nails, screws designed for masonry attachment, or powder-driven fasteners spaced 24 inches o.c.

E. Z-Furring Members:
   1. Erect insulation (specified in Division 07 Section "Thermal Insulation") vertically and hold in place with Z-furring members spaced 24 inches 600 mm o.c.
   2. Except at exterior corners, securely attach narrow flanges of furring members to wall with concrete stub nails, screws designed for masonry attachment, or powder-driven fasteners spaced 24 inches o.c.
   3. At exterior corners, attach wide flange of furring members to wall with short flange extending beyond corner; on adjacent wall surface, screw-attach short flange of furring channel to web of attached channel. At interior corners, space second member no more than 12 inches from corner and cut insulation to fit.

F. Installation Tolerance: Install each framing member so fastening surfaces vary not more than 1/8 inch from the plane formed by faces of adjacent framing.

END OF SECTION

SECTION 095100 - ACOUSTICAL TILE CEILINGS

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes acoustical tiles for ceilings and the following:
   1. Concealed suspension systems.

PART 2 - PRODUCTS

2.1 ACOUSTICAL TILES, GENERAL

A. Acoustical Tile Standard: Provide manufacturer's standard tiles of configuration and size indicated that comply with ASTM E 1264 classifications as designated by types, patterns, acoustical ratings, and light reflectance, unless otherwise indicated.
   1. Mounting Method for Measuring NRC: Type E-400; plenum mounting in which face of test specimen is 15-3/4 inches away from test surface per ASTM E 795.

2.2 ACOUSTICAL TILES FOR ACOUSTICAL TILE CEILING

A. Products: Subject to compliance with requirements, provide one of the following:
   1. Armstrong World Industries, Inc.
   2. BPB USA.
   3. USG Interiors, Inc.

B. Classification: Provide tiles complying with ASTM E 1264 for type, form, and pattern as follows:
   1. Type III, mineral base with painted finish; Form 1, modular.
   2. Pattern: To be selected by Architect from manufacturer’s standard range.

C. Color: As selected from manufacturer's standard range.

D. Edge/Joint Detail: Square.

E. Thickness: 5/8 inch.

F. Modular Size: As indicated on the drawings.

G. Antimicrobial Treatment: Broad spectrum fungicide and bactericide.

2.3 WASHABLE CEILING TILE (Kitchen Locker Rooms and Toilet Rooms)

A. Products: Provide ceiling panels with noise reduction and cleanable surfaces characteristics. Subject to compliance with requirements, provide one of the following:
   1. USG Mars ClimaPlus
   2. Armstrong ClimaPlus

B. Classification: Provide tiles complying with ASTM E 1264 for type, form, and pattern as follows:
   1. Substrate: Mineral Fiber.
   2. Type IV, Form 1.
   3. Color: White
   4. Edge /Joint Detail: Square

C. Thickness: 5/8 inch.

D. Sound Transmission: Noise Reduction Coefficient: .70

E. Surface: Washable and scrubbable.

F. Antimicrobial treatment: Face and back of panel.

G. Size: Indicated on drawings.

2.4 METAL SUSPENSION SYSTEM FOR ACOUSTICAL TILE CEILING

A. Provide suspension system for extreme humidity applications. Basis of Design: USG Donn Brand All Aluminum AX Suspension System

B. Acceptable manufacturers: Subject to compliance with requirements, provide one of the following:
   1. Armstrong World Industries, Inc.;
   2. Fry Reglet Corporation.
   3. BPB USA

C. Direct-Hung, Double Web, Suspension System: Main and cross runners roll formed from aluminum with aluminum cap.
   1. Structural Classification: Intermediate-duty system.
   2. Access: Upward with initial access openings of size indicated below and located throughout ceiling within each module formed by main and cross runners, with additional access available by progressively removing remaining acoustical tiles.
      a. Initial Access Opening: In each module.
      b. Color: Flat white.
   3. Seismic Requirements
      a. Molding: 7/8 inch.
      b. Clip: ACM7.

2.5 METAL EDGE MOLDINGS AND TRIM

A. Products: Subject to compliance with requirements, provide one of the following:
   1. Armstrong World Industries, Inc.;
   2. BPB USA;
   3. Chicago Metallic Corporation;
   4. Fry Reglet Corporation;
   5. Gordon, Inc.;
   6. USG Interiors, Inc.;

B. Extruded-Aluminum Edge Moldings and Trim: Where indicated, provide manufacturer's extruded-aluminum edge moldings and trim of profile indicated or referenced by manufacturer's designations, including splice plates, corner pieces, and attachment and other clips, complying with seismic design requirements and the following:
   1. Aluminum Alloy: Alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated, and with not less than the strength and durability properties of aluminum extrusions complying with ASTM B 221 for Alloy and Temper 6063-T5.
   2. Finish designations prefixed by AA comply with system established by the Aluminum Association for designating aluminum finishes.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, including structural framing and substrates to which acoustical tile ceilings attach or abut, with Installer present, for compliance with requirements specified in this and other Sections that affect ceiling installation and anchorage and with requirements for installation tolerances and other conditions affecting performance of acoustical tile ceilings.
   1. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Measure each ceiling area and establish layout of acoustical tiles to balance border widths at opposite edges of each ceiling. Avoid using less-than-half-width tiles at borders, and comply with layout shown on reflected ceiling plans.

3.3 INSTALLATION, SUSPENDED ACOUSTICAL TILE CEILINGS

A. General: Install acoustical tile ceilings to comply with ASTM C 636 and seismic design requirements indicated, per manufacturer's written instructions and CISCA's "Ceiling Systems Handbook."

B. Suspend ceiling hangers from building's structural members and as follows:
   1. Install hangers plumb and free from contact with insulation or other objects within ceiling plenum that are not part of supporting structure or of ceiling suspension system.
   2. Splay hangers only where required to miss obstructions; offset resulting horizontal forces by bracing, countersplaying, or other equally effective means.
   3. Where width of ducts and other construction within ceiling plenum produces hanger spacings that interfere with location of hangers at spacings required to support standard suspension system members, install supplemental suspension members and hangers in form of trapezes or equivalent devices.
   4. Secure wire hangers to ceiling suspension members and to supports above with a minimum of three tight turns. Connect hangers directly either to structures or to inserts, eye screws, or other devices that are secure and appropriate for substrate and that will not deteriorate or otherwise fail due to age, corrosion, or elevated temperatures.
   5. When steel framing does not permit installation of hanger wires at spacing required, install carrying channels or other supplemental support for attachment of hanger wires.
   6. Do not attach hangers to steel deck tabs.
   7. Do not attach hangers to steel roof deck. Attach hangers to structural members.
   8. Space hangers not more than 48 inches o.c. along each member supported directly from hangers, unless otherwise indicated; provide hangers not more than 8 inches from ends of each member.
   9. Size supplemental suspension members and hangers to support ceiling loads within performance limits established by referenced standards and publications.

C. Install edge moldings and trim of type indicated at perimeter of acoustical tile ceiling area and where necessary to conceal edges of acoustical tiles.
   1. Screw attach moldings to substrate at intervals not more than 16 inches o.c. and not more than 3 inches from ends, leveling with ceiling suspension system to a tolerance of 1/8 inch in 12 feet. Miter corners accurately and connect securely.
   2. Do not use exposed fasteners, including pop rivets, on moldings and trim.

D. Install suspension system runners so they are square and securely interlocked with one another. Remove and replace dented, bent, or kinked members.

E. Install acoustical tiles in coordination with suspension system and exposed moldings and trim. Place splines or suspension system flanges into kerfed edges so tile-to-tile joints are closed by double lap of material.
   1. Fit adjoining tile to form flush, tight joints. Scribe and cut tile for accurate fit at borders and around penetrations through tile.
   2. Hold tile field in compression by inserting leaf-type, spring-steel spacers between tile and moldings, spaced 12 inches o.c.
   3. Protect lighting fixtures and air ducts to comply with requirements indicated for fire-resistance-rated assembly.

3.4 CLEANING

A. Clean exposed surfaces of acoustical tile ceilings, including trim and edge moldings. Comply with manufacturer's written instructions for cleaning and touchup of minor finish damage. Remove and replace tiles and other ceiling components that cannot be successfully cleaned and repaired to permanently eliminate evidence of damage.

END OF SECTION

SECTION 09 64 29 – WOOD STRIP AND PLANK FLOORING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Wood plank and strip flooring.

B. Sleepers.

C. Sheet vapor retarder.

1.02 RELATED REQUIREMENTS

A. Section 06 1000 - Rough Carpentry: Wood overlay subfloor surface.

C. Section 09 9123 - Interior Painting: Product requirements for surface finish materials for application in this section.

1.03 REFERENCE STANDARDS

A. ASTM D3676 - Standard Specification for Rubber Cellular Cushion Used for Carpet or Rug Underlay; 2013.

B. ASTM E96/E96M - Standard Test Methods for Water Vapor Transmission of Materials; 2016.

C. ICC-ES AC380 - Acceptance Criteria for Termite Physical Barrier Systems; 2014 (editorially revised 2017).

D. NWFA (IG) - Installation Guidelines; Current Edition.

1.04 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data: Provide data for flooring.

C. Shop Drawings: Indicate floor joint pattern and termination details.

D. Samples: Submit five samples 48 by 6 inch (1219 by 152 mm) in size illustrating floor finish, color, and sheen.

E. Sustainable Design Submittal: Submit VOC content documentation for field-applied adhesives, stains, finish coatings, and sealers.

F. Installation Instructions: Indicate standard and special installation procedures.

G. Maintenance Data: Include maintenance procedures and recommended maintenance materials.

H. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
   1. See Section 01 6000 - Product Requirements, for additional provisions.
   2. Extra Flooring Material: 10 square yards (9 sq m) matching installed flooring.

1.05 QUALITY ASSURANCE

A. Perform work of this section in accordance with NWFA (IG).
   1. Maintain one copy of each document on site.

B. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section with minimum three years documented experience.

C. Installer Qualifications: Company specializing in performing work of the type specified and with at least three years of documented experience.

1.06 FIELD CONDITIONS

A. Do not install wood flooring until wet construction work is complete and ambient air at installation space has moisture content stabilized at maximum moisture content of 40 percent.

B. Provide heat, light, and ventilation prior to installation.

C. Store materials in area of installation for minimum period of 24 hours prior to installation.

D. Maintain minimum room temperature of 65 degrees F (18 degrees C) for a period of two days prior to delivery of materials to installation space, during installation, and after installation.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Hardwood Flooring:
   1. Woodwright Hardwood Floor Comapny: www.woodwright.net
   2. Substitutions: Section 01 6000 - Product Requirements.

2.02 MATERIALS

A. Wood Plank Flooring - Type WD-XX:
   1. Species: TBD.
   2. Grade: Clear.
   3. Moisture Content: 7 to 9 percent.
   4. Actual Thickness: 3/4 inch (19 mm).
   5. Actual Width: 6 inches (152 mm).
   6. Edge: Tongue and groove.
   7. End: End matched.
   8. Length: 36 inches-to-48 inches.
   9. Factory Finish: Refer to drawings for stain.

C. Flooring Nails: Type recommended by flooring manufacturer.

D. Sleepers and Shims: Softwood lumber, pressure treated for moisture protection, 2 by 4 inch (50 by 100 mm) size.

E. Vapor Retarder: Black polyethylene sheet, 8 mil (0.2 mm) thick; 2 inch (50 mm) wide tape for joint sealing.

F. Sheathing Paper: Plain building paper.

2.03 ACCESSORIES

A. Wood Base: Same species as flooring; profile as indicated.

B. Wood Plugs: Round shape, 3/4 inch (19 mm) diameter by 1/8 inch (3 mm) thick, of same species as flooring.

C. Divider Strip: Angle; mill finish aluminum.

D. Transition Strip: Same species and finish as flooring material; profiles indicated.

E. Floor Finish: As indicated on Drawings, to achieve satin sheen surface; type recommended by flooring manufacturer.

F. Sealer and Wax: Types recommended by flooring manufacturer.

2.04 SOURCE QUALITY CONTROL

A. Inspect and stamp species and grade on underside of each piece of wood flooring at factory.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify existing conditions before starting this work.

B. Verify that concrete subfloor surface is smooth and flat to plus or minus 1/4 inch in 10 feet (6 mm in 3 m).

C. Verify that required floor-mounted utilities are in correct location.

3.02 PREPARATION

A. Sleepers and Shims:
   1. Place sleepers over vapor retarder; space sleepers at 12 inches (300 mm) on center.

2. Shim underside of sleepers to achieve level line of plus or minus 1/4 inch in 10 feet (6 mm in 3 m).

B. Prepare substrate to receive wood flooring in accordance with manufacturer's and NWFA instructions.

C. Broom clean substrate.

3.03 INSTALLATION

A. Sheathing Paper: Place over wood subfloor; lap edges and ends 2 inches (50 mm), staple in place.

B. Wood Flooring:
1. Install in accordance with manufacturer's and NWFA instructions; predrill and blind nail to subfloor.
2. Lay flooring parallel to length of room areas. Verify alignment as work progresses.
3. Arrange flooring with end matched grain set flush and tight.
4. Terminate flooring at centerline of door openings where adjacent floor finish is dissimilar; provide divider strips and transition strips in accordance with flooring manufacturer's recommendations and as indicated.
5. Install edge strips at unprotected or exposed edges, and where flooring terminates.
6. Secure edge strips before installation of flooring with stainless steel screws.
7. Install flooring tight to floor access covers.
8. Install flooring under movable partitions without interrupting floor pattern.
9. Provide expansion space as recommended by manufacturer at fixed walls and other interruptions.

C. Install base at floor perimeter to cover expansion space in accordance with manufacturer's instructions. Miter inside and outside corners.

D. Finishing: Factory finish as indicated on Drawings.

3.04 CLEANING

A. Clean and polish floor surfaces in accordance with floor finish manufacturer's instructions.

3.05 PROTECTION

A. Prohibit traffic on floor finish for 48 hours after installation.

B. Place protective coverings over finished floors; do not remove coverings until Date of Substantial Completion.

END OF SECTION

SECTION 09 65 19 – RESILIENT TILE FLOORING

PART 1 - GENERAL

1.1 SUMMARY

A Section Includes tile flooring.

1. Luxury vinyl tile.
2. Waterproofing membrane.

1.2 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Shop Drawings: For each type of floor tile. Include floor tile layouts, edges, columns, doorways, enclosing partitions, built-in furniture, cabinets, and cutouts.

1. Show details of special patterns.

C. Samples for Verification: Full-size units of each color and pattern of floor tile required.

1. For heat-welding bead, manufacturer's standard-size Samples, but not less than 9 inches long, of each color required.

D. Product Schedule: For floor tile.

E. Qualification Data: For qualified Installer.

F. Maintenance Data: For each type of floor tile to include in maintenance manuals.

1.3 QUALITY ASSURANCE

A. Installer Qualifications: A qualified installer who employs workers for this Project who are competent in techniques required by manufacturer for floor tile installation indicated.

1. Engage an installer who employs workers for this Project who are trained or certified by manufacturer for installation techniques required.

B. Fire-Test-Response Characteristics: As determined by testing identical products according to ASTM E 648 or NFPA 253 by a qualified testing agency.

1. Critical Radiant Flux Classification: Class I, not less than 0.45 W/sq. cm.

C. Mockups: Build mockups to verify selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.

1. Build mockups for floor tile including accessories.
   a. Size: Minimum 100 sq. ft. for each type, color, and pattern [in locations indicated] [in locations directed by Architect] <Insert location requirements>.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Store floor tile and installation materials in dry spaces protected from the weather, with ambient temperatures maintained within range recommended by manufacturer, but not less than 50 deg F or more than 90 deg F. Store floor tiles on flat surfaces.

1.5 PROJECT CONDITIONS

A. Maintain ambient temperatures within range recommended by manufacturer, but not less than 70 deg F or more than 95 deg F, in spaces to receive floor tile during the following time periods:
   1. 48 hours before installation.
   2. During installation.
   3. 48 hours after installation.

B. Until Substantial Completion, maintain ambient temperatures within range recommended by manufacturer, but not less than 55 deg F or more than 95 deg F.

C. Close spaces to traffic during floor tile installation.

D. Close spaces to traffic for 48 hours after floor tile installation.

E. Install floor tile after other finishing operations, including painting, have been completed.

1.6 WARRANTY: 5 years manufacturer's warranty from substantial completion.

1.7 EXTRA MATERIALS

A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
   1. Floor Tile: Furnish 1 box for every 50 boxes or fraction thereof, of each type, color, and pattern of floor tile installed.

PART 2 - PRODUCTS

2.1 LUXURY VINL FLOOR TILE

A. Description: Vinyl tile shall comply with ASTM 1700.
   1. Class 1.
   2. Type: Type A; Smooth surface.
   3. Thickness: 0.125 inch.
   4. Size: TBD.
   5. Seamless installation Method: Heat welded.
   6. Colors and Patterns: Artifice Interlace # 10772..

B. Acceptable Manufacturer's: Subject to compliance with requirements, provide products indicated or comparable products by one of the following:
   1. Altro Group
   2. Amtico International.
   3. Armstrong World Industries.
   4. Flexco, Inc.
   5. Roppe Corporation, USA
   6. TOLI International

C. Basis of Design: Tarkett
   1. Color: TBD.
   2. Type: Type A.
   3. Thickness: 0.080 inches.
   4. Size: As indicated on the Drawings.
   5. Seaming Method: Standard.

2.2 WATERPROOFING MEMBRANE: Liquid applied waterproofing membrane complying with ANSI A118.10 for waterproofing applications indicated.

A. Basis of Design: Custom Building Products: ReGard Waterproofing and Crack Prevention Membrane.

B. Acceptable manufacturers:

1. Ardex Engineered Clements
2. Bostik
3. Laticrete International.

2.3 ACCESSORIES:

A. Subfloor Filler: White premix latex; type recommended by adhesive material manufacturer.

B. Primers, Adhesives, and Seaming Materials: Waterproof; types recommended by flooring manufacturer.

C. Moldings, Transition and Edge Strips: Refer to transition details in drawings.

D. Sealing, finishing clear coats: type recommended by flooring manufacturer.

2.4 ADHESIVES: As recommended by the tile manufacturer.

PART 3 EXECUTION

3.1 EXAMINATION

A. Examine substrates, with Installer present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.

B. Verify that finishes of substrates comply with tolerances and other requirements specified in other Sections and that substrates are free of cracks, ridges, depressions, scale, and foreign deposits that might interfere with adhesion of floor tile.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Prepare substrates according to manufacturer's written instructions to ensure adhesion of resilient products.

B. Do not install floor tiles until they are same temperature as space where they are to be installed. Move resilient products and installation materials into spaces where they will be installed at least 48 hours in advance of installation.

C. Sweep and vacuum clean substrates to be covered by resilient products immediately before installation.

3.3 FLOOR TILE INSTALLATION

A Comply with manufacturer's written instructions for installing floor tile.

B. Lay out floor tiles from center marks established with principal walls, discounting minor offsets, so tiles at opposite edges of room are of equal width. Adjust as necessary to avoid using cut widths that equal less than one-half tile at perimeter.

C. Match floor tiles for color and pattern by selecting tiles from cartons in the same sequence as manufactured and packaged, if so numbered. Discard broken, cracked, chipped, or deformed tiles.
   4. Lay tiles in pattern of colors and sizes indicated.

C. Scribe, cut, and fit floor tiles to butt neatly and tightly to vertical surfaces and permanent fixtures including built-in furniture, cabinets, pipes, outlets, and door frames.

D. Extend floor tiles into toe spaces, door reveals, closets, and similar openings. Extend floor tiles to center of door openings.

E. Maintain reference markers, holes, and openings that are in place or marked for future cutting by repeating on floor tiles as marked on substrates. Use chalk or other nonpermanent, nonstaining marking device.

F. Adhere floor tiles to flooring substrates using a full spread of adhesive applied to substrate to produce a completed installation without open cracks, voids, raising and puckering at joints, telegraphing of adhesive spreader marks, and other surface imperfections.

G. Seamless Installation:
   1. Heat-Welded Seams: Comply with ASTM F 1516. Rout joints and heat weld with welding bead to permanently fuse sections into a seamless floor covering. Prepare, weld, and finish seams to produce surfaces flush with adjoining floor covering surfaces.
   2. Chemically Bonded Seams: Bond seams with chemical-bonding compound to permanently fuse sections into a seamless floor covering. Prepare seams and apply compound to produce tightly fitted seams without gaps, overlays, or excess bonding compound on floor covering surfaces.

3.4 CLEANING AND PROTECTION

A. Comply with manufacturer's written instructions for cleaning and protection of floor tile.

B. Perform the following operations immediately after completing floor tile installation:
   1 Remove adhesive and other blemishes from exposed surfaces.
   2. Sweep and vacuum surfaces thoroughly.
   3. Damp-mop surfaces to remove marks and soil.

C. Protect floor tile products from mars, marks, indentations, and other damage from construction operations and placement of equipment and fixtures during remainder of construction period.

D. Cover floor tile until Substantial Completion.

END OF SECTION

SECTION 09 65 13 – RESILIENT BASE AND ACCESSORIES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Resilient base and accessories for resilient flooring.

1.2 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Samples: For each type of product indicated, in manufacturer's standard-size Samples but not less than 12 inches (300 mm) long, of each resilient product color, texture, and pattern required.

1.3 PROJECT CONDITIONS

A. Maintain ambient temperatures within range recommended by manufacturer in spaces to receive resilient products.

B. Until Substantial Completion, maintain ambient temperatures within range recommended by manufacturer.

C. Install resilient products after other finishing operations, including painting, have been completed.

PART 2 - PRODUCTS

2.1 THERMOSET RUBBER BASE

A. Manufacturers: Subject to compliance with requirements, provide product indicated or comparable product by one of the following:
1. Basis of Design: Shaw

B. Product Standard: ASTM F 1861, Type TS (rubber, vulcanized thermoset) Group 1 solid homogeneous).
1. Style and Location:
   a. Style A: Cove: Provide in areas with resilient flooring.
   b. Style B: Straight: Provide in areas with carpet.

2. Thickness: 0.125
3. Height: 4 inches.
4. Lengths: Coils in manufacturer’s standard length.
5. Outside Corners: Preformed.
6. Inside Corners: Job formed.
7. Color: Granite.

2.2 RESILIENT MOLDING ACCESSORY

A. Resilient Molding Accessory:

1. Manufacturers: Subject to compliance with requirements, provide the following:

a. Roppe.

B. Description: Reducer strip for resilient floor covering, Joiner for tile and carpet & Transition strips.

C. Material: Rubber.

D. Profile and Dimensions: As indicated.

E. Colors and Patterns: As selected by Architect from manufacturers standard colors.

2.3 INSTALLATION MATERIALS

A. Trowelable Leveling and Patching Compounds: Latex-modified, portland cement based or blended hydraulic-cement-based formulation provided or approved by manufacturer for applications indicated.

B. Adhesives: Water-resistant type recommended by manufacturer to suit resilient products and substrate conditions indicated.

1. Use adhesives that comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24):

a. Cove Base Adhesives: Not more than 50 g/L.

PART 3 - EXECUTION

3.1 PREPARATION

A. Prepare substrates according to manufacturer's written instructions to ensure adhesion of resilient products.

B. Fill cracks, holes, and depressions in substrates with trowelable leveling and patching compound and remove bumps and ridges to produce a uniform and smooth substrate.

C. Do not install resilient products until they are same temperature as the space where they are to be installed.

1. Move resilient products and installation materials into spaces where they will be installed at least 48 hours in advance of installation.

D. Sweep and vacuum clean substrates to be covered by resilient products immediately before installation.

3.2 RESILIENT WALL BASE INSTALLATION

A. Comply with manufacturer's written instructions for installing resilient base.

B. Apply resilient base to walls, columns, pilasters, casework and cabinets in toe spaces, and other permanent fixtures in rooms and areas where base is required.

C. Install resilient base in lengths as long as practicable without gaps at seams and with tops of adjacent pieces aligned.

D. Tightly adhere resilient base to substrate throughout length of each piece, with base in continuous contact with horizontal and vertical substrates.

E. Do not stretch resilient base during installation.

F. Job-Formed Corners:

1. Outside Corners: Use straight pieces of maximum lengths possible. Form without producing discoloration (whitening) at bends. Shave back of base at points where bends occur and remove strips perpendicular to length of base that are only deep enough to produce a snug fit without removing more than half the wall base thickness.

2. Inside Corners: Use straight pieces of maximum lengths possible. Form by cutting an inverted V-shaped notch in toe of wall base at the point where corner is formed. Shave back of base where necessary to produce a snug fit to substrate.

3.3 RESILIENT ACCESSORY INSTALLATION

A. Comply with manufacturer's written instructions for installing resilient accessories.

B. Resilient Molding Accessories: Butt to adjacent materials and tightly adhere to substrates throughout length of each piece. Install reducer strips at edges of carpet and resilient floor covering that would otherwise be exposed.

3.4 CLEANING AND PROTECTION

A. Comply with manufacturer's written instructions for cleaning and protection of resilient products.

B. Cover resilient products until Substantial Completion.

END OF SECTION

SECTION 09 91 23 – INTERIOR PAINTING

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes surface preparation and the application of paint systems on the following substrates:

1. Gypsum board.
2. Steel door frames.

1.2 RELATED SECTIONS

1. Section 08 1113 – Hollow Metal Doors and Frames
2. Section 09 2900 – Gypsum Board

1.3 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Samples: For each finish and for each color and texture required, prepare actual brush out and submit three sets of 12” x 12” sample of each finish and color.

C. Product List: Printout of current "MPI Approved Products List" for each product category specified in Part 2, with the proposed product highlighted.

1.4 QUALITY ASSURANCE

A. MPI Standards:

1. Products: Complying with MPI standards indicated and listed in "MPI Approved Products List."
2. Preparation and Workmanship: Comply with requirements in "MPI Architectural Painting Specification Manual" for products and paint systems indicated.

B. Mockups: Apply benchmark samples of each paint system indicated and each color and finish selected to verify preliminary selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.

1. Architect will select one surface to represent surfaces and conditions for application of each paint system specified in Part 3.

a. Wall and Ceiling Surfaces: Provide samples of at least 100 sq. ft. (9 sq. m).
b. Other Items: Architect will designate items or areas required.

2. Apply benchmark samples after permanent lighting and other environmental services have been activated.

3. Final approval of color selections will be based on benchmark samples.

    a. If preliminary color selections are not approved, apply additional benchmark samples of additional colors selected by Architect at no added cost to Owner.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Delivery: Deliver materials to project site ready-mixed in original containers with labels intact; labels bearing manufacturer's name, paint type, color and recommended installation and reducing procedures.

B. Storage and Handling:
1. Store materials in location acceptable to concerned entities.
2. Store materials not in use in tightly covered containers will-ventilated areas with ambient temperatures continuously maintained at not less than 45 deg F (7 deg C).
3. Maintain neat, clean conditions in storage area; remove rags and waste materials at end of each day's work; store rags in closed containers.
4. Close containers at end of day's work. Leave no materials open.

1.6 PROJECT CONDITIONS

A. Apply paints only when temperature of surfaces to be painted and ambient air temperatures are between 50 and 95 deg F (10 and 35 deg C).

B. Do not apply paints when relative humidity exceeds 85 percent; at temperatures less than 5 deg F (3 deg C) above the dew paint; or to damp or wet surfaces.
1. Apply no materials in spaces where dust is being generated.

C. Protection: Cover finished work of other trades and surfaces not being painted concurrently and prefinished items.

D. Safety Precautions:
1. Provide temporary fire protection equipment in materials storage area.

1.7 EXTRA MATERIALS

A. Furnish extra materials described below that are from same production run (batch mix) as materials applied and that are packaged for storage and identified with labels describing contents.

1. Quantity: Furnish an additional 5 percent, but not less than 1 gal. of each material and color applied.

PART 2 - PRODUCTS

2.1 INTERIOR PAINT (Walls and Frames).

A. Basis of Design: Sherwin Williams.

1. Type: Super Paint Interior Acrylic Latex | Flat (#0005)

2. Type: Epoxy Paint: High solids gypsum wall paint; Non-toxic.
3. Colors: Extra white (#0005).

B. Acceptable Manufacturers: Products of the following manufacturers similar in type and quality are acceptable for use, subject to approval of product o\list:
1. PPG Industries.
2. Benjamin Moore Co.
3. Duron Paint Co.

2.2 EXTERIOR PAINT

A. Basis of Design: PPG Industries
1. Exterior door frames.
2. Color: Indicated on Drawings.

B. Acceptable Manufacturers: Products of the following manufacturers similar in type and quality are acceptable for use, subject to approval of product o\list:
1. PPG Industries.
2. Duron Paint Co.
3. Benjamin Moore Co.

2.3 PREPARATION AND APPLICATION

A. Comply with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual" applicable to substrates indicated.

B. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.

C. Painting Mechanical and Electrical Work: Paint items exposed in equipment rooms and occupied spaces including, but not limited to, the following:

1. Mechanical Work.

2. Electrical Work.

PART 3 – EXECUTION

3.1 EXAMINATION

A. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of work.

B. Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows:
1. Gypsum Board: 2 percent.

C. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers.

D. Begin coating application only after unsatisfactory conditions have been corrected and surfaces are dry.

1. Beginning coating application constitutes Contractor's acceptance of substrates and conditions.

3.2 PREPARATION AND APPLICATION

A. Comply with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual" applicable to substrates indicated.

B. Clean substrates of substances that could impair bond of paints, including dirt, oil, grease, and incompatible paints and encapsulants.

2. Remove incompatible primers and re-prime substrate with compatible primers as required to produce paint systems indicated.

C. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.

D. Painting Mechanical and Electrical Work: Paint items exposed in equipment rooms and occupied spaces including, but not limited to, the following:

1. Mechanical Work:

a. Uninsulated metal piping.
b. Uninsulated plastic piping.
c. Pipe hangers and supports.
d. Tanks that do not have factory-applied final finishes.
e. Visible portions of internal surfaces of metal ducts, without liner, behind air inlets and outlets.
f. Duct, equipment, and pipe insulation having cotton or canvas insulation covering or other paintable jacket material.
g. Mechanical equipment that is indicated to have a factory-primed finish for field painting.

2. Electrical Work:

h. Switchgear.
i. Panelboards.
j. Electrical equipment that is indicated to have a factory-primed finish for field painting.

E. Painting Galvanized Metal Decking, Conduit, Ductwork
1. Inspect and test for passivators that may be present before proceeding to the
2. coating phase.
Passivators must be removed before application of the coating.
3. Clean using SSPC Method – SP1 Solvent Cleaning. The surface shall be clean and free from dust, dirt, grease, and all other forms of contamination. If any

oxidation (white rust) has formed, this shall be removed by sanding the surface. Prior to coating, solvent wipe or “tack” off substrate to remove dust and residual contamination generated by the sanding process.

F. Protect work of other trades against damage from paint application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.

G. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

END OF SECTION

SECTION 10 28 00 – TOILET, BATH, AND LAUNDRY ACCESSORIES

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:
   1. Restroom accessories.

B. Related Sections include the following:
   1. Section 07 9200 – Joint Sealants.

1.2 SUBMITTALS

A. Product Data: For each type of product indicated. Include the following:
   1. Construction details and dimensions.
   2. Anchoring and mounting requirements, including requirements for cutouts in other work and substrate preparation.
   3. Material and finish descriptions.
   4. Features that will be included for Project.
   5. Manufacturer's warranty.

B. Samples: Full size, for each accessory item to verify design, operation, and finish requirements.
   1. Approved full-size Samples will be returned and may be used in the Work.

C. Product Schedule: Indicating types, quantities, sizes, and installation locations by room of each accessory required.
   1. Identify locations using room designations indicated on Drawings.
   2. Identify products using designations indicated on Drawings.

D. Maintenance Data: For toilet and bath accessories to include in maintenance manuals.

1.3 QUALITY ASSURANCE

A. Source Limitations: For products listed together in the same articles in Part 2, provide products of same manufacturer unless otherwise approved by Architect.

1.4 COORDINATION

A. Coordinate accessory locations with other work to prevent interference with clearances required for access by people with disabilities, and for proper installation, adjustment, operation, cleaning, and servicing of accessories.

B. Deliver inserts and anchoring devices set into concrete or masonry as required to prevent delaying the Work.

1.5 WARRANTY

A. Special Mirror Warranty: Manufacturer's standard form in which manufacturer agrees to replace mirrors that develop visible silver spoilage defects and that fail in materials or workmanship within specified warranty period.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Stainless Steel: ASTM A 666, Type 304, 0.0312-inch minimum nominal thickness, unless otherwise indicated.

B. Brass: ASTM B 19 flat products; ASTM B 16, rods, shapes, forgings, and flat products with finished edges; or ASTM B 30, castings.

C. Steel Sheet: ASTM A 1008/A 1008M, Designation CS (cold rolled, commercial steel), 0.0359-inch minimum nominal thickness.

D. Galvanized Steel Sheet: ASTM A 653/A 653M, with G60 hot-dip zinc coating.

E. Galvanized Steel Mounting Devices: ASTM A 153/A 153M, hot-dip galvanized after fabrication.

F. Fasteners: Screws, bolts, and other devices of same material as accessory unit and tamper-and-theft resistant where exposed, and of galvanized steel where concealed.

G. Mirrors: ASTM C 1503, Mirror Glazing Quality, clear-glass mirrors, nominal 6.0 mm thick.

H. ABS Plastic: Acrylonitrile-butadiene-styrene resin formulation.

2.2 RESTROOM ACCESSORIES

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

B. Basis-of-Design Product: The design for accessories is based on equipment and products indicated. Subject to compliance with requirements, provide the named product or a comparable product:
1. Bobrick
2. Bradley
3. American Specialties

C. Grab Bar:
1. Basis-of-Design Product: Bobrick No. B 6806
2. Mounting: Flanges with concealed fasteners.
3. Material: Stainless steel, 0.05 inch thick.
   a. Finish: Smooth, No. 4, satin finish.
4. Outside Diameter: 1-1/2 inches.
5. Configuration and Length: See Drawings.

D. Recessed Toilet Paper Holder
1. Basis-of-Design: Bobrick B-35883
2. Multi Roll Dispenser
3. Tumbler lock
4. Material: Stainless Steel; satin finish.

E. Recessed Soap Dispenser
1. Basis-of-Design: Bobrick B-4063
2. Size; 7-1/4” W x 6-3/8” H x 5-1/2” D.
3. Capacity: 50 fl oz. removable soap container
4. Concealed locking device.

5.

F. Recessed Sanitary Napkin Disposal
1. Basis-of-Design Product: Bobrick B 3513
2. Capacity: 0.6 gal 18 gauge stainless steel.
3. Cover: 18 gauge stainless steel with satin finish.
4. Mounting: See Drawings for mounting locations. See manufacturer instructions.
5. Rough Wall Opening: 6-3/8”W x 12-3/8 H x 3-3/4: depth.

G. Recessed Waste Receptacle
1. Basis of Design: Bobrick B-35643; Trimline.
2. Capacity: 12 gallons; leak proof.
3. Material: 18 gauge; Type 304 Stainless Steel.

H. Recessed Sanitary Napkin Vendor
1. Basis of Design: Bobrick B-3706325
2. 13-7/8 W x 28” H x 7-15/16” D
3. Dispenses: 30 tampons, 20 napkins.
4. Material: Stainless Steel; Satin Finish.

I. Framed Glass Mirrors
1. Basis of Design: Bobrick B-290
2. Welded Angle Frame Mirror; Corners heilaric welded grounded smooth
3. Gauge: 18-8 heavy gauge stainless steel

J. Recessed Paper Towel Dispenser
1. Basis of Design: Bobrick B-359033
2. Size: 11-1/2” W x 15-7/8” H x 3-3/4” min. depth.
3. Dispenses 300 c-fold or 400 multifold towels
4. Built in tumbler lock
5. Stainless steel; satin finish.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install accessories according to manufacturers' written instructions, using fasteners appropriate to substrate indicated and recommended by unit manufacturer. Install units level, plumb, and firmly anchored in locations and at heights indicated.

B. Grab Bars: Install to withstand a downward load of at least 250 lbs, when tested according to method in ASTM F 446.

3.2 ADJUSTING AND CLEANING

A. Adjust accessories for unencumbered, smooth operation. Replace damaged or defective items.

B. Remove temporary labels and protective coatings.

C. Clean and polish exposed surfaces according to manufacturer's written recommendations.

END OF SECTION

SECTION 10 44 00 - FIRE PROTECTION SPECIALTIES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Fire extinguishers.

B. Fire extinguisher cabinets.

C. Accessories.

1.02 RELATED REQUIREMENTS

A. Section 06 1000 - Rough Carpentry: Wood blocking product and execution requirements.

B. Section 09 9123 - Interior Painting: Field paint finish.

1.03 REFERENCE STANDARDS

A. NFPA 10 - Standard for Portable Fire Extinguishers; 2013.

1.04 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data: Provide extinguisher operational features.

C. Shop Drawings: Indicate locations of cabinets and cabinet physical dimensions.

D. Manufacturer's Installation Instructions: Indicate special criteria and wall opening coordination requirements.

E. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.

F. Maintenance Data: Include test, refill or recharge schedules and re-certification requirements.

1.05 FIELD CONDITIONS

A. Do not install extinguishers when ambient temperature may cause freezing of extinguisher ingredients.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Fire Extinguishers:

1. Basis of Design: Kidde, a unit of United Technologies Corp; : www.kidde.com.
2. Ansul, a Tyco Business; : www.ansul.com.
3. Nystrom, Inc; : www.nystrom.com/sle.
4. Oval Brand Fire Products: www.ovalfireproducts.com/#sle.
5. Substitutions: See Section 01 6000 - Product Requirements.

B. Fire Extinguisher Cabinets and Accessories:

1. Basis of Design: Larsen's Manufacturing Co.FS SS2409-R2: www.larsensmfg.com.
2. Ansul, a Tyco Business; : www.ansul.com.
3. Potter-Roemer; : www.potterroemer.com.
4. Substitutions: See Section 01 6000 - Product Requirements.

2.02 FIRE EXTINGUISHERS

A. Fire Extinguishers - General: Comply with product requirements of NFPA 10 and applicable codes, whichever is more stringent.

B. Water Type Fire Extinguishers: Stainless steel tank, pressurized, with premixed antifreeze solution, including hose and nozzle.

1. Class: 2-A type.
2. Size: 2.5 gallon (9.4 L).
3. Finish: Polished chrome.

2.03 FIRE EXTINGUISHER CABINETS

A. Cabinet Construction: Non-fire rated.

B. Cabinet Configuration: Recessed type.
   1. Size to accommodate accessories.
   2. Trim: Flat square edge, with 1 inch (25.4 mm) wide face.

C. Door: 0.036 inch (0.9 mm) metal thickness, reinforced for flatness and rigidity with nylon catch. Hinge doors for 180 degree opening with two butt hinge.

D. Door Glazing: Float glass, clear, 1/8 inch (3 mm) thick, and set in resilient channel glazing gasket.

E. Cabinet Mounting Hardware: Appropriate to cabinet, with pre-drilled holes for placement of anchors.

F. Weld, fill, and grind components smooth.

G. Finish of Cabinet Exterior Trim and Door: No. 4 - Brushed stainless steel.

H. Finish of Cabinet Interior: White colored enamel.

2.04 ACCESSORIES

A. Extinguisher Brackets: Formed steel, chrome-plated.

B. Graphic Signage Identification: Lettering complying with authorities having jurisdiction for letter style, spacing and location. Locate as indicated by Architect.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify existing conditions before starting work.

B. Verify rough openings for cabinet are correctly sized and located.

3.02 INSTALLATION

A. Install in accordance with manufacturer's instructions.

B. Install cabinets plumb and level, 54-inches from finished floor to top of fire extinguisher.

C. Place extinguishers in cabinets.

END OF SECTION

SECTION 11 17 00 - TRASH COMPACTORS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Waste compactor unit and discharge container.

B. Trash Sorter.

1.2 RELATED SECTIONS

A. Division 26 - Basic Electrical Methods and Materials: Power supply and fused disconnect.

1.3 REFERENCES

A. ANSI Z245-2 - American National Standard for Equipment Technology and Operations for Wastes and Recyclable Materials- Stationary Extruder Bagger- Safety Requirements; 1997.

1.4 SUBMITTALS

A. Submit under provisions of Section 01300.

B. Product Data: Provide unit capacities, physical dimensions, utility requirements and locations, point loads.

C. Shop Drawings: Indicate machine location, rough in and anchor placement dimensions and tolerances, clearances required. Permanent disconnect located within 5 feet (1524 mm) of trash chute discharge required.

D. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.

E. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) square, representing actual product, color, and patterns.

F. Contract Closeout Submittals. Submit in accordance with Section 01780:
   1. Operational Data: Include description of system operation, adjusting and testing required.
   2. Maintenance Data: Identify system maintenance requirements, servicing cycles, lubrication types required and local spare part sources.
   3. Warranty: Provide warranty in Owners name at installation. Standard one year warranty against material defect.

1.5 QUALITY ASSURANCE

A. Manufacturer Qualifications: Minimum 5 years’ experience manufacturing trash compaction equipment.

B. Installer Qualifications: Minimum 2 years experience installing similar equipment.

C. Product Requirements:
   1. Equipment Rating: In accordance with ANSI Z245.2.

D. Mock-Up: Provide a mock-up for evaluation of workmanship.
   1. Provide unit designated by Architect.
   2. Do not proceed with remaining work until workmanship and operation are approved by Architect.
   3. Rework mock-up area as required to produce acceptable work.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Store products in manufacturer's unopened packaging until ready for installation.

B. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

1.7 COORDINATION

A. Contractor to furnish installer with approved shop drawings and plan view elevation of trash room.

B. Contractor shall coordinate all electrical requirements and characteristics of building electrical system with Owner in order to provide for efficient operation of equipment.

C. Contractor shall ensure that all required electrical conduits, dedicated circuit breakers and disconnects are installed for electrical load required by equipment, and operational, by him to receive equipment for hookup prior to equipment being delivered to site.

1.8 PROJECT CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

1.9 WARRANTY

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Basis of Design: Marathon Equipment Company
   1. Model: RJ-225
      a. Charge Capacity: 0.39 cu yd.
      b. Clear top Opening: 22.5” L x 28” W
      c. Capacity/hr: 37 cu yds.

B. Requests for substitutions will be considered in accordance with provisions of Section 01600.

2.2 PERFORMANCE REQUIREMENTS

A. Stationary Compactor: Complete with 2 cubic yard container on poly-clad casters; remote power unit, single side rachet, push button controls mounted in the panel box face; hopper with access door and interlock for hand or chute feed; photoelectric cycle control
   1. Cycle Time: 28 seconds.
   2. Normal Force: 13,900 lbs (6305 kg).
   3. Pack Out Force: 16, 400 lbs (7439 kg).
   4. Normal Ram Face Force: 23.2 psi (160 kPa).
   5. Pack Out Ram Face Force: 27.3 psi (188 kPa).
   6. Ram Penetration: 4 inches (102 mm).

7. Weight: 16,000 lbs (726 kg)

B. Electrical Requirements
1. Motor: 3 hp (2.2 kW).
2. Voltage: 120 VAC
3. UL and CUL Listed
a. Remote power unit with controls mounted in the face of the box.
b. NEMA 3-type; all circuits fused.
c. Standard controls: Keylock start/stop/reverse

2.3 TRASH SORTER

A. Basis of Design: Reaction Distributing Inc.
1. Model: T-20X
2. Dimensions: 52” L x 34” H x 31” W

B. Substitutions: Request for substitutions will be considered in accordance with provisions of Section 01 60 00 – Substitution Procedures

PART 3 EXECUTION

3.1 EXAMINATION

A. Do not begin installation until equipment pad and electrical rough-in have been properly prepared.
1. Verify that anchors are correctly positioned.

B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

C. Permanent "energized" disconnect shall be located within 5 feet (1524 mm) of trash chute discharge.

3.2 INSTALLATION

A. Install unit in accordance with manufacturer's instructions and with standards required by Authority Having Jurisdiction (AHJ).

B. Coordinate with waste chute discharge.
1. Anchor unit securely in place.
2. Electrical: Rough-in and final connections under Division 16.
3. Hydraulic System: Prevent dust, dirt, moisture, and other foreign matter out of hydraulic system.
4. Start-Up: Comply with manufacturer's checklist.

C. Touch-up minor damaged surfaces caused during installation. Replace damaged components as directed by Architect.

D. Use for construction trash compaction is not allowed.

3.3 DEMONSTRATION AND INSTRUCTIONS

A. Demonstrate and instruct Owner Representatives on unit operation.

3.4 PROTECTION

A. Protect installed products until completion of project.

B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION

SECTION 12 36 61.16 – SOLID SURFACE COUNTERTOPS

PART 1 **-** GENERAL

1.01 SECTION INCLUDES

A. Solid surface countertops.

1.02 REFERENCE STANDARDS

A. ASTM D1929 - Standard Test Method for Determining Ignition Temperature of Plastics; 2016.

B. ASTM D635 - Standard Test Method for Rate of Burning and/or Extent and Time of Burning of Plastics in a Horizontal Position; 2014.

C. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2016.

D. ISFA-2 - Classification and Standards for Solid Surfacing Material; 2001 (2013).

E. PS 1 - Structural Plywood; 2009.

1.03 SUBMITTALS

A. See Section 013300 – Submittal Procedures, for submittal procedures.

B. Product Data: Manufacturer's data sheets on each product to be used, including:
   1. Preparation instructions and recommendations.
   2. Storage and handling requirements and recommendations.
   3. Specimen warranty.

C. Shop Drawings: Complete details of materials and installation; combine with shop drawings of cabinets and casework specified in other sections.

D. Selection Samples: Submit five samples for each finish product specified, color chips representing manufacturer's full range of available colors and patterns.

E. Verification Samples: Submit five samples for each finish product specified, minimum size 6 inches square, representing actual product, color, and patterns.

F. Test Reports: Chemical resistance testing, showing compliance with specified requirements.

G. Installation Instructions: Manufacturer's installation instructions and recommendations.

H. Maintenance Data: Manufacturer's instructions and recommendations for maintenance and repair of countertop surfaces.

1.04 QUALITY ASSURANCE

A. Fabricator Qualifications: Same fabricator as for cabinets on which tops are to be installed.

B. Installer Qualifications: Fabricator.

C. Fire Test Response Characteristics: Provide original fire test reports to ensure compliance with the following requirements:
   1. Burn Rate: ASTM D635, Class CC1, for a nominal thickness of 1.5 mm.
   2. Self-Ignition Temperature: ASTM D1929, greater than 650 degrees F.
   3. Smoke Density: ASTM D2848, less than 78%.
   4. Flammability Classification: ASTM E84, smoke less than 450; flame spread less than 75.

D. Impact Resistance: Provide Solid Surfacing Countertops that comply with the following requirements:
   1. Impact Strength: Un-notched (23 deg.), ASTM D4812: No breakage.

2. Impact Strength, Notched: (23 deg.), ASTM D526: 88J/m (1/16).

E. Allowable Tolerances:
1. Maximum Deflection: 1/16" over 12".

1.05 DELIVERY, STORAGE, AND HANDLING

A. Store products in manufacturer's unopened packaging until ready for installation.

B. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

1.06 FIELD CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

1.07 WARRANTY

A. Manufacturer's Special Warranty on Solid Surfacing Countertops: Manufacturer's standard form agreeing to repair or replace units that fail in material or workmanship within the specified warranty period.

B. Warranty Period: 1 year after the date of Substantial Completion.

C. The warranty shall not deprive the Owner of other rights or remedies the Owner may have under other provisions of the Contract Documents, and is in addition to and runs concurrent with other warranties made by the Contractor under the requirements of the Contract Documents.

PART 2 - PRODUCTS

2.01 COUNTERTOP ASSEMBLIES

A. Solid Surface Countertops: Solid surfacing sheet or plastic resin casting over continuous substrate.
1. Basis of Design: DalTile Incorporated.
a. Style: One Quartz
b. Flat Sheet Thickness: 1/2 inch, minimum.
c. Sheet Size: Maximum 4' x 8', or 4' x 10'.
d. Solid Surfacing Sheet and Plastic Resin Castings: Complying with ISFA-2 and NEMA LD 3; polyester resin, mineral filler, and pigments; homogenous, non-porous and capable of being worked and repaired using standard woodworking tools; no surface coating; color and pattern consistent throughout thickness.
1) Surface Burning Characteristics: Flame spread 25, maximum; smoke developed 450, maximum; when tested in accordance with ASTM E84
2) Finish on Exposed Surfaces: Semi-gloss, gloss rating of 25 to 50.
e. Other Acceptable Manufacturers:
1) Schober, Inc.; Product: Lumicor; www.schober.com.
2) Dupont: www.corian.com.
3) Formica Corporation: www.formica.com.
4) Avonite Surfaces: www.avonitesurfaces.com.
5) Corian: www.corian.com
f. Other Components Thickness: 1/2 inch, minimum.
g. Exposed Edge Treatment: Built up to minimum 1-1/4 inch thick; pencil edge profile.
h. Back and End Splashes: Same sheet material, square top; minimum 4 inches high.

2.02 ACCESSORY MATERIALS

A. Wood-Based Components:
   1. Wood fabricated from old growth timber is not permitted.
   2. Provide sustainably harvested wood, certified or labeled as specified in Section 016000.

B. Plywood for Supporting Substrate: PS 1 Exterior Grade, A-C veneer grade, minimum 5-ply; minimum 3/4-inch-thick; join lengths using metal splines.

C. Adhesives: Chemical resistant waterproof adhesive as recommended by manufacturer of materials being joined.

D. Joint Sealant: Mildew-resistant silicone sealant, Color as selected by Architect from manufacturer's full range.

2.03 FABRICATION

A. Fabricate tops and splashes in the largest sections practicable, with top surface of joints flush.
   1. Join lengths of tops using best method recommended by manufacturer.
   2. Fabricate to overhang fronts and ends of cabinets 1 inch except where top butts against cabinet or wall.
   3. Prepare all cutouts accurately to size; replace tops having improperly dimensioned or unnecessary cutouts or fixture holes.

B. Provide back/end splash wherever counter edge abuts vertical surface unless otherwise indicated.
   1. Secure to countertop with concealed fasteners and with contact surfaces set in waterproof glue.
   2. Height: 4 inches, unless otherwise indicated.

C. Solid Surfacing: Fabricate tops up to 144 inches long in one piece; join pieces with adhesive sealant in accordance with manufacturer's recommendations and instructions.
   1. Acceptable means of machining are listed below. Ensure that material is not chipped or warped by machining operations.
      a. Sawing: Select equipment and blades suitable for type of cut required.
      b. Drilling: Drills especially designed for use with plastic products.
      c. Milling: Climb cut where possible.
      d. Routing.
      e. Tapping.
      f. Shearing and Punching: Acceptable only on 1/16" materials.
      g. Die Cutting: Acceptable only on material 1/8" or less.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Do not begin installation until substrates have been properly prepared.

B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

C. Verify that wall surfaces have been finished and mechanical and electrical services and outlets are installed in proper locations.

3.02 PREPARATION

A. Clean surfaces thoroughly prior to installation.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.03 INSTALLATION

A. Install countertops as recommended by the manufacturer's written instructions.

B. Securely attach countertops to cabinets using concealed fasteners. Make flat surfaces level; shim where required.

C. Utilize fasteners, adhesives, and bonding agents recommended by the manufacturer for type of installation indicated. Material that is chipped, warped, hazed or discolored as a result of installation or fabrication method will be rejected.

D. Attach countertops using screws with minimum penetration into substrate board of 5/8 inch.

E. Attach solid surface countertops to substrate as recommended by the solid surface manufacturer's written instructions.

F. Seal joint between back/end splashes and vertical surfaces.

3.04 CLEANING AND PROTECTION

A. Clean countertops surfaces thoroughly.

B. Protect installed products until completion of project.

C. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION

SECTION 221316 - SANITARY WASTE AND VENT PIPING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Hub-and-spigot, cast-iron soil pipe and fittings.
2. Copper tube and fittings.
3. ABS pipe and fittings.
4. PVC pipe and fittings.
5. Specialty pipe fittings.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product.

1.3 WARRANTY

A. Listed manufacturers to provide labeling and warranty of their respective products.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Components and installation shall be capable of withstanding the following minimum working pressure unless otherwise indicated:

1. Soil, Waste, and Vent Piping: 10-foot head of water.

2.2 PIPING MATERIALS

A. Piping materials shall bear label, stamp, or other markings of specified testing agency.

B. Comply with requirements in "Piping Schedule" Article for applications of pipe, tube, fitting materials, and joining methods for specific services, service locations, and pipe sizes.

2.3 HUB-AND-SPIGOT, CAST-IRON SOIL PIPE AND FITTINGS

A. Pipe and Fittings: ASTM A74, Service class.

B. Gaskets: ASTM C564, rubber.

C. Calking Materials: ASTM B29, pure lead and oakum or hemp fiber.

2.4 COPPER TUBE AND FITTINGS

A. Copper Type DWV Tube: ASTM B306, drainage tube, drawn temper.

B. Copper Drainage Fittings: ASME B16.23, cast copper or ASME B16.29, wrought copper, solder-joint fittings.

C. Copper Pressure Fittings:

1. Copper Fittings: ASME B16.18, cast-copper-alloy or ASME B16.22, wrought-copper, solder-joint fittings. Furnish wrought-copper fittings if indicated.
2. Copper Unions: MSS SP-123, copper-alloy, hexagonal-stock body with ball-and-socket, metal-to-metal seating surfaces, and solder-joint or threaded ends.

D. Copper Flanges: ASME B16.24, Class 150, cast copper with solder-joint end.

1. Flange Gasket Materials: ASME B16.21, full-face, flat, nonmetallic, asbestos-free, 1/8-inch. maximum thickness unless thickness or specific material is indicated.
2. Flange Bolts and Nuts: ASME B18.2.1, carbon steel unless otherwise indicated.

E. Solder: ASTM B32, lead free with ASTM B813, water-flushable flux.

2.5 ABS PIPE AND FITTINGS

A. Comply with NSF 14, "Plastics Piping Systems Components and Related Materials," for plastic piping components. Include marking with "NSF-dwv" for plastic drain, waste, and vent piping and "NSF-sewer" for plastic sewer piping.

B. Solid-Wall ABS Pipe: ASTM D2661, Schedule 40.

C. Cellular-Core ABS Pipe: ASTM F628, Schedule 40.

D. ABS Socket Fittings: ASTM D2661, made to ASTM D3311, drain, waste, and vent patterns.

E. Solvent Cement: ASTM D2235.

2.6 PVC PIPE AND FITTINGS

A. Comply with NSF 14, "Plastics Piping Systems Components and Related Materials," for plastic piping components. Include marking with "NSF-dwv" for plastic drain, waste, and vent piping and "NSF-sewer" for plastic sewer piping.

B. Solid-Wall PVC Pipe: ASTM D2665, drain, waste, and vent.

C. Cellular-Core PVC Pipe: ASTM F891, Schedule 40.

D. PVC Socket Fittings: ASTM D2665, made to ASTM D3311, drain, waste, and vent patterns and to fit Schedule 40 pipe.

E. Adhesive Primer: ASTM F656.

F. Solvent Cement: ASTM D2564.

2.7 SPECIALTY PIPE FITTINGS

A. Transition Couplings:

1. Fitting-Type Transition Couplings: Manufactured piping coupling or specified piping system fitting.
2. Unshielded, Nonpressure Transition Couplings:

a. Standard: ASTM C1173.
b. Description: Elastomeric, sleeve-type, reducing or transition pattern. Include shear ring and corrosion-resistant-metal tension band and tightening mechanism on each end.
c. End Connections: Same size as and compatible with pipes to be joined.
d. Sleeve Materials:

1) For Cast-Iron Soil Pipes: ASTM C564, rubber.
2) For Plastic Pipes: ASTM F477, elastomeric seal or ASTM D5926, PVC.
3) For Dissimilar Pipes: ASTM D5926, PVC or other material compatible with pipe materials being joined.

3. Shielded, Nonpressure Transition Couplings:

a. Standard: ASTM C1460.
b. Description: Elastomeric or rubber sleeve with full-length, corrosion-resistant outer shield and corrosion-resistant-metal tension band and tightening mechanism on each end.
c. End Connections: Same size as and compatible with pipes to be joined.

PART 3 - EXECUTION

3.1 EARTH MOVING

A. Comply with requirements for excavating, trenching, and backfilling specified in Section 312000 "Earth Moving."

3.2 PIPING INSTALLATION

A. Drawing plans, schematics, and diagrams indicate general location and arrangement of piping systems.

1. Indicated locations and arrangements were used to size pipe and calculate friction loss, expansion, pump sizing, and other design considerations.
2. Install piping as indicated unless deviations to layout are approved on coordination drawings.

B. Install piping in concealed locations unless otherwise indicated and except in equipment rooms and service areas.

C. Install piping indicated to be exposed and piping in equipment rooms and service areas at right angles or parallel to building walls. Diagonal runs are prohibited unless specifically indicated otherwise.

D. Install piping above accessible ceilings to allow sufficient space for ceiling panel removal.

E. Install piping to permit valve servicing.

F. Install piping at indicated slopes.

G. Install piping free of sags and bends.

H. Install fittings for changes in direction and branch connections.

I. Install piping to allow application of insulation.

J. Make changes in direction for soil and waste drainage and vent piping using appropriate branches, bends, and long-sweep bends.

1. Sanitary tees and short-sweep 1/4 bends may be used on vertical stacks if change in direction of flow is from horizontal to vertical.
2. Use long-turn, double Y-branch and 1/8-bend fittings if two fixtures are installed back to back or side by side with common drain pipe.

    a. Straight tees, elbows, and crosses may be used on vent lines.

3. Do not change direction of flow more than 90 degrees.
4. Use proper size of standard increasers and reducers if pipes of different sizes are connected.

    a. Reducing size of waste piping in direction of flow is prohibited.

K. Lay buried building waste piping beginning at low point of each system.

1. Install true to grades and alignment indicated, with unbroken continuity of invert. Place hub ends of piping upstream.
2. Install required gaskets according to manufacturer's written instructions for use of lubricants, cements, and other installation requirements.
3. Maintain swab in piping and pull past each joint as completed.

L. Install soil and waste and vent piping at the following minimum slopes unless otherwise indicated:

1. Building Sanitary Waste: 2 percent downward in direction of flow for piping NPS 3 and smaller; 1 percent downward in direction of flow for piping NPS 4 and larger.
2. Horizontal Sanitary Waste Piping: 2 percent downward in direction of flow.
3. Vent Piping: 1 percent down toward vertical fixture vent or toward vent stack.

M. Install cast-iron soil piping according to CISPI's "Cast Iron Soil Pipe and Fittings Handbook," Chapter IV, "Installation of Cast Iron Soil Pipe and Fittings."

N. Install aboveground copper tubing according to CDA's "Copper Tube Handbook."

O. Install aboveground ABS piping according to ASTM D2661.

P. Install aboveground PVC piping according to ASTM D2665.

Q. Install underground ABS and PVC piping according to ASTM D2321.

R. Plumbing Specialties:

1. Install backwater valves in sanitary waster gravity-flow piping.

a. Comply with requirements for backwater valves specified in Section 221319 "Sanitary Waste Piping Specialties."

2. Install cleanouts at grade and extend to where building sanitary drains connect to building sanitary sewers in sanitary waste gravity-flow piping.

a. Comply with requirements for cleanouts specified in Section 221319 "Sanitary Waste Piping Specialties."

3. Install drains in sanitary waste gravity-flow piping.

a. Comply with requirements for drains specified in Section 221319 "Sanitary Waste Piping Specialties."

S. Do not enclose, cover, or put piping into operation until it is inspected and approved by authorities having jurisdiction.

T. Install sleeves for piping penetrations of walls, ceilings, and floors.

1. Comply with requirements for sleeves specified in Section 220517 "Sleeves and Sleeve Seals for Plumbing Piping."

U. Install sleeve seals for piping penetrations of concrete walls and slabs.

1. Comply with requirements for sleeve seals specified in Section 220517 "Sleeves and Sleeve Seals for Plumbing Piping."

V. Install escutcheons for piping penetrations of walls, ceilings, and floors.

1. Comply with requirements for escutcheons specified in Section 220518 "Escutcheons for Plumbing Piping."

3.3 JOINT CONSTRUCTION

A. Join hub-and-spigot, cast-iron soil piping with gasket joints according to CISPI's "Cast Iron Soil Pipe and Fittings Handbook" for compression joints.

B. Join copper tube and fittings with soldered joints according to ASTM B828. Use ASTM B813, water-flushable, lead-free flux and ASTM B32, lead-free-alloy solder.

C. Grooved Joints: Cut groove ends of pipe according to AWWA C606. Lubricate and install gasket over ends of pipes or pipe and fitting. Install coupling housing sections, over gasket, with keys seated in piping grooves. Install and tighten housing bolts.

D. Plastic, Nonpressure-Piping, Solvent-Cement Joints: Clean and dry joining surfaces. Join pipe and fittings according to the following:

1. Comply with ASTM F402 for safe-handling practice of cleaners, primers, and solvent cements.
2. ABS Piping: Join according to ASTM D2235 and ASTM D2661 appendixes.

3. PVC Piping: Join according to ASTM D2855 and ASTM D2665 appendixes.

3.4 SPECIALTY PIPE FITTING INSTALLATION

A. Transition Couplings:

1. Install transition couplings at joints of piping with small differences in ODs.
2. In Waste Drainage Piping: Unshielded, nonpressure transition couplings.

3.5 VALVE INSTALLATION

A. Comply with requirements in Section 220523.12 "Ball Valves for Plumbing Piping," Section 220523.13 "Butterfly Valves for Plumbing Piping," Section 220523.14 "Check Valves for Plumbing Piping," and Section 220523.15 "Gate Valves for Plumbing Piping" for general-duty valve installation requirements.

B. Shutoff Valves:

1. Install shutoff valve on each sewage pump discharge.
2. Install gate or full-port ball valve for piping NPS 2 and smaller.
3. Install gate valve for piping NPS 2-1/2 and larger.

C. Check Valves: Install swing check valve, between pump and shutoff valve, on each sewage pump discharge.

D. Backwater Valves: Install backwater valves in piping subject to backflow.

1. Horizontal Piping: Horizontal backwater valves. Use normally closed type unless otherwise indicated.
2. Floor Drains: Drain outlet backwater valves unless drain has integral backwater valve.
3. Install backwater valves in accessible locations.
4. Comply with requirements for backwater valve specified in Section 221319 "Sanitary Waste Piping Specialties."

3.6 HANGER AND SUPPORT INSTALLATION

A. Comply with requirements for seismic-restraint devices specified in Section 220548 "Vibration and Seismic Controls for Plumbing Piping and Equipment."

B. Comply with requirements for pipe hanger and support devices and installation specified in Section 220529 "Hangers and Supports for Plumbing Piping and Equipment." Section 220548.13 "Vibration Controls for Plumbing Piping and Equipment."

1. Install carbon-steel pipe hangers for horizontal piping in noncorrosive environments.
2. Install carbon-steel pipe support clamps for vertical piping in noncorrosive environments.
3. Install stainless-steel pipe support clamps for vertical piping in corrosive environments.
4. Vertical Piping: MSS Type 8 or Type 42, clamps.
5. Install individual, straight, horizontal piping runs:

    a. 100 Feet and Less: MSS Type 1, adjustable, steel clevis hangers.
    b. Longer Than 100 Feet: MSS Type 43, adjustable roller hangers.
    c. Longer Than 100 Feet if Indicated: MSS Type 49, spring cushion rolls.

6. Multiple, Straight, Horizontal Piping Runs 100 Feet or Longer: MSS Type 44, pipe rolls. Support pipe rolls on trapeze.
7. Base of Vertical Piping: MSS Type 52, spring hangers.

C. Support horizontal piping and tubing within 12 inches of each fitting, valve, and coupling.

D. Support vertical piping and tubing at base and at each floor.

E. Rod diameter may be reduced one size for double-rod hangers, with 3/8-inch minimum rods.

F. Install hangers for cast-iron soil piping with the following maximum horizontal spacing and minimum rod diameters:

1. NPS 1-1/2 and NPS 2 : 60 inches with 3/8-inch rod.
2. NPS 3 : 60 inches with 1/2-inch rod.
3. NPS 4 and NPS 5: 60 inches with 5/8-inch rod.
4. NPS 6 and NPS 8: 60 inches with 3/4-inch rod.
5. NPS 10 and NPS 12: 60 inches with 7/8-inch rod.
6. Spacing for 10-foot lengths may be increased to 10 feet. Spacing for fittings is limited to 60 inches .

G. Install supports for vertical cast-iron soil piping every 15 feet.

H. Install hangers for steel piping with the following maximum horizontal spacing and minimum rod diameters:

1. NPS 1-1/4: 84 inches with 3/8-inch rod.
2. NPS 1-1/2: 108 inches with 3/8-inch rod.
3. NPS 2: 10 feet with 3/8-inch rod.
4. NPS 2-1/2: 11 feet with 1/2-inch rod.
5. NPS 3 : 12 feet with 1/2-inch rod.
6. NPS 4 and NPS 5: 12 feet with 5/8-inch rod.
7. NPS 6 and NPS 8: 12 feet with 3/4-inch rod.
8. NPS 10 and NPS 12: 12 feet with 7/8-inch rod.

I. Install supports for vertical steel piping every 15 feet.

J. Install supports for vertical stainless-steel piping every 10 feet.

K. Install hangers for copper tubing with the following maximum horizontal spacing and minimum rod diameters:

1. NPS 1-1/4: 72 inches with 3/8-inch rod.
2. NPS 1-1/2 and NPS 2 : 96 inches with 3/8-inch rod.
3. NPS 2-1/2: 108 inches with 1/2-inch rod.
4. NPS 3 and NPS 5: 10 feet with 1/2-inch rod.
5. NPS 6: 10 feet with 5/8-inch rod.
6. NPS 8: 10 feet with 3/4-inch rod.

L. Install supports for vertical copper tubing every 10 feet (3 m).

M. Install hangers for ABS and PVC piping with the following maximum horizontal spacing and minimum rod diameters:

1. NPS 1-1/2 and NPS 2 : 48 inches with 3/8-inch rod.

2. NPS 3 : 48 inches with 1/2-inch rod.
3. NPS 4 and NPS 5: 48 inches with 5/8-inch rod.
4. NPS 6 and NPS 8: 48 inches with 3/4-inch rod.
5. NPS 10 and NPS 12: 48 inches with 7/8-inch rod.

N. Install supports for vertical ABS and PVC piping every 48 inches.

O. Support piping and tubing not listed above according to MSS SP-58 and manufacturer's written instructions.

3.7 CONNECTIONS

A. Drawings indicate general arrangement of piping, fittings, and specialties.

B. Connect soil and waste piping to exterior sanitary sewerage piping. Use transition fitting to join dissimilar piping materials.

C. Connect waste and vent piping to the following:

1. Plumbing Fixtures: Connect waste piping in sizes indicated, but not smaller than required by plumbing code.
2. Plumbing Fixtures and Equipment: Connect atmospheric vent piping in sizes indicated, but not smaller than required by authorities having jurisdiction.
3. Plumbing Specialties: Connect waste and vent piping in sizes indicated, but not smaller than required by plumbing code.
4. Install test tees (wall cleanouts) in conductors near floor and floor cleanouts with cover flush with floor.
5. Install horizontal backwater valves with cleanout cover flush with floor.
6. Comply with requirements for backwater valves cleanouts and drains specified in Section 221319 "Sanitary Waste Piping Specialties."
7. Equipment: Connect waste piping as indicated.

    a. Provide shutoff valve if indicated and union for each connection.
    b. Use flanges instead of unions for connections NPS 2-1/2 and larger.

D. Where installing piping adjacent to equipment, allow space for service and maintenance of equipment.

E. Make connections according to the following unless otherwise indicated:

1. Install unions, in piping NPS 2 and smaller, adjacent to each valve and at final connection to each piece of equipment.
2. Install flanges, in piping NPS 2-1/2 and larger, adjacent to flanged valves and at final connection to each piece of equipment.

3.8 IDENTIFICATION

A. Identify exposed sanitary waste and vent piping.

B. Comply with requirements for identification specified in Section 220553 "Identification for Plumbing Piping and Equipment."

3.9 FIELD QUALITY CONTROL

A. During installation, notify authorities having jurisdiction at least 24 hours before inspection must be made. Perform tests specified below in presence of authorities having jurisdiction.

1. Roughing-in Inspection: Arrange for inspection of piping before concealing or closing-in after roughing-in and before setting fixtures.
2. Final Inspection: Arrange for final inspection by authorities having jurisdiction to observe tests specified below and to ensure compliance with requirements.

B. Reinspection: If authorities having jurisdiction find that piping will not pass test or inspection, make required corrections and arrange for reinspection.

C. Reports: Prepare inspection reports and have them signed by authorities having jurisdiction.

D. Test sanitary waste and vent piping according to procedures of authorities having jurisdiction or, in absence of published procedures, as follows:

1. Test for leaks and defects in new piping and parts of existing piping that have been altered, extended, or repaired.

    a. If testing is performed in segments, submit separate report for each test, complete with diagram of portion of piping tested.

2. Leave uncovered and unconcealed new, altered, extended, or replaced waste and vent piping until it has been tested and approved.

    a. Expose work that was covered or concealed before it was tested.

3. Roughing-in Plumbing Test Procedure: Test waste and vent piping except outside leaders on completion of roughing-in.

    a. Close openings in piping system and fill with water to point of overflow, but not less than 10-foot head of water.
    b. From 15 minutes before inspection starts to completion of inspection, water level must not drop.
    c. Inspect joints for leaks.

4. Finished Plumbing Test Procedure: After plumbing fixtures have been set and traps filled with water, test connections and prove they are gastight and watertight.

    a. Plug vent-stack openings on roof and building drains where they leave building. Introduce air into piping system equal to pressure of 1-inch wg.
    b. Use U-tube or manometer inserted in trap of water closet to measure this pressure.
    c. Air pressure must remain constant without introducing additional air throughout period of inspection.
    d. Inspect plumbing fixture connections for gas and water leaks.

5. Repair leaks and defects with new materials and retest piping, or portion thereof, until satisfactory results are obtained.
6. Prepare reports for tests and required corrective action.

3.10 CLEANING AND PROTECTION

A. Clean interior of piping. Remove dirt and debris as work progresses.

B. Protect sanitary waste and vent piping during remainder of construction period to avoid clogging with dirt and debris and to prevent damage from traffic and construction work.

C. Place plugs in ends of uncompleted piping at end of day and when work stops.

D. Exposed ABS and PVC Piping: Protect plumbing vents exposed to sunlight with two coats of water-based latex paint.

E. Repair damage to adjacent materials caused by waste and vent piping installation.

3.11 PIPING SCHEDULE

A. Flanges and unions may be used on aboveground pressure piping unless otherwise indicated.

B. Aboveground, soil and waste piping NPS 4 and smaller shall be any of the following:

1. Service class, cast-iron soil pipe and fittings; gaskets; and gasketed joints.
2. Copper Type DWV tube, copper drainage fittings, and soldered joints.
3. Solid-wall ABS pipe, ABS socket fittings, and solvent-cemented joints.
4. Solid-wall PVC pipe, PVC socket fittings, and solvent-cemented joints.
5. Dissimilar Pipe-Material Couplings: Unshielded, nonpressure transition couplings.

C. Aboveground, soil and waste piping NPS 5 and larger shall be any of the following:

1. Service class, cast-iron soil pipe and fittings; gaskets; and gasketed joints.
2. Solid-wall PVC pipe, PVC socket fittings, and solvent-cemented joints.
3. Dissimilar Pipe-Material Couplings: Unshielded, nonpressure transition couplings.

D. Aboveground, vent piping NPS 4 and smaller shall be any of the following:

1. Service class, cast-iron soil pipe and fittings; gaskets; and gasketed joints.
2. Copper Type DWV tube, copper drainage fittings, and soldered joints.

a. Option for Vent Piping, NPS 2-1/2 and NPS 3-1/2: Hard copper tube, Type M; copper pressure fittings; and soldered joints.

3. Solid-wall ABS pipe, ABS socket fittings, and solvent-cemented joints.
4. Solid-wall PVC pipe, PVC socket fittings, and solvent-cemented joints.
5. Dissimilar Pipe-Material Couplings: Unshielded, nonpressure transition couplings.

E. Aboveground, vent piping NPS 5 and larger shall be any of the following:

1. Service class, cast-iron soil pipe and fittings; gaskets; and gasketed joints.
2. Dissimilar Pipe-Material Couplings: Unshielded, nonpressure transition couplings.

F. Underground, soil, waste, and vent piping NPS 4 and smaller shall be any of the following:

1. Service class, cast-iron soil piping; gaskets; and gasketed joints.
2. Solid wall ABS pipe, ABS socket fittings, and solvent-cemented joints.
3. Solid wall PVC pipe, PVC socket fittings, and solvent-cemented joints.

4. Dissimilar Pipe-Material Couplings: Unshielded, nonpressure transition couplings.

G. Underground, soil and waste piping NPS 5 and larger shall be any of the following:

1. Service class, cast-iron soil piping; gaskets; and gasketed joints.
2. Solid-wall PVC pipe; PVC socket fittings; and solvent-cemented joints.
3. Dissimilar Pipe-Material Couplings: Unshielded, nonpressure transition couplings.

END OF SECTION 221316

SECTION 221319 - SANITARY WASTE PIPING SPECIALTIES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Backwater valves.
2. Cleanouts.
3. Roof flashing assemblies.
4. Miscellaneous sanitary drainage piping specialties.

B. Related Requirements:

1. Section 221423 "Storm Drainage Piping Specialties" for trench drains for storm water, channel drainage systems for storm water, roof drains, and catch basins.
2. Section 224300 "Healthcare Plumbing Fixtures" for plaster sink interceptors.
3. Section 334200 "Stormwater Conveyance" for storm drainage piping and piping specialties outside the building.

1.2 DEFINITIONS

A. ABS: Acrylonitrile-butadiene-styrene.

B. PVC: Polyvinyl chloride.

1.3 INFORMATIONAL SUBMITTALS

A. Field quality-control reports.

1.4 CLOSEOUT SUBMITTALS

A. Operation and maintenance data.

PART 2 - PRODUCTS

2.1 ASSEMBLY DESCRIPTIONS

A. Sanitary waste piping specialties shall bear label, stamp, or other markings of specified testing agency.

B. Comply with NSF 14 for plastic sanitary waste piping specialty components.

2.2 BACKWATER VALVES

A. Horizontal, Cast-Iron Backwater Valves:

1. Standard: ASME A112.14.1.
2. Size: Same as connected piping.
3. Body: Cast iron.
4. Cover: Cast iron with bolted or threaded access check valve.
5. End Connections: Hub and spigot.
6. Type Check Valve: Removable, bronze, swing check, factory assembled or field modified to hang closed.
7. Extension: ASTM A74, Service class; full-size, cast-iron, soil-pipe extension to field-installed cleanout at floor; replaces backwater valve cover.

B. Horizontal, Plastic Backwater Valves:

1. Size: Same as connected piping.
2. Body: PVC.
3. Cover: Same material as body with threaded access to check valve.
4. Check Valve: Removable swing check.
5. End Connections: Socket type.

2.3 CLEANOUTS

A. Cast-Iron Exposed Cleanouts:

1. Standard: ASME A112.36.2M for cast iron for cleanout test tee.
2. Size: Same as connected drainage piping
3. Body Material: Hub-and-spigot, cast-iron soil pipe T-branch as required to match connected piping.
4. Closure: Countersunk or raised-head, cast-iron plug.
5. Closure Plug Size: Same as or not more than one size smaller than cleanout size.
6. Closure: Stainless-steel plug with seal.

B. Cast-Iron Exposed Floor Cleanouts:

1. Standard: ASME A112.36.2M for adjustable housing cleanout.
2. Size: Same as connected branch.
3. Type: Adjustable housing.
4. Body or Ferrule: Cast iron.
5. Clamping Device: Required.
6. Outlet Connection: Inside calk.
7. Closure: Cast-iron plug.
8. Adjustable Housing Material: Cast iron.
9. Frame and Cover Material and Finish: Nickel-bronze, copper alloy.
10. Frame and Cover Shape: Round.
11. Top Loading Classification: HeavyDuty.
12. Riser: ASTM A74, Service class, cast-iron drainage pipe fitting and riser to cleanout.

C. Cast-Iron Wall Cleanouts:

1. Standard: ASME A112.36.2M. Include wall access.
2. Size: Same as connected drainage piping.
3. Body: Hub-and-spigot, cast-iron soil pipe T-branch as required to match connected piping.
4. Closure Plug:

    a. Cast iron.
    b. Countersunk or raised head.
    c. Drilled and threaded for cover attachment screw.
    d. Size: Same as or not more than one size smaller than cleanout size.

5. Wall Access: Round, deep, chrome-plated bronze cover plate with screw.
6. Wall Access: Round nickel-bronze, copper-alloy, or stainless-steel wall-installation frame and cover.

D. Plastic Floor Cleanouts:

1. Size: Same as connected branch.
2. Body: PVC.
3. Closure Plug: PVC.
4. Riser: Drainage pipe fitting and riser to cleanout of same material as drainage piping.

2.4 ROOF FLASHING ASSEMBLIES

A. Roof Flashing Assemblies:

1. Description: Manufactured assembly made of 4.0-lb/sq. ft., 0.0625-inch-thick, lead flashing collar and skirt extending at least 6 inches from pipe, with galvanized-steel boot reinforcement and counterflashing fitting.

    a. Open-Top Vent Cap: Without cap.
    b. Low-Silhouette Vent Cap: With vandal-proof vent cap.
    c. Extended Vent Cap: With field-installed, vandal-proof vent cap.

2.5 MISCELLANEOUS SANITARY DRAINAGE PIPING SPECIALTIES

A. Open Drains:

1. Description: Shop or field fabricate from ASTM A74, Service class, hub-and-spigot, cast-iron soil-pipe fittings. Include P-trap, hub-and-spigot riser section; and where required, increaser fitting joined with ASTM C564 rubber gaskets.
2. Size: Same as connected waste piping with increaser fitting of size indicated.

B. Deep-Seal Traps:

1. Description: Cast-iron or bronze casting, with inlet and outlet matching connected piping and cleanout trap-seal primer valve connection.
2. Size: Same as connected waste piping.

    a. NPS 2: 4-inch- minimum water seal.

b. NPS 2-1/2 and Larger: 5-inch- minimum water seal.

C. Floor-Drain, Trap-Seal Primer Fittings:

1. Description: Cast iron, with threaded inlet and threaded or spigot outlet, and trap-seal primer valve connection.
2. Size: Same as floor drain outlet with NPS 1/2 side inlet.

D. Air-Gap Fittings:

1. Standard: ASME A112.1.2, for fitting designed to ensure fixed, positive air gap between installed inlet and outlet piping.
2. Body: Bronze or cast iron.
3. Inlet: Opening in top of body.
4. Outlet: Larger than inlet.
5. Size: Same as connected waste piping and with inlet large enough for associated indirect waste piping.

E. Sleeve Flashing Device:

1. Description: Manufactured, cast-iron fitting, with clamping device that forms sleeve for pipe floor penetrations of floor membrane. Include galvanized-steel pipe extension in top of fitting that will extend 1 inch above finished floor and galvanized-steel pipe extension in bottom of fitting that will extend through floor slab.
2. Size: As required for close fit to riser or stack piping.

F. Stack Flashing Fittings:

1. Description: Counterflashing-type, cast-iron fitting, with bottom recess for terminating roof membrane, and with threaded or hub top for extending vent pipe.
2. Size: Same as connected stack vent or vent stack.

G. Vent Caps:

1. Description: Cast-iron body with threaded or hub inlet and vandal-proof design. Include vented hood and setscrews to secure to vent pipe.
2. Size: Same as connected stack vent or vent stack.

H. Expansion Joints:

1. Standard: ASME A112.6.4.
2. Body: Cast iron with bronze sleeve, packing, and gland.
3. End Connections: Matching connected piping.
4. Size: Same as connected soil, waste, or vent piping.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install backwater valves in building drain piping.

1. For interior installation, provide cleanout deck plate flush with floor and centered over backwater valve cover, and of adequate size to remove valve cover for servicing.

B. Install cleanouts in aboveground piping and building drain piping according to the following, unless otherwise indicated:

1. Size same as drainage piping up to NPS 4. Use NPS 4 for larger drainage piping unless larger cleanout is indicated.
2. Locate at each change in direction of piping greater than 45 degrees.
3. Locate at minimum intervals of 50 feet for piping NPS 4 and smaller and 100 feet for larger piping.
4. Locate at base of each vertical soil and waste stack.

C. For floor cleanouts for piping below floors, install cleanout deck plates with top flush with finished floor.

D. For cleanouts located in concealed piping, install cleanout wall access covers, of types indicated, with frame and cover flush with finished wall.

E. Install roof flashing assemblies on sanitary stack vents and vent stacks that extend through roof. Comply with requirements in Section 076200, Sheet Metal Flashing and Trim.

F. Install flashing fittings on sanitary stack vents and vent stacks that extend through roof. Comply with requirements in Section 076200, Sheet Metal Flashing and Trim.

G. Assemble open drain fittings and install with top of hub 1 inch above floor.

H. Install deep-seal traps on floor drains and other waste outlets, if indicated.

I. Install floor-drain, trap-seal primer fittings on inlet to floor drains that require trap-seal primer connection.

1. Exception: Fitting may be omitted if trap has trap-seal primer connection.
2. Size: Same as floor drain inlet.

J. Install air-gap fittings on draining-type backflow preventers and on indirect-waste piping discharge into sanitary drainage system.

K. Install sleeve and sleeve seals with each riser and stack passing through floors with waterproof membrane.

L. Install vent caps on each vent pipe passing through roof.

M. Install expansion joints on vertical stacks and conductors. Position expansion joints for easy access and maintenance.

N. Install wood-blocking reinforcement for wall-mounting-type specialties.

O. Install traps on plumbing specialty drain outlets. Omit traps on indirect wastes unless trap is indicated.

3.2 CONNECTIONS

A. Comply with requirements in Section 221316 "Sanitary Waste and Vent Piping" for piping installation requirements. Drawings indicate general arrangement of piping, fittings, and specialties.

B. Install piping adjacent to equipment to allow service and maintenance.

C. Ground equipment according to Section 260526 "Grounding and Bonding for Electrical Systems."

D. Connect wiring according to Section 260519 "Low-Voltage Electrical Power Conductors and Cables."

3.3 FLASHING INSTALLATION

A. Comply with requirements in Section 076200 "Sheet Metal Flashing and Trim."

B. Fabricate flashing from single piece unless large pans, sumps, or other drainage shapes are required.

C. Install sheet flashing on pipes, sleeves, and specialties passing through or embedded in floors and roofs with waterproof membrane.

1. Pipe Flashing: Sleeve type, matching pipe size, with minimum length of 10 inches, and skirt or flange extending at least 8 inches around pipe.
2. Sleeve Flashing: Flat sheet, with skirt or flange extending at least 8 inches around sleeve.
3. Embedded Specialty Flashing: Flat sheet, with skirt or flange extending at least 8 inches around specialty.

D. Set flashing on floors and roofs in solid coating of bituminous cement.

E. Secure flashing into sleeve and specialty clamping ring or device.

F. Install flashing for piping passing through roofs with counterflashing or commercially made flashing fittings, according to Section 076200 "Sheet Metal Flashing and Trim."

G. Extend flashing up vent pipe passing through roofs and turn down into pipe, or secure flashing into cast-iron sleeve having calking recess.

3.4 LABELING AND IDENTIFYING

A. Distinguish among multiple units, inform operator of operational requirements, indicate safety and emergency precautions, and warn of hazards and improper operations, in addition to identifying unit.

1. Nameplates and signs are specified in Section 220553 "Identification for Plumbing Piping and Equipment."

3.5 PROTECTION

A. Protect drains during remainder of construction period to avoid clogging with dirt or debris and to prevent damage from traffic or construction work.

B. Place plugs in ends of uncompleted piping at end of each day or when work stops.

END OF SECTION 221319

SECTION 23050 - COMMON WORK RESULTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. See Editing Instruction No. 3 in the Evaluations for discussion about how this Section supplements other Division 23 Sections.

This Section includes the following:
Piping materials and installation instructions common to most piping systems.
Transition fittings.
Dielectric fittings.
Mechanical sleeve seals.
Sleeves.
Escutcheons.
Grout.
Equipment installation requirements common to equipment sections.
Painting and finishing.
Concrete bases.
Supports and anchorages.

1.3 DEFINITIONS

A. Finished Spaces: Spaces other than mechanical and electrical equipment rooms, furred spaces, pipe and duct chases, unheated spaces immediately below roof, spaces above ceilings, unexcavated spaces, crawlspaces, and tunnels.

B. Exposed, Interior Installations: Exposed to view indoors. Examples include finished occupied spaces and mechanical equipment rooms.

Exposed, Exterior Installations: Exposed to view outdoors or subject to outdoor ambient temperatures and weather conditions. Examples include rooftop locations.

Concealed, Interior Installations: Concealed from view and protected from physical contact by building occupants. Examples include above ceilings and chases.

Concealed, Exterior Installations: Concealed from view and protected from weather conditions and physical contact by building occupants but subject to outdoor ambient temperatures. Examples include installations within unheated shelters.

The following are industry abbreviations for plastic materials:
CPVC: Chlorinated polyvinyl chloride plastic.
PE: Polyethylene plastic.
PVC: Polyvinyl chloride plastic.

The following are industry abbreviations for rubber materials:
EPDM: Ethylene-propylene-diene terpolymer rubber.
NBR: Acrylonitrile-butadiene rubber.

1.4 SUBMITTALS

A. Product Data: For the following:
1. Adjust list below to suit Project.
2. Transition fittings.
Dielectric fittings.
Mechanical sleeve seals.
Escutcheons.

B. Welding certificates.

1.5 QUALITY ASSURANCE

A. Steel Support Welding: Qualify processes and operators according to AWS D1.1, "Structural Welding Code--Steel."

B. Steel Pipe Welding: Qualify processes and operators according to ASME Boiler and Pressure Vessel Code: Section IX, "Welding and Brazing Qualifications."
Comply with provisions in ASME B31 Series, "Code for Pressure Piping."
Certify that each welder has passed AWS qualification tests for welding processes involved and that certification is current.

C. Electrical Characteristics for HVAC Equipment: Equipment of higher electrical characteristics may be furnished provided such proposed equipment is approved in writing and connecting electrical services, circuit breakers, and conduit sizes are appropriately modified. If minimum energy ratings or efficiencies are specified, equipment shall comply with requirements.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver pipes and tubes with factory-applied end caps. Maintain end caps through shipping, storage, and handling to prevent pipe end damage and to prevent entrance of dirt, debris, and moisture.

B. Store plastic pipes protected from direct sunlight. Support to prevent sagging and bending.

1.7 COORDINATION

A. Arrange for pipe spaces, chases, slots, and openings in building structure during progress of construction, to allow for HVAC installations.

B. Coordinate installation of required supporting devices and set sleeves in poured-in-place concrete and other structural components as they are constructed.

C. Coordinate requirements for access panels and doors for HVAC items requiring access that are concealed behind finished surfaces. Access panels and doors are specified in Division 08 Section "Access Doors and Frames."

PART 2 - PRODUCTS

2.1 MANUFACTURERS

In other Part 2 articles where subparagraph titles below introduce lists, the following requirements apply for product selection:
Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the manufacturers specified.
Manufacturers: Subject to compliance with requirements, provide products by the manufacturers specified.

2.2 PIPE, TUBE, AND FITTINGS

A. Refer to individual Division 23 piping Sections for pipe, tube, and fitting materials and joining methods.

Pipe Threads: ASME B1.20.1 for factory-threaded pipe and pipe fittings.

2.3 JOINING MATERIALS

A. Refer to individual Division 23 piping Sections for special joining materials not listed below.

B. Pipe-Flange Gasket Materials: Suitable for chemical and thermal conditions of piping system contents.
ASME B16.21, nonmetallic, flat, asbestos-free, 1/8-inch maximum thickness unless thickness or specific material is indicated.
Full-Face Type: For flat-face, Class 125, cast-iron and cast-bronze flanges.
Narrow-Face Type: For raised-face, Class 250, cast-iron and steel flanges.
AWWA C110, rubber, flat face, 1/8 inch thick, unless otherwise indicated; and full-face or ring type, unless otherwise indicated.

Flange Bolts and Nuts: ASME B18.2.1, carbon steel, unless otherwise indicated.

Plastic, Pipe-Flange Gasket, Bolts, and Nuts: Type and material recommended by piping system manufacturer, unless otherwise indicated.

Solder Filler Metals: ASTM B 32, lead-free alloys. Include water-flushable flux according to ASTM B 813.

Brazing Filler Metals: AWS A5.8, BCuP Series, copper-phosphorus alloys for general-duty brazing, unless otherwise indicated; and AWS A5.8, BAg1, silver alloy for refrigerant piping, unless otherwise indicated.

Welding Filler Metals: Comply with AWS D10.12 for welding materials appropriate for wall thickness and chemical analysis of steel pipe being welded.

Solvent Cements for Joining Plastic Piping:
CPVC Piping: ASTM F 493.
PVC Piping: ASTM D 2564. Include primer according to ASTM F 656.

Fiberglass Pipe Adhesive: As furnished or recommended by pipe manufacturer.

2.4 TRANSITION FITTINGS

A. Plastic-to-Metal Transition Fittings: CPVC and PVC one-piece fitting with manufacturer's Schedule 80 equivalent dimensions; one end with threaded brass insert, and one solvent-cement-joint end.
Available Manufacturers:
Eslon Thermoplastics.

B. Plastic-to-Metal Transition Adaptors: One-piece fitting with manufacturer's SDR 11 equivalent dimensions; one end with threaded brass insert, and one solvent-cement-joint end.
Available Manufacturers:
Thompson Plastics, Inc.

Plastic-to-Metal Transition Unions: MSS SP-107, CPVC and PVC four-part union. Include brass end, solvent-cement-joint end, rubber O-ring, and union nut.
Available Manufacturers:
NIBCO INC.
NIBCO, Inc.; Chemtrol Div.

2.5 DIELECTRIC FITTINGS

A. Description: Combination fitting of copper alloy and ferrous materials with threaded, solder-joint, plain, or weld-neck end connections that match piping system materials.

B. Insulating Material: Suitable for system fluid, pressure, and temperature.

C. Dielectric Unions: Factory-fabricated, union assembly, for 250-psig minimum working pressure at 180 deg F.

Available Manufacturers:
Capitol Manufacturing Co.
Central Plastics Company.
Eclipse, Inc.
Epco Sales, Inc.
Hart Industries, International, Inc.
Watts Industries, Inc.; Water Products Div.
Zurn Industries, Inc.; Wilkins Div.

D. Dielectric Flanges: Factory-fabricated, companion-flange assembly, for 150- or 300-psig minimum working pressure as required to suit system pressures.

1. Available Manufacturers:

Capitol Manufacturing Co.
Central Plastics Company.
Epco Sales, Inc.
Watts Industries, Inc.; Water Products Div.

E. Dielectric-Flange Kits: Companion-flange assembly for field assembly. Include flanges, full-face- or ring-type neoprene or phenolic gasket, phenolic or polyethylene bolt sleeves, phenolic washers, and steel backing washers.

1. Available Manufacturers:

Advance Products & Systems, Inc.
Calpico, Inc.
Central Plastics Company.
Pipeline Seal and Insulator, Inc.

2. Separate companion flanges and steel bolts and nuts shall have 150- or 300-psig minimum working pressure where required to suit system pressures.

F. Dielectric Couplings: Galvanized-steel coupling with inert and noncorrosive, thermoplastic lining; threaded ends; and 300-psig minimum working pressure at 225 deg F.

1. Available Manufacturers:

Calpico, Inc.
Lochinvar Corp.

G. Dielectric Nipples: Electroplated steel nipple with inert and noncorrosive, thermoplastic lining; plain, threaded, or grooved ends; and 300-psig minimum working pressure at 225 deg F.

1. Available Manufacturers:

Perfection Corp.
Precision Plumbing Products, Inc.
Sioux Chief Manufacturing Co., Inc.
Victaulic Co. of America.

2.6 MECHANICAL SLEEVE SEALS

A. Description: Modular sealing element unit, designed for field assembly, to fill annular space between pipe and sleeve.
Available Manufacturers:
Advance Products & Systems, Inc.
Calpico, Inc.
Metraflex Co.
Pipeline Seal and Insulator, Inc.
Sealing Elements: EPDM and NBR interlocking links shaped to fit surface of pipe. Include type and number required for pipe material and size of pipe.
Pressure Plates: Carbon steel and Stainless steel. Include two for each sealing element.
Connecting Bolts and Nuts: Carbon steel with corrosion-resistant coating and Stainless steel of length required to secure pressure plates to sealing elements. Include one for each sealing element.

2.7 SLEEVES

A. Galvanized-Steel Sheet: 0.0239-inch minimum thickness; round tube closed with welded longitudinal joint.

B. Steel Pipe: ASTM A 53, Type E, Grade B, Schedule 40, galvanized, plain ends.

C. Sleeve in paragraph below is available with many end variations.

1.1.1.A. Cast Iron: Cast or fabricated "wall pipe" equivalent to ductile-iron pressure pipe, with plain ends and integral waterstop, unless otherwise indicated.

Stack Sleeve Fittings: Manufactured, cast-iron sleeve with integral clamping flange. Include clamping ring and bolts and nuts for membrane flashing.
Underdeck Clamp: Clamping ring with set screws.

Molded PVC: Permanent, with nailing flange for attaching to wooden forms.

PVC Pipe: ASTM D 1785, Schedule 40.

Molded PE: Reusable, PE, tapered-cup shaped, and smooth-outer surface with nailing flange for attaching to wooden forms.

2.8 ESCUTCHEONS

A. Description: Manufactured wall and ceiling escutcheons and floor plates, with an ID to closely fit around pipe, tube, and insulation of insulated piping and an OD that completely covers opening.

B. Do not delete or combine types of escutcheons in seven paragraphs below until selections in Part 3 "Piping Systems - Common Requirements" Article are made.

C. One-Piece, Deep-Pattern Type: Deep-drawn, box-shaped brass with polished chrome-plated finish.

D. One-Piece, Cast-Brass Type: With set screw.
Finish: Polished chrome-plated and rough brass.

Split-Casting, Cast-Brass Type: With concealed hinge and set screw.
Finish: Polished chrome-plated and rough brass.

One-Piece, Stamped-Steel Type: With set screw or spring clips and chrome-plated finish.

Split-Plate, Stamped-Steel Type: With concealed hinge, set screw or spring clips, and chrome-plated finish.

One-Piece, Floor-Plate Type: Cast-iron floor plate.

Split-Casting, Floor-Plate Type: Cast brass with concealed hinge and set screw.

2.9 GROUT

A. Description: ASTM C 1107, Grade B, nonshrink and nonmetallic, dry hydraulic-cement grout.
Characteristics: Post-hardening, volume-adjusting, nonstaining, noncorrosive,
Nongaseous, and recommended for interior and exterior applications.
Design Mix: 5000-psi, 28-day compressive strength.
Packaging: Premixed and factory packaged.

PART 3 - EXECUTION

3.1 PIPING SYSTEMS - COMMON REQUIREMENTS

Install piping according to the following requirements and Division 23 Sections specifying piping systems.

Drawing plans, schematics, and diagrams indicate general location and arrangement of piping systems. Indicated locations and arrangements were used to size pipe and calculate friction loss, expansion, pump sizing, and other design considerations. Install piping as indicated unless deviations to layout are approved on Coordination Drawings.

Install piping in concealed locations, unless otherwise indicated and except in equipment rooms and service areas.

Install piping indicated to be exposed and piping in equipment rooms and service areas at right angles or parallel to building walls. Diagonal runs are prohibited unless specifically indicated otherwise.

Install piping above accessible ceilings to allow sufficient space for ceiling panel removal.

Install piping to permit valve servicing.

Install piping at indicated slopes.

Install piping free of sags and bends.

Install fittings for changes in direction and branch connections.

Install piping to allow application of insulation.

Select system components with pressure rating equal to or greater than system operating pressure.

Install escutcheons for penetrations of walls, ceilings, and floors according to the following:
New Piping:
Piping with Fitting or Sleeve Protruding from Wall: One-piece, deep-pattern type.
Chrome-Plated Piping: One-piece, cast-brass type with polished chrome-plated finish.
Insulated Piping: One-piece, stamped-steel type with spring clips.
Bare Piping at Wall and Floor Penetrations in Finished Spaces: One-piece, cast-brass type with polished chrome-plated finish.
Bare Piping at Wall and Floor Penetrations in Finished Spaces: One-piece, stamped-steel type.
Bare Piping at Ceiling Penetrations in Finished Spaces: One-piece or split-casting, cast-brass type with polished chrome-plated finish.

Bare Piping at Ceiling Penetrations in Finished Spaces: One-piece, stamped-steel type or split-plate, stamped-steel type with concealed hinge and set screw.
Bare Piping in Unfinished Service Spaces: One-piece, cast-brass type with polished chrome-plated finish.
Bare Piping in Unfinished Service Spaces: One-piece, stamped-steel type with concealed or exposed-rivet hinge and set screw or spring clips.
Bare Piping in Equipment Rooms: One-piece, cast-brass type.
Bare Piping in Equipment Rooms: One-piece, stamped-steel type with set screw or spring clips.
Bare Piping at Floor Penetrations in Equipment Rooms: One-piece, floor-plate type.

Sleeves are not required for core-drilled holes.

Permanent sleeves are not required for holes formed by removable PE sleeves.

Install sleeves for pipes passing through concrete and masonry walls and concrete floor and roof slabs.

Install sleeves for pipes passing through concrete and masonry walls, gypsum-board partitions, and concrete floor and roof slabs.
Cut sleeves to length for mounting flush with both surfaces.
Exception: Extend sleeves installed in floors of mechanical equipment areas or other wet areas 2 inches above finished floor level. Extend cast-iron sleeve fittings below floor slab as required to secure clamping ring if ring is specified.
Install sleeves in new walls and slabs as new walls and slabs are constructed.
Install sleeves that are large enough to provide 1/4-inch annular clear space between sleeve and pipe or pipe insulation. Use the following sleeve materials:
PVC or Steel Pipe Sleeves: For pipes smaller than NPS 6.
Steel Sheet Sleeves: For pipes NPS 6 and larger, penetrating gypsum-board partitions.
Stack Sleeve Fittings: For pipes penetrating floors with membrane waterproofing. Secure flashing between clamping flanges. Install section of cast-iron soil pipe to extend sleeve to 2 inches above finished floor level. Refer to Division 07 Section "Sheet Metal Flashing and Trim" for flashing.
Seal space outside of sleeve fittings with grout.
Except for underground wall penetrations, seal annular space between sleeve and pipe or pipe insulation, using joint sealants appropriate for size, depth, and location of joint. Refer to Division 07 Section "Joint Sealants" for materials and installation.

Aboveground, Exterior-Wall Pipe Penetrations: Seal penetrations using sleeves and mechanical sleeve seals. Select sleeve size to allow for 1-inch annular clear space between pipe and sleeve for installing mechanical sleeve seals.
Install steel pipe for sleeves smaller than 6 inches in diameter.
Install cast-iron "wall pipes" for sleeves 6 inches and larger in diameter.
Mechanical Sleeve Seal Installation: Select type and number of sealing elements required for pipe material and size. Position pipe in center of sleeve. Assemble mechanical sleeve seals and install in annular space between pipe and sleeve. Tighten bolts against pressure plates that cause sealing elements to expand and make watertight seal.

Underground, Exterior-Wall Pipe Penetrations: Install cast-iron "wall pipes" for sleeves. Seal pipe penetrations using mechanical sleeve seals. Select sleeve size to allow for 1-inch annular clear space between pipe and sleeve for installing mechanical sleeve seals.
Mechanical Sleeve Seal Installation: Select type and number of sealing elements required for pipe material and size. Position pipe in center of sleeve. Assemble mechanical sleeve seals and install in annular space between pipe and sleeve. Tighten bolts against pressure plates that cause sealing elements to expand and make watertight seal.

Fire-Barrier Penetrations: Maintain indicated fire rating of walls, partitions, ceilings, and floors at pipe penetrations. Seal pipe penetrations with firestop materials. Refer to Division 07 Section "Penetration Firestopping" for materials.

Verify final equipment locations for roughing-in.

Refer to equipment specifications in other Sections of these Specifications for roughing-in requirements.

3.2 PIPING JOINT CONSTRUCTION

A. Join pipe and fittings according to the following requirements and Division 23 Sections specifying piping systems.

B. Ream ends of pipes and tubes and remove burrs. Bevel plain ends of steel pipe.

C. Remove scale, slag, dirt, and debris from inside and outside of pipe and fittings before assembly.

1.1.1.A. Soldered Joints: Apply ASTM B 813, water-flushable flux, unless otherwise indicated, to tube end. Construct joints according to ASTM B 828 or CDA's "Copper Tube Handbook," using lead-free solder alloy complying with ASTM B 32.

Brazed Joints: Construct joints according to AWS's "Brazing Handbook," "Pipe and Tube" Chapter, using copper-phosphorus brazing filler metal complying with AWS A5.8.

Threaded Joints: Thread pipe with tapered pipe threads according to ASME B1.20.1. Cut threads full and clean using sharp dies. Ream threaded pipe ends to remove burrs and restore full ID. Join pipe fittings and valves as follows:
Apply appropriate tape or thread compound to external pipe threads unless dry seal threading is specified.
Damaged Threads: Do not use pipe or pipe fittings with threads that are corroded or damaged. Do not use pipe sections that have cracked or open welds.

Welded Joints: Construct joints according to AWS D10.12, using qualified processes and welding operators according to Part 1 "Quality Assurance" Article.

Flanged Joints: Select appropriate gasket material, size, type, and thickness for service application. Install gasket concentrically positioned. Use suitable lubricants on bolt threads.

Plastic Piping Solvent-Cement Joints: Clean and dry joining surfaces. Join pipe and fittings according to the following:
Comply with ASTM F 402 for safe-handling practice of cleaners, primers, and solvent cements.
CPVC Piping: Join according to ASTM D 2846/D 2846M Appendix.
PVC Pressure Piping: Join schedule number ASTM D 1785, PVC pipe and PVC socket fittings according to ASTM D 2672. Join other-than-schedule-number PVC pipe and socket fittings according to ASTM D 2855.
PVC Nonpressure Piping: Join according to ASTM D 2855.

Plastic Pressure Piping Gasketed Joints: Join according to ASTM D 3139.

Plastic Nonpressure Piping Gasketed Joints: Join according to ASTM D 3212.

PE Piping Heat-Fusion Joints: Clean and dry joining surfaces by wiping with clean cloth or paper towels. Join according to ASTM D 2657.
Plain-End Pipe and Fittings: Use butt fusion.
Plain-End Pipe and Socket Fittings: Use socket fusion.

Fiberglass Bonded Joints: Prepare pipe ends and fittings, apply adhesive, and join according to pipe manufacturer's written instructions.

3.3 PIPING CONNECTIONS

A. Make connections according to the following, unless otherwise indicated:
Install unions, in piping NPS 2 and smaller, adjacent to each valve and at final connection to each piece of equipment.
Install flanges, in piping NPS 2-1/2 and larger, adjacent to flanged valves and at final connection to each piece of equipment.
Dry Piping Systems: Install dielectric unions and flanges to connect piping materials of dissimilar metals.
Wet Piping Systems: Install dielectric coupling and nipple fittings to connect piping materials of dissimilar metals.

3.4 EQUIPMENT INSTALLATION - COMMON REQUIREMENTS

A. Install equipment to allow maximum possible headroom unless specific mounting heights are not indicated.

B. Install equipment level and plumb, parallel and perpendicular to other building systems and components in exposed interior spaces, unless otherwise indicated.

C. Install HVAC equipment to facilitate service, maintenance, and repair or replacement of components. Connect equipment for ease of disconnecting, with minimum interference to other installations. Extend grease fittings to accessible locations.

D. Install equipment to allow right of way for piping installed at required slope.

3.5 PAINTING

A. Painting of HVAC systems, equipment, and components is specified in Division 09 Sections "Interior Painting" and "Exterior Painting."

B. Damage and Touchup: Repair marred and damaged factory-painted finishes with materials and procedures to match original factory finish.

3.6 CONCRETE BASES (Furnished & Installed by General Contractor)

Construct concrete bases of dimensions indicated, but not less than 4 inches larger in both directions than supported unit.
Install dowel rods to connect concrete base to concrete floor. Unless otherwise indicated, install dowel rods on 18-inch centers around the full perimeter of the base.
Install epoxy-coated anchor bolts for supported equipment that extend through concrete base, and anchor into structural concrete floor.
Place and secure anchorage devices. Use supported equipment manufacturer's setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.
Install anchor bolts to elevations required for proper attachment to supported equipment.
Install anchor bolts according to anchor-bolt manufacturer's written instructions.
Use 3000-psi, 28-day compressive-strength concrete and reinforcement as specified in Division 03 Section "Cast-in-Place Concrete or Miscellaneous Cast-in-Place Concrete."

3.7 ERECTION OF METAL SUPPORTS AND ANCHORAGES

A. Refer to Division 05 Section "Metal Fabrications" for structural steel.

B. Cut, fit, and place miscellaneous metal supports accurately in location, alignment, and elevation to support and anchor HVAC materials and equipment.

C. Field Welding: Comply with AWS D1.1.

3.8 ERECTION OF WOOD SUPPORTS AND ANCHORAGES (Where Indicated on the Drawings)

A. Cut, fit, and place wood grounds, nailers, blocking, and anchorages to support, and anchor HVAC materials and equipment.

B. Select fastener sizes that will not penetrate members if opposite side will be exposed to view or will receive finish materials. Tighten connections between members. Install fasteners without splitting wood members.

C. Attach to substrates as required to support applied loads.

3.9 GROUTING

A. Mix and install grout for HVAC equipment base bearing surfaces, pump and other equipment base plates, and anchors.

B. Clean surfaces that will come into contact with grout.

C. Provide forms as required for placement of grout.

D. Avoid air entrapment during placement of grout.

Place grout, completely filling equipment bases.

Place grout on concrete bases and provide smooth bearing surface for equipment.

Place grout around anchors.

Cure placed grout.

END OF DOCUMENT 230500

SECTION 230529 - HANGERS AND SUPPORTS FOR HVAC PIPING AND EQUIPMENT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following hangers and supports for HVAC system piping and equipment:
   1. Steel pipe hangers and supports.
   2. Trapeze pipe hangers.
   3. Metal framing systems.
   4. Thermal-hanger shield inserts.
   5. Fastener systems.
   6. Pipe stands.
   7. Equipment supports.

B. Related Sections include the following:
   1. Division 05 Section "Metal Fabrications" for structural-steel shapes and plates for trapeze hangers for pipe and equipment supports.
   2. Division 21 Section "Water-Based Fire-Suppression Systems" for pipe hangers for fire-protection piping.
   3. Division 23 Section “Expansion Fittings and Loops for HVAC Piping" for pipe guides and anchors.
   4. Division 23 Section “Vibration Controls for HVAC Piping and Equipment" for vibration isolation devices.
   5. Division 23 Section(s) “Metal Ducts" and "Nonmetal Ducts" for duct hangers and supports.

1.3 DEFINITIONS

A. MSS: Manufacturers Standardization Society for The Valve and Fittings Industry Inc.

B. Terminology: As defined in MSS SP-90, "Guidelines on Terminology for Pipe Hangers and Supports."

1.4 PERFORMANCE REQUIREMENTS

A. Supports for multiple pipes, including pipe stands, shall be capable of supporting combined weight of supported systems, system contents, and test water.

B. Equipment supports shall be capable of supporting combined operating weight of supported equipment and connected systems and components.

1.5 SUBMITTALS

A. Product Data: For the following:
   1. Steel pipe hangers and supports.

2. Fiberglass pipe hangers.
3. Thermal-hanger shield inserts.
4. Powder-actuated fastener systems.

B. Shop Drawings: Show fabrication and installation details and include calculations for the following:

1. Trapeze pipe hangers. Include Product Data for components.
2. Metal framing systems. Include Product Data for components.
3. Fiberglass strut systems. Include Product Data for components.
4. Pipe stands. Include Product Data for components.
5. Equipment supports.

C. Welding certificates.

1.6 QUALITY ASSURANCE

A. Welding: Qualify procedures and personnel according to the following:
1. AWS D1.1, "Structural Welding Code--Steel."
2. AWS D1.2, "Structural Welding Code--Aluminum."
3. AWS D1.3, "Structural Welding Code--Sheet Steel."
4. AWS D1.4, "Structural Welding Code--Reinforcing Steel."
5. ASME Boiler and Pressure Vessel Code: Section IX.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. In other Part 2 articles where titles below introduce lists, the following requirements apply to product selection:
1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, manufacturers specified.
2. Manufacturers: Subject to compliance with requirements, provide products by one of the manufacturers specified.

2.2 STEEL PIPE HANGERS AND SUPPORTS

A. Description: MSS SP-58, Types 1 through 58, factory-fabricated components. Refer to Part 3 "Hanger and Support Applications" Article for where to use specific hanger and support types.

B. Available Manufacturers:
1. AAA Technology & Specialties Co., Inc.
2. Bergen-Power Pipe Supports.
3. B-Line Systems, Inc.; a division of Cooper Industries.
4. Carpenter & Paterson, Inc.
5. Empire Industries, Inc.
6. ERICO/Michigan Hanger Co.
7. Globe Pipe Hanger Products, Inc.
8. Grinnell Corp.
9. GS Metals Corp.
10. National Pipe Hanger Corporation.
11. PHD Manufacturing, Inc.

12. PHS Industries, Inc.
13. Piping Technology & Products, Inc.
14. Tolco Inc.

B. Galvanized, Metallic Coatings: Pre-galvanized or hot dipped.

C. Nonmetallic Coatings: Plastic coating, jacket, or liner.

D. Padded Hangers: Hanger with fiberglass or other pipe insulation pad or cushion for support of bearing surface of piping.

2.3 TRAPEZE PIPE HANGERS

A. Description: MSS SP-69, Type 59, shop- or field-fabricated pipe-support assembly made from structural-steel shapes with MSS SP-58 hanger rods, nuts, saddles, and U-bolts.

2.4 METAL FRAMING SYSTEMS

A. Description: MFMA-3, shop- or field-fabricated pipe-support assembly made of steel channels and other components.

B. Coordinate first paragraph and list below with Part 2 "Manufacturers" Article. Retain "Available" for nonproprietary and delete for semi proprietary specifications.

C. Available Manufacturers:
1. B-Line Systems, Inc.; a division of Cooper Industries.
2. ERICO/Michigan Hanger Co.; ERISTRUT Div.
3. GS Metals Corp.
4. Power-Strut Div.; Tyco International, Ltd.
5. Thomas & Betts Corporation.
6. Tolco Inc.
7. Unistrut Corp.; Tyco International, Ltd.

D. Coatings: Manufacturer's standard finish, unless bare metal surfaces are indicated.

E. Nonmetallic Coatings: Plastic coating, jacket, or liner.

2.5 THERMAL-HANGER SHIELD INSERTS

A. Description: 100-psig- minimum, compressive-strength insulation insert encased in sheet metal shield.

B. Available Manufacturers:
1. Carpenter & Paterson, Inc.
2. ERICO/Michigan Hanger Co.
3. PHS Industries, Inc.
4. Pipe Shields, Inc.
5. Rilco Manufacturing Company, Inc.
6. Value Engineered Products, Inc.

C. Insulation-Insert Material for Cold Piping: ASTM C 552, Type II cellular glass with vapor barrier.

D. Insulation-Insert Material for Hot Piping: ASTM C 552, Type II cellular glass.

E. For Trapeze or Clamped Systems: Insert and shield shall cover entire circumference of pipe.

F. For Clevis or Band Hangers: Insert and shield shall cover lower 180 degrees of pipe.

G. Insert Length: Extend 2 inches beyond sheet metal shield for piping operating below ambient air temperature.

2.6 FASTENER SYSTEMS

A. Powder-Actuated Fasteners: Threaded-steel stud, for use in hardened portland cement concrete with pull-out, tension, and shear capacities appropriate for supported loads and building materials where used.
1. Available Manufacturers:
   a. Hilti, Inc.
   b. ITW Ramset/Red Head.
   c. Masterset Fastening Systems, Inc.
   d. MKT Fastening, LLC.
   e. Powers Fasteners.

B. Mechanical-Expansion Anchors: Insert-wedge-type zinc-coated or stainless steel, for use in hardened portland cement concrete with pull-out, tension, and shear capacities appropriate for supported loads and building materials where used.
1. Available Manufacturers:
   a. B-Line Systems, Inc.; a division of Cooper Industries.
   b. Empire Industries, Inc.
   c. Hilti, Inc.
   d. ITW Ramset/Red Head.
   e. MKT Fastening, LLC.
   f. Powers Fasteners.

2.7 PIPE STAND FABRICATION

A. Pipe Stands, General: Shop or field-fabricated assemblies made of manufactured corrosion-resistant components to support roof-mounted piping.

B. Compact Pipe Stand: One-piece plastic unit with integral-rod-roller, pipe clamps, or V-shaped cradle to support pipe, for roof installation without membrane penetration.
1. Available Manufacturers:
   a. ERICO/Michigan Hanger Co.
   b. MIRO Industries.

C. Low-Type, Single-Pipe Stand: One-piece plastic or stainless-steel base unit with plastic roller, for roof installation without membrane penetration.
1. Available Manufacturers:
   a. MIRO Industries.

D. High-Type, Single-Pipe Stand: Assembly of base, vertical and horizontal members, and pipe support, for roof installation without membrane penetration.
1. Available Manufacturers:
   a. ERICO/Michigan Hanger Co.
   b. MIRO Industries.
   c. Portable Pipe Hangers.
2. Base: Stainless steel.

3. Vertical Members: Two or more cadmium-plated-steel or stainless-steel, continuous-thread rods.
4. Horizontal Member: Cadmium-plated-steel or stainless-steel rod with plastic or stainless-steel, roller-type pipe support.

E. High-Type, Multiple-Pipe Stand: Assembly of bases, vertical and horizontal members, and pipe supports, for roof installation without membrane penetration.
1. Available Manufacturers:
   a. Portable Pipe Hangers.
2. Bases: One or more plastic.
3. Vertical Members: Two or more protective-coated-steel channels.
4. Horizontal Member: Protective-coated-steel channel.
5. Pipe Supports: Galvanized-steel, clevis-type pipe hangers.

F. Curb-Mounting-Type Pipe Stands: Shop- or field-fabricated pipe support made from structural-steel shape, continuous-thread rods, and rollers for mounting on permanent stationary roof curb.

2.8 EQUIPMENT SUPPORTS

A. Description: Welded, shop- or field-fabricated equipment support made from structural-steel shapes.

2.9 MISCELLANEOUS MATERIALS

A. Structural Steel: ASTM A 36/A 36M, steel plates, shapes, and bars; black and galvanized.

B. Grout: ASTM C 1107, factory-mixed and -packaged, dry, hydraulic-cement, nonshrink and nonmetallic grout; suitable for interior and exterior applications.
1. Properties: Nonstaining, noncorrosive, and nongaseous.
2. Design Mix: 5000-psi, 28-day compressive strength.

PART 3 - EXECUTION

3.1 HANGER AND SUPPORT APPLICATIONS

A. Specific hanger and support requirements are specified in Sections specifying piping systems and equipment.

B. Comply with MSS SP-69 for pipe hanger selections and applications that are not specified in piping system Sections.

C. Use hangers and supports with galvanized, metallic coatings for piping and equipment that will not have field-applied finish.

D. Use nonmetallic coatings on attachments for electrolytic protection where attachments are in direct contact with copper tubing.

E. Use padded hangers for piping that is subject to scratching.

F. Horizontal-Piping Hangers and Supports: Unless otherwise indicated on the drawings and except as specified in piping system Sections, install the following types:
1. Adjustable, Steel Clevis Hangers (MSS Type 1): For suspension of noninsulated or insulated stationary pipes, NPS 1/2 to NPS 30.

2. Yoke-Type Pipe Clamps (MSS Type 2): For suspension of 120 to 450 deg F pipes, NPS 4 to NPS 16, requiring up to 4 inches of insulation.
3. Carbon- or Alloy-Steel, Double-Bolt Pipe Clamps (MSS Type 3): For suspension of pipes, NPS 3/4 to NPS 24, requiring clamp flexibility and up to 4 inches of insulation.
4. Steel Pipe Clamps (MSS Type 4): For suspension of cold and hot pipes, NPS 1/2 to NPS 24, if little or no insulation is required.
5. Pipe Hangers (MSS Type 5): For suspension of pipes, NPS 1/2 to NPS 4, to allow off-center closure for hanger installation before pipe erection.
6. Adjustable, Swivel Split- or Solid-Ring Hangers (MSS Type 6): For suspension of noninsulated stationary pipes, NPS 3/4 to NPS 8.
7. Adjustable, Steel Band Hangers (MSS Type 7): For suspension of noninsulated stationary pipes, NPS 1/2 to NPS 8.
8. Adjustable Band Hangers (MSS Type 9): For suspension of noninsulated stationary pipes, NPS 1/2 to NPS 8.
9. Adjustable, Swivel-Ring Band Hangers (MSS Type 10): For suspension of noninsulated stationary pipes, NPS 1/2 to NPS 2.
10. Split Pipe-Ring with or without Turnbuckle-Adjustment Hangers (MSS Type 11): For suspension of noninsulated stationary pipes, NPS 3/8 to NPS 8.
11. Extension Hinged or 2-Bolt Split Pipe Clamps (MSS Type 12): For suspension of noninsulated stationary pipes, NPS 3/8 to NPS 3.
12. U-Bolts (MSS Type 24): For support of heavy pipes, NPS 1/2 to NPS 30.
13. Clips (MSS Type 26): For support of insulated pipes not subject to expansion or contraction.
14. Pipe Saddle Supports (MSS Type 36): For support of pipes, NPS 4 to NPS 36, with steel pipe base stanchion support and cast-iron floor flange.
15. Pipe Stanchion Saddles (MSS Type 37): For support of pipes, NPS 4 to NPS 36, with steel pipe base stanchion support and cast-iron floor flange and with U-bolt to retain pipe.
16. Adjustable, Pipe Saddle Supports (MSS Type 38): For stanchion-type support for pipes, NPS 2-1/2 to NPS 36, if vertical adjustment is required, with steel pipe base stanchion support and cast-iron floor flange.
17. Single Pipe Rolls (MSS Type 41): For suspension of pipes, NPS 1 to NPS 30, from 2 rods if longitudinal movement caused by expansion and contraction might occur.
18. Adjustable Roller Hangers (MSS Type 43): For suspension of pipes, NPS 2-1/2 to NPS 20, from single rod if horizontal movement caused by expansion and contraction might occur.
19. Complete Pipe Rolls (MSS Type 44): For support of pipes, NPS 2 to NPS 42, if longitudinal movement caused by expansion and contraction might occur but vertical adjustment is not necessary.
20. Pipe Roll and Plate Units (MSS Type 45): For support of pipes, NPS 2 to NPS 24, if small horizontal movement caused by expansion and contraction might occur and vertical adjustment is not necessary.
21. Adjustable Pipe Roll and Base Units (MSS Type 46): For support of pipes, NPS 2 to NPS 30, if vertical and lateral adjustment during installation might be required in addition to expansion and contraction.

G. Vertical-Piping Clamps: Unless otherwise indicated and except as specified in piping system Sections, install the following types:
1. Riser Clamps (MSS Type 8): For support of pipe risers, NPS 3/4 to NPS 20.
2. Carbon- or Alloy-Steel Riser Clamps (MSS Type 42): For support of pipe risers, NPS 3/4 to NPS 20, if longer ends are required for riser clamps.

H. Hanger-Rod Attachments: Unless otherwise indicated and except as specified in piping system Sections, install the following types:

1. Steel Turnbuckles (MSS Type 13): For adjustment up to 6 inches for heavy loads.
2. Steel Clevises (MSS Type 14): For 120 to 450 deg F piping installations.
3. Swivel Turnbuckles (MSS Type 15): For use with MSS Type 11, split pipe rings.
4. Malleable-Iron Sockets (MSS Type 16): For attaching hanger rods to various types of building attachments.
5. Steel Weldless Eye Nuts (MSS Type 17): For 120 to 450 deg F piping installations.

I. Building Attachments: Unless otherwise indicated and except as specified in piping system Sections, install the following types:
1. Steel or Malleable Concrete Inserts (MSS Type 18): For upper attachment to suspend pipe hangers from concrete ceiling.
2. Top-Beam C-Clamps (MSS Type 19): For use under roof installations with bar-joist construction to attach to top flange of structural shape.
3. Side-Beam or Channel Clamps (MSS Type 20): For attaching to bottom flange of beams, channels, or angles.
4. Center-Beam Clamps (MSS Type 21): For attaching to center of bottom flange of beams.
5. Welded Beam Attachments (MSS Type 22): For attaching to bottom of beams if loads are considerable and rod sizes are large.
6. C-Clamps (MSS Type 23): For structural shapes.
7. Top-Beam Clamps (MSS Type 25): For top of beams if hanger rod is required tangent to flange edge.
8. Side-Beam Clamps (MSS Type 27): For bottom of steel I-beams.
9. Steel-Beam Clamps with Eye Nuts (MSS Type 28): For attaching to bottom of steel I-beams for heavy loads.
10. Linked-Steel Clamps with Eye Nuts (MSS Type 29): For attaching to bottom of steel I-beams for heavy loads, with link extensions.
11. Malleable Beam Clamps with Extension Pieces (MSS Type 30): For attaching to structural steel.
12. Welded-Steel Brackets: For support of pipes from below, or for suspending from above by using clip and rod. Use one of the following for indicated loads:
    a. Light (MSS Type 31): 750 lb.
    b. Medium (MSS Type 32): 1500 lb.
    c. Heavy (MSS Type 33): 3000 lb.
13. Side-Beam Brackets (MSS Type 34): For sides of steel or wooden beams.
14. Plate Lugs (MSS Type 57): For attaching to steel beams if flexibility at beam is required.
15. Horizontal Travelers (MSS Type 58): For supporting piping systems subject to linear horizontal movement where headroom is limited.

J. Saddles and Shields: Unless otherwise indicated and except as specified in piping system Sections, install the following types:
1. Steel Pipe-Covering Protection Saddles (MSS Type 39): To fill interior voids with insulation that matches adjoining insulation.
2. Protection Shields (MSS Type 40): Of length recommended in writing by manufacturer to prevent crushing insulation.
3. Thermal-Hanger Shield Inserts: For supporting insulated pipe.

K. Spring Hangers and Supports: Unless otherwise indicated and except as specified in piping system Sections, install the following types:
1. Restraint-Control Devices (MSS Type 47): Where indicated to control piping movement.
2. Spring Cushions (MSS Type 48): For light loads if vertical movement does not exceed 1-1/4 inches.

3. Spring-Cushion Roll Hangers (MSS Type 49): For equipping Type 41 roll hanger with springs.
4. Spring Sway Braces (MSS Type 50): To retard sway, shock, vibration, or thermal expansion in piping systems.
5. Variable-Spring Hangers (MSS Type 51): Preset to indicated load and limit variability factor to 25 percent to absorb expansion and contraction of piping system from hanger.
6. Variable-Spring Base Supports (MSS Type 52): Preset to indicated load and limit variability factor to 25 percent to absorb expansion and contraction of piping system from base support.
7. Variable-Spring Trapeze Hangers (MSS Type 53): Preset to indicated load and limit variability factor to 25 percent to absorb expansion and contraction of piping system from trapeze support.
8. Constant Supports: For critical piping stress and if necessary to avoid transfer of stress from one support to another support, critical terminal, or connected equipment. Include auxiliary stops for erection, hydrostatic test, and load-adjustment capability. These supports include the following types:
   a. Horizontal (MSS Type 54): Mounted horizontally.
   b. Vertical (MSS Type 55): Mounted vertically.
   c. Trapeze (MSS Type 56): Two vertical-type supports and one trapeze member.

L. Comply with MSS SP-69 for trapeze pipe hanger selections and applications that are not specified in piping system Sections.

M. Comply with MFMA-102 for metal framing system selections and applications that are not specified in piping system Sections.

N. Use mechanical-expansion anchors instead of building attachments where required in concrete construction.

3.2 HANGER AND SUPPORT INSTALLATION

A. Steel Pipe Hanger Installation: Comply with MSS SP-69 and MSS SP-89. Install hangers, supports, clamps, and attachments as required to properly support piping from building structure.

B. Trapeze Pipe Hanger Installation: Comply with MSS SP-69 and MSS SP-89. Arrange for grouping of parallel runs of horizontal piping and support together on field-fabricated trapeze pipe hangers.
1. Pipes of Various Sizes: Support together and space trapezes for smallest pipe size or install intermediate supports for smaller diameter pipes as specified above for individual pipe hangers.
2. Field fabricate from ASTM A 36/A 36M, steel shapes selected for loads being supported. Weld steel according to AWS D1.1.

C. Fiberglass Pipe Hanger Installation: Comply with applicable portions of MSS SP-69 and MSS SP-89. Install hangers and attachments as required to properly support piping from building structure.

D. Metal Framing System Installation: Arrange for grouping of parallel runs of piping and support together on field-assembled metal framing systems.

E. Fiberglass Strut System Installation: Arrange for grouping of parallel runs of piping and

support together on field-assembled fiberglass struts.

F. Thermal-Hanger Shield Installation: Install in pipe hanger or shield for insulated piping.

G. Fastener System Installation:
1. Install mechanical-expansion anchors in concrete after concrete is placed and completely cured. Install fasteners according to manufacturer's written instructions.

H. Pipe Stand Installation:
1. Pipe Stand Types except Curb-Mounting Type: Assemble components and mount on smooth roof surface. Do not penetrate roof membrane.
2. Curb-Mounting-Type Pipe Stands: Assemble components or fabricate pipe stand and mount on permanent, stationary roof curb. Refer to Division 07 Section "Roof Accessories" for curbs.

I. Install hangers and supports complete with necessary inserts, bolts, rods, nuts, washers, and other accessories.

J. Equipment Support Installation: Fabricate from welded-structural-steel shapes.

K. Install hangers and supports to allow controlled thermal and seismic movement of piping systems, to permit freedom of movement between pipe anchors, and to facilitate action of expansion joints, expansion loops, expansion bends, and similar units.

L. Install lateral bracing with pipe hangers and supports to prevent swaying.

M. Install building attachments within concrete slabs or attach to structural steel. Install additional attachments at concentrated loads, including valves, flanges, and strainers, NPS 2-1/2 and larger and at changes in direction of piping. Install concrete inserts before concrete is placed; fasten inserts to forms and install reinforcing bars through openings at top of inserts.

N. Load Distribution: Install hangers and supports so piping live and dead loads and stresses from movement will not be transmitted to connected equipment.

O. Pipe Slopes: Install hangers and supports to provide indicated pipe slopes and so maximum pipe deflections allowed by ASME B31.1 (for power piping) and ASME B31.9 (for building services piping) are not exceeded.

P. Insulated Piping: Comply with the following:
1. Attach clamps and spacers to piping.
   a. Piping Operating above Ambient Air Temperature: Clamp may project through insulation.
   b. Piping Operating below Ambient Air Temperature: Use thermal-hanger shield insert with clamp sized to match OD of insert.
   c. Do not exceed pipe stress limits according to ASME B31.1 for power piping and ASME B31.9 for building services piping.
2. Install MSS SP-58, Type 39, protection saddles if insulation without vapor barrier is indicated. Fill interior voids with insulation that matches adjoining insulation.
   a. Option: Thermal-hanger shield inserts may be used. Include steel weight-distribution plate for pipe NPS 4 and larger if pipe is installed on rollers.
3. Install MSS SP-58, Type 40, protective shields on cold piping with vapor barrier. Shields shall span an arc of 180 degrees.
   a. Option: Thermal-hanger shield inserts may be used. Include steel weight-

distribution plate for pipe NPS 4 and larger if pipe is installed on rollers.

4. Shield Dimensions for Pipe: Not less than the following:
   a. NPS 1/4 to NPS 3-1/2: 12 inches long and 0.048 inch thick.
   b. NPS 4: 12 inches long and 0.06 inch thick.
   c. NPS 5 and NPS 6: 18 inches long and 0.06 inch thick.
   d. NPS 8 to NPS 14: 24 inches long and 0.075 inch thick.
   e. NPS 16 to NPS 24: 24 inches long and 0.105 inch thick.
5. Pipes NPS 8 and Larger: Include wood inserts.
6. Insert Material: Length at least as long as protective shield.
7. Thermal-Hanger Shields: Install with insulation same thickness as piping insulation.

3.3 EQUIPMENT SUPPORTS

A. Fabricate structural-steel stands to suspend equipment from structure overhead or to support equipment above floor.

B. Grouting: Place grout under supports for equipment and make smooth bearing surface.

C. Provide lateral bracing, to prevent swaying, for equipment supports.

3.4 METAL FABRICATIONS

A. Cut, drill, and fit miscellaneous metal fabrications for trapeze pipe hangers and equipment supports.

B. Fit exposed connections together to form hairline joints. Field weld connections that cannot be shop welded because of shipping size limitations.

C. Field Welding: Comply with AWS D1.1 procedures for shielded metal arc welding, appearance and quality of welds, and methods used in correcting welding work, and with the following:
   1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
   2. Obtain fusion without undercut or overlap.
   3. Remove welding flux immediately.
   4. Finish welds at exposed connections so no roughness shows after finishing and contours of welded surfaces match adjacent contours.

3.5 ADJUSTING

A. Hanger Adjustments: Adjust hangers to distribute loads equally on attachments and to achieve indicated slope of pipe.

B. Trim excess length of continuous-thread hanger and support rods to 1-1/2 inches.

3.6 PAINTING (Reference other Section of the General Construction portion of the Specification)

A. Touch Up: Clean field welds and abraded areas of shop paint. Paint exposed areas immediately after erecting hangers and supports. Use same materials as used for shop painting. Comply with SSPC-PA 1 requirements for touching up field-painted surfaces.
   1. Apply paint by brush or spray to provide minimum dry film thickness of 2.0 mils.

B. Touch Up: Cleaning and touchup painting of field welds, bolted connections, and abraded

areas of shop paint on miscellaneous metal are specified in Division 09 painting Sections.

C. Galvanized Surfaces: Clean welds, bolted connections, and abraded areas and apply galvanizing-repair paint to comply with ASTM A 780.

END OF SECTION 230529

SECTION 230548 - VIBRATION CONTROLS FOR HVAC PIPING AND EQUIPMENT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following:
1. Isolation pads.
2. Isolation mounts.
3. Restrained elastomeric isolation mounts.
4. Freestanding and restrained spring isolators.
5. Housed spring mounts.
6. Elastomeric hangers.
7. Spring hangers.
8. Spring hangers with vertical-limit stops.
9. Pipe riser resilient supports.
10. Resilient pipe guides.
11. Freestanding and restrained air-mounting system.
12. Restrained vibration isolation roof-curb rails.
13. Snubbers.
14. Restraining braces and cables.
15. Steel and inertia, vibration isolation equipment bases.

1.3 DEFINITIONS

A. IBC: International Building Code.

B. ICC-ES: ICC-Evaluation Service.

C. OSHPD: Office of Statewide Health Planning and Development for the State of California.

1.4 PERFORMANCE REQUIREMENTS

A. Wind-Restraint Loading:
1. Basic Wind Speed: 140 mph.
2. Minimum 10 lb/sq. ft. multiplied by the maximum area of the HVAC component projected on a vertical plane that is normal to the wind direction, and 45 degrees either side of normal.

1.5 SUBMITTALS

A. Product Data: For the following:
1. Include rated load, rated deflection, and overload capacity for each vibration isolation device.
2. Illustrate and indicate style, material, strength, fastening provision, and finish for each type and size of component used.
3. Interlocking Snubbers: Include ratings for horizontal, vertical, and combined loads.

B. Delegated-Design Submittal: For vibration isolation details indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

1. Design Calculations: Calculate static and dynamic loading due to equipment weight and operation, wind forces required to select vibration isolators, wind restraints, and for designing vibration isolation bases.
   a. Coordinate design calculations with wind load calculations required for equipment mounted outdoors. Comply with requirements in other Division 22 Sections for equipment mounted outdoors.
2. Riser Supports: Include riser diagrams showing anticipated expansion and contraction at each support point, initial and final loads on building structure, spring deflection changes, and loads. Include certification that riser system has been examined for excessive stress and that none will exist.
3. Vibration Isolation Base Details: Detail overall dimensions, including anchorages and attachments to structure and to supported equipment. Include auxiliary motor slides and rails, base weights, equipment static loads, power transmission, component misalignment, and cantilever loads.
4. Wind-Restraint Details:
   a. Design Analysis: To support selection and arrangement of wind restraints. Include calculations of combined tensile and shear loads, prepared by the manufacturer and structural engineer's consultant.
   b. Details: Indicate fabrication and arrangement. Detail attachments of restraints to the restrained items and to the structure. Show attachment locations, methods, and spacings. Identify components, list their strengths, and indicate directions and values of forces transmitted to the structure. Indicate association with vibration isolation devices.
   c. Coordinate restraint and vibration isolation details with wind-restraint details required for equipment mounted outdoors. Comply with requirements in other Division 22 Sections for equipment mounted outdoors.

C. Coordination Drawings: Show coordination of bracing for HVAC piping and equipment with other systems and equipment in the vicinity, including other supports and restraints.

D. Welding certificates.

E. Qualification Data: For professional engineer and testing agency.

F. Air-Mounting System Performance Certification: Include natural frequency, load, and damping test data performed by an independent agency.

G. Field quality-control test reports.

H. Operation and Maintenance Data: For air-mounting systems to include in operation and maintenance manuals.

1.6 QUALITY ASSURANCE

A. Welding: Qualify procedures and personnel according to AWS D1.1/D1.1M, "Structural Welding Code - Steel."

PART 2 - PRODUCTS

2.1 VIBRATION ISOLATORS

A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
   1. Ace Mountings Co., Inc.
   2. Amber/Booth Company, Inc.
   3. California Dynamics Corporation.
   4. Isolation Technology, Inc.

5. Kinetics Noise Control.
6. Mason Industries.
7. Vibration Eliminator Co., Inc.
8. Vibration Isolation.
9. Vibration Mountings & Controls, Inc.

B. Pads: Arranged in single or multiple layers of sufficient stiffness for uniform loading over pad area, molded with a nonslip pattern and galvanized-steel baseplates, and factory cut to sizes that match requirements of supported equipment.
   1. Resilient Material: Oil- and water-resistant neoprene, rubber, and hermetically sealed compressed fiberglass.

C. Mounts: Double-deflection type, with molded, oil-resistant rubber, hermetically sealed compressed fiberglass, or neoprene isolator elements with factory-drilled, encapsulated top plate for bolting to equipment and with baseplate for bolting to structure. Color-code or otherwise identify to indicate capacity range.
   1. Materials: Cast-ductile-iron or welded steel housing containing two separate and opposing, oil-resistant rubber or neoprene elements that prevent central threaded element and attachment hardware from contacting the housing during normal operation.
   2. Neoprene: Shock-absorbing materials compounded according to the standard for bridge-bearing neoprene.

D. Spring Isolators: Freestanding, laterally stable, open-spring isolators.
   1. Outside Spring Diameter: Not less than 80 percent of the compressed height of the spring at rated load.
   2. Minimum Additional Travel: 50 percent of the required deflection at rated load.
   3. Lateral Stiffness: More than 80 percent of rated vertical stiffness.
   4. Overload Capacity: Support 200 percent of rated load, fully compressed, without deformation or failure.
   5. Baseplates: Factory drilled for bolting to structure and bonded to 1/4-inch- thick, rubber isolator pad attached to baseplate underside. Baseplates shall limit floor load to 500 psig.
   6. Top Plate and Adjustment Bolt: Threaded top plate with adjustment bolt and cap screw to fasten and level equipment.

E. Spring Isolators: Freestanding, steel, open-spring isolators with limit-stop restraint.
   1. Housing: Steel with resilient vertical-limit stops to prevent spring extension due to weight being removed; factory-drilled baseplate bonded to 1/4-inch- thick, neoprene or rubber isolator pad attached to baseplate underside; and adjustable equipment mounting and leveling bolt that acts as blocking during installation.
   2. Outside Spring Diameter: Not less than 80 percent of the compressed height of the spring at rated load.
   3. Minimum Additional Travel: 50 percent of the required deflection at rated load.
   4. Lateral Stiffness: More than 80 percent of rated vertical stiffness.
   5. Overload Capacity: Support 200 percent of rated load, fully compressed, without deformation or failure.

F. Housed Spring Mounts: Housed spring isolator with integral snubbers.
   1. Housing: Ductile-iron or steel housing to provide all-directional restraint.
   2. Base: Factory drilled for bolting to structure.
   3. Snubbers: Vertically adjustable to allow a maximum of 1/4-inch travel up or down before contacting a resilient collar.

G. Elastomeric Hangers: Single or double-deflection type, fitted with molded, oil-resistant elastomeric isolator elements bonded to steel housings with threaded connections for hanger rods. Color-code or otherwise identify to indicate capacity range.

H. Spring Hangers: Combination coil-spring and elastomeric-insert hanger with spring and insert in compression.
1. Frame: Steel, fabricated for connection to threaded hanger rods and to allow for a maximum of 30 degrees of angular hanger-rod misalignment without binding or reducing isolation efficiency.
2. Outside Spring Diameter: Not less than 80 percent of the compressed height of the spring at rated load.
3. Minimum Additional Travel: 50 percent of the required deflection at rated load.
4. Lateral Stiffness: More than 80 percent of rated vertical stiffness.
5. Overload Capacity: Support 200 percent of rated load, fully compressed, without deformation or failure.
6. Elastomeric Element: Molded, oil-resistant rubber or neoprene. Steel-washer-reinforced cup to support spring and bushing projecting through bottom of frame.
7. Self-centering hanger rod cap to ensure concentricity between hanger rod and support spring coil.

I. Spring Hangers with Vertical-Limit Stop: Combination coil-spring and elastomeric-insert hanger with spring and insert in compression and with a vertical-limit stop.
1. Frame: Steel, fabricated for connection to threaded hanger rods and to allow for a maximum of 30 degrees of angular hanger-rod misalignment without binding or reducing isolation efficiency.
2. Outside Spring Diameter: Not less than 80 percent of the compressed height of the spring at rated load.
3. Minimum Additional Travel: 50 percent of the required deflection at rated load.
4. Lateral Stiffness: More than 80 percent of rated vertical stiffness.
5. Overload Capacity: Support 200 percent of rated load, fully compressed, without deformation or failure.
6. Elastomeric Element: Molded, oil-resistant rubber or neoprene.
7. Adjustable Vertical Stop: Steel washer with neoprene washer "up-stop" on lower threaded rod.
8. Self-centering hanger rod cap to ensure concentricity between hanger rod and support spring coil.

J. Pipe Riser Resilient Support: All-directional, acoustical pipe anchor consisting of 2 steel tubes separated by a minimum of 1/2-inch- thick neoprene. Include steel and neoprene vertical-limit stops arranged to prevent vertical travel in both directions. Design support for a maximum load on the isolation material of 500 psig and for equal resistance in all directions.

K. Resilient Pipe Guides: Telescopic arrangement of 2 steel tubes or post and sleeve arrangement separated by a minimum of 1/2-inch- thick neoprene. Where clearances are not readily visible, a factory-set guide height with a shear pin to allow vertical motion due to pipe expansion and contraction shall be fitted. Shear pin shall be removable and reinsertable to allow for selection of pipe movement. Guides shall be capable of motion to meet location requirements.

2.2 RESTRAINED VIBRATION ISOLATION ROOF-CURB RAILS

A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
1. Amber/Booth Company, Inc.
2. California Dynamics Corporation.
3. Isolation Technology, Inc.
4. Kinetics Noise Control.
5. Mason Industries.
6. Thybar Corporation.
7. Vibration Eliminator Co., Inc.

8. Vibration Isolation.
9. Vibration Mountings & Controls, Inc.

B. Retain option in first two paragraphs below if required by authorities having jurisdiction.

C. General Requirements for Restrained Vibration Isolation Roof-Curb Rails: Factory-assembled, fully enclosed, insulated, air- and watertight curb rail designed to resiliently support equipment and to withstand wind forces.

D. D. Lower Support Assembly: Formed sheet-metal section containing adjustable and removable steel springs that support upper frame. Upper frame shall provide continuous support for equipment and shall be captive to resiliently resist wind forces. Lower support assembly shall have a means for attaching to building structure and a wood nailer for attaching roof materials, and shall be insulated with a minimum of 2 inches of rigid, glass-fiber insulation on inside of assembly.

E. Spring Isolators: Adjustable, restrained spring isolators shall be mounted on 1/4-inch- t thick, elastomeric vibration isolation pads and shall have access ports, for level adjustment, with removable waterproof covers at all isolator locations. Isolators shall be located so they are accessible for adjustment at any time during the life of the installation without interfering with the integrity of the roof.
   1. Restrained Spring Isolators: Freestanding, steel, open-spring isolators with wind restraint.
      a. Housing: Steel with resilient vertical-limit stops and adjustable equipment mounting and leveling bolt.
      b. Outside Spring Diameter: Not less than 80 percent of the compressed height of the spring at rated load.
      c. Minimum Additional Travel: 50 percent of the required deflection at rated load.
      d. Lateral Stiffness: More than 80 percent of rated vertical stiffness.
      e. Overload Capacity: Support 200 percent of rated load, fully compressed, without deformation or failure.
   2. Pads: Arranged in single or multiple layers of sufficient stiffness for uniform loading over pad area, molded with a nonslip pattern and galvanized-steel baseplates, and factory cut to sizes that match requirements of supported equipment.
      a. Resilient Material: Oil- and water-resistant standard neoprene, natural rubber, or hermetically sealed compressed fiberglass.

F. Snubber Bushings: All-directional, elastomeric snubber bushings at least 1/4 inch thick.

G. Water Seal: Galvanized sheet metal with EPDM seals at corners, attached to upper support frame, extending down past wood nailer of lower support assembly, and counterflashed over roof materials.

2.3 VIBRATION ISOLATION EQUIPMENT BASES

A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
   1. Amber/Booth Company, Inc.
   2. California Dynamics Corporation.
   3. Isolation Technology, Inc.
   4. Kinetics Noise Control.
   5. Mason Industries.
   6. Vibration Eliminator Co., Inc.
   7. Vibration Isolation.
   8. Vibration Mountings & Controls, Inc.

B. Steel Base: Factory-fabricated, welded, structural-steel bases and rails.
   1. Design Requirements: Lowest possible mounting height with not less than 1-inch clearance above the floor. Include equipment anchor bolts and auxiliary motor slide bases or rails.
      a. Include supports for suction and discharge elbows for pumps.
   2. Structural Steel: Steel shapes, plates, and bars complying with ASTM A 36/A 36M. Bases shall have shape to accommodate supported equipment.
   3. Support Brackets: Factory-welded steel brackets on frame for outrigger isolation mountings and to provide for anchor bolts and equipment support.

C. Inertia Base: Factory-fabricated, welded, structural-steel bases and rails ready for placement of cast-in-place concrete.
   1. Design Requirements: Lowest possible mounting height with not less than 1-inch clearance above the floor. Include equipment anchor bolts and auxiliary motor slide bases or rails.
      b. Include supports for suction and discharge elbows for pumps.
   2. Structural Steel: Steel shapes, plates, and bars complying with ASTM A 36/A 36M. Bases shall have shape to accommodate supported equipment.
   3. Support Brackets: Factory-welded steel brackets on frame for outrigger isolation mountings and to provide for anchor bolts and equipment support.
   4. Fabrication: Fabricate steel templates to hold equipment anchor-bolt sleeves and anchors in place during placement of concrete. Obtain anchor-bolt templates from supported equipment manufacturer.

2.4 FACTORY FINISHES

A. Finish: Manufacturer's standard prime-coat finish ready for field painting.

B. Finish: Manufacturer's standard paint applied to factory-assembled and -tested equipment before shipping.
   1. Powder coating on springs and housings.
   2. All hardware shall be galvanized. Hot-dip galvanize metal components for exterior use.
   3. Baked enamel or powder coat for metal components on isolators for interior use.
   4. Color-code or otherwise mark vibration isolation and wind-control devices to indicate capacity range.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas and equipment to receive vibration isolation and wind-control devices for compliance with requirements for installation tolerances and other conditions affecting performance.

B. Examine roughing-in of reinforcement and cast-in-place anchors to verify actual locations before installation.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 APPLICATIONS

A. Multiple Pipe Supports: Secure pipes to trapeze member with clamps approved for application by an agency acceptable to authorities having jurisdiction.

B. Hanger Rod Stiffeners: Install hanger rod stiffeners where indicated or scheduled on Drawings to receive them and where required to prevent buckling of hanger rods due to forces.

C. Strength of Support and Restraint Assemblies: Where not indicated, select sizes of components so strength will be adequate to carry present and future loads within specified loading limits.

3.3 VIBRATION-CONTROL DEVICE INSTALLATION

A. Comply with requirements in Division 07 Section "Roof Accessories" for installation of roof curbs, equipment supports, and roof penetrations.

B. Equipment Restraints:
1. Install snubbers on HVAC equipment mounted on vibration isolators. Locate snubbers as close as possible to vibration isolators and bolt to equipment base and supporting structure.
2. Install resilient bolt isolation washers on equipment anchor bolts where clearance between anchor and adjacent surface exceeds 0.125 inch.

C. Piping Restraints:
1. Comply with requirements in MSS SP-127.
2. Space lateral supports a maximum of 40 feet o.c., and longitudinal supports a maximum of 80 feet o.c.
3. Brace a change of direction longer than 12 feet.

D. Install cables so they do not bend across edges of adjacent equipment or building structure.

E. Install restraint devices using methods approved by an agency acceptable to authorities having jurisdiction providing required submittals for component.

F. Install bushing assemblies for anchor bolts for floor-mounted equipment, arranged to provide resilient media between anchor bolt and mounting hole in concrete base.

G. Install bushing assemblies for mounting bolts for wall-mounted equipment, arranged to provide resilient media where equipment or equipment-mounting channels are attached to wall.

H. Attachment to Structure: If specific attachment is not indicated, anchor bracing to structure at flanges of beams, at upper truss chords of bar joists, or at concrete members.

I. Drilled-in Anchors (Where indicated on the drawings):
1. Identify position of reinforcing steel and other embedded items prior to drilling holes for anchors. Do not damage existing reinforcing or embedded items during coring or drilling. Notify the structural engineer if reinforcing steel or other embedded items are encountered during drilling. Locate and avoid prestressed tendons, electrical and telecommunications conduit, and gas lines.
2. Do not drill holes in concrete or masonry until concrete, mortar, or grout has achieved full design strength.
3. Wedge Anchors: Protect threads from damage during anchor installation. Heavy-duty sleeve anchors shall be installed with sleeve fully engaged in the structural element to which anchor is to be fastened.
4. Adhesive Anchors: Clean holes to remove loose material and drilling dust prior to installation of adhesive. Place adhesive in holes proceeding from the bottom of the hole and progressing toward the surface in such a manner as to avoid introduction of air pockets in the adhesive.
5. Set anchors to manufacturer's recommended torque, using a torque wrench.
6. Install zinc-coated steel anchors for interior and stainless-steel anchors for exterior applications.

3.4 FIELD QUALITY CONTROL

A. Perform tests and inspections.

B. Tests and Inspections:
1. Provide evidence of recent calibration of test equipment by a testing agency acceptable to authorities having jurisdiction.
2. Schedule test with Owner, through Architect, before connecting anchorage device to restrained component (unless post connection testing has been approved), and with at least seven days' advance notice.
3. Obtain Architect's approval before transmitting test loads to structure. Provide temporary load-spreading members.
4. Test at least four of each type and size of installed anchors and fasteners selected by Architect.
5. Test to 90 percent of rated proof load of device.
6. Measure isolator restraint clearance.
7. Measure isolator deflection.
8. Verify snubber minimum clearances.
9. Test and adjust air-mounting system controls and safeties.
10. If a device fails test, modify all installations of same type and retest until satisfactory results are achieved.

C. Remove and replace malfunctioning units and retest as specified above.

D. Prepare test and inspection reports.

3.5 ADJUSTING

A. Adjust isolators after piping system is at operating weight.

B. Adjust limit stops on restrained spring isolators to mount equipment at normal operating height. After equipment installation is complete, adjust limit stops so they are out of contact during normal operation.

C. Adjust air-spring leveling mechanism.

D. Adjust active height of spring isolators.

E. Adjust restraints to permit free movement of equipment within normal mode of operation.

3.6 DEMONSTRATION

A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain air-mounting systems. Refer to Division 01 Section "Demonstration And Training."

END OF DOCUMENT 230548

SECTION 23 0553 - IDENTIFICATION HVAC PIPING AND EQUIPMENT

GENERAL

1.1 SUMMARY

A. Section Includes:

1. Identifying Devices and Labels

B. Related Sections:

1. Section 23 05 00 (15050) – Common Work Results for HVAC

1.2 REFERENCES

A. ASTM International (ASTM) Publications: (Former American Society for Testing and Materials)

1. C1036 “Standard Specification for Flat Glass”

B. The American Society of Mechanical Engineers (ASME) Publications:

1. A13.1 “Scheme for the Identification of Piping Systems”

1.3 SUBMITTALS

A. General: Submit the following in accordance with Conditions of Contract and Division 01 Specification Sections.

B. Submit “Letter of Conformance” in accordance with Section 01 33 00 indicating specified items selected for use in project with the following supporting data.

1. Product Data: For identification materials and devices.
2. Samples: Of color, lettering style, and graphic representation required for each identification material and device.

C. QUALITY ASSURANCE

D. Comply with ASME A13.1, "Scheme for the Identification of Piping Systems" for lettering size, length of color field, colors, and viewing angles of identification devices.

E. SEQUENCING AND SCHEDULING

F. Coordinate installation of identifying devices with completion of covering and painting of surfaces where devices are to be applied.

G. Install identifying devices before installing acoustical ceilings and similar concealment.

1.4 PRODUCTS

1.5 GENERAL

A. General: Products specified are for applications referenced in other Division 23 Sections. If more than single type is specified for listed applications, selection is Installer's option.

B. Pipes Including Insulation: Full-band pipe markers, extending 360 degrees around pipe at each location.

1.6 IDENTIFYING DEVICES AND LABELS

A. Lettering: Manufacturer's standard preprinted captions as selected by Owner's Representative.

B. Lettering: Use piping system terms indicated and abbreviate only as necessary for each application length.

1. Arrows: Either integrally with piping system service lettering, to accommodate both directions, or as separate unit, on each pipe marker to indicate direction of flow.

C. Plastic Duct Markers: Manufacturer's standard laminated plastic, in the following color codes:

1. Green: Cold-air supply.

2. Yellow: Hot-air supply.
3. Blue: Exhaust, outside, return, and mixed air.
4. Terminology: Include direction of airflow; duct service such as supply, return, and exhaust; duct origin, duct destination, and design flow.

D. Plastic Tape: Manufacturer's standard color-coded, pressure-sensitive, self-adhesive, vinyl tape, at least 3 mils thick.
1. Width: 1-1/2 inches on pipes with OD, including insulation, less than 6 inches; 2-1/2 inches for larger pipes.
2. Color: Comply with ASME A13.1, unless otherwise indicated.

E. Valve Tags: Stamped or engraved with 1/4-inch letters for piping system abbreviation and 1/2-inch sequenced numbers. Include 5/32-inch hole for fastener.
1. Material: 0.032-inch thick, polished brass.
2. Size: 1-1/2-inches diameter, unless otherwise indicated.

F. Valve Tag Fasteners: Brass, wire-link chain and S-hooks.

G. Access Panel Markers: 1/16-inch thick, engraved plastic-laminate markers, with abbreviated terms and numbers corresponding to concealed valve. Provide 1/8-inch center hole for attachment.

1.7 Valve Schedule Frames: Glazed display frame for removable mounting on masonry walls for each page of valve schedule. Include screws.

A. Frame: Extruded aluminum.

B. Glazing: ASTM C1036, Type I, Class 1, Glazing quality B, 2.5-mm, single-thickness glass.

1.8 Lettering and Graphics: Coordinate names, abbreviations, and other designations used in mechanical identification with corresponding designations indicated. Use numbers, letters, and terms indicated for proper identification, operation, and maintenance of mechanical systems and equipment.

A. Multiple Systems: Identify individual system number and service if multiple systems of same name are indicated.

1.9 EXECUTION

A. LABELING AND IDENTIFYING PIPING SYSTEMS

B. Install pipe markers on each system as indicated below. Include arrows showing normal direction of flow.
1. Gas.
2. Condensate.
3. Vent.

C. Marker Type: Plastic markers, with application systems. Install on pipe insulation segment where required for hot, noninsulated pipes.

D. Fasten markers on pipes and insulated pipes by one of following methods:
1. Snap-on application of pretensioned, semirigid plastic pipe marker.

E. Locate pipe markers where piping is exposed in machine rooms; accessible maintenance spaces such as shafts, tunnels, and plenums; and exterior nonconcealed locations according to the following:
1. Near each valve and control device.
2. Near each branch connection, excluding short takeoffs for fixtures and terminal units. Mark each pipe at branch, where flow pattern is not obvious.
3. Near penetrations through walls, floors, ceilings, or nonaccessible enclosures.
4. At access doors, manholes, and similar access points that permit view of concealed piping.

5. Near major equipment items and other points of origination and termination.
6. Spaced at a maximum of 50-foot intervals along each run. Reduce intervals to 25 feet in areas of congested piping and equipment.
7. On piping above removable acoustical ceilings, except omit intermediately spaced markers.

1.10 VALVE TAGS

A. Install on valves and control devices in piping systems, except check valves, valves within factory-fabricated equipment units, plumbing fixture supply stops, shutoff valves, faucets, convenience and lawn-watering hose connections, and HVAC terminal devices and similar roughing-in connections of end-use fixtures and units. List tagged valves in valve schedule.

B. Valve Tag Application Schedule: Tag valves according to size, shape, color scheme, and with captions similar to those indicated in the following:
   1. Chilled Water
   2. Heating Hot Water
   3. Condenser Water

C. Tag Material: Brass.

D. Tag Size and Shape: According to the following:
   1. Cold Water: 1-1/2 inches round.
   2. Hot Water: 1-1/2 inches round.
   3. Gas: 1-1/2 inches round.

E. Install framed valve schedule in each major mechanical equipment room.

F. Valve schedule and tag locations shall be shown on record drawings.

1.11 LABELING AND IDENTIFYING DUCT SYSTEMS.

A. Duct Systems: Identify air supply, return, exhaust, intake, and relief ducts with duct markers; or provide stenciled signs and arrows showing service and direction of flow.
   1. Location: Locate signs near points where ducts enter into concealed spaces and at maximum intervals of 50 feet in each space where ducts are exposed or concealed by removable ceiling system.

1.12 ADJUSTING AND CLEANING

A. Relocate HVAC identification materials and devices that have become visually blocked by work of this or other Divisions.

B. Clean faces of identification devices and glass frames of valve charts

END OF DOCUMENT 230553

SECTION 230593 - TESTING-ADJUSTING AND BALANCING FOR HVAC

PART 1 GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:
   1. Balancing Air Systems:
      a. Constant-volume air systems.

1.3 DEFINITIONS

A. AABC: Associated Air Balance Council.

B. NEBB: National Environmental Balancing Bureau.

C. TAB: Testing, adjusting, and balancing.

D. TABB: Testing, Adjusting, and Balancing Bureau.

E. TAB Specialist: An entity engaged to perform TAB Work.

1.4 SUBMITTALS

A. Qualification Data: Within 45 days of Contractor's Notice to Proceed, submit documentation that the TAB contractor and this Project's TAB team members meet the qualifications specified in "Quality Assurance" Article.

B. Contract Documents Examination Report: Within 45 days of Contractor's Notice to Proceed, submit the Contract Documents review report as specified in Part 3.

C. Strategies and Procedures Plan: Within 60 days of Contractor's Notice to Proceed, submit TAB strategies and step-by-step procedures as specified in "Preparation" Article.

D. Certified TAB reports.

E. Sample report forms.

F. Instrument calibration reports, to include the following:
   1. Instrument type and make.
   2. Serial number.
   3. Application.
   4. Dates of use.
   5. Dates of calibration.

1.5 QUALITY ASSURANCE

A. TAB Contractor Qualifications: Engage a TAB entity certified by AABC NEBB or TABB.

1. TAB Field Supervisor: Employee of the TAB contractor and certified by AABC NEBB or TABB.
2. TAB Technician: Employee of the TAB contractor and who is certified by AABC NEBB or TABB as a TAB technician.

B. TAB Conference: Meet with Architect, Owner, Construction Manager, and, when required, Commissioning Authority on approval of the TAB strategies and procedures plan to develop a mutual understanding of the details. Require the participation of the TAB field supervisor and technicians. Provide seven days' advance notice of scheduled meeting time and location.
1. Agenda Items:
a. The Contract Documents examination report.
b. The TAB plan.
c. Coordination and cooperation of trades and subcontractors.
d. Coordination of documentation and communication flow.

C. Certify TAB field data reports and perform the following:
1. Review field data reports to validate accuracy of data and to prepare certified TAB reports.
2. Certify that the TAB team complied with the approved TAB plan and the procedures specified and referenced in this Specification.

D. TAB Report Forms: Use standard TAB contractor's forms approved by Architect, Owner, Construction Manager, and, when required, Commissioning Authority.

E. Instrumentation Type, Quantity, Accuracy, and Calibration: As described in ASHRAE 111, Section 5, "Instrumentation."

1.6 PROJECT CONDITIONS

A. Full Owner Occupancy: Owner will occupy the site and existing building during entire TAB period. Cooperate with Owner during TAB operations to minimize conflicts with Owner's operations.

B. Partial Owner Occupancy: Owner may occupy completed areas of building before Substantial Completion. Cooperate with Owner during TAB operations to minimize conflicts with Owner's operations.

1.7 COORDINATION

A. Notice: Provide seven days' advance notice for each test. Include scheduled test dates and times.

B. Perform TAB after leakage and pressure tests on air and water distribution systems have been satisfactorily completed.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.0 EXAMINATION

A. Examine the Contract Documents to become familiar with Project requirements and to discover conditions in systems' designs that may preclude proper TAB of systems and equipment.

B. Examine systems for installed balancing devices, such as test ports, gage cocks, thermometer wells, flow-control devices, balancing valves and fittings, and manual volume dampers. Verify that locations of these balancing devices are accessible.

C. Examine the approved submittals for HVAC systems and equipment.

D. Examine design data including HVAC system descriptions, statements of design assumptions for environmental conditions and systems' output, and statements of philosophies and assumptions about HVAC system and equipment controls.

E. Examine ceiling plenums and underfloor air plenums used for supply, return, or relief air to verify that they meet the leakage class of connected ducts as specified in Division 23 Section "Metal Ducts" and "Nonmetal Ducts" and are properly separated from adjacent areas. Verify that penetrations in plenum walls are sealed and fire-stopped if required.

F. Examine equipment performance data including fan and pump curves.
   1. Relate performance data to Project conditions and requirements, including system effects that can create undesired or unpredicted conditions that cause reduced capacities in all or part of a system.
   2. Calculate system-effect factors to reduce performance ratings of HVAC equipment when installed under conditions different from the conditions used to rate equipment performance. To calculate system effects for air systems, use tables and charts found in AMCA 201, "Fans and Systems," or in SMACNA's "HVAC Systems - Duct Design." Compare results with the design data and installed conditions.

G. Examine system and equipment installations and verify that field quality-control testing, cleaning, and adjusting specified in individual Sections have been performed.

H. Examine test reports specified in individual system and equipment Sections.

I. Examine HVAC equipment and filters and verify that bearings are greased, belts are aligned and tight, and equipment with functioning controls is ready for operation.

J. Examine terminal units, such as variable-air-volume boxes, and verify that they are accessible and their controls are connected and functioning.

K. Examine strainers. Verify that startup screens are replaced by permanent screens with indicated perforations.

L. Examine heat-transfer coils for correct piping connections and for clean and straight fins.

M. Examine operating safety interlocks and controls on HVAC equipment.

N. Report deficiencies discovered before and during performance of TAB procedures. Observe and record system reactions to changes in conditions. Record default set points if different from indicated values.

3.1 PREPARATION

A. Prepare a TAB plan that includes strategies and step-by-step procedures.

B. Complete system-readiness checks and prepare reports. Verify the following:
   1. Permanent electrical-power wiring is complete.
   2. Automatic temperature-control systems are operational.
   3. Equipment and duct access doors are securely closed.

4. Balance, smoke, and fire dampers are open.
5. Isolating and balancing valves are open and control valves are operational.
6. Ceilings are installed in critical areas where air-pattern adjustments are required and access to balancing devices is provided.
7. Windows and doors can be closed so indicated conditions for system operations can be met.

3.2 GENERAL PROCEDURES FOR TESTING AND BALANCING

A. Perform testing and balancing procedures on each system according to the procedures contained in AABC's "National Standards for Total System Balance" or ASHRAE 111 and in this Section.
   1. Comply with requirements in ASHRAE 62.1-2004, Section 7.2.2, "Air Balancing."

B. Cut insulation, ducts, pipes, and equipment cabinets for installation of test probes to the minimum extent necessary for TAB procedures.
   1. After testing and balancing, patch probe holes in ducts with same material and thickness as used to construct ducts.
   2. Install and join new insulation that matches removed materials. Restore insulation, coverings, vapor barrier, and finish according to Division 23 Section "HVAC Insulation."

C. Mark equipment and balancing devices, including damper-control positions, valve position indicators, fan-speed-control levers, and similar controls and devices, with paint or other suitable, permanent identification material to show final settings.

D. Take and report testing and balancing measurements in inch-pound (IP) units.

3.3 GENERAL PROCEDURES FOR BALANCING AIR SYSTEMS

A. Prepare test reports for both fans and outlets. Obtain manufacturer's outlet factors and recommended testing procedures. Crosscheck the summation of required outlet volumes with required fan volumes.

B. Prepare schematic diagrams of systems' "as-built" duct layouts.

C. Determine the best locations in main and branch ducts for accurate duct-airflow measurements.

D. Check airflow patterns from the outdoor-air louvers and dampers and the return- and exhaust-air dampers through the supply-fan discharge and mixing dampers.

E. Locate start-stop and disconnect switches, electrical interlocks, and motor starters.

F. Verify that motor starters are equipped with properly sized thermal protection.

G. Check dampers for proper position to achieve desired airflow path.

H. Check for airflow blockages.

I. Check condensate drains for proper connections and functioning.

J. Check for proper sealing of air-handling-unit components.

K. Verify that air duct system is sealed as specified in Division 23 Section "Metal Ducts."

3.4 PROCEDURES FOR CONSTANT-VOLUME AIR SYSTEMS

A. Adjust fans to deliver total indicated airflows within the maximum allowable fan speed listed by fan manufacturer.
   1. Measure total airflow.
      a. Where sufficient space in ducts is unavailable for Pitot-tube traverse measurements, measure airflow at terminal outlets and inlets and calculate the total airflow.
   2. Measure fan static pressures as follows to determine actual static pressure:
      a. Measure outlet static pressure as far downstream from the fan as practical and upstream from restrictions in ducts such as elbows and transitions.
      b. Measure static pressure directly at the fan outlet or through the flexible connection.
      c. Measure inlet static pressure of single-inlet fans in the inlet duct as near the fan as possible, upstream from the flexible connection, and downstream from duct restrictions.
      d. Measure inlet static pressure of double-inlet fans through the wall of the plenum that houses the fan.
   3. Measure static pressure across each component that makes up an air-handling unit, rooftop unit, and other air-handling and -treating equipment.
      a. Report the cleanliness status of filters and the time static pressures are measured.
   4. Measure static pressures entering and leaving other devices, such as sound traps, heat-recovery equipment, and air washers, under final balanced conditions.
   5. Review Record Documents to determine variations in design static pressures versus actual static pressures. Calculate actual system-effect factors. Recommend adjustments to accommodate actual conditions.
   6. Obtain approval from Architect, Owner, Construction Manager, and, when required, Commissioning Authority for adjustment of fan speed higher or lower than indicated speed. Comply with requirements in Division 23 Sections for air-handling units for adjustment of fans, belts, and pulley sizes to achieve indicated air-handling-unit performance.
   7. Do not make fan-speed adjustments that result in motor overload. Consult equipment manufacturers about fan-speed safety factors. Modulate dampers and measure fan-motor amperage to ensure that no overload will occur. Measure amperage in full-cooling, full-heating, economizer, and any other operating mode to determine the maximum required brake horsepower.

B. Adjust volume dampers for main duct, submain ducts, and major branch ducts to indicated airflows within specified tolerances.
   1. Measure airflow of submain and branch ducts.
      a. Where sufficient space in submain and branch ducts is unavailable for Pitot-tube traverse measurements, measure airflow at terminal outlets and inlets and calculate the total airflow for that zone.
   2. Measure static pressure at a point downstream from the balancing damper, and adjust volume dampers until the proper static pressure is achieved.
   3. Remeasure each submain and branch duct after all have been adjusted. Continue to adjust submain and branch ducts to indicated airflows within specified tolerances.

C. Measure air outlets and inlets without making adjustments.
   1. Measure terminal outlets using a direct-reading hood or outlet manufacturer's written instructions and calculating factors.

D. Adjust air outlets and inlets for each space to indicated airflows within specified tolerances of indicated values. Make adjustments using branch volume dampers rather than extractors and the dampers at air terminals.
   1. Adjust each outlet in same room or space to within specified tolerances of indicated quantities without generating noise levels above the limitations prescribed by the Contract Documents.
   2. Adjust patterns of adjustable outlets for proper distribution without drafts.

3.5 PROCEDURES FOR CONDENSING UNITS

A. Verify proper rotation of fans.

B. Measure entering- and leaving-air temperatures.

C. Record compressor data.

3.6 PROCEDURES FOR HEAT-TRANSFER COILS (AS APPLICABLE)

A. Measure, adjust, and record the following data for each electric heating coil:
   1. Nameplate data.
   2. Airflow.
   3. Entering- and leaving-air temperature at full load.
   4. Voltage and amperage input of each phase at full load and at each incremental stage.
   5. Calculated kilowatt at full load.
   6. Fuse or circuit-breaker rating for overload protection.

B. Measure, adjust, and record the following data for each refrigerant coil:
   1. Dry-bulb temperature of entering and leaving air.
   2. Wet-bulb temperature of entering and leaving air.
   3. Airflow.
   4. Air pressure drop.
   5. Refrigerant suction pressure and temperature.

C. Set HVAC system's air flow rates and water flow rates within the following tolerances:
   1. Supply, Return, and Exhaust Fans and Equipment with Fans: Plus or minus 10 percent.
   2. Air Outlets and Inlets: Plus or minus 10 percent.
   3. Heating-Water Flow Rate: Plus or minus 10 percent.
   4. Cooling-Water Flow Rate: Plus or minus 10 percent.
   5. Fans, Inlets, Equipment related to the smoke control system: Plus or minus 5 percent.

3.7 REPORTING

A. Initial Construction-Phase Report: Based on examination of the Contract Documents as specified in "Examination" Article, prepare a report on the adequacy of design for systems' balancing devices. Recommend changes and additions to systems' balancing devices to facilitate proper performance measuring and balancing. Recommend changes and additions to HVAC systems and general construction to allow access for performance measuring and balancing devices.

B. Status Reports: Prepare biweekly progress reports to describe completed procedures, procedures in progress, and scheduled procedures. Include a list of deficiencies and

problems found in systems being tested and balanced. Prepare a separate report for each system and each building floor for systems serving multiple floors.

3.8 FINAL REPORT

A. General: Prepare a certified written report; tabulate and divide the report into separate sections for tested systems and balanced systems.
   1. Include a certification sheet at the front of the report's binder, signed and sealed by the certified testing and balancing engineer.
   2. Include a list of instruments used for procedures, along with proof of calibration.

B. Final Report Contents: In addition to certified field-report data, include the following:
   1. Fan curves.
   2. Manufacturers' test data.
   3. Field test reports prepared by system and equipment installers.
   4. Other information relative to equipment performance; do not include Shop Drawings and product data.

C. General Report Data: In addition to form titles and entries, include the following data:
   1. Title page.
   2. Name and address of the TAB contractor.
   3. Project name.
   4. Project location.
   5. Architect's name and address.
   6. Engineer's name and address.
   7. Contractor's name and address.
   8. Report date.
   9. Signature of TAB supervisor who certifies the report.
   10. Table of Contents with the total number of pages defined for each section of the report. Number each page in the report.
   11. Summary of contents including the following:
      a. Indicated versus final performance.
      b. Notable characteristics of systems.
      c. Description of system operation sequence if it varies from the Contract Documents.
   12. Nomenclature sheets for each item of equipment.
   13. Data for terminal units, including manufacturer's name, type, size, and fittings.
   14. Notes to explain why certain final data in the body of reports vary from indicated values.
   15. Test conditions for fans and pump performance forms including the following:
      a. Settings for outdoor-, return-, and exhaust-air dampers.
      b. Conditions of filters.
      c. Cooling coil, wet- and dry-bulb conditions.
      d. Face and bypass damper settings at coils.
      e. Fan drive settings including settings and percentage of maximum pitch diameter.
      f. Inlet vane settings for variable-air-volume systems.
      g. Settings for supply-air, static-pressure controller.
      h. Other system operating conditions that affect performance.

D. System Diagrams: Include schematic layouts of air and hydronic distribution systems. Present each system with single-line diagram and include the following:
   1. Quantities of outdoor, supply, return, and exhaust airflows.
   2. Duct, outlet, and inlet sizes.
   3. Pipe and valve sizes and locations.

4. Terminal units.
5. Balancing stations.
6. Position of balancing devices.

E. Air-Handling-Unit Test Reports: For air-handling units with coils, include the following:
   1. Unit Data:
      a. Unit identification.
      b. Location.
      c. Make and type.
      d. Model number and unit size.
      e. Manufacturer's serial number.
      f. Unit arrangement and class.
      g. Discharge arrangement.
      h. Sheave make, size in inches, and bore.
      i. Center-to-center dimensions of sheave, and amount of adjustments in inches.
      j. Number, make, and size of belts.
      k. Number, type, and size of filters.
   2. Motor Data:
      a. Motor make, and frame type and size.
      b. Horsepower and rpm.
      c. Volts, phase, and hertz.
      d. Full-load amperage and service factor.
      e. Sheave make, size in inches, and bore.
      f. Center-to-center dimensions of sheave, and amount of adjustments in inches.
   3. Test Data (Indicated and Actual Values):
      a. Total air flow rate in cfm.
      b. Total system static pressure in inches wg.
      c. Fan rpm.
      d. Discharge static pressure in inches wg.
      e. Filter static-pressure differential in inches wg.
      f. Preheat-coil static-pressure differential in inches wg.
      g. Cooling-coil static-pressure differential in inches wg.
      h. Heating-coil static-pressure differential in inches wg.
      i. Outdoor airflow in cfm.
      j. Return airflow in cfm.
      k. Outdoor-air damper position.
      l. Return-air damper position.
      m. Vortex damper position.

F. Apparatus-Coil Test Reports:
   1. Coil Data:
      a. System identification.
      b. Location.
      c. Coil type.
      d. Number of rows.
      e. Fin spacing in fins per inch o.c.
      f. Make and model number.
      g. Face area in sq. ft..
      h. Tube size in NPS.
      i. Tube and fin materials.
      j. Circuiting arrangement.
   2. Test Data (Indicated and Actual Values):
      a. Air flow rate in cfm.
      b. Average face velocity in fpm.
      c. Air pressure drop in inches wg.

d. Outdoor-air, wet- and dry-bulb temperatures in deg F.
e. Return-air, wet- and dry-bulb temperatures in deg F.
f. Entering-air, wet- and dry-bulb temperatures in deg F.
g. Leaving-air, wet- and dry-bulb temperatures in deg F.
h. Water flow rate in gpm.
i. Water pressure differential in feet of head or psig.
j. Entering-water temperature in deg F.
k. Leaving-water temperature in deg F.
l. Refrigerant expansion valve and refrigerant types.
m. Refrigerant suction pressure in psig.
n. Refrigerant suction temperature in deg F.
o. Inlet steam pressure in psig.

3. Unit Data:
   a. System identification.
   b. Location.
   c. Make and type.
   d. Model number and unit size.
   e. Manufacturer's serial number.
   f. Fuel type in input data.
   g. Output capacity in Btu/h.
   h. Ignition type.
   i. Burner-control types.
   j. Motor horsepower and rpm.
   k. Motor volts, phase, and hertz.
   l. Motor full-load amperage and service factor.
   m. Sheave make, size in inches, and bore.
   n. Center-to-center dimensions of sheave, and amount of adjustments in inches.
4. Test Data (Indicated and Actual Values):
   a. Total air flow rate in cfm.
   b. Entering-air temperature in deg F.
   c. Leaving-air temperature in deg F.
   d. Air temperature differential in deg F.
   e. Entering-air static pressure in inches wg.
   f. Leaving-air static pressure in inches wg.
   g. Air static-pressure differential in inches wg.
   h. Low-fire fuel input in Btu/h.
   i. High-fire fuel input in Btu/h.
   j. Manifold pressure in psig.
   k. High-temperature-limit setting in deg F.
   l. Operating set point in Btu/h.
   m. Motor voltage at each connection.
   n. Motor amperage for each phase.
   o. Heating value of fuel in Btu/h.

G. Electric-Coil Test Reports: For electric furnaces, duct coils, and electric coils installed in central-station air-handling units, include the following:
1. Unit Data:
   a. System identification.
   b. Location.
   c. Coil identification.
   d. Capacity in Btu/h.
   e. Number of stages.
   f. Connected volts, phase, and hertz.
   g. Rated amperage.
   h. Air flow rate in cfm.

i. Face area in sq. ft..
j. Minimum face velocity in fpm.

2. Test Data (Indicated and Actual Values):
   a. Heat output in Btu/h.
   b. Air flow rate in cfm.
   c. Air velocity in fpm.
   d. Entering-air temperature in deg F.
   e. Leaving-air temperature in deg F.
   f. Voltage at each connection.
   g. Amperage for each phase.

H. Fan Test Reports: For supply, return, and exhaust fans, include the following:
   1. Fan Data:
      a. System identification.
      b. Location.
      c. Make and type.
      d. Model number and size.
      e. Manufacturer's serial number.
      f. Arrangement and class.
      g. Sheave make, size in inches, and bore.
      h. Center-to-center dimensions of sheave, and amount of adjustments in inches.
   2. Motor Data:
      a. Motor make, and frame type and size.
      b. Horsepower and rpm.
      c. Volts, phase, and hertz.
      d. Full-load amperage and service factor.
      e. Sheave make, size in inches, and bore.
      f. Center-to-center dimensions of sheave, and amount of adjustments in inches.
      g. Number, make, and size of belts.
   3. Test Data (Indicated and Actual Values):
      a. Total airflow rate in cfm.
      b. Total system static pressure in inches wg.
      c. Fan rpm.
      d. Discharge static pressure in inches wg.
      e. Suction static pressure in inches wg.

I. Round and Rectangular Duct Traverse Reports: Include a diagram with a grid representing the duct cross-section and record the following:
   1. Report Data:
      a. System and air-handling-unit number.
      b. Location and zone.
      c. Traverse air temperature in deg F.
      d. Duct static pressure in inches wg.
      e. Duct size in inches.
      f. Duct area in sq. ft..
      g. Indicated air flow rate in cfm.
      h. Indicated velocity in fpm.
      i. Actual air flow rate in cfm.
      j. Actual average velocity in fpm.
      k. Barometric pressure in psig.

J. Air-Terminal-Device Reports:
   1. Unit Data:
      a. System and air-handling unit identification.
      b. Location and zone.

c. Apparatus used for test.
d. Area served.
e. Make.
f. Number from system diagram.
g. Type and model number.
h. Size.
i. Effective area in sq. ft..

2. Test Data (Indicated and Actual Values):
a. Air flow rate in cfm.
b. Air velocity in fpm.
c. Preliminary air flow rate as needed in cfm.
d. Preliminary velocity as needed in fpm.
e. Final air flow rate in cfm.
f. Final velocity in fpm.
g. Space temperature in deg F.

K. System-Coil Reports: For reheat coils and water coils of terminal units, include the following:
1. Unit Data:
a. System and air-handling-unit identification.
b. Location and zone.
c. Room or riser served.
d. Coil make and size.
e. Flowmeter type.
2. Test Data (Indicated and Actual Values):
a. Air flow rate in cfm.
b. Entering-water temperature in deg F.
c. Leaving-water temperature in deg F.
d. Water pressure drop in feet of head or psig.
e. Entering-air temperature in deg F.
f. Leaving-air temperature in deg F.

L. Instrument Calibration Reports:
1. Report Data:
a. Instrument type and make.
b. Serial number.
c. Application.
d. Dates of use.
e. Dates of calibration.

3.9 INSPECTIONS

A. Initial Inspection:
1. After testing and balancing are complete, operate each system and randomly check measurements to verify that the system is operating according to the final test and balance readings documented in the final report.
2. Check the following for each system:
a. Measure airflow of at least 10 percent of air outlets.
b. Measure water flow of at least 5 percent of terminals.
c. Measure room temperature at each thermostat/temperature sensor. Compare the reading to the set point.
d. Verify that balancing devices are marked with final balance position.
e. Note deviations from the Contract Documents in the final report.

B. Final Inspection:

1. After initial inspection is complete and documentation by random checks verifies that testing and balancing are complete and accurately documented in the final report, request that a final inspection be made by Architect, Owner, Construction Manager, and, when required,
2. Commissioning Authority.
3. The TAB contractor's test and balance engineer shall conduct the inspection in the presence of Architect, Owner, Construction Manager, and, when required, Commissioning Authority.
4. Architect, Owner, Construction Manager, and, when required, Commissioning Authority shall randomly select measurements, documented in the final report, to be rechecked. Rechecking shall be limited to either 10 percent of the total measurements recorded or the extent of measurements that can be accomplished in a normal 8-hour business day.
5. If rechecks yield measurements that differ from the measurements documented in the final report by more than the tolerances allowed, the measurements shall be noted as "FAILED."
6. If the number of "FAILED" measurements is greater than 10 percent of the total measurements checked during the final inspection, the testing and balancing shall be considered incomplete and shall be rejected.

C. TAB Work will be considered defective if it does not pass final inspections. If TAB Work fails, proceed as follows:
   1. Recheck all measurements and make adjustments. Revise the final report and balancing device settings to include all changes; resubmit the final report and request a second final inspection.
   2. If the second final inspection also fails, Owner may contract the services of another TAB contractor to complete TAB Work according to the Contract Documents and deduct the cost of the services from the original TAB contractor's final payment.

D. Prepare test and inspection reports.

3.10 ADDITIONAL TESTS

A. Within 90 days of completing TAB, perform additional TAB to verify that balanced conditions are being maintained throughout and to correct unusual conditions.

B. Seasonal Periods: If initial TAB procedures were not performed during near-peak summer and winter conditions, perform additional TAB during near-peak summer and winter conditions.

END OF DOCUMENT 230593

SECTION 230713 - HVAC INSULATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:
   1. Insulation Materials:
      a. Calcium silicate.
      b. Cellular glass.
      c. Flexible elastomeric.
      d. Mineral fiber.
      e. Phenolic.
      f. Polyisocyanurate.
      g. Polyolefin.
      h. Polystyrene.
   2. Fire-rated insulation systems.
   3. Insulating cements.
   4. Adhesives.
   5. Mastics.
   6. Lagging adhesives.
   7. Sealants.
   8. Factory-applied jackets.
   9. Field-applied fabric-reinforcing mesh.
   10. Field-applied cloths.
   11. Field-applied jackets.
   12. Tapes.
   13. Securements.
   14. Corner angles.

B. Related Sections:
   1. Division 21 Section "Fire-Suppression Systems Insulation."
   2. Division 22 Section "Plumbing Insulation."
   3. Division 23 Section "Metal Ducts" for duct liners.

1.3 SUBMITTALS

A. Product Data: For each type of product indicated. Include thermal conductivity, thickness, and jackets (both factory and field applied, if any).

B. Shop Drawings:
   1. Detail application of protective shields, saddles, and inserts at hangers for each type of insulation and hanger.
   2. Detail attachment and covering of heat tracing inside insulation.
   3. Detail insulation application at pipe expansion joints for each type of insulation.
   4. Detail insulation application at elbows, fittings, flanges, valves, and specialties for each type of insulation.
   5. Detail removable insulation at piping specialties, equipment connections, and access panels.

6. Detail application of field-applied jackets.
7. Detail application at linkages of control devices.
8. Detail field application for each equipment type.

C. Samples: For each type of insulation and jacket indicated. Identify each Sample, describing product and intended use.
   1. Sample Sizes:
      a. Preformed Pipe Insulation Materials: 12 inches long by NPS 2.
      b. Sheet Form Insulation Materials: 12 inches square.
      c. Jacket Materials for Pipe: 12 inches long by NPS 2.
      d. Sheet Jacket Materials: 12 inches square.
      e. Manufacturer's Color Charts: For products where color is specified, show the full range of colors available for each type of finish material.

D. Qualification Data: For qualified Installer.

E. Material Test Reports: From a qualified testing agency acceptable to authorities having jurisdiction indicating, interpreting, and certifying test results for compliance of insulation materials, sealers, attachments, cements, and jackets, with requirements indicated. Include dates of tests and test methods employed.

F. Field quality-control reports.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: Skilled mechanics who have successfully completed an apprenticeship program or another craft training program certified by the Department of Labor, Bureau of Apprenticeship and Training.

B. Fire-Test-Response Characteristics: Insulation and related materials shall have fire-test-response characteristics indicated, as determined by testing identical products per ASTM E 84, by a testing and inspecting agency acceptable to authorities having jurisdiction. Factory label insulation and jacket materials and adhesive, mastic, tapes, and cement material containers, with appropriate markings of applicable testing and inspecting agency.
   1. Insulation Installed Indoors: Flame-spread index of 25 or less, and smoke-developed index of 50 or less.
   2. Insulation Installed Outdoors: Flame-spread index of 75 or less, and smoke-developed index of 150 or less.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Packaging: Insulation material containers shall be marked by manufacturer with appropriate ASTM standard designation, type and grade, and maximum use temperature.

1.6 COORDINATION

A. Coordinate size and location of supports, hangers, and insulation shields specified in Division 23 Section "Hangers and Supports for HVAC Piping and Equipment."

B. Coordinate clearance requirements with piping Installer for piping insulation application, duct Installer for duct insulation application, and equipment Installer for equipment insulation application. Before preparing piping and ductwork Shop Drawings, establish and maintain clearance requirements for installation of insulation and field-applied jackets and finishes and for space required for maintenance.

1.7 SCHEDULING

A. Schedule insulation application after pressure testing systems and, where required, after installing and testing heat tracing. Insulation application may begin on segments that have satisfactory test results.

B. Complete installation and concealment of plastic materials as rapidly as possible in each area of construction.

PART 2 - PRODUCTS

2.01 INSULATION MATERIALS

A. Comply with requirements in Part 3 schedule articles for where insulating materials shall be applied.

B. Products shall not contain asbestos, lead, mercury, or mercury compounds.

C. Products that come in contact with stainless steel shall have a leachable chloride content of less than 50 ppm when tested according to ASTM C 871.

D. Insulation materials for use on austenitic stainless steel shall be qualified as acceptable according to ASTM C 795.

E. Foam insulation materials shall not use CFC or HCFC blowing agents in the manufacturing process.

F. Calcium Silicate:
1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
   a. Industrial Insulation Group (The); Thermo-12 Gold.
2. Preformed Pipe Sections: Flat-, curved-, and grooved-block sections of noncombustible, inorganic, hydrous calcium silicate with a non-asbestos fibrous reinforcement. Comply with ASTM C 533, Type I.
3. Flat-, curved-, and grooved-block sections of noncombustible, inorganic, hydrous calcium silicate with a non-asbestos fibrous reinforcement. Comply with ASTM C 533, Type I.
4. Prefabricated Fitting Covers: Comply with ASTM C 450 and ASTM C 585 for dimensions used in preforming insulation to cover valves, elbows, tees, and flanges.

G. Cellular Glass: Inorganic, incombustible, foamed or cellulated glass with annealed, rigid, hermetically sealed cells. Factory-applied jacket requirements are specified in "Factory-Applied Jackets" Article.
1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
   a. Cell-U-Foam Corporation; Ultra-CUF.
   b. Pittsburgh Corning Corporation; Foamglas Super K.
2. Block Insulation: ASTM C 552, Type I.
3. Board Insulation: ASTM C 552, Type IV.
4. Preformed Pipe Insulation without Jacket: Comply with ASTM C 552, Type II, Class 1.
5. Preformed Pipe Insulation with Factory-Applied ASJ-SSL: Comply with ASTM C 552, Type II, Class 2.
6. Factory fabricate shapes according to ASTM C 450 and ASTM C 585.

H. Flexible Elastomeric: Closed-cell, sponge- or expanded-rubber materials. Comply with ASTM C 534, Type I for tubular materials and Type II for sheet materials.
   1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
      a. Aeroflex USA Inc.; Aerocel.
      b. Armacell LLC; AP Armaflex.
      c. RBX Corporation; Insul-Sheet 1800 and Insul-Tube 180.

I. Mineral-Fiber Blanket Insulation: Mineral or glass fibers bonded with a thermosetting resin. Comply with ASTM C 553, Type II and ASTM C 1290, Type II with factory-applied vinyl jacket or III with factory-applied FSK jacket. Factory-applied jacket requirements are specified in "Factory-Applied Jackets" Article.
   1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
      a. CertainTeed Corp.; Duct Wrap.
      b. Johns Manville; Microlite.
      c. Knauf Insulation; Duct Wrap.
      d. Manson Insulation Inc.; Alley Wrap.
      e. Owens Corning; All-Service Duct Wrap.

J. High-Temperature, Mineral-Fiber Blanket Insulation: Mineral or glass fibers bonded with a thermosetting resin. Comply with ASTM C 553, Type V, without factory-applied jacket.
   1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
      a. Johns Manville; HTB 23 Spin-Glas.
      b. Owens Corning; High Temperature Flexible Batt Insulations or equal.

K. Mineral-Fiber Board Insulation: Mineral or glass fibers bonded with a thermosetting resin. Comply with ASTM C 612, Type IA or Type IB. For duct and plenum applications, provide insulation with factory-applied FSK jacket. For equipment applications, provide insulation with factory-applied ASJ. Factory-applied jacket requirements are specified in "Factory-Applied Jackets" Article.
   1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
      a. CertainTeed Corp.; Commercial Board.
      b. Fibrex Insulations Inc.; FBX.
      c. Johns Manville; 800 Series Spin-Glas.
      d. Knauf Insulation; Insulation Board.
      e. Manson Insulation Inc.; AK Board.
      f. Owens Corning; Fiberglas 700 Series.

L. High-Temperature, Mineral-Fiber Board Insulation: Mineral or glass fibers bonded with a thermosetting resin. Comply with ASTM C 612, Type III, without factory-applied jacket.
   1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
      a. Fibrex Insulations Inc.; FBX.
      b. Johns Manville; 1000 Series Spin-Glas.
      c. Owens Corning; High Temperature Industrial Board Insulations.
      d. Rock Wool Manufacturing Company; Delta Board.
      e. Roxul Inc.; Roxul RW.
      f. Thermafiber; Thermafiber Industrial Felt.

M. Mineral-Fiber, Preformed Pipe Insulation:
   1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
      a. Fibrex Insulations Inc.; Coreplus 1200.

b. Johns Manville; Micro-Lok.
c. Knauf Insulation; 1000 Pipe Insulation.
d. Manson Insulation Inc.; Alley-K.
e. Owens Corning; Fiberglas Pipe Insulation.

2. Type II, 1200 deg F Materials: Mineral or glass fibers bonded with a thermosetting resin. Comply with ASTM C 547, Type II, Grade A, with factory-applied ASJ-SSL. Factory-applied jacket requirements are specified in "Factory-Applied Jackets" Article.

N. Mineral-Fiber, Pipe and Tank Insulation: Mineral or glass fibers bonded with a thermosetting resin. Semirigid board material with factory-applied FSK jacket complying with ASTM C 1393, Type II or Type IIIA Category 2, or with properties similar to ASTM C 612, Type IB. Nominal density is 2.5 lb/cu. ft. or more. Thermal conductivity (k-value) at 100 deg F is 0.29 Btu x in./h x sq. ft. x deg F or less. Factory-applied jacket requirements are specified in "Factory-Applied Jackets" Article.

1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
   a. CertainTeed Corp.; CrimpWrap.
   b. Johns Manville; MicroFlex.
   c. Knauf Insulation; Pipe and Tank Insulation.
   d. Manson Insulation Inc.; AK Flex.
   e. Owens Corning; Fiberglas Pipe and Tank Insulation.

O. Phenolic (Where indicated on the drawings):

1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
   a. Kingspan Corp.; Koolphen K.
2. Preformed pipe insulation of rigid, expanded, closed-cell structure. Comply with ASTM C 1126, Type III, Grade 1.
3. Block insulation of rigid, expanded, closed-cell structure. Comply with ASTM C 1126, Type II, Grade 1.
4. Factory fabricate shapes according to ASTM C 450 and ASTM C 585.
5. Factory-Applied Jacket: Requirements are specified in "Factory-Applied Jackets" Article.
   a. Preformed Pipe Insulation: ASJ.
   b. Board for Duct and Plenum Applications: ASJ.
   c. Board for Equipment Applications: ASJ.

P. Polyisocyanurate: Unfaced, preformed, rigid cellular polyisocyanurate material intended for use as thermal insulation.

1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
   a. Apache Products Company; ISO-25.
   b. Dow Chemical Company (The); Trymer.
   c. Duna USA Inc.; Corafoam.
   d. Elliott Company; Elfoam.
2. Comply with ASTM C 591, Type I or Type IV, except thermal conductivity (k-value) shall not exceed 0.19 Btu x in./h x sq. ft. x deg F at 75 deg F after 180 days of aging.
3. Flame-spread index shall be 25 or less and smoke-developed index shall be 50 or less for thickness up to 1-1/2 inches as tested by ASTM E 84.
4. Fabricate shapes according to ASTM C 450 and ASTM C 585.
5. Factory-Applied Jacket: Requirements are specified in "Factory-Applied Jackets" Article.
   a. Pipe Applications: ASJ-SSL.
   b. Equipment Applications: ASJ-SSL.

Q. Polyolefin: Unicellular, polyethylene thermal plastic insulation. Comply with ASTM C 534 or ASTM C 1427, Type I, Grade 1 for tubular materials and Type II, Grade 1 for sheet materials.
   1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
      a. Armacell LLC; Tubolit.
      b. Nomaco Inc.; IMCOLOCK, IMCOSHEET, NOMALOCK, and NOMAPLY.
      c. RBX Corporation; Therma-cell.

R. Polystyrene: Rigid, extruded cellular polystyrene intended for use as thermal insulation. Comply with ASTM C 578, Type IV or Type XIII, except thermal conductivity (k-value) shall not exceed 0.26 Btu x in./h x sq. ft. x deg F after 180 days of aging. Fabricate shapes according to ASTM C 450 and ASTM C 585.
   1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
      a. Dow Chemical Company (The); Styrofoam.
      b. Knauf Insulation; Knauf Polystyrene.

2.02 FIRE-RATED INSULATION SYSTEMS (Where indicated on the drawings)

A. Fire-Rated Board: Structural-grade, press-molded, xonolite calcium silicate, fireproofing board suitable for operating temperatures up to 1700 deg F. Comply with ASTM C 656, Type II, Grade 6. tested and certified to provide a 2-hour fire rating by a NRTL acceptable to authority having jurisdiction.

   1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
      a. Johns Manville; Super Firetemp M or equal.

B. Fire-Rated Blanket: High-temperature, flexible, blanket insulation with FSK jacket that is tested and certified to provide a 2-hour fire rating by a NRTL acceptable to authority having jurisdiction.

   2. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
      a. CertainTeed Corp.; FlameChek.
      b. Johns Manville; Firetemp Wrap.
      c. Nelson Firestop Products; Nelson FSB Flameshield Blanket.
      d. Thermal Ceramics; FireMaster Duct Wrap.
      e. 3M; Fire Barrier Wrap Products.
      f. Unifrax Corporation; FyreWrap.
      g. Vesuvius; PYROSCAT FP FASTR Duct Wrap.

2.03 INSULATING CEMENTS

A. Mineral-Fiber Insulating Cement: Comply with ASTM C 195.
   1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
      a. Insulco, Division of MFS, Inc.; Triple I.
      b. P. K. Insulation Mfg. Co., Inc.; Super-Stik.

B. Expanded or Exfoliated Vermiculite Insulating Cement: Comply with ASTM C 196.
   1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
      a. P. K. Insulation Mfg. Co., Inc.; Thermal-V-Kote.

T. Mineral-Fiber, Hydraulic-Setting Insulating and Finishing Cement: Comply with ASTM C 449/C 449M.
   1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
      a. Insulco, Division of MFS, Inc.; SmoothKote.
      b. P. K. Insulation Mfg. Co., Inc.; PK No. 127, and Quik-Cote.
      c. Rock Wool Manufacturing Company; Delta One Shot.

2.04 ADHESIVES

A. Materials shall be compatible with insulation materials, jackets, and substrates and for bonding insulation to itself and to surfaces to be insulated, unless otherwise indicated.

B. Calcium Silicate Adhesive: Fibrous, sodium-silicate-based adhesive with a service temperature range of 50 to 800 deg F.
   1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
      a. Childers Products, Division of ITW; CP-97.
      b. Foster Products Corporation, H. B. Fuller Company; 81-27/81-93.
      c. Marathon Industries, Inc.; 290.
      d. Mon-Eco Industries, Inc.; 22-30.
      e. Vimasco Corporation; 760.
   2. For indoor applications, use adhesive that has a VOC content of 80 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).

C. Cellular-Glass, Phenolic, Polyisocyanurate, and Polystyrene Adhesive: Solvent-based resin adhesive, with a service temperature range of minus 75 to plus 300 deg F.
   1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
      a. Childers Products, Division of ITW; CP-96.
      b. Foster Products Corporation, H. B. Fuller Company; 81-33.
   2. For indoor applications, use adhesive that has a VOC content of 50 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).

D. Flexible Elastomeric and Polyolefin Adhesive: Comply with MIL-A-24179A, Type II, Class I.
   1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
      a. Aeroflex USA Inc.; Aeroseal.
      b. Armacell LCC; 520 Adhesive.
      c. Foster Products Corporation, H. B. Fuller Company; 85-75.
      d. RBX Corporation; Rubatex Contact Adhesive.

   2. For indoor applications, use adhesive that has a VOC content of 50 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).

E. Mineral-Fiber Adhesive: Comply with MIL-A-3316C, Class 2, Grade A.
   7. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
      a. Childers Products, Division of ITW; CP-82.
      b. Foster Products Corporation, H. B. Fuller Company; 85-20.
      c. ITW TACC, Division of Illinois Tool Works; S-90/80.
      d. Marathon Industries, Inc.; 225.
      e. Mon-Eco Industries, Inc.; 22-25.
   8. For indoor applications, use adhesive that has a VOC content of 80 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).

F. Polystyrene Adhesive: Solvent- or water-based, synthetic resin adhesive with a service temperature range of minus 20 to plus 140 deg F.

1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
   a. Childers Products, Division of ITW; CP-96.
   b. Foster Products Corporation, H. B. Fuller Company; 97-13.

G. ASJ Adhesive, and FSK and PVDC Jacket Adhesive: Comply with MIL-A-3316C, Class 2, Grade A for bonding insulation jacket lap seams and joints.1
1. See Editing Instruction No. 1 in the Evaluations for cautions about naming manufacturers and products. See Division 01 Section "Product Requirements."
2. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
   a. Childers Products, Division of ITW; CP-82.
   b. Foster Products Corporation, H. B. Fuller Company; 85-20.
   c. ITW TACC, Division of Illinois Tool Works; S-90/80.
   d. Marathon Industries, Inc.; 225.
   e. Mon-Eco Industries, Inc.; 22-25.
3. For indoor applications, use adhesive that has a VOC content of 50 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).

H. PVC Jacket Adhesive: Compatible with PVC jacket.
1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
   a. Dow Chemical Company (The); 739, Dow Silicone.
   b. Johns-Manville; Zeston Perma-Weld, CEEL-TITE Solvent Welding Adhesive.
   c. P.I.C. Plastics, Inc.; Welding Adhesive.
   d. Speedline Corporation; Speedline Vinyl Adhesive.
2. For indoor applications, use adhesive that has a VOC content of 50 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).

2.05 MASTICS

A. Materials shall be compatible with insulation materials, jackets, and substrates; comply with MIL-C-19565C, Type II.
1. For indoor applications, use mastics that have a low VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24).

B. Vapor-Barrier Mastic: Solvent based; suitable for outdoor use on below ambient services.

1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
   a. Childers Products, Division of ITW; Encacel.
   b. Foster Products Corporation, H. B. Fuller Company; 60-95/60-96.
   c. Marathon Industries, Inc.; 570.
   d. Mon-Eco Industries, Inc.; 55-70.
2. Water-Vapor Permeance: ASTM F 1249, 0.05 perm at 30-mil dry film thickness.
3. Service Temperature Range: Minus 50 to plus 220 deg F.
4. Solids Content: ASTM D 1644, 33 percent by volume and 46 percent by weight.
5. Color: White.

2.06 LAGGING ADHESIVES

A. Description: Comply with MIL-A-3316C Class I, Grade A and shall be compatible with insulation materials, jackets, and substrates.
   1. For indoor applications, use lagging adhesives that have a low VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24).
   2. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
      a. Childers Products, Division of ITW; CP-52.
      b. Foster Products Corporation, H. B. Fuller Company; 81-42.
      c. Marathon Industries, Inc.; 130.
      d. Mon-Eco Industries, Inc.; 11-30.
      e. Vimasco Corporation; 136.
   3. Fire-resistant, water-based lagging adhesive and coating for use indoors to adhere fire-resistant lagging cloths over duct, equipment, and pipe insulation.
   4. Service Temperature Range: Minus 50 to plus 180 deg F.
   5. Color: White.

2.07 SEALANTS

A. Joint Sealants:
   1. Joint Sealants for Cellular-Glass, Phenolic, and Polyisocyanurate Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
      a. Childers Products, Division of ITW; CP-76.
      b. Foster Products Corporation, H. B. Fuller Company; 30-45.
      c. Marathon Industries, Inc.; 405.
      d. Mon-Eco Industries, Inc.; 44-05.
      e. Pittsburgh Corning Corporation; Pittseal 444.
      f. Vimasco Corporation; 750.
   2. Joint Sealants for Polystyrene Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
      a. Childers Products, Division of ITW; CP-70.
      b. Foster Products Corporation, H. B. Fuller Company; 30-45/30-46.
      c. Marathon Industries, Inc.; 405.
      d. Mon-Eco Industries, Inc.; 44-05.
      e. Vimasco Corporation; 750.
   3. Materials shall be compatible with insulation materials, jackets, and substrates.
   4. Permanently flexible, elastomeric sealant.
   5. Service Temperature Range: Minus 100 to plus 300 deg F.
   6. Color: White or gray.
   7. For indoor applications, use sealants that have a VOC content of 250 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).

B. FSK and Metal Jacket Flashing Sealants:
   1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
      a. Childers Products, Division of ITW; CP-76-8.
      b. Foster Products Corporation, H. B. Fuller Company; 95-44.
      c. Marathon Industries, Inc.; 405.
      d. Mon-Eco Industries, Inc.; 44-05.
      e. Vimasco Corporation; 750.
   2. Materials shall be compatible with insulation materials, jackets, and substrates.
   3. Fire- and water-resistant, flexible, elastomeric sealant.
   4. Service Temperature Range: Minus 40 to plus 250 deg F.

5. Color: Aluminum.
6. For indoor applications, use sealants that have a VOC content of 250 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).

C. ASJ Flashing Sealants, and Vinyl, PVDC, and PVC Jacket Flashing Sealants:
1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
   a. Childers Products, Division of ITW; CP-76.
2. Materials shall be compatible with insulation materials, jackets, and substrates.
3. Fire- and water-resistant, flexible, elastomeric sealant.
4. Service Temperature Range: Minus 40 to plus 250 deg F.
5. Color: White.
6. For indoor applications, use sealants that have a VOC content of 250 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).

2.08 FACTORY-APPLIED JACKETS

A. Insulation system schedules indicate factory-applied jackets on various applications. When factory-applied jackets are indicated, comply with the following:
1. ASJ: White, kraft-paper, fiberglass-reinforced scrim with aluminum-foil backing; complying with ASTM C 1136, Type I.
2. ASJ-SSL: ASJ with self-sealing, pressure-sensitive, acrylic-based adhesive covered by a removable protective strip; complying with ASTM C 1136, Type I.
3. FSK Jacket: Aluminum-foil, fiberglass-reinforced scrim with kraft-paper backing; complying with ASTM C 1136, Type II.
4. FSP Jacket: Aluminum-foil, fiberglass-reinforced scrim with polyethylene backing; complying with ASTM C 1136, Type II.

2.09 FIELD-APPLIED FABRIC-REINFORCING MESH

A. Woven Glass-Fiber Fabric for Pipe Insulation: Approximately 2 oz./sq. yd. with a thread count of 10 strands by 10 strands/sq. inch for covering pipe and pipe fittings.
1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
   a. Vimasco Corporation; Elastafab 894.

B. Woven Glass-Fiber Fabric for Duct and Equipment Insulation: Approximately 6 oz./sq. yd. with a thread count of 5 strands by 5 strands/sq. inch for covering equipment.
1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
   a. Childers Products, Division of ITW; Chil-Glas No. 5.

C. Woven Polyester Fabric: Approximately 1 oz./sq. yd. with a thread count of 10 strands by 10 strands/sq. inch, in a Leno weave, for duct, equipment, and pipe.
1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
   a. Foster Products Corporation, H. B. Fuller Company; Mast-A-Fab.
   b. Vimasco Corporation; Elastafab 894.

2.10 FIELD-APPLIED CLOTHS

A. Woven Glass-Fiber Fabric: Comply with MIL-C-20079H, Type I, plain weave, and presized a minimum of 8 oz./sq. yd.
1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:

a. Alpha Associates, Inc.; Alpha-Maritex 84215 and 84217/9485RW, Luben 59.

2.11 FIELD-APPLIED JACKETS

A. Field-applied jackets shall comply with ASTM C 921, Type I, unless otherwise indicated.

B. FSK Jacket: Aluminum-foil-face, fiberglass-reinforced scrim with kraft-paper backing.

C. PVC Jacket: High-impact-resistant, UV-resistant PVC complying with ASTM D 1784, Class 16354-C; thickness as scheduled; roll stock ready for shop or field cutting and forming. Thickness is indicated in field-applied jacket schedules.
1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
   a. Johns Manville; Zeston.
   b. P.I.C. Plastics, Inc.; FG Series.
   c. Proto PVC Corporation; LoSmoke.
   d. Speedline Corporation; SmokeSafe.
2. Adhesive: As recommended by jacket material manufacturer.
3. Color: Color-code jackets based on system.
4. Factory-fabricated fitting covers to match jacket if available; otherwise, field fabricate.
   a. Shapes: 45- and 90-degree, short- and long-radius elbows, tees, valves, flanges, unions, reducers, end caps, soil-pipe hubs, traps, mechanical joints, and P-trap and supply covers for lavatories.
5. Factory-fabricated tank heads and tank side panels.

D. Metal Jacket:
1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
   a. Childers Products, Division of ITW; Metal Jacketing Systems.
   b. PABCO Metals Corporation; Surefit.
   c. RPR Products, Inc.; Insul-Mate.
2. Aluminum Jacket: Comply with ASTM B 209, Alloy 3003, 3005, 3105 or 5005, Temper H-14.
   a. Factory cut and rolled to size.
   b. Finish and thickness are indicated in field-applied jacket schedules.
   c. Moisture Barrier for Indoor Applications: 3-mil- thick, heat-bonded polyethylene and kraft paper.
   d. Moisture Barrier for Outdoor Applications: 3-mil- thick, heat-bonded polyethylene and kraft paper.
   e. Factory-Fabricated Fitting Covers:
      1) Same material, finish, and thickness as jacket.
      2) Preformed 2-piece or gore, 45- and 90-degree, short- and long-radius elbows.
      3) Tee covers.
      4) Flange and union covers.
      5) End caps.
      6) Beveled collars.
      7) Valve covers.
      8) Field fabricate fitting covers only if factory-fabricated fitting covers are not available.
3. Stainless-Steel Jacket: ASTM A 167 or ASTM A 240/A 240M.
   a. Factory cut and rolled to size.
   b. Material, finish, and thickness are indicated in field-applied jacket schedules.
   c. Moisture Barrier for Indoor Applications: 3-mil- thick, heat-bonded polyethylene and kraft paper.

g. Moisture Barrier for Outdoor Applications: 3-mil- thick, heat-bonded polyethylene and kraft paper.
h. Factory-Fabricated Fitting Covers:
1) Same material, finish, and thickness as jacket.
2) Preformed 2-piece or gore, 45- and 90-degree, short- and long-radius elbows.
3) Tee covers.
4) Flange and union covers.
5) End caps.
6) Beveled collars.
7) Valve covers.
8) Field fabricate fitting covers only if factory-fabricated fitting covers are not available.

G. Underground Direct-Buried Jacket: 125-mil- thick vapor barrier and waterproofing membrane consisting of a rubberized bituminous resin reinforced with a woven-glass fiber or polyester scrim and laminated aluminum foil.
1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
a. Pittsburgh Corning Corporation; Pittwrap.
b. Polyguard; Insulrap No Torch 125.

H. Self-Adhesive Outdoor Jacket: 60-mil- thick, laminated vapor barrier and waterproofing membrane for installation over insulation located aboveground outdoors; consisting of a rubberized bituminous resin on a crosslaminated polyethylene film covered with stucco-embossed aluminum-foil facing.
1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
a. Polyguard; Alumaguard 60.

2.12 TAPES

A. ASJ Tape: White vapor-retarder tape matching factory-applied jacket with acrylic adhesive, complying with ASTM C 1136.
1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
a. Avery Dennison Corporation, Specialty Tapes Division; Fasson 0835.
b. Compac Corp.; 104 and 105.
c. Ideal Tape Co., Inc., an American Biltrite Company; 428 AWF ASJ.
d. Venture Tape; 1540 CW Plus, 1542 CW Plus, and 1542 CW Plus/SQ.
2. Width: 3 inches.
3. Thickness: 11.5 mils.
4. Adhesion: 90 ounces force/inch in width.
5. Elongation: 2 percent.
6. Tensile Strength: 40 lbf/inch in width.
7. ASJ Tape Disks and Squares: Precut disks or squares of ASJ tape.

B. FSK Tape: Foil-face, vapor-retarder tape matching factory-applied jacket with acrylic adhesive; complying with ASTM C 1136.
1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
a. Avery Dennison Corporation, Specialty Tapes Division; Fasson 0827.
b. Compac Corp.; 110 and 111.
c. Ideal Tape Co., Inc., an American Biltrite Company; 491 AWF FSK.
d. Venture Tape; 1525 CW, 1528 CW, and 1528 CW/SQ.
2. Width: 3 inches.
3. Thickness: 6.5 mils.

4. Adhesion: 90 ounces force/inch in width.
5. Elongation: 2 percent.
6. Tensile Strength: 40 lbf/inch in width.
7. FSK Tape Disks and Squares: Precut disks or squares of FSK tape.

C. PVC Tape: White vapor-retarder tape matching field-applied PVC jacket with acrylic adhesive. Suitable for indoor and outdoor applications.
1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
   a. Avery Dennison Corporation, Specialty Tapes Division; Fasson 0555.
   b. Compac Corp.; 130.
   c. Ideal Tape Co., Inc., an American Biltrite Company; 370 White PVC tape.
   d. Venture Tape; 1506 CW NS.
2. Width: 2 inches.
3. Thickness: 6 mils.
4. Adhesion: 64 ounces force/inch in width.
5. Elongation: 500 percent.
6. Tensile Strength: 18 lbf/inch in width.

D. Aluminum-Foil Tape: Vapor-retarder tape with acrylic adhesive.
1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
   a. Avery Dennison Corporation, Specialty Tapes Division; Fasson 0800.
   b. Compac Corp.; 120.
   c. Ideal Tape Co., Inc., an American Biltrite Company; 488 AWF.
   d. Venture Tape; 3520 CW.
2. Width: 2 inches.
3. Thickness: 3.7 mils.
4. Adhesion: 100 ounces force/inch in width.
5. Elongation: 5 percent.
6. Tensile Strength: 34 lbf/inch in width.

2.12 SECUREMENTS

A. Bands:
1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
   a. Childers Products; Bands.
   b. PABCO Metals Corporation; Bands.
   c. RPR Products, Inc.; Bands.
2. Stainless Steel: ASTM A 167 or ASTM A 240/A 240M, Type 304 or Type 316; 0.015 inch thick, 1/2 inch wide with wing seal.
3. Aluminum: ASTM B 209, Alloy 3003, 3005, 3105, or 5005; Temper H-14, 0.020 inch thick, 1/2 inch wide with wing seal.
4. Springs: Twin spring set constructed of stainless steel with ends flat and slotted to accept metal bands. Spring size determined by manufacturer for application.

B. Insulation Pins and Hangers:
1. Capacitor-Discharge-Weld Pins: Copper- or zinc-coated steel pin, fully annealed for capacitor-discharge welding, 0.106-inch- diameter shank, length to suit depth of insulation indicated.
   a. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
      1) AGM Industries, Inc.; CWP-1.
      2) GEMCO; CD.
      3) Midwest Fasteners, Inc.; CD.

4) Nelson Stud Welding; TPA, TPC, and TPS.

2. Cupped-Head, Capacitor-Discharge-Weld Pins: Copper- or zinc-coated steel pin, fully annealed for capacitor-discharge welding, 0.106-inch- diameter shank, length to suit depth of insulation indicated with integral 1-1/2-inch galvanized carbon-steel washer.
   a. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
      1) AGM Industries, Inc.; CWP-1.
      2) GEMCO; Cupped Head Weld Pin.
      3) Midwest Fasteners, Inc.; Cupped Head.
      4) Nelson Stud Welding; CHP.
3. Metal, Adhesively Attached, Perforated-Base Insulation Hangers: Baseplate welded to projecting spindle that is capable of holding insulation, of thickness indicated, securely in position indicated when self-locking washer is in place. Comply with the following requirements:
   a. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
      1) AGM Industries, Inc.; Tactoo Insul-Hangers, Series T.
      2) GEMCO; Perforated Base.
      3) Midwest Fasteners, Inc.; Spindle.
   b. Baseplate: Perforated, galvanized carbon-steel sheet, 0.030 inch thick by 2 inches square.
   c. Spindle: Stainless steel, fully annealed, 0.106-inch- diameter shank, length to suit depth of insulation indicated.
   d. Adhesive: Recommended by hanger manufacturer. Product with demonstrated capability to bond insulation hanger securely to substrates indicated without damaging insulation, hangers, and substrates.
4. Nonmetal, Adhesively Attached, Perforated-Base Insulation Hangers: Baseplate fastened to projecting spindle that is capable of holding insulation, of thickness indicated, securely in position indicated when self-locking washer is in place. Comply with the following requirements:
   a. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
      1) GEMCO; Nylon Hangers.
      2) Midwest Fasteners, Inc.; Nylon Insulation Hangers.
   b. Baseplate: Perforated, nylon sheet, 0.030 inch thick by 1-1/2 inches in diameter.
   c. Spindle: Nylon, 0.106-inch- diameter shank, length to suit depth of insulation indicated, up to 2-1/2 inches.
   d. Adhesive: Recommended by hanger manufacturer. Product with demonstrated capability to bond insulation hanger securely to substrates indicated without damaging insulation, hangers, and substrates.
5. Self-Sticking-Base Insulation Hangers: Baseplate welded to projecting spindle that is capable of holding insulation, of thickness indicated, securely in position indicated when self-locking washer is in place. Comply with the following requirements:
   a. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
      1) AGM Industries, Inc.; Tactoo Insul-Hangers, Series TSA.
      2) GEMCO; Press and Peel.
      3) Midwest Fasteners, Inc.; Self Stick.
   b. Baseplate: Galvanized carbon-steel sheet, 0.030 inch thick by 2 inches square.

c. Spindle: Stainless steel, fully annealed, 0.106-inch- diameter shank, length to suit depth of insulation indicated.
d. Adhesive-backed base with a peel-off protective cover.

6. Insulation-Retaining Washers: Self-locking washers formed from 0.016-inch- thick, stainless-steel sheet, with beveled edge sized as required to hold insulation securely in place but not less than 1-1/2 inches in diameter.
   a. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
      1) AGM Industries, Inc.; RC-150.
      2) GEMCO; R-150.
      3) Midwest Fasteners, Inc.; WA-150.
      4) Nelson Stud Welding; Speed Clips.
   b. Protect ends with capped self-locking washers incorporating a spring steel insert to ensure permanent retention of cap in exposed locations.
7. Nonmetal Insulation-Retaining Washers: Self-locking washers formed from 0.016-inch- thick nylon sheet, with beveled edge sized as required to hold insulation securely in place but not less than 1-1/2 inches in diameter.
   a. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
      1) GEMCO.
      2) Midwest Fasteners, Inc.

C. Staples: Outward-clinching insulation staples, nominal 3/4-inch- wide, stainless steel or Monel.

D. Wire: 0.062-inch soft-annealed, stainless steel.
1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
   a. C & F Wire.
   b. Childers Products.
   c. PABCO Metals Corporation.
   d. RPR Products, Inc.

2.14 CORNER ANGLES

A. PVC Corner Angles: 30 mils thick, minimum 1 by 1 inch, PVC according to ASTM D 1784, Class 16354-C. White or color-coded to match adjacent surface.

B. Aluminum Corner Angles: 0.040 inch thick, minimum 1 by 1 inch, aluminum according to ASTM B 209, Alloy 3003, 3005, 3105 or 5005; Temper H-14.

C. Stainless-Steel Corner Angles: 0.024 inch thick, minimum 1 by 1-inch, stainless steel according to ASTM A 167 or ASTM A 240/A 240M, Type 304 or 316.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates and conditions for compliance with requirements for installation and other conditions affecting performance of insulation application.
1. Verify that systems and equipment to be insulated have been tested and are free of defects.

2. Verify that surfaces to be insulated are clean and dry.
3. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Surface Preparation: Clean and prepare surfaces to be insulated. Before insulating, apply a corrosion coating to insulated surfaces as follows:
   1. Stainless Steel: Coat 300 series stainless steel with an epoxy primer 5 mils thick and an epoxy finish 5 mils thick if operating in a temperature range between 140 and 300 deg F. Consult coating manufacturer for appropriate coating materials and application methods for operating temperature range.
   2. Carbon Steel: Coat carbon steel operating at a service temperature between 32 and 300 deg F with an epoxy coating. Consult coating manufacturer for appropriate coating materials and application methods for operating temperature range.

C. Coordinate insulation installation with the trade installing heat tracing. Comply with requirements for heat tracing that apply to insulation.

D. Mix insulating cements with clean potable water; if insulating cements are to be in contact with stainless-steel surfaces, use demineralized water.

3.3 GENERAL INSTALLATION REQUIREMENTS

A. Install insulation materials, accessories, and finishes with smooth, straight, and even surfaces; free of voids throughout the length of equipment, ducts and fittings, and piping including fittings, valves, and specialties.

B. Install insulation materials, forms, vapor barriers or retarders, jackets, and thicknesses required for each item of equipment, duct system, and pipe system as specified in insulation system schedules.

C. Install accessories compatible with insulation materials and suitable for the service. Install accessories that do not corrode, soften, or otherwise attack insulation or jacket in either wet or dry state.

D. Install insulation with longitudinal seams at top and bottom of horizontal runs.

E. Install multiple layers of insulation with longitudinal and end seams staggered.

F. Do not weld brackets, clips, or other attachment devices to piping, fittings, and specialties.

G. Keep insulation materials dry during application and finishing.

H. Install insulation with tight longitudinal seams and end joints. Bond seams and joints with adhesive recommended by insulation material manufacturer.

I. Install insulation with least number of joints practical.

J. Where vapor barrier is indicated, seal joints, seams, and penetrations in insulation at hangers, supports, anchors, and other projections with vapor-barrier mastic.
   1. Install insulation continuously through hangers and around anchor attachments.
   2. For insulation application where vapor barriers are indicated, extend insulation on anchor legs from point of attachment to supported item to point of attachment to structure. Taper and seal ends at attachment to structure with vapor-barrier mastic.

3. Install insert materials and install insulation to tightly join the insert. Seal insulation to insulation inserts with adhesive or sealing compound recommended by insulation material manufacturer.
4. Cover inserts with jacket material matching adjacent pipe insulation. Install shields over jacket, arranged to protect jacket from tear or puncture by hanger, support, and shield.

K. Apply adhesives, mastics, and sealants at manufacturer's recommended coverage rate and wet and dry film thicknesses.

L. Install insulation with factory-applied jackets as follows:
1. Draw jacket tight and smooth.
2. Cover circumferential joints with 3-inch- wide strips, of same material as insulation jacket. Secure strips with adhesive and outward clinching staples along both edges of strip, spaced 4 inches o.c.
3. Overlap jacket longitudinal seams at least 1-1/2 inches. Install insulation with longitudinal seams at bottom of pipe. Clean and dry surface to receive self-sealing lap. Staple laps with outward clinching staples along edge at 2 inches o.c.
   a. For below ambient services, apply vapor-barrier mastic over staples.
   b. Overlap insulation pacing at seams and seal with pressure sensitive tape having same falling as insulation.
   c. Apply Vapor-retarder mastic. Repair punctures, tears and penetrations with tape and/or mastic to maintain vapor-retarder seal.
4. Cover joints and seams with tape as recommended by insulation material manufacturer to maintain vapor seal.
5. Where vapor barriers are indicated, apply vapor-barrier mastic on seams and joints and at ends adjacent to duct and pipe flanges and fittings.

M. Cut insulation in a manner to avoid compressing insulation more than 75 percent of its nominal thickness.

N. Finish installation with systems at operating conditions. Repair joint separations and cracking due to thermal movement.

O. Repair damaged insulation facings by applying same facing material over damaged areas. Extend patches at least 4 inches beyond damaged areas. Adhere, staple, and seal patches similar to butt joints.

P. For above ambient services, do not install insulation to the following:
1. Vibration-control devices.
2. Testing agency labels and stamps.
3. Nameplates and data plates.
4. Manholes.
5. Handholes.
6. Cleanouts.

3.4 PENETRATIONS

A. Insulation Installation at Roof Penetrations: Install insulation continuously through roof penetrations.
1. Seal penetrations with flashing sealant.
2. For applications requiring only indoor insulation, terminate insulation above roof surface and seal with joint sealant. For applications requiring indoor and outdoor insulation, install insulation for outdoor applications tightly joined to indoor insulation ends. Seal joint with joint sealant.

3. Extend jacket of outdoor insulation outside roof flashing at least 2 inches below top of roof flashing.
4. Seal jacket to roof flashing with flashing sealant.

B. Insulation Installation at Underground Exterior Wall Penetrations: Terminate insulation flush with sleeve seal. Seal terminations with flashing sealant.

C. Insulation Installation at Aboveground Exterior Wall Penetrations: Install insulation continuously through wall penetrations.
1. Seal penetrations with flashing sealant.
2. For applications requiring only indoor insulation, terminate insulation inside wall surface and seal with joint sealant. For applications requiring indoor and outdoor insulation, install insulation for outdoor applications tightly joined to indoor insulation ends. Seal joint with joint sealant.
3. Extend jacket of outdoor insulation outside wall flashing and overlap wall flashing at least 2 inches.
4. Seal jacket to wall flashing with flashing sealant.

D. Insulation Installation at Interior Wall and Partition Penetrations (That Are Not Fire Rated): Install insulation continuously through walls and partitions.

E. Insulation Installation at Fire-Rated Wall and Partition Penetrations: Install insulation continuously through penetrations of fire-rated walls and partitions. Terminate insulation at fire damper sleeves for fire-rated wall and partition penetrations. Externally insulate damper sleeves to match adjacent insulation and overlap duct insulation at least 2 inches.
1. Comply with requirements in Division 07 Section "Penetration Firestopping "irestopping and fire-resistive joint sealers.

F. Insulation Installation at Floor Penetrations:
1. Duct: Install insulation continuously through floor penetrations that are not fire rated. For penetrations through fire-rated assemblies, terminate insulation at fire damper sleeves and externally insulate damper sleeve beyond floor to match adjacent duct insulation. Overlap damper sleeve and duct insulation at least 2 inches.
2. Pipe: Install insulation continuously through floor penetrations.
3. Seal penetrations through fire-rated assemblies. Comply with requirements in Division 07 Section "Penetration Firestopping."

3.5 EQUIPMENT, TANK, AND VESSEL INSULATION INSTALLATION

A. Mineral Fiber, Pipe and Tank Insulation Installation for Tanks and Vessels: Secure insulation with adhesive and anchor pins and speed washers.
1. Apply adhesives according to manufacturer's recommended coverage rates per unit area, for 50 percent coverage of tank and vessel surfaces.
2. Groove and score insulation materials to fit as closely as possible to equipment, including contours. Bevel insulation edges for cylindrical surfaces for tight joints. Stagger end joints.
3. Protect exposed corners with secured corner angles.
4. Install adhesively attached or self-sticking insulation hangers and speed washers on sides of tanks and vessels as follows:
   a. Do not weld anchor pins to ASME-labeled pressure vessels.
   b. Select insulation hangers and adhesive that are compatible with service temperature and with substrate.
   c. On tanks and vessels, maximum anchor-pin spacing is 3 inches from insulation end joints, and 16 inches o.c. in both directions.
   d. Do not overcompress insulation during installation.

e. Cut and miter insulation segments to fit curved sides and domed heads of tanks and vessels.
f. Impale insulation over anchor pins and attach speed washers.
g. Cut excess portion of pins extending beyond speed washers or bend parallel with insulation surface. Cover exposed pins and washers with tape matching insulation facing.

5. Secure each layer of insulation with stainless-steel or aluminum bands. Select band material compatible with insulation materials.
6. Where insulation hangers on equipment and vessels are not permitted or practical and where insulation support rings are not provided, install a girdle network for securing insulation. Stretch prestressed aircraft cable around the diameter of vessel and make taut with clamps, turnbuckles, or breather springs. Place one circumferential girdle around equipment approximately 6 inches from each end. Install wire or cable between two circumferential girdles 12 inches o.c. Install a wire ring around each end and around outer periphery of center openings, and stretch prestressed aircraft cable radially from the wire ring to nearest circumferential girdle. Install additional circumferential girdles along the body of equipment or tank at a minimum spacing of 48 inches o.c. Use this network for securing insulation with tie wire or bands.
7. Stagger joints between insulation layers at least 3 inches.
8. Install insulation in removable segments on equipment access doors, manholes, handholes, and other elements that require frequent removal for service and inspection.
9. Bevel and seal insulation ends around manholes, handholes, ASME stamps, and nameplates.
10. For equipment with surface temperatures below ambient, apply mastic to open ends, joints, seams, breaks, and punctures in insulation.

B. Flexible Elastomeric Thermal Insulation Installation for Tanks and Vessels: Install insulation over entire surface of tanks and vessels.
1. Apply 100 percent coverage of adhesive to surface with manufacturer's recommended adhesive.
2. Seal longitudinal seams and end joints.

C. Insulation Installation on Pumps:
1. Fabricate metal boxes lined with insulation. Fit boxes around pumps and coincide box joints with splits in pump casings. Fabricate joints with outward bolted flanges. Bolt flanges on 6-inch centers, starting at corners. Install 3/8-inch- diameter fasteners with wing nuts. Alternatively, secure the box sections together using a latching mechanism.
2. Fabricate boxes from stainless steel, at least 0.050 inch thick.
3. For below ambient services, install a vapor barrier at seams, joints, and penetrations. Seal between flanges with replaceable gasket material to form a vapor barrier.

3.6 GENERAL PIPE INSULATION INSTALLATION

A. Requirements in this article generally apply to all insulation materials except where more specific requirements are specified in various pipe insulation material installation articles.

B. Insulation Installation on Fittings, Valves, Strainers, Flanges, and Unions:
1. Install insulation over fittings, valves, strainers, flanges, unions, and other specialties with continuous thermal and vapor-retarder integrity, unless otherwise indicated.
2. Insulate pipe elbows using preformed fitting insulation or mitered fittings made from same material and density as adjacent pipe insulation. Each piece shall be butted tightly against adjoining piece and bonded with adhesive. Fill joints, seams, voids,

and irregular surfaces with insulating cement finished to a smooth, hard, and uniform contour that is uniform with adjoining pipe insulation.

3. Insulate tee fittings with preformed fitting insulation or sectional pipe insulation of same material and thickness as used for adjacent pipe. Cut sectional pipe insulation to fit. Butt each section closely to the next and hold in place with tie wire. Bond pieces with adhesive.
4. Insulate valves using preformed fitting insulation or sectional pipe insulation of same material, density, and thickness as used for adjacent pipe. Overlap adjoining pipe insulation by not less than two times the thickness of pipe insulation, or one pipe diameter, whichever is thicker. For valves, insulate up to and including the bonnets, valve stuffing-box studs, bolts, and nuts. Fill joints, seams, and irregular surfaces with insulating cement.
5. Insulate strainers using preformed fitting insulation or sectional pipe insulation of same material, density, and thickness as used for adjacent pipe. Overlap adjoining pipe insulation by not less than two times the thickness of pipe insulation, or one pipe diameter, whichever is thicker. Fill joints, seams, and irregular surfaces with insulating cement. Insulate strainers so strainer basket flange or plug can be easily removed and replaced without damaging the insulation and jacket. Provide a removable reusable insulation cover. For below ambient services, provide a design that maintains vapor barrier.
6. Insulate flanges and unions using a section of oversized preformed pipe insulation. Overlap adjoining pipe insulation by not less than two times the thickness of pipe insulation, or one pipe diameter, whichever is thicker.
7. Cover segmented insulated surfaces with a layer of finishing cement and coat with a mastic. Install vapor-barrier mastic for below ambient services and a breather mastic for above ambient services. Reinforce the mastic with fabric-reinforcing mesh. Trowel the mastic to a smooth and well-shaped contour.
8. For services not specified to receive a field-applied jacket except for flexible elastomeric and polyolefin, install fitted PVC cover over elbows, tees, strainers, valves, flanges, and unions. Terminate ends with PVC end caps. Tape PVC covers to adjoining insulation facing using PVC tape.
9. Stencil or label the outside insulation jacket of each union with the word "UNION." Match size and color of pipe labels.

C. Insulate instrument connections for thermometers, pressure gages, pressure temperature taps, test connections, flow meters, sensors, switches, and transmitters on insulated pipes, vessels, and equipment. Shape insulation at these connections by tapering it to and around the connection with insulating cement and finish with finishing cement, mastic, and flashing sealant.

D. Install removable insulation covers at locations indicated. Installation shall conform to the following:

1. Make removable flange and union insulation from sectional pipe insulation of same thickness as that on adjoining pipe. Install same insulation jacket as adjoining pipe insulation.
2. When flange and union covers are made from sectional pipe insulation, extend insulation from flanges or union long at least two times the insulation thickness over adjacent pipe insulation on each side of flange or union. Secure flange cover in place with stainless-steel or aluminum bands. Select band material compatible with insulation and jacket.
3. Construct removable valve insulation covers in same manner as for flanges except divide the two-part section on the vertical center line of valve body.
4. When covers are made from block insulation, make two halves, each consisting of mitered blocks wired to stainless-steel fabric. Secure this wire frame, with its attached insulation, to flanges with tie wire. Extend insulation at least 2 inches over adjacent pipe insulation on each side of valve. Fill space between flange or union

cover and pipe insulation with insulating cement. Finish cover assembly with insulating cement applied in two coats. After first coat is dry, apply and trowel second coat to a smooth finish.

5. Unless a PVC jacket is indicated in field-applied jacket schedules, finish exposed surfaces with a metal jacket.

3.7 CALCIUM SILICATE INSULATION INSTALLATION

A. Insulation Installation on Boiler Breechings, Emergency Generator Exhaust, Muffler and Ducts:
   1. Secure single-layer insulation with stainless-steel bands at 12-inch intervals and tighten bands without deforming insulation material.
   2. Install 2-layer insulation with joints tightly butted and staggered at least 3 inches. Secure inner layer with wire spaced at 12-inch intervals. Secure outer layer with stainless-steel bands at 12-inch intervals.
   3. On exposed applications without metal jacket, finish insulation surface with a skim coat of mineral-fiber, hydraulic-setting cement. When cement is dry, apply flood coat of lagging adhesive and press on one layer of glass cloth. Overlap edges at least 1 inch. Apply finish coat of lagging adhesive over glass cloth. Thin finish coat to achieve smooth, uniform finish.

B. Insulation Installation on Straight Pipes and Tubes:
   1. Secure single-layer insulation with stainless-steel bands at 12-inch intervals and tighten bands without deforming insulation materials.
   2. Install 2-layer insulation with joints tightly butted and staggered at least 3 inches. Secure inner layer with wire spaced at 12-inch intervals. Secure outer layer with stainless-steel bands at 12-inch intervals.
   3. Apply a skim coat of mineral-fiber, hydraulic-setting cement to insulation surface. When cement is dry, apply flood coat of lagging adhesive and press on one layer of glass cloth or tape. Overlap edges at least 1 inch. Apply finish coat of lagging adhesive over glass cloth or tape. Thin finish coat to achieve smooth, uniform finish.

C. Insulation Installation on Pipe Flanges:
   1. Install preformed pipe insulation to outer diameter of pipe flange.
   2. Make width of insulation section same as overall width of flange and bolts, plus twice the thickness of pipe insulation.
   3. Fill voids between inner circumference of flange insulation and outer circumference of adjacent straight pipe segments with cut sections of block insulation of same material and thickness as pipe insulation.
   4. Finish flange insulation same as pipe insulation.

D. Insulation Installation on Pipe Fittings and Elbows:
   1. Install preformed sections of same material as straight segments of pipe insulation when available. Secure according to manufacturer's written instructions.
   2. When preformed insulation sections of insulation are not available, install mitered sections of calcium silicate insulation. Secure insulation materials with wire or bands.
   3. Finish fittings insulation same as pipe insulation.

E. Insulation Installation on Valves and Pipe Specialties:
   1. Install mitered segments of calcium silicate insulation to valve body. Arrange insulation to permit access to packing and to allow valve operation without disturbing insulation.
   2. Install insulation to flanges as specified for flange insulation application.
   3. Finish valve and specialty insulation same as pipe insulation.

3.8 CELLULAR-GLASS INSULATION INSTALLATION

A. Insulation Installation on Straight Pipes and Tubes:
1. Secure each layer of insulation to pipe with wire or bands and tighten bands without deforming insulation materials.
2. Where vapor barriers are indicated, seal longitudinal seams, end joints, and protrusions with vapor-barrier mastic and joint sealant.
3. For insulation with factory-applied jackets on above ambient services, secure laps with outward clinched staples at 6 inches o.c.
4. For insulation with factory-applied jackets on below ambient services, do not staple longitudinal tabs but secure tabs with additional adhesive as recommended by insulation material manufacturer and seal with vapor-barrier mastic and flashing sealant.

B. Insulation Installation on Pipe Flanges:
1. Install preformed pipe insulation to outer diameter of pipe flange.
2. Make width of insulation section same as overall width of flange and bolts, plus twice the thickness of pipe insulation.
3. Fill voids between inner circumference of flange insulation and outer circumference of adjacent straight pipe segments with cut sections of cellular-glass block insulation of same thickness as pipe insulation.
4. Install jacket material with manufacturer's recommended adhesive, overlap seams at least 1 inch, and seal joints with flashing sealant.

B. Insulation Installation on Pipe Fittings and Elbows:
1. Install preformed sections of same material as straight segments of pipe insulation when available. Secure according to manufacturer's written instructions.
5. When preformed sections of insulation are not available, install mitered sections of cellular-glass insulation. Secure insulation materials with wire or bands.

C. Insulation Installation on Valves and Pipe Specialties:
1. Install preformed sections of cellular-glass insulation to valve body.
2. Arrange insulation to permit access to packing and to allow valve operation without disturbing insulation.
3. Install insulation to flanges as specified for flange insulation application.

3.9 FLEXIBLE ELASTOMERIC INSULATION INSTALLATION

A. Seal longitudinal seams and end joints with manufacturers recommended adhesive to eliminate openings in insulation that allow passage of air to surface being insulated.

B. Insulation Installation on Pipe Flanges:
1. Install pipe insulation to outer diameter of pipe flange.
2. Make width of insulation section same as overall width of flange and bolts, plus twice the thickness of pipe insulation.
3. Fill voids between inner circumference of flange insulation and outer circumference of adjacent straight pipe segments with cut sections of sheet insulation of same thickness as pipe insulation.
4. Secure insulation to flanges and seal seams with manufacturers recommended adhesive to eliminate openings in insulation that allow passage of air to surface being insulated.

C. Insulation Installation on Pipe Fittings and Elbows:
1. Install mitered sections of pipe insulation.

2. Secure insulation materials and seal seams with manufacturer's recommended adhesive to eliminate openings in insulation that allow passage of air to surface being insulated.

D. Insulation Installation on Valves and Pipe Specialties:
1. Install preformed valve covers manufactured of same material as pipe insulation when available.
2. When preformed valve covers are not available, install cut sections of pipe and sheet insulation to valve body. Arrange insulation to permit access to packing and to allow valve operation without disturbing insulation.
3. Install insulation to flanges as specified for flange insulation application.
4. Secure insulation to valves and specialties and seal seams with manufacturer's recommended adhesive to eliminate openings in insulation that allow passage of air to surface being insulated.

3.10 MINERAL-FIBER INSULATION INSTALLATION

A. Insulation Installation on Straight Pipes and Tubes:
1. Secure each layer of preformed pipe insulation to pipe with wire or bands and tighten bands without deforming insulation materials.
2. Where vapor barriers are indicated, seal longitudinal seams, end joints, and protrusions with vapor-barrier mastic and joint sealant.
3. For insulation with factory-applied jackets on above ambient surfaces, secure laps with outward clinched staples at 6 inches o.c.
4. For insulation with factory-applied jackets on below ambient surfaces, do not staple longitudinal tabs but secure tabs with additional adhesive as recommended by insulation material manufacturer and seal with vapor-barrier mastic and flashing sealant.

B. Insulation Installation on Pipe Flanges:
1. Install preformed pipe insulation to outer diameter of pipe flange.
2. Make width of insulation section same as overall width of flange and bolts, plus twice the thickness of pipe insulation.
3. Fill voids between inner circumference of flange insulation and outer circumference of adjacent straight pipe segments with mineral-fiber blanket insulation.
4. Install jacket material with manufacturer's recommended adhesive, overlap seams at least 1 inch, and seal joints with flashing sealant.

C. Insulation Installation on Pipe Fittings and Elbows:
1. Install preformed sections of same material as straight segments of pipe insulation when available.
2. When preformed insulation elbows and fittings are not available, install mitered sections of pipe insulation, to a thickness equal to adjoining pipe insulation. Secure insulation materials with wire or bands.

D. Insulation Installation on Valves and Pipe Specialties:
1. Install preformed sections of same material as straight segments of pipe insulation when available.
2. When preformed sections are not available, install mitered sections of pipe insulation to valve body.
3. Arrange insulation to permit access to packing and to allow valve operation without disturbing insulation.
4. Install insulation to flanges as specified for flange insulation application.

E. Blanket Insulation Installation on Ducts and Plenums: Secure with adhesive and insulation pins.

1. Apply adhesives according to manufacturer's recommended coverage rates per unit area, for 50 percent coverage of duct and plenum surfaces.
2. Apply adhesive to entire circumference of ducts and to all surfaces of fittings and transitions.
3. Install either capacitor-discharge-weld pins and speed washers or cupped-head, capacitor-discharge-weld pins on sides and bottom of horizontal ducts and sides of vertical ducts as follows:
    a. On duct sides with dimensions 18 inches and smaller, place pins along longitudinal centerline of duct. Space 3 inches maximum from insulation end joints, and 16 inches o.c.
    b. On duct sides with dimensions larger than 18 inches, place pins 16 inches o.c. each way, and 3 inches maximum from insulation joints. Install additional pins to hold insulation tightly against surface at cross bracing.
    c. Pins may be omitted from top surface of horizontal, rectangular ducts and plenums.
    d. Do not overcompress insulation during installation.
    e. Impale insulation over pins and attach speed washers.
    f. Cut excess portion of pins extending beyond speed washers or bend parallel with insulation surface. Cover exposed pins and washers with tape matching insulation facing.
4. For ducts and plenums with surface temperatures below ambient, install a continuous unbroken vapor barrier. Create a facing lap for longitudinal seams and end joints with insulation by removing 2 inches from 1 edge and 1 end of insulation segment. Secure laps to adjacent insulation section with 1/2-inch outward-clinching staples, 1 inch o.c. Install vapor barrier consisting of factory- or field-applied jacket, adhesive, vapor-barrier mastic, and sealant at joints, seams, and protrusions.
    a. Repair punctures, tears, and penetrations with tape or mastic to maintain vapor-barrier seal.
    b. Install vapor stops for ductwork and plenums operating below 50 deg F at 18-foot intervals. Vapor stops shall consist of vapor-barrier mastic applied in a Z-shaped pattern over insulation face, along butt end of insulation, and over the surface. Cover insulation face and surface to be insulated a width equal to 2 times the insulation thickness but not less than 3 inches.
5. Overlap unfaced blankets a minimum of 2 inches on longitudinal seams and end joints. At end joints, secure with steel bands spaced a maximum of 18 inches o.c.
6. Install insulation on rectangular duct elbows and transitions with a full insulation section for each surface. Install insulation on round and flat-oval duct elbows with individually mitered gores cut to fit the elbow.
7. Insulate duct stiffeners, hangers, and flanges that protrude beyond insulation surface with 6-inch- wide strips of same material used to insulate duct. Secure on alternating sides of stiffener, hanger, and flange with pins spaced 6 inches o.c.

F. Board Insulation Installation on Ducts and Plenums: Secure with adhesive and insulation pins.
    1. Apply adhesives according to manufacturer's recommended coverage rates per unit area, for 50 percent coverage of duct and plenum surfaces.
    2. Apply adhesive to entire circumference of ducts and to all surfaces of fittings and transitions.
    3. Install either capacitor-discharge-weld pins and speed washers or cupped-head, capacitor-discharge-weld pins on sides and bottom of horizontal ducts and sides of vertical ducts as follows:
        a. On duct sides with dimensions 18 inches and smaller, place pins along longitudinal centerline of duct. Space 3 inches maximum from insulation end joints, and 16 inches o.c.

b. On duct sides with dimensions larger than 18 inches, space pins 16 inches o.c. each way, and 3 inches maximum from insulation joints. Install additional pins to hold insulation tightly against surface at cross bracing.
c. Pins may be omitted from top surface of horizontal, rectangular ducts and plenums.
d. Do not over compress insulation during installation.
e. Cut excess portion of pins extending beyond speed washers or bend parallel with insulation surface. Cover exposed pins and washers with tape matching insulation facing.

4. For ducts and plenums with surface temperatures below ambient, install a continuous unbroken vapor barrier. Create a facing lap for longitudinal seams and end joints with insulation by removing 2 inches from 1 edge and 1 end of insulation segment. Secure laps to adjacent insulation section with 1/2-inch outward-clinching staples, 1-inch o.c. Install vapor barrier consisting of factory- or field-applied jacket, adhesive, vapor-barrier mastic, and sealant at joints, seams, and protrusions.
   a. Repair punctures, tears, and penetrations with tape or mastic to maintain vapor-barrier seal.
   b. Install vapor stops for ductwork and plenums operating below 50 deg F at 18-foot intervals. Vapor stops shall consist of vapor-barrier mastic applied in a Z-shaped pattern over insulation face, along butt end of insulation, and over the surface. Cover insulation face and surface to be insulated a width equal to 2 times the insulation thickness but not less than 3 inches.
5. Install insulation on rectangular duct elbows and transitions with a full insulation section for each surface. Groove and score insulation to fit as closely as possible to outside and inside radius of elbows. Install insulation on round and flat-oval duct elbows with individually mitered gores cut to fit the elbow.
6. Insulate duct stiffeners, hangers, and flanges that protrude beyond insulation surface with 6-inch- wide strips of same material used to insulate duct. Secure on alternating sides of stiffener, hanger, and flange with pins spaced 6 inches o.c.

3.11 PHENOLIC INSULATION INSTALLATION

A. General Installation Requirements:
1. Secure single-layer insulation with stainless-steel bands at 12-inch intervals and tighten bands without deforming insulation materials.
2. Install 2-layer insulation with joints tightly butted and staggered at least 3 inches. Secure inner layer with 0.062-inch wire spaced at 12-inch intervals. Secure outer layer with stainless-steel bands at 12-inch intervals.

B. Insulation Installation on Straight Pipes and Tubes:
1. Secure each layer of insulation to pipe with wire or bands and tighten bands without deforming insulation materials.
2. Where vapor barriers are indicated, seal longitudinal seams, end joints, and protrusions with vapor-barrier mastic and joint sealant.
3. For insulation with factory-applied jackets on above ambient services, secure laps with outward clinched staples at 6 inches o.c.
4. For insulation with factory-applied jackets with vapor retarders on below ambient services, do not staple longitudinal tabs but secure tabs with additional adhesive as recommended by insulation material manufacturer and seal with vapor-barrier mastic and flashing sealant.

C. Insulation Installation on Pipe Flanges:
1. Install preformed pipe insulation to outer diameter of pipe flange.
2. Make width of insulation section same as overall width of flange and bolts, plus twice the thickness of pipe insulation.

3. Fill voids between inner circumference of flange insulation and outer circumference of adjacent straight pipe segments with cut sections of block insulation of same material and thickness as pipe insulation.

D. Insulation Installation on Pipe Fittings and Elbows:
1. Install preformed insulation sections of same material as straight segments of pipe insulation. Secure according to manufacturer's written instructions.

E. Insulation Installation on Valves and Pipe Specialties:
1. Install preformed insulation sections of same material as straight segments of pipe insulation. Secure according to manufacturer's written instructions.
2. Arrange insulation to permit access to packing and to allow valve operation without disturbing insulation.
3. Install insulation to flanges as specified for flange insulation application.

3.12 POLYISOCYANURATE INSULATION INSTALLATION

A. Insulation Installation on Straight Pipes and Tubes:
1. Secure each layer of insulation to pipe with tape or bands and tighten without deforming insulation materials. Orient longitudinal joints between half sections in 3 and 9 o'clock positions on the pipe.
2. For insulation with factory-applied jackets with vapor barriers, do not staple longitudinal tabs but secure tabs with additional adhesive or tape as recommended by insulation material manufacturer and seal with vapor-barrier mastic.
3. All insulation shall be tightly butted and free of voids and gaps at all joints. Vapor barrier must be continuous. Before installing jacket material, install vapor-barrier system.

B. Insulation Installation on Pipe Flanges:
1. Install preformed pipe insulation to outer diameter of pipe flange.
2. Make width of insulation section same as overall width of flange and bolts, same thickness of adjacent pipe insulation, not to exceed 1-1/2-inch thickness.
3. Fill voids between inner circumference of flange insulation and outer circumference of adjacent straight pipe segments with cut sections of polyisocyanurate block insulation of same thickness as pipe insulation.

C. Insulation Installation on Fittings and Elbows:
1. Install preformed sections of same material as straight segments of pipe insulation. Secure according to manufacturer's written instructions.

D. Insulation Installation on Valves and Pipe Specialties:
1. Install preformed sections of polyisocyanurate insulation to valve body.
2. Arrange insulation to permit access to packing and to allow valve operation without disturbing insulation.
3. Install insulation to flanges as specified for flange insulation application.

3.13 POLYOLEFIN INSULATION INSTALLATION

A. Insulation Installation on Straight Pipes and Tubes:
1. Seal split-tube longitudinal seams and end joints with manufacturers recommended adhesive to eliminate openings in insulation that allow passage of air to surface being insulated.

B. Insulation Installation on Pipe Flanges:
1. Install pipe insulation to outer diameter of pipe flange.

2. Make width of insulation section same as overall width of flange and bolts, plus twice the thickness of pipe insulation.
3. Fill voids between inner circumference of flange insulation and outer circumference of adjacent straight pipe segments with cut sections of polyolefin sheet insulation of same thickness as pipe insulation.
4. Secure insulation to flanges and seal seams with manufacturers recommended adhesive to eliminate openings in insulation that allow passage of air to surface being insulated.

C. Insulation Installation on Pipe Fittings and Elbows:
1. Install mitered sections of polyolefin pipe insulation.
2. Secure insulation materials and seal seams with manufacturer's recommended adhesive to eliminate openings in insulation that allow passage of air to surface being insulated.

D. Insulation Installation on Valves and Pipe Specialties:
1. Install cut sections of polyolefin pipe and sheet insulation to valve body.
2. Arrange insulation to permit access to packing and to allow valve operation without disturbing insulation.
3. Install insulation to flanges as specified for flange insulation application.
4. Secure insulation to valves and specialties, and seal seams with manufacturer's recommended adhesive to eliminate openings in insulation that allow passage of air to surface being insulated.

3.14 POLYSTYRENE INSULATION INSTALLATION

A. Insulation Installation on Straight Pipes and Tubes:
1. Secure each layer of insulation with tape or bands and tighten bands without deforming insulation materials. Orient longitudinal joints between half sections in 3 and 9 o'clock positions on the pipe.
2. For insulation with factory-applied jackets with vapor barriers, do not staple longitudinal tabs but secure tabs with additional adhesive or tape as recommended by insulation material manufacturer and seal with vapor-barrier mastic.
3. All insulation shall be tightly butted and free of voids and gaps at all joints. Vapor barrier must be continuous. Before installing jacket material, install vapor-barrier system.

B. Insulation Installation on Pipe Flanges:
1. Install preformed pipe insulation to outer diameter of pipe flange.
2. Make width of insulation section same as overall width of flange and bolts, same thickness of adjacent pipe insulation, not to exceed 1-1/2-inch thickness.
3. Fill voids between inner circumference of flange insulation and outer circumference of adjacent straight pipe segments with cut sections of polystyrene block insulation of same thickness as pipe insulation.

C. Insulation Installation on Pipe Fittings and Elbows:
1. Install preformed insulation sections of same material as straight segments of pipe insulation. Secure according to manufacturer's written instructions.

D. Insulation Installation on Valves and Pipe Specialties:
1. Install preformed section of polystyrene insulation to valve body.
2. Arrange insulation to permit access to packing and to allow valve operation without disturbing insulation.
3. Install insulation to flanges as specified for flange insulation application.

3.15 FIELD-APPLIED JACKET INSTALLATION

A. Where glass-cloth jackets are indicated, install directly over bare insulation or insulation with factory-applied jackets.
   1. Draw jacket smooth and tight to surface with 2-inch overlap at seams and joints.
   2. Embed glass cloth between two 0.062-inch- thick coats of lagging adhesive.
   3. Completely encapsulate insulation with coating, leaving no exposed insulation.

B. Where FSK jackets are indicated, install as follows:
   1. Draw jacket material smooth and tight.
   2. Install lap or joint strips with same material as jacket.
   3. Secure jacket to insulation with manufacturer's recommended adhesive.
   4. Install jacket with 1-1/2-inch laps at longitudinal seams and 3-inch- wide joint strips at end joints.
   5. Seal openings, punctures, and breaks in vapor-retarder jackets and exposed insulation with vapor-barrier mastic.

3.16 FIRE-RATED INSULATION SYSTEM INSTALLATION

A. Where fire-rated insulation system is indicated, secure system to ducts and duct hangers and supports to maintain a continuous fire rating.

B. Insulate duct access panels and doors to achieve same fire rating as duct.

C. Install firestopping at penetrations through fire-rated assemblies. Fire-stop systems are specified in Division 07 Section "Penetration Firestopping."

3.17 FINISHES

A. Duct, Equipment, and Pipe Insulation with ASJ, Glass-Cloth, or Other Paintable Jacket Material: Paint jacket with paint system identified below and as specified in Division 09 painting Sections.
   1. Flat Acrylic Finish: Two finish coats over a primer that is compatible with jacket material and finish coat paint. Add fungicidal agent to render fabric mildew proof.
      a. Finish Coat Material: Interior, flat, latex-emulsion size.

B. Flexible Elastomeric Thermal Insulation: After adhesive has fully cured, apply two coats of insulation manufacturer's recommended protective coating.

C. Color: Final color as selected by Architect. Vary first and second coats to allow visual inspection of the completed Work.

D. Do not field paint aluminum or stainless-steel jackets.

3.18 FIELD QUALITY CONTROL

A. Perform tests and inspections.

B. Tests and Inspections:
   1. Inspect ductwork, randomly selected by Architect, by removing field-applied jacket and insulation in layers in reverse order of their installation. Extent of inspection shall be limited to one location for each duct system defined in the "Duct Insulation Schedule, General" Article.
   2. Inspect field-insulated equipment, randomly selected by Architect, by removing field-applied jacket and insulation in layers in reverse order of their installation. Extent of

inspection shall be limited to one location for each type of equipment defined in the "Equipment Insulation Schedule" Article. For large equipment, remove only a portion adequate to determine compliance.

3. Inspect pipe, fittings, strainers, and valves, randomly selected by Architect, by removing field-applied jacket and insulation in layers in reverse order of their installation. Extent of inspection shall be limited to three locations of straight pipe, three locations of threaded fittings, three locations of welded fittings, two locations of threaded strainers, two locations of welded strainers, three locations of threaded valves, and three locations of flanged valves for each pipe service defined in the "Piping Insulation Schedule, General" Article.

C. All insulation applications will be considered defective Work if sample inspection reveals noncompliance with requirements.

3.19 BOILER BREECHING INSULATION SCHEDULE

A. Round, exposed breeching and connector insulation shall be one of the following:
1. Calcium Silicate: 4 inches thick.
2. High-Temperature Mineral-Fiber Blanket: 3 inches thick and 3-lb/cu. ft. nominal density.
3. High-Temperature Mineral-Fiber Board: 3 inches thick and 3-lb/cu. ft. nominal density.

B. Round, concealed breeching and connector insulation shall be one of the following:
1. Calcium Silicate: 4 inches thick.
2. High-Temperature Mineral-Fiber Blanket: 3 inches thick and 3-lb/cu. ft. nominal density.
3. High-Temperature Mineral-Fiber Board: 3 inches thick and 3-lb/cu. ft. nominal density.

C. Rectangular, exposed breeching and connector insulation shall be one of the following:
1. Calcium Silicate: 4 inches thick.
2. High-Temperature Mineral-Fiber Blanket: 3 inches thick and 3-lb/cu. ft. nominal density.
3. High-Temperature Mineral-Fiber Board: 3 inches thick and 3-lb/cu. ft. nominal density.

D. Rectangular, concealed breeching and connector insulation shall be one of the following:
1. Calcium Silicate: 4 inches thick.
2. High-Temperature Mineral-Fiber Blanket: 3 inches thick and 3-lb/cu. ft. nominal density.
3. High-Temperature Mineral-Fiber Board: 3 inches thick and 3-lb/cu. ft. nominal density.

3.20 DUCT INSULATION SCHEDULE, GENERAL

A. Plenums and Ducts Requiring Insulation:
1. Indoor, concealed supply and outdoor air.
2. Indoor, exposed supply and outdoor air.
3. Indoor, concealed return located in nonconditioned space.
4. Indoor, exposed return located in nonconditioned space.
5. Indoor, concealed, Type I, commercial, kitchen hood exhaust.
6. Indoor, exposed, Type I, commercial, kitchen hood exhaust.
7. Indoor, concealed oven and warewash exhaust.
8. Indoor, exposed oven and warewash exhaust.

9. Indoor, concealed exhaust between isolation damper and penetration of building exterior.
10. Indoor, exposed exhaust between isolation damper and penetration of building exterior.
11. Outdoor, concealed supply and return.
12. Outdoor, exposed supply and return.

E. Items Not Insulated:
1. Fibrous-glass ducts.
2. Metal ducts with duct liner of sufficient thickness to comply with energy code and ASHRAE/IESNA 90.1.
3. Factory-insulated flexible ducts.
4. Factory-insulated plenums and casings.
5. Flexible connectors.
6. Vibration-control devices.
7. Factory-insulated access panels and doors.

3.21 INDOOR DUCT AND PLENUM INSULATION SCHEDULE

A. Concealed, round and flat-oval, supply-air duct insulation shall be the following:
1. Mineral-Fiber Blanket: 1-1/2 inches thick and 0.75-lb/cu. ft. nominal density.

B. Concealed, round and flat-oval, return-air duct insulation shall be the following:
1. Mineral-Fiber Blanket: 1-1/2 inches thick and 0.75-lb/cu. ft. nominal density.

C. Concealed, round and flat-oval, outdoor-air duct insulation shall be the following:
1. Mineral-Fiber Board: 2 inches thick and 3-lb/cu. ft. nominal density.

D. Concealed, round and flat-oval, hot exhaust-air duct insulation shall be the following:
1. Flexible Elastomeric: 1 inch thick.

E. Concealed, rectangular, supply-air duct insulation shall be the following:
1. Mineral-Fiber Blanket: 1-1/2 inches thick and 0.75-lb/cu. ft. nominal density.

F. Concealed, rectangular, return-air duct insulation shall be the following:
1. Mineral-Fiber Blanket: 1-1/2 inches thick and 0.75-lb/cu. ft. nominal density.

G. Concealed, rectangular, outdoor-air duct insulation shall be the following:
1. Mineral-Fiber Board: 2 inches thick and 3-lb/cu. ft. nominal density.

H. Concealed, rectangular, exhaust-air duct insulation between isolation damper and penetration of building exterior shall be the following:
1. Mineral-Fiber Board: 1-1/2 inches thick and 2-lb/cu. ft. nominal density.

I. Concealed, Type I, Commercial, Kitchen Hood Exhaust Duct and Plenum Insulation: Fire-rated blanket or board; thickness as required to achieve 2-hour fire rating.

J. Concealed, supply-air plenum insulation shall be one of the following:
1. Mineral-Fiber Blanket: 2 inches thick and 1.5-lb/cu. ft. nominal density.
2. Mineral-Fiber Board: 2 inches thick and 2-lb/cu. ft. nominal density.

K. Concealed, return-air plenum insulation shall be one of the following:
1. Mineral-Fiber Blanket: 1-1/2 inches thick and 0.75-lb/cu. ft. nominal density.
2. Mineral-Fiber Board: 1-1/2 inches thick and 2-lb/cu. ft. nominal density.

L. Concealed, outdoor-air plenum insulation shall be one of the following:
1. Mineral-Fiber Blanket: 2 inches thick and 3-lb/cu. ft. nominal density.
2. Mineral-Fiber Board: 2 inches thick and 3-lb/cu. ft. nominal density.

M. Concealed, exhaust-air plenum insulation shall be one of the following:
1. Mineral-Fiber Blanket: 2 inches thick and 1.5-lb/cu. ft. nominal density.
2. Mineral-Fiber Board: 2 inches thick and 2-lb/cu. ft. nominal density.

N. Exposed, round and flat-oval, supply-air duct shall be internally lined.

O. Exposed, round and flat-oval, return-air duct insulation shall not be insulated.

P. Exposed, round and flat-oval, outdoor-air duct insulation shall be one of the following:
1. Mineral-Fiber Board: 2 inches thick and 3-lb/cu. ft. nominal density.

Q. Exposed, round and flat-oval, hot exhaust-air duct insulation shall be one of the following:
1. Phenolic: 1 inch thick.
2. Polyolefin: 1 inch thick.

R. Exposed, rectangular, supply-air duct insulation shall be internally lined.

S. Exposed, rectangular, return-air duct insulation shall not be insulated.

T. Exposed, rectangular, outdoor-air duct insulation shall be one of the following:
1. Mineral-Fiber Board: 2 inches thick and 3-lb/cu. ft. nominal density.
2. Phenolic: 2 inches thick.
3. Polyolefin: 2 inches thick.

U. Exposed, rectangular, hot exhaust-air duct insulation shall be one of the following:
1. Phenolic: 1 inch thick.
2. Polyolefin: 1 inch thick.

V. Exposed, Type I, Commercial, Kitchen Hood Exhaust Duct and Plenum Insulation: Fire-rated board; thickness as required to achieve 2-hour fire rating.

W. Exposed, supply-air plenum insulation shall be one of the following:
1. Mineral-Fiber Board: 1-1/2 inches thick and 2-lb/cu. ft. nominal density.
2. Phenolic: 1-1/2 inches thick.
3. Polyolefin: 1-1/2 inches thick.

X. Exposed, return-air plenum insulation shall be the following:
1. Mineral-Fiber Board: 1-1/2 inches thick and 2-lb/cu. ft. nominal density.

Y. Exposed, outdoor-air plenum insulation shall be one of the following:
1. Mineral-Fiber Board: 2 inches thick and 3-lb/cu. ft. nominal density.
2. Phenolic: 2 inches thick.

Z. Exposed, hot exhaust-air plenum insulation shall be one of the following:
1. Mineral-Fiber Board: 1-1/2 inches thick and 2-lb/cu. ft. nominal density.
2. Phenolic: 1-1/2 inches thick.

3.22 ABOVEGROUND, OUTDOOR DUCT AND PLENUM INSULATION SCHEDULE

A. Insulation materials and thicknesses are identified below. If more than one material is listed for a duct system, selection from materials listed is Contractor's option.

B. Concealed, round and flat-oval, supply-air duct insulation shall be one of the following:
1. Mineral-Fiber Blanket: 3 inches and 3-lb/cu. ft. nominal density.
2. Mineral-Fiber Board: 3 inches thick and 6-lb/cu. ft. nominal density.

C. Concealed, round and flat-oval, return-air duct insulation shall be one of the following:

1. Mineral-Fiber Blanket: 3 inches and 3-lb/cu. ft. nominal density.
2. Mineral-Fiber Board: 3 inches thick and 6-lb/cu. ft. nominal density.

D. Concealed, round and flat-oval, outdoor-air duct insulation shall be one of the following:
1. Mineral-Fiber Blanket: 3 inches and 3-lb/cu. ft. nominal density.
2. Mineral-Fiber Board: 3 inches thick and 3-lb/cu. ft. nominal density.

E. Concealed, rectangular, supply-air duct insulation shall be one of the following:
1. Mineral-Fiber Blanket: 3 inches and 3-lb/cu. ft. nominal density.
2. Mineral-Fiber Board: 3 inches thick and 6-lb/cu. ft. nominal density.

F. Concealed, rectangular, return-air duct insulation shall be one of the following:
1. Mineral-Fiber Blanket: 3 inches and 3-lb/cu. ft. nominal density.
2. Mineral-Fiber Board: 2 inches thick and 2-lb/cu. ft. nominal density.

G. Concealed, supply-air plenum insulation shall be one of the following:
1. Retain one or more of three subparagraphs below.
2. Mineral-Fiber Blanket: 3 inches and 3-lb/cu. ft. nominal density.
3. Mineral-Fiber Board: 2 inches thick and 2-lb/cu. ft. nominal density.

H. Concealed, return-air plenum insulation shall be one of the following:
1. Mineral-Fiber Blanket: 2 inches and 1.5-lb/cu. ft. nominal density.
2. Mineral-Fiber Board: 2 inches thick and 3-lb/cu. ft. nominal density.

I. Exposed, round and flat-oval, supply-air duct insulation shall be the following:
1. Mineral-Fiber Board: 3 inches thick and 6-lb/cu. ft. nominal density.

J. Exposed, round and flat-oval, return-air duct insulation shall be the following:
1. Mineral-Fiber Board: 3 inches thick and 6-lb/cu. ft. nominal density.

K. Exposed, rectangular, supply-air duct insulation shall be the following:
1. Mineral-Fiber Board: 3 inches thick and 6-lb/cu. ft. nominal density.

L. Exposed, rectangular, return-air duct insulation shall be the following:
1. Mineral-Fiber Board: 2 inches thick and 6-lb/cu. ft. nominal density.

M. Exposed, supply-air plenum insulation shall be the following:
1. Mineral-Fiber Board: 3 inches thick and 6-lb/cu. ft. nominal density.

N. Exposed, return-air plenum insulation shall be the following:
1. Mineral-Fiber Board: 3 inches thick and 6-lb/cu. ft. nominal density.

3.23 EQUIPMENT INSULATION SCHEDULE (AS APPLICABLE)

A. Insulation materials and thicknesses are identified below. If more than one material is listed for a type of equipment, selection from materials listed is Contractor's option.

B. Insulate indoor and outdoor equipment in paragraphs below that is not factory insulated.

C. Chillers: Insulate cold surfaces on chillers, including, but not limited to, evaporator bundles, heat-recovery bundles, suction piping, compressor inlets, tube sheets, water boxes, and nozzles with one of the following:
   1. Cellular Glass: 2 inches thick.
   2. Phenolic: 1 inch thick.
   3. Polyisocyanurate: 1-1/2 inches thick.
   4. Polyolefin: 1-1/2 inches thick.

D. Heat-exchanger (water-to-water for cooling service) insulation shall be one of the following:
   1. Cellular Glass: 2 inches thick.
   2. Flexible Elastomeric: 1 inch thick.
   3. Phenolic: 1 inch thick.
   4. Polyisocyanurate: 1 inch thick.
   5. Polyolefin: 1 inch thick.

E. Heat-exchanger (water-to-water for heating service) insulation shall be one of the following:
   1. Calcium Silicate: 3 inches thick.
   2. Cellular Glass: 3 inches thick.

F. Steam-to-hot-water converter insulation shall be one of the following:
   1. Calcium Silicate: 3 inches thick.
   2. Cellular Glass: 3 inches thick.

G. Hot-water-to-steam converter insulation shall be one of the following:
   1. Calcium Silicate: 3 inches thick.
   2. Cellular Glass: 3 inches thick.

H. Chilled-water pump insulation shall be one of the following:
   1. Cellular Glass: 3 inches thick.
   2. Phenolic: 2 inches thick.
   3. Polyisocyanurate: 1-1/2 inches thick.

I. Condenser-water pump shall not be insulated.

J. Dual-service heating and cooling pump insulation shall be one of the following:
   1. Cellular Glass: 3 inches thick.
   2. Phenolic: 2 inches thick.
   3. Polyisocyanurate: 1 inch Insert thickness thick.

K. Heating-hot-water pump insulation shall be the following:
   1. Cellular Glass: 3 inches thick.

L. Heat-recovery pump insulation shall be one of the following:
   1. Cellular Glass: 2 inches thick.
   2. Phenolic: 1 inch thick.
   3. Polyisocyanurate: 1-1/2 inches thick.

M. Steam condensate pump and boiler feedwater pump insulation shall be the following:
   1. Cellular Glass: 3 inches thick.

N. Chilled-water expansion/compression tank insulation shall be one of the following:
   1. Cellular Glass: 1-1/2 inches thick.
   2. Flexible Elastomeric: 1 inch thick.
   3. Phenolic: 1 inch thick.
   4. Polyisocyanurate: 1 inch thick.

5. Polyolefin: 1 inch thick.

O. Condenser-water expansion/compression tank shall not be insulated.

P. Dual-service heating and cooling expansion/compression tank insulation shall be one of the following:
1. Cellular Glass: 1-1/2 inches thick.
2. Flexible Elastomeric: 1 inch thick.
3. Phenolic: 1 inch thick.
4. Polyisocyanurate: 1 inch thick.
5. Polyolefin: 1 inch thick.

Q. Heating-hot-water expansion/compression tank insulation shall be the following:
1. Cellular Glass: 1-1/2 inches thick.

R. Heat-recovery expansion/compression tank insulation shall be one of the following:
1. Cellular Glass: 1-1/2 inches thick.
2. Flexible Elastomeric: 1 inch thick.
3. Phenolic: 1 inch thick.
4. Polyisocyanurate: 1 inch thick.
5. Polyolefin: 1 inch thick.

S. Chilled-water air-separator insulation shall be one of the following:
1. Cellular Glass: 2 inches thick.
2. Flexible Elastomeric: 1 inch thick.
3. Phenolic: 1 inch thick.
4. Polyisocyanurate: 1 inch thick.
5. Polyolefin: 1 inch thick.

T. Condenser-water air-separator shall not be insulated.

U. Dual-service heating and cooling air-separator insulation shall be one of the following:
1. Cellular Glass: 2 inches thick.
2. Flexible Elastomeric: 1 inch thick.
3. Phenolic: 1 inch thick.
4. Polyisocyanurate: 1 inch thick.
5. Polyolefin: 1 inch thick.

V. Heating-hot-water air-separator insulation shall be the following:
1. Cellular Glass: 3 inches thick.

W. Heat-recovery air-separator insulation shall be one of the following:
1. Retain one or more of seven subparagraphs below.
2. Cellular Glass: 2 inches thick.
3. Flexible Elastomeric: 1 inch thick.
4. Phenolic: 1 inch thick.
5. Polyisocyanurate: 1 inch thick.
6. Polyolefin: 1 inch thick.

X. Thermal storage tank (brine, water, ice) insulation shall be one of the following:
1. Retain one or more of six subparagraphs below.
2. Cellular Glass: 4 inches thick.
3. Phenolic: 3 inches thick.
4. Polyisocyanurate (Outdoor Application Only): 3 inches thick.
5. Polystyrene (Outdoor Application Only): 3 inches thick.

Y. Deaerator insulation shall be the following:
1. Cellular Glass: 3 inches thick.

Z. Steam condensate tank and receiver insulation shall be one of the following:
1. Cellular Glass: 3 inches thick.
2. Mineral-Fiber Pipe and Tank: 2 inches thick.

AA. Steam flash-tank, flash-separator, and blow-off-tank insulation shall be one of the following:
1. Calcium Silicate: 3 inches thick.
2. Cellular Glass: 3 inches thick.
3. Mineral-Fiber Pipe and Tank: 2 inches thick.

BB. Piping system filter-housing insulation shall be one of the following:
1. Cellular Glass: 3 inches thick.
2. Mineral-Fiber Pipe and Tank: 2 inches thick.

CC. Outdoor, aboveground, heated, fuel-oil storage tank insulation shall be one of the following:
1. Cellular Glass: 3 inches thick.
2. Mineral-Fiber Pipe and Tank: 2 inches thick.
3. Polyisocyanurate: 1-1/2 inches thick.

3.24 PIPING INSULATION SCHEDULE, GENERAL

A. Acceptable preformed pipe and tubular insulation materials and thicknesses are identified for each piping system and pipe size range. If more than one material is listed for a piping system, selection from materials listed is Contractor's option.

B. Items Not Insulated: Unless otherwise indicated, do not install insulation on the following:
1. Drainage piping located in crawl spaces.
2. Underground piping.
3. Chrome-plated pipes and fittings unless there is a potential for personnel injury.

3.25 INDOOR PIPING INSULATION SCHEDULE

A. Condensate and Equipment Drain Water below 60 Deg F:
1. All Pipe Sizes: Insulation shall be one of the following:
a. Flexible Elastomeric: 1 inch thick.
b. Mineral-Fiber, Preformed Pipe Insulation, Type I: 1 inch thick.
c. Phenolic: 1 inch thick.
d. Polyisocyanurate: 1 inch thick.
e. Polyolefin: 1 inch thick.

B. Chilled Water and Brine, 40 Deg F and below:
1. NPS 3 and Smaller: Insulation shall be one of the following:
a. Cellular Glass: 1-1/2 inches thick.
b. Phenolic: 1-1/2 inches thick.
c. Polyisocyanurate: 1-1/2 inches thick.
2. NPS 4 to NPS 12: Insulation shall be one of the following:
a. Cellular Glass: 2 inches thick.
b. Phenolic: 3 inches thick.
c. Polyisocyanurate: 1-1/2 inches thick.
3. NPS 14 and Larger: Insulation shall be one of the following:
a. Cellular Glass: 3 inches thick.
b. Phenolic: 3 inches thick.

c. Polyisocyanurate: 2 inches thick.

C. Chilled Water and Brine, above 40 Deg F:
1. NPS 12 and Smaller: Insulation shall be one of the following:
a. Cellular Glass: 2 inches thick.
b. Phenolic: 2 inches thick.
c. Polyisocyanurate: 2 inches thick.
d. Polyolefin: 1 inch thick.
2. NPS 14 and Larger: Insulation shall be one of the following:
a. Cellular Glass: 3 inches thick.
b. Phenolic: 3 inches thick.
c. Polyisocyanurate: 2 inches thick.

D. Condenser-Water Supply and Return are not to be insulated.

E. Heating-Hot-Water Supply and Return, 200 Deg F and below:
1. NPS 12 and Smaller: Insulation shall be one of the following:
a. Cellular Glass: 2 inches thick.
b. Mineral-Fiber, Preformed Pipe, Type I: 2 inches thick.
c. Phenolic: 1-1/2 inches thick.
d. Polyisocyanurate: 1-1/2 inches thick.
2. NPS 14 and Larger: Insulation shall be one of the following:
a. Cellular Glass: 3 inches thick.
b. Phenolic: 2 inches thick.
c. Polyisocyanurate: 2 inches thick.

F. Heating-Hot-Water Supply and Return, above 200 Deg F:
1. NPS 3/4 and Smaller: Insulation shall be one of the following:
a. Cellular Glass: 2 inches thick.
b. Mineral-Fiber, Preformed Pipe, Type I or II: 2 inches thick.
2. NPS 1 Insert pipe size and Larger: Insulation shall be one of the following:
a. Cellular Glass: 3 inches thick.
b. Mineral-Fiber, Preformed Pipe, Type I or II: 3 inches thick.

G. Steam and Steam Condensate, 350 Deg F and below:
1. NPS 3/4 and Smaller: Insulation shall be one of the following:
a. Cellular Glass: 3 inches thick.
b. Mineral-Fiber, Preformed Pipe, Type I or II: 2 inches thick.
2. NPS 1 and Larger: Insulation shall be one of the following:
a. Calcium Silicate: 3 inches thick.
b. Cellular Glass: 3 inches thick.
c. Mineral-Fiber, Preformed Pipe, Type I or II: 3 inches thick.

H. Refrigerant Suction and Hot-Gas Piping:
1. All Pipe Sizes: Insulation shall be one of the following:
a. Cellular Glass: 1-1/2 inches thick.
b. Flexible Elastomeric: 1 inch thick.
c. Mineral-Fiber, Preformed Pipe Insulation, Type I: 1 inch thick.
d. Phenolic: 1 inch thick.
e. Polyisocyanurate: 1 inch thick.
f. Polyolefin: 1 inch thick.

I. Refrigerant Suction and Hot-Gas Flexible Tubing:
1. All Pipe Sizes: Insulation shall be one of the following:
a. Flexible Elastomeric: 1 inch thick.
b. Polyolefin: 1 inch thick.

J. Dual-Service Heating and Cooling, 40 to 200 Deg F:
1. NPS 12 and Smaller: Insulation shall be one of the following:
a. Cellular Glass: 2 inches thick.
b. Mineral-Fiber, Preformed Pipe, Type I: 2 inches thick.
c. Phenolic: 1-1/2 inches thick.
d. Polyisocyanurate: 1-1/2 inches thick.
2. Insert pipe size and Larger: Insulation shall be one of the following:
a. Cellular Glass: 3 inches thick.
b. Mineral-Fiber, Preformed Pipe, Type I: 3 inches thick.
c. Phenolic: 2 inches thick.
d. Polyisocyanurate: 2 inches thick.

K. Heat-Recovery Piping:
1. All Pipe Sizes: Insulation shall be one of the following:
a. Cellular Glass: 1-1/2 inches thick.
b. Flexible Elastomeric: 1 inch thick.
c. Mineral-Fiber, Preformed Pipe Insulation, Type I: 1 inch thick.
d. Phenolic: 1 inch thick.
e. Polyisocyanurate: 1 inch thick.
f. Polyolefin: 1 inch thick.

L. Hot Service Drains:
1. All Pipe Sizes: Insulation shall be one of the following:
a. Cellular Glass: 1-1/2 inches thick.
b. Mineral-Fiber, Preformed Pipe, Type I or II: 1 inch thick.

M. Hot Service Vents:
1. All Pipe Sizes: Insulation shall be one of the following:
a. Cellular Glass: 1-1/2 inches Insert thickness thick.
b. Mineral-Fiber, Preformed Pipe, Type I or II: 1 inch thick.

3.26 OUTDOOR, ABOVEGROUND PIPING INSULATION SCHEDULE

A. Chilled Water and Brine:
1. All Pipe Sizes: Insulation shall be one of the following:
a. Cellular Glass: 3 inches thick.
b. Flexible Elastomeric: 3 inches thick.
c. Mineral-Fiber, Preformed Pipe Insulation, Type I: 3 inches thick.
d. Phenolic: 2 inches thick.
e. Polyisocyanurate: 2 inches thick.
f. Polyolefin: 3 inches thick.
g. Polystyrene: 2 inches thick.

B. Condenser-Water Supply and Return:
1. All Pipe Sizes: Insulation shall be one of the following:
a. Cellular Glass: 2 inches thick.
b. Flexible Elastomeric: 2 inches thick.
c. Mineral-Fiber, Preformed Pipe Insulation, Type I: 2 inches thick.
d. Phenolic: 2 inches thick.
e. Polyisocyanurate: 2 inches thick.
f. Polyolefin: 2 inches thick.
g. Polystyrene: 2 inches thick.

C. Heating-Hot-Water Supply and Return, 200 Deg F and below:
1. All Pipe Sizes: Insulation shall be one of the following:

a. Cellular Glass: 3 inches thick.
b. Mineral-Fiber, Preformed Pipe Insulation, Type I: 2 inches thick.
c. Phenolic: 2 inches thick.
d. Polyisocyanurate: 2 inches thick.

D. Heating-Hot-Water Supply and Return, above 200 Deg F:
1. All Pipe Sizes: Insulation shall be one of the following:

a. Calcium Silicate: 3 inches thick.
b. Cellular Glass: 3 inches thick.
f. Mineral-Fiber, Preformed Pipe Insulation, Type I or II: 2 inches thick.

E. Steam and Steam Condensate, 350 Deg F and below:
1. All Pipe Sizes: Insulation shall be one of the following:

a. Calcium Silicate: 4 inches thick.
b. Cellular Glass: 4 inches thick.
c. Mineral-Fiber, Preformed Pipe Insulation, Type I or II: 3 inches thick.

F. Refrigerant Suction and Hot-Gas Piping:
1. All Pipe Sizes: Insulation shall be one of the following:
a. Cellular Glass: 2 inches thick.
b. Flexible Elastomeric: 2 inches thick.
c. Mineral-Fiber, Preformed Pipe Insulation, Type I: 2 inches thick.
d. Phenolic: 2 inches thick.
e. Polyisocyanurate: 2 inches thick.
f. Polyolefin: 2 inches thick.
g. Polystyrene: 2 inches thick.

G. Refrigerant Suction and Hot-Gas Flexible Tubing:
1. All Pipe Sizes: Insulation shall be one of the following:
a. Flexible Elastomeric: 2 inches thick.
b. Polyolefin: 2 inches thick.

H. Heat-Recovery Piping:
1. All Pipe Sizes: Insulation shall be one of the following:
a. Cellular Glass: 2 inches thick.
b. Flexible Elastomeric: 2 inches thick.
c. Mineral-Fiber, Preformed Pipe Insulation, Type I: 2 inches thick.
d. Phenolic: 2 inches thick.
e. Polyisocyanurate: 2 inches thick.
f. Polyolefin: 2 inches thick.
g. Polystyrene: 2 inches thick.

I. Dual-Service Heating and Cooling:
1. All Pipe Sizes: Insulation shall be one of the following:
a. Cellular Glass: 3 inches thick.
b. Mineral-Fiber, Preformed Pipe Insulation, Type I: 2 inches thick.
c. Phenolic: 2 inches thick.
d. Polyisocyanurate: 2 inches thick.

J. Hot Service Drains:
1. All Pipe Sizes: Insulation shall be one of the following:
a. Calcium Silicate: 1-1/2 inches thick.
b. Cellular Glass: 1-1/2 inches thick.

c. Mineral-Fiber, Preformed Pipe Insulation, Type I: 1 inch thick.

K. Hot Service Vents:
1. All Pipe Sizes: Insulation shall be one of the following:
a. Calcium Silicate: 1-1/2 inches thick.
b. Cellular Glass: 1-1/2 inches Insert thickness thick.
c. Mineral-Fiber, Preformed Pipe Insulation, Type II: 1 inch thick.

L. Fuel Oil Piping, Heated:
1. All Pipe Sizes: Insulation shall be one of the following:
a. Cellular Glass: 2 inches thick.
b. Mineral-Fiber, Preformed Pipe Insulation, Type I: 2 inches thick.

3.27 OUTDOOR, UNDERGROUND PIPING INSULATION SCHEDULE

A. Loose-fill insulation, for belowground piping, is specified in Division 33 piping distribution Sections.

B. Chilled Water, All Sizes: Cellular glass, 2 inches thick.

C. Condenser-Water Supply and Return, All Sizes: Cellular glass, 2 inches thick.

D. Heating-Hot-Water Supply and Return, All Sizes, 200 Deg F and below: Cellular glass, 3 inches thick.

E. Heating-Hot-Water Supply and Return, All Sizes, above 200 Deg F:
1. Cellular Glass: 3 inches thick.

F. Steam and Steam Condensate, All Sizes, 350 Deg F and below:
1. Calcium Silicate: 4 inches thick.
2. Cellular Glass: 4 inches thick.

G. Dual-Service Heating and Cooling, All Sizes, 40 to 200 Deg F: Cellular glass, 3 inches thick.

H. Fuel Oil Piping, All Sizes, Heated: Cellular glass, 2 inches thick.

3.28 INDOOR, FIELD-APPLIED JACKET SCHEDULE

A. Install jacket over insulation material. For insulation with factory-applied jacket, install the field-applied jacket over the factory-applied jacket.

B. If more than one material is listed, selection from materials listed is Contractor's option.

C. Ducts and Plenums, Concealed:
1. PVC, Color-Coded by System: 20 mils thick.
2. Aluminum, Stucco Embossed: 0.016 inch thick.
3. Painted Aluminum, Stucco Embossed: 0.016 inch thick.

D. Ducts and Plenums, Exposed:
1. PVC, Color-Coded by System: 20 mils thick.
2. Aluminum, Stucco Embossed: 0.016 inch thick.
3. Painted Aluminum, Stucco Embossed: 0.016 inch thick.

E. Equipment, Concealed:

1. PVC, Color-Coded by System: 20 mils thick.
2. Aluminum, Smooth: 0.016 inch thick.
3. Painted Aluminum, Smooth: 0.016 inch thick.

F. Equipment, Exposed, up to 48 Inches in Diameter or with Flat Surfaces up to 72 Inches:
1. PVC, Color-Coded by System: 20 mils thick.
2. Aluminum, Smooth: 0.016 inch thick.
3. Painted Aluminum, Smooth: 0.016 inch thick.

G. Equipment, Exposed, Larger Than 48 Inches in Diameter or with Flat Surfaces Larger Than 72 Inches:
1. Retain one of four subparagraphs below.
2. Painted Aluminum, Smooth with 1-1/4-Inch- Deep Corrugations: 0.032-inch 0.040 inch thick.

H. Piping, Concealed:
1. None.

I. Piping, Exposed:
1. PVC, Color-Coded by System: 20 mils thick.
2. Aluminum, Smooth: 0.020 inch thick.

3.29 OUTDOOR, FIELD-APPLIED JACKET SCHEDULE

A. Install jacket over insulation material. For insulation with factory-applied jacket, install the field-applied jacket over the factory-applied jacket.

B. If more than one material is listed, selection from materials listed is Contractor's option.

C. Ducts and Plenums, Concealed:
1. PVC, Color-Coded by System: 30 mils thick.
2. Aluminum, Smooth: 0.024 inch thick.
3. Painted Aluminum, Smooth: 0.024 inch thick.

D. Ducts and Plenums, Exposed, up to 48 Inches in Diameter or with Flat Surfaces up to 72 Inches:
1. Aluminum, Smooth: 0.024 inch thick.
2. Painted Aluminum, Smooth: 0.024 inch thick.

E. Ducts and Plenums, Exposed, Larger Than 48 Inches in Diameter or with Flat Surfaces Larger Than 72 Inches:
1. Painted Aluminum, Smooth with 2-1/2-Inch- Deep Corrugations: 0.032 inch thick.

F. Equipment, Concealed:
1. None.

G. Equipment, Exposed, up to 48 Inches in Diameter or with Flat Surfaces up to 72 Inches:
1. Painted Aluminum, Smooth with Z-Shaped Locking Seam: 0.024 inch thick.

H. Equipment, Exposed, Larger Than 48 Inches in Diameter or with Flat Surfaces Larger Than 72 Inches:
1. Painted Aluminum, Smooth with 2-1/2-Inch- Deep Corrugations: 0.032 inch thick.

I. Piping, Concealed:

1. None.

J. Piping, Exposed:
   1. PVC: 30 mils thick.
   2. Painted Aluminum, Smooth with Z-Shaped Locking Seam: 0.024 inch thick.

3.30 UNDERGROUND, FIELD-INSTALLED INSULATION JACKET

A. For underground direct-buried piping applications, install underground direct-buried jacket over insulation material.

END OF DOCUMENT 230713

SECTION 232300 – REFRIGERANT PIPING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes refrigerant piping used for air-conditioning applications.

1.3 PERFORMANCE REQUIREMENTS (AS APPLICABLE)

A. Line Test Pressure for Refrigerant R-134a:
1. Suction Lines for Air-Conditioning Applications: 115 psig.
2. Suction Lines for Heat-Pump Applications: 225 psig.
3. Hot-Gas and Liquid Lines: 225 psig.

B. Line Test Pressure for Refrigerant R-407C:
1. Suction Lines for Air-Conditioning Applications: 230 psig.
2. Suction Lines for Heat-Pump Applications: 380 psig.
3. Hot-Gas and Liquid Lines: 380 psig.

C. Line Test Pressure for Refrigerant R-410A:
1. Suction Lines for Air-Conditioning Applications: 300 psig.
2. Suction Lines for Heat-Pump Applications: 535 psig.
3. Hot-Gas and Liquid Lines: 535 psig.

1.4 SUBMITTALS

A. Product Data: For each type of valve and refrigerant piping specialty indicated. Include pressure drop, based on manufacturer's test data, for the following:
1. Thermostatic expansion valves.
2. Solenoid valves.
3. Hot-gas bypass valves.
4. Filter dryers.
5. Strainers.
6. Pressure-regulating valves.

B. Shop Drawings: Show layout of refrigerant piping and specialties, including pipe, tube, and fitting sizes, flow capacities, valve arrangements and locations, slopes of horizontal runs, oil traps, double risers, wall and floor penetrations, and equipment connection details. Show interface and spatial relationships between piping and equipment.
1. Refrigerant piping indicated on Drawings is schematic only. Size piping and design actual piping layout, including oil traps, double risers, specialties, and pipe and tube sizes to accommodate, as a minimum, equipment provided, elevation difference between compressor and evaporator, and length of piping to ensure proper operation and compliance with warranties of connected equipment.

C. Welding certificates.

D. Field quality-control test reports.

E. Operation and Maintenance Data: For refrigerant valves and piping specialties to include in maintenance manuals.

1.5 QUALITY ASSURANCE

A. Welding: Qualify procedures and personnel according to ASME Boiler and Pressure Vessel Code: Section IX, "Welding and Brazing Qualifications."

B. Comply with ASHRAE 15, "Safety Code for Refrigeration Systems."

C. Comply with ASME B31.5, "Refrigeration Piping and Heat Transfer Components."

1.6 PRODUCT STORAGE AND HANDLING

A. Store piping in a clean and protected area with end caps in place to ensure that piping interior and exterior are clean when installed.

1.7 COORDINATION

A. Coordinate size and location of roof curbs, equipment supports, and roof penetrations. These items are specified in Division 07 Section "Roof Accessories."

PART 2 - PRODUCTS

2.1 COPPER TUBE AND FITTINGS

A. Copper Tube: ASTM B 88, Type K or L; or ASTM B 280, Type ACR.

B. Wrought-Copper Fittings: ASME B16.22.

C. Wrought-Copper Unions: ASME B16.22.

D. Solder Filler Metals: ASTM B 32. Use 95-5 tin antimony or alloy HB solder to join copper socket fittings on copper pipe.

E. Brazing Filler Metals: AWS A5.8.

F. Flexible Connectors:
1. Body: Tin-bronze bellows with woven, flexible, tinned-bronze-wire-reinforced protective jacket.
2. End Connections: Socket ends.
3. Offset Performance: Capable of minimum 3/4-inch misalignment in minimum 7-inch-long assembly.
4. Pressure Rating: Factory test at minimum 500 psig.
5. Maximum Operating Temperature: 250 deg F.

2.2 STEEL PIPE AND FITTINGS

A. Steel Pipe: ASTM A 53/A 53M, black steel with plain ends; Type, Grade, and wall thickness as selected in Part 3 piping applications articles.

B. Wrought-Steel Fittings: ASTM A 234/A 234M, for welded joints.

C. Steel Flanges and Flanged Fittings: ASME B16.5, steel, including bolts, nuts, and gaskets, bevel-welded end connection, and raised face.

D. Welding Filler Metals: Comply with AWS D10.12/D10.12M for welding materials appropriate for wall thickness and chemical analysis of steel pipe being welded.

E. Flanged Unions:
1. Body: Forged-steel flanges for NPS 1 to NPS 1-1/2 and ductile iron for NPS 2 to NPS 3. Apply rust-resistant finish at factory.
2. Gasket: Fiber asbestos free.
3. Fasteners: Four plated-steel bolts, with silicon bronze nuts. Apply rust-resistant finish at factory.
4. End Connections: Brass tailpiece adapters for solder-end connections to copper tubing.
5. Offset Performance: Capable of minimum 3/4-inch misalignment in minimum 7-inch-long assembly.
6. Pressure Rating: Factory test at minimum 400 psig.
7. Maximum Operating Temperature: 330 deg F.

F. Flexible Connectors:
1. Body: Stainless-steel bellows with woven, flexible, stainless-steel-wire-reinforced protective jacket
2. End Connections:
   a. NPS 2 and Smaller: With threaded-end connections.
   b. NPS 2-1/2 and Larger: With flanged-end connections.
3. Offset Performance: Capable of minimum 3/4-inch misalignment in minimum 7-inch-long assembly.
4. Pressure Rating: Factory test at minimum 500 psig.
5. Maximum Operating Temperature: 250 deg F.

2.3 VALVES AND SPECIALTIES

A. Diaphragm Packless Valves:
1. Body and Bonnet: Forged brass or cast bronze; globe design with straight-through or angle pattern.
2. Diaphragm: Phosphor bronze and stainless steel with stainless-steel spring.
3. Operator: Rising stem and hand wheel.
4. Seat: Nylon.
5. End Connections: Socket, union, or flanged.
6. Working Pressure Rating: 500 psig.
7. Maximum Operating Temperature: 275 deg F.

B. Packed-Angle Valves:
1. Body and Bonnet: Forged brass or cast bronze.
2. Packing: Molded stem, back seating, and replaceable under pressure.
3. Operator: Rising stem.
4. Seat: Nonrotating, self-aligning polytetrafluoroethylene.
5. Seal Cap: Forged-brass or valox hex cap.
6. End Connections: Socket, union, threaded, or flanged.
7. Working Pressure Rating: 500 psig.
8. Maximum Operating Temperature: 275 deg F.

C. Check Valves:
1. Body: Ductile iron, forged brass, or cast bronze; globe pattern.
2. Bonnet: Bolted ductile iron, forged brass, or cast bronze; or brass hex plug.
3. Piston: Removable polytetrafluoroethylene seat.
4. Closing Spring: Stainless steel.
5. Manual Opening Stem: Seal cap, plated-steel stem, and graphite seal.

6. End Connections: Socket, union, threaded, or flanged.
7. Maximum Opening Pressure: 0.50 psig.
8. Working Pressure Rating: 500 psig.
9. Maximum Operating Temperature: 275 deg F.

D. Service Valves:
1. Body: Forged brass with brass cap including key end to remove core.
2. Core: Removable ball-type check valve with stainless-steel spring.
3. Seat: Polytetrafluoroethylene.
4. End Connections: Copper spring.
5. Working Pressure Rating: 500 psig.

E. Solenoid Valves: Comply with ARI 760 and UL 429; listed and labeled by an NRTL.
1. Body and Bonnet: Plated steel.
2. Solenoid Tube, Plunger, Closing Spring, and Seat Orifice: Stainless steel.
3. Seat: Polytetrafluoroethylene.
4. End Connections: Threaded.
5. Electrical: Molded, watertight coil in NEMA 250 enclosure of type required by location with 1/2-inch conduit adapter, and 24-, 115-, or 208-V ac coil.
6. Working Pressure Rating: 400 psig.
7. Maximum Operating Temperature: 240 deg F.
8. Manual operator.

F. Safety Relief Valves: Comply with ASME Boiler and Pressure Vessel Code; listed and labeled by an NRTL.
1. Body and Bonnet: Ductile iron and steel, with neoprene O-ring seal.
2. Piston, Closing Spring, and Seat Insert: Stainless steel.
3. Seat Disc: Polytetrafluoroethylene.
4. End Connections: Threaded.
5. Working Pressure Rating: 400 psig.
6. Maximum Operating Temperature: 240 deg F.

G. Thermostatic Expansion Valves: Comply with ARI 750.
1. Body, Bonnet, and Seal Cap: Forged brass or steel.
2. Diaphragm, Piston, Closing Spring, and Seat Insert: Stainless steel.
3. Packing and Gaskets: Non-asbestos.
4. Capillary and Bulb: Copper tubing filled with refrigerant charge.
5. Suction Temperature: 40 deg F.
6. Superheat: Adjustable.
7. Reverse-flow option (for heat-pump applications).
8. End Connections: Socket, flare, or threaded union.
9. Working Pressure Rating: 450 psig.

H. Hot-Gas Bypass Valves: Comply with UL 429; listed and labeled by an NRTL.
1. Body, Bonnet, and Seal Cap: Ductile iron or steel.
2. Diaphragm, Piston, Closing Spring, and Seat Insert: Stainless steel.
3. Packing and Gaskets: Non-asbestos.
4. Solenoid Tube, Plunger, Closing Spring, and Seat Orifice: Stainless steel.
5. Seat: Polytetrafluoroethylene.
6. Equalizer: Internal or External.
7. Electrical: Molded, watertight coil in NEMA 250 enclosure of type required by location with 1/2-inch conduit adapter, and 24-, 115-, or 208-V ac coil.
8. End Connections: Socket.
9. Set Pressure.
10. Throttling Range: Maximum 5 psig.

11. Working Pressure Rating: 500 psig.
12. Maximum Operating Temperature: 240 deg F.

I. Straight-Type Strainers:
1. Body: Welded steel with corrosion-resistant coating.
2. Screen: 100-mesh stainless steel.
3. End Connections: Socket or flare.
4. Working Pressure Rating: 500 psig.
5. Maximum Operating Temperature: 275 deg F.

J. Angle-Type Strainers:
1. Body: Forged brass or cast bronze.
2. Drain Plug: Brass hex plug.
3. Screen: 100-mesh monel.
4. End Connections: Socket or flare.
5. Working Pressure Rating: 500 psig.
6. Maximum Operating Temperature: 275 deg F.

K. Moisture/Liquid Indicators:
1. Body: Forged brass.
2. Window: Replaceable, clear, fused glass window with indicating element protected by filter screen.
3. Indicator: Color coded to show moisture content in ppm.
4. Minimum Moisture Indicator Sensitivity: Indicate moisture above 60 ppm.
5. End Connections: Socket or flare.
6. Working Pressure Rating: 500 psig.
7. Maximum Operating Temperature: 240 deg F.

L. Replaceable-Core Filter Dryers: Comply with ARI 730.
1. Body and Cover: Painted-steel shell with ductile-iron cover, stainless-steel screws, and neoprene gaskets.
2. Filter Media: 10 micron, pleated with integral end rings; stainless-steel support.
3. Desiccant Media: Activated alumina or charcoal.
4. Designed for reverse flow (for heat-pump applications).
5. End Connections: Socket.
6. Access Ports: NPS 1/4 connections at entering and leaving sides for pressure differential measurement.
7. Maximum Pressure Loss: 2 psig.
8. Rated Flow: As scheduled.
9. Working Pressure Rating: 500 psig.
10. Maximum Operating Temperature: 240 deg F.

M. Permanent Filter Dryers: Comply with ARI 730.
1. Body and Cover: Painted-steel shell.
2. Filter Media: 10 micron, pleated with integral end rings; stainless-steel support.
3. Desiccant Media: Activated alumina or charcoal.
4. Designed for reverse flow (for heat-pump applications).
5. End Connections: Socket.
6. Access Ports: NPS 1/4 connections at entering and leaving sides for pressure differential measurement.
7. Maximum Pressure Loss: 2 psig.
8. Rated Flow: As scheduled.
9. Working Pressure Rating: 500 psig.
10. Maximum Operating Temperature: 240 deg F.

N. Mufflers:
1. Body: Welded steel with corrosion-resistant coating.
2. End Connections: Socket or flare.
3. Working Pressure Rating: 500 psig.
4. Maximum Operating Temperature: 275 deg F.

O. Receivers: Comply with ARI 495.
1. Comply with ASME Boiler and Pressure Vessel Code; listed and labeled by an NRTL.
2. Comply with UL 207; listed and labeled by an NRTL.
3. Body: Welded steel with corrosion-resistant coating.
4. Tappings: Inlet, outlet, liquid level indicator, and safety relief valve.
5. End Connections: Socket or threaded.
6. Working Pressure Rating: 500 psig.
7. Maximum Operating Temperature: 275 deg F.

P. Liquid Accumulators: Comply with ARI 495.
1. Body: Welded steel with corrosion-resistant coating.
2. End Connections: Socket or threaded.
3. Working Pressure Rating: 500 psig.
4. Maximum Operating Temperature: 275 deg F.

2.4 REFRIGERANTS

A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
1. Atofina Chemicals, Inc.
2. DuPont Company; Fluorochemicals Div.
3. Honeywell, Inc.; Genetron Refrigerants.
4. INEOS Fluor Americas LLC.

B. ASHRAE 34, R-134a: Tetrafluoroethane.

C. ASHRAE 34, R-407C: Difluoromethane/Pentafluoroethane/1, 1, 1, 2-Tetrafluoroethane.

D. ASHRAE 34, R-410A: Pentafluoroethane/Difluoromethane.

PART 3 - EXECUTION

3.1 PIPING APPLICATIONS FOR REFRIGERANT R-134a (AS APPLICABLE)

A. Suction Lines NPS 1-1/2 and Smaller for Conventional Air-Conditioning Applications: Copper, Type ACR, annealed-temper tubing and wrought-copper fittings with soldered joints.

B. Suction Lines NPS 4 and Smaller for Conventional Air-Conditioning Applications: Copper, Type ACR or L, drawn-temper tubing and wrought-copper fittings with brazed or soldered joints.

C. Hot-Gas and Liquid Lines, and Suction Lines for Heat-Pump Applications:
1. NPS 1-1/2 and Smaller: Copper, Type ACR, K, or L, drawn-temper tubing and wrought-copper fittings with brazed or soldered joints.
2. NPS 4: Copper, Type ACR, K, or L, drawn-temper tubing and wrought-copper fittings with brazed or soldered joints.

D. Safety-Relief-Valve Discharge Piping:
1. NPS 1-1/2 and Smaller: Copper, Type ACR or L, drawn-temper tubing and wrought-copper fittings with brazed or solderedjoints.
2. NPS 4: Copper, Type ACR, K, or L, drawn-temper tubing and wrought-copper fittings with brazed or soldered joints.

3.2 PIPING APPLICATIONS FOR REFRIGERANT R-407C (AS APPLICABLE)

A. Suction Lines NPS 4 and Smaller for Conventional Air-Conditioning Applications: Copper, Type ACR or L, drawn-temper tubing and wrought-copper fittings with brazed or soldered joints.

B. Hot-Gas and Liquid Lines, and Suction Lines for Heat-Pump Applications:
1. NPS 1 and Smaller: Copper, Type ACR or L, drawn-temper tubing and wrought-copper fittings with brazed or soldered joints.
2. NPS 1-1/4 to NPS 2: Copper, Type K, annealed- or drawn-temper tubing and wrought-copper fittings with brazed or soldered joints.
3. NPS 4: Copper, Type ACR, K, or L, drawn-temper tubing and wrought-copper fittings with soldered joints.

C. Safety-Relief-Valve Discharge Piping:
1. NPS 1 and Smaller: Copper, Type ACR or L, drawn-temper tubing and wrought-copper fittings with brazed or solderedjoints.
2. NPS 1-1/4 to NPS 2: Copper, Type K, annealed- or drawn-temper tubing and wrought-copper fittings with brazed or soldered joints.
3. NPS 4: Copper, Type ACR, K, or L, drawn-temper tubing and wrought-copper fittings with soldered joints.

3.3 PIPING APPLICATIONS FOR REFRIGERANT R-410A (AS APPLICABLE)

A. Suction Lines NPS 4 and Smaller for Conventional Air-Conditioning Applications: Copper, Type ACR, K, or L, drawn-temper tubing and wrought-copper fittings with soldered joints.

B. Hot-Gas and Liquid Lines, and Suction Lines for Heat-Pump Applications: Copper, Type ACR or L, annealed- or drawn-temper tubing and wrought-copper fittings with brazed or soldered joints.

C. Hot-Gas and Liquid Lines, and Suction Lines for Heat-Pump Applications: Copper, Type ACR, K, or L, drawn-temper tubing and wrought-copper fittings with 95-5 tin-antimony soldered joints.

D. Safety-Relief-Valve Discharge Piping: Copper, Type ACR or L, annealed- or drawn-temper tubing and wrought-copper fittings with brazed or soldered joints.

3.4 VALVE AND SPECIALTY APPLICATIONS

A. Install diaphragm packless or packed-angle valves in suction and discharge lines of compressor.

B. Install service valves for gage taps at inlet and outlet of hot-gas bypass valves and strainers if they are not an integral part of valves and strainers.

C. Install a check valve at the compressor discharge and a liquid accumulator at the compressor suction connection.

D. Except as otherwise indicated, install diaphragm packless or packed-angle valves on inlet and outlet side of filter dryers.

E. Install a full-sized, three-valve bypass around filter dryers.

F. Install solenoid valves upstream from each expansion valve and hot-gas bypass valve. Install solenoid valves in horizontal lines with coil at top.

G. Install thermostatic expansion valves as close as possible to distributors on evaporators.
   1. Install valve so diaphragm case is warmer than bulb.
   2. Secure bulb to clean, straight, horizontal section of suction line using two bulb straps. Do not mount bulb in a trap or at bottom of the line.
   3. If external equalizer lines are required, make connection where it will reflect suction-line pressure at bulb location.

H. Install safety relief valves where required by ASME Boiler and Pressure Vessel Code. Pipe safety-relief-valve discharge line to outside according to ASHRAE 15.

I. Install moisture/liquid indicators in liquid line at the inlet of the thermostatic expansion valve or at the inlet of the evaporator coil capillary tube.

J. Install strainers upstream from and adjacent to the following unless they are furnished as an integral assembly for device being protected:
   1. Solenoid valves.
   2. Thermostatic expansion valves.
   3. Hot-gas bypass valves.
   4. Compressor.

K. Install filter dryers in liquid line between compressor and thermostatic expansion valve, and in the suction line at the compressor.

L. Install receivers sized to accommodate pump-down charge.

M. Install flexible connectors at compressors.

3.5 PIPING INSTALLATION

A. Drawing plans, schematics, and diagrams indicate general location and arrangement of piping systems; indicated locations and arrangements were used to size pipe and calculate friction loss, expansion, pump sizing, and other design considerations. Install piping as indicated unless deviations to layout are approved on Shop Drawings.

B. Install refrigerant piping according to ASHRAE 15.

C. Install piping in concealed locations unless otherwise indicated and except in equipment rooms and service areas.

D. Install piping indicated to be exposed and piping in equipment rooms and service areas at right angles or parallel to building walls. Diagonal runs are prohibited unless specifically indicated otherwise.

E. Install piping above accessible ceilings to allow sufficient space for ceiling panel removal.

F. Install piping adjacent to machines to allow service and maintenance.

G. Install piping free of sags and bends.

H. Install fittings for changes in direction and branch connections.

I. Select system components with pressure rating equal to or greater than system operating pressure.

J. Refer to Division 23 Sections "Instrumentation and Control for HVAC" and "Sequence of Operation" for solenoid valve controllers, control wiring, and sequence of operation.

K. Install piping as short and direct as possible, with a minimum number of joints, elbows, and fittings.

L. Arrange piping to allow inspection and service of refrigeration equipment. Install valves and specialties in accessible locations to allow for service and inspection. Install access doors or panels as specified in Division 08 Section "Access Doors and Frames" if valves or equipment requiring maintenance is concealed behind finished surfaces.

M. Install refrigerant piping in protective conduit where installed belowground.

N. Install refrigerant piping in rigid or flexible conduit in locations where exposed to mechanical injury.

O. Slope refrigerant piping as follows:
   1. Install horizontal hot-gas discharge piping with a uniform slope downward away from compressor.
   2. Install horizontal suction lines with a uniform slope downward to compressor.
   3. Install traps and double risers to entrain oil in vertical runs.
   4. Liquid lines may be installed level.

P. When brazing or soldering, remove solenoid-valve coils and sight glasses; also remove valve stems, seats, and packing, and accessible internal parts of refrigerant specialties. Do not apply heat near expansion-valve bulb.

Q. Before installation of steel refrigerant piping, clean pipe and fittings using the following procedures:
   1. Shot blast the interior of piping.
   2. Remove coarse particles of dirt and dust by drawing a clean, lintless cloth through tubing by means of a wire or electrician's tape.
   3. Draw a clean, lintless cloth saturated with trichloroethylene through the tube or pipe. Continue this procedure until cloth is not discolored by dirt.
   4. Draw a clean, lintless cloth, saturated with compressor oil, squeezed dry, through the tube or pipe to remove remaining lint. Inspect tube or pipe visually for remaining dirt and lint.
   5. Finally, draw a clean, dry, lintless cloth through the tube or pipe.
   6. Safety-relief-valve discharge piping is not required to be cleaned but is required to be open to allow unrestricted flow.

R. Install pipe sleeves at penetrations in exterior walls and floor assemblies.

S. Seal penetrations through fire and smoke barriers according to Division 07 Section "Penetration Firestopping."

T. Install piping with adequate clearance between pipe and adjacent walls and hangers or between pipes for insulation installation.

U. Install sleeves through floors, walls, or ceilings, sized to permit installation of full-thickness insulation.

V. Seal pipe penetrations through exterior walls according to Division 07 Section "Joint Sealants" for materials and methods.

W. Identify refrigerant piping and valves according to Division 23 Section "Identification for HVAC Piping and Equipment."

3.6 PIPE JOINT CONSTRUCTION

A. Ream ends of pipes and tubes and remove burrs. Bevel plain ends of steel pipe.

B. Remove scale, slag, dirt, and debris from inside and outside of pipe and fittings before assembly.

C. Fill pipe and fittings with an inert gas (nitrogen or carbon dioxide), during brazing or welding, to prevent scale formation.

D. Soldered Joints: Construct joints according to ASTM B 828 or CDA's "Copper Tube Handbook."

E. Brazed Joints: Construct joints according to AWS's "Brazing Handbook," Chapter "Pipe and Tube."
1. Use Type BcuP, copper-phosphorus alloy for joining copper socket fittings with copper pipe.
2. Use Type BAg, cadmium-free silver alloy for joining copper with bronze or steel.

F. Threaded Joints: Thread steel pipe with tapered pipe threads according to ASME B1.20.1. Cut threads full and clean using sharp dies. Ream threaded pipe ends to remove burrs and restore full ID. Join pipe fittings and valves as follows:
1. Apply appropriate tape or thread compound to external pipe threads unless dry-seal threading is specified.
2. Damaged Threads: Do not use pipe or pipe fittings with threads that are corroded or damaged. Do not use pipe sections that have cracked or open welds.

G. Steel pipe can be threaded, but threaded joints must be seal brazed or seal welded.

H. Welded Joints: Construct joints according to AWS D10.12/D10.12M.

I. Flanged Joints: Select appropriate gasket material, size, type, and thickness for service application. Install gasket concentrically positioned. Use suitable lubricants on bolt threads.

3.7 HANGERS AND SUPPORTS

A. Hanger, support, and anchor products are specified in Division 23 Section "Hangers and Supports for HVAC Piping and Equipment."

B. Install the following pipe attachments:
1. Adjustable steel clevis hangers for individual horizontal runs less than 20 feet long.
2. Roller hangers and spring hangers for individual horizontal runs 20 feet or longer.
3. Pipe Roller: MSS SP-58, Type 44 for multiple horizontal piping 20 feet or longer, supported on a trapeze.
4. Spring hangers to support vertical runs.

5. Copper-clad hangers and supports for hangers and supports in direct contact with copper pipe.

C. Install hangers for copper tubing with the following maximum spacing and minimum rod sizes:
1. NPS 1/2: Maximum span, 60 inches; minimum rod size, 1/4 inch.
2. NPS 5/8: Maximum span, 60 inches; minimum rod size, 1/4 inch.
3. NPS 1: Maximum span, 72 inches; minimum rod size, 1/4 inch.
4. NPS 1-1/4: Maximum span, 96 inches; minimum rod size, 3/8 inch.
5. NPS 1-1/2: Maximum span, 96 inches; minimum rod size, 3/8 inch.
6. NPS 2: Maximum span, 96 inches; minimum rod size, 3/8 inch.
7. NPS 2-1/2: Maximum span, 108 inches; minimum rod size, 3/8 inch.
8. NPS 3: Maximum span, 10 feet; minimum rod size, 3/8 inch.
9. NPS 4: Maximum span, 12 feet; minimum rod size, 1/2 inch.

D. Install hangers for steel piping with the following maximum spacing and minimum rod sizes:
1. NPS 2: Maximum span, 10 feet; minimum rod size, 3/8 inch.
2. NPS 2-1/2: Maximum span, 11 feet; minimum rod size, 3/8 inch.
3. NPS 3: Maximum span, 12 feet; minimum rod size, 3/8 inch.
4. NPS 4: Maximum span, 14 feet; minimum rod size, 1/2 inch.

E. Support multifloor vertical runs at least at each floor.

3.8 FIELD QUALITY CONTROL

A. Perform tests and inspections and prepare test reports.

B. Tests and Inspections:
1. Comply with ASME B31.5, Chapter VI.
2. Test refrigerant piping, specialties, and receivers. Isolate compressor, condenser, evaporator, and safety devices from test pressure if they are not rated above the test pressure.
3. Test high- and low-pressure side piping of each system separately at not less than the pressures indicated in Part 1 "Performance Requirements" Article.
   a. Fill system with nitrogen to the required test pressure.
   b. System shall maintain test pressure at the manifold gage throughout duration of test.
   c. Test joints and fittings with electronic leak detector or by brushing a small amount of soap and glycerin solution over joints.
   d. Remake leaking joints using new materials and retest until satisfactory results are achieved.

3.9 SYSTEM CHARGING

A. Charge system using the following procedures:
1. Install core in filter dryers after leak test but before evacuation.
2. Evacuate entire refrigerant system with a vacuum pump to 500 micrometers. If vacuum holds for 12 hours, system is ready for charging.
3. Break vacuum with refrigerant gas, allowing pressure to build up to 2 psig.
4. Charge system with a new filter-dryer core in charging line.

3.10 ADJUSTING

A. Adjust thermostatic expansion valve to obtain proper evaporator superheat.

G. Adjust high- and low-pressure switch settings to avoid short cycling in response to fluctuating suction pressure.

H. Adjust set-point temperature of air-conditioning or chilled-water controllers to the system design temperature.

I. Perform the following adjustments before operating the refrigeration system, according to manufacturer's written instructions:
   1. Open shutoff valves in condenser water circuit.
   2. Verify that compressor oil level is correct.
   3. Open compressor suction and discharge valves.
   4. Open refrigerant valves except bypass valves that are used for other purposes.
   5. Check open compressor-motor alignment and verify lubrication for motors and bearings.

J. Replace core of replaceable filter dryer after system has been adjusted and after design flow rates and pressures are established.

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SECTION 233113 - METAL DUCTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:
1. Single-wall rectangular ducts and fittings.
2. Double-wall rectangular ducts and fittings.
3. Single-wall round.
4. Double-wall round.
5. Sheet metal materials.
6. Duct liner.
7. Sealants and gaskets.
8. Hangers and supports.
9. Seismic-restraint devices.

B. Related Sections:
1. Division 23 Section "Testing, Adjusting, and Balancing for HVAC" for testing, adjusting, and balancing requirements for metal ducts.
2. Division 23 Section "Nonmetal Ducts" for fibrous-glass ducts.
3. Division 23 Section "HVAC Casings" for factory- and field-fabricated casings for mechanical equipment.
4. Division 23 Section "Air Duct Accessories" for dampers, sound-control devices, duct-mounting access doors and panels, turning vanes, and flexible ducts.

1.3 PERFORMANCE REQUIREMENTS

A. Delegated Duct Design: Duct construction, including sheet metal thicknesses, seam and joint construction, reinforcements, and hangers and supports, shall comply with SMACNA's "HVAC Duct Construction Standards - Metal and Flexible" and performance requirements and design criteria indicated in "Duct Schedule" Article.

B. Structural Performance: Duct hangers and supports shall withstand the effects of gravity loads and stresses within limits and under conditions described in SMACNA's "HVAC Duct Construction Standards - Metal and Flexible"

C. Airstream Surfaces: Surfaces in contact with the airstream shall comply with requirements in ASHRAE 62.1-2004.

1.4 SUBMITTALS

A. Product Data: For each type of the following products:
1. Liners and adhesives.
2. Sealants and gaskets.
3. Seismic-restraint devices.

B. Shop Drawings:

1. Fabrication, assembly, and installation, including plans, elevations, sections, components, and attachments to other work.
2. Factory- and shop-fabricated ducts and fittings.
3. Duct layout indicating sizes, configuration, liner material, and static-pressure classes.
4. Elevation of top of ducts.
5. Dimensions of main duct runs from building grid lines.
6. Fittings.
7. Reinforcement and spacing.
8. Seam and joint construction.
9. Penetrations through fire-rated and other partitions.
10. Equipment installation based on equipment being used on Project.
11. Locations for duct accessories, including dampers, turning vanes, and access doors and panels.
12. Hangers and supports, including methods for duct and building attachment and vibration isolation.

C. Delegated-Design Submittal:
1. Sheet metal thicknesses.
2. Joint and seam construction and sealing.
3. Reinforcement details and spacing.
4. Materials, fabrication, assembly, and spacing of hangers and supports.

D. Coordination Drawings: Plans, drawn to scale, on which the following items are shown and coordinated with each other, using input from installers of the items involved:
1. Duct installation in congested spaces, indicating coordination with general construction, building components, and other building services. Indicate proposed changes to duct layout.
2. Suspended ceiling components.
3. Structural members to which duct will be attached.
4. Size and location of initial access modules for acoustical tile.
5. Penetrations of smoke barriers and fire-rated construction.
6. Items penetrating finished ceiling including the following:
   a. Lighting fixtures.
   b. Air outlets and inlets.
   c. Speakers.
   d. Sprinklers.
   e. Access panels.
   f. Perimeter moldings.

E. Welding certificates.

F. Field quality-control reports.

1.5 QUALITY ASSURANCE

A. Welding Qualifications: Qualify procedures and personnel according to the following:
1. AWS D1.1/D1.1M, "Structural Welding Code - Steel," for hangers and supports.
2. AWS D1.2/D1.2M, "Structural Welding Code - Aluminum," for aluminum supports.
3. AWS D9.1M/D9.1, "Sheet Metal Welding Code," for duct joint and seam welding.

B. ASHRAE Compliance: Applicable requirements in ASHRAE 62.1-2004, Section 5 - "Systems and Equipment" and Section 7 - "Construction and System Start-Up."

C. ASHRAE/IESNA Compliance: Applicable requirements in ASHRAE/IESNA 90.1-2004, Section 6.4.4 - "HVAC System Construction and Insulation."

PART 2 - PRODUCTS

2.1 SINGLE-WALL RECTANGULAR DUCTS AND FITTINGS

A. General Fabrication Requirements: Comply with SMACNA's "HVAC Duct Construction Standards - Metal and Flexible" based on indicated static-pressure class unless otherwise indicated.

B. Transverse Joints: Select joint types and fabricate according to SMACNA's "HVAC Duct Construction Standards - Metal and Flexible," Figure 1-4, "Transverse (Girth) Joints," for static-pressure class, applicable sealing requirements, materials involved, duct-support intervals, and other provisions in SMACNA's "HVAC Duct Construction Standards - Metal and Flexible."

C. Longitudinal Seams: Select seam types and fabricate according to SMACNA's "HVAC Duct Construction Standards - Metal and Flexible," Figure 1-5, "Longitudinal Seams - Rectangular Ducts," for static-pressure class, applicable sealing requirements, materials involved, duct-support intervals, and other provisions in SMACNA's "HVAC Duct Construction Standards - Metal and Flexible."

D. Elbows, Transitions, Offsets, Branch Connections, and Other Duct Construction: Select types and fabricate according to SMACNA's "HVAC Duct Construction Standards - Metal and Flexible," Chapter 2, "Fittings and Other Construction," for static-pressure class, applicable sealing requirements, materials involved, duct-support intervals, and other provisions in SMACNA's "HVAC Duct Construction Standards - Metal and Flexible."

2.2 DOUBLE-WALL RECTANGULAR DUCTS AND FITTINGS

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
1. McGill AirFlow LLC.
2. Sheet Metal Connectors, Inc.

B. Rectangular Ducts: Fabricate ducts with indicated dimensions for the inner duct.

C. Outer Duct: Comply with SMACNA's "HVAC Duct Construction Standards - Metal and Flexible" based on indicated static-pressure class unless otherwise indicated.

D. Transverse Joints: Select joint types and fabricate according to SMACNA's "HVAC Duct Construction Standards - Metal and Flexible," Figure 1-4, "Transverse (Girth) Joints," for static-pressure class, applicable sealing requirements, materials involved, duct-support intervals, and other provisions in SMACNA's "HVAC Duct Construction Standards - Metal and Flexible."

E. Longitudinal Seams: Select seam types and fabricate according to SMACNA's "HVAC Duct Construction Standards - Metal and Flexible," Figure 1-5, "Longitudinal Seams - Rectangular Ducts," for static-pressure class, applicable sealing requirements, materials involved, duct-support intervals, and other provisions in SMACNA's "HVAC Duct Construction Standards - Metal and Flexible."

F. Interstitial Insulation: Fibrous-glass liner complying with ASTM C 1071, NFPA 90A, or NFPA 90B; and with NAIMA AH124, "Fibrous Glass Duct Liner Standard."
   1. Maximum Thermal Conductivity: 0.27 Btu x in./h x sq. ft. x deg F at 75 deg F mean temperature.
   2. Install spacers that position the inner duct at uniform distance from outer duct without compressing insulation.
   3. Coat insulation with antimicrobial coating.
   4. Cover insulation with polyester film complying with UL 181, Class 1.

G. Inner Duct: Minimum 0.028-inch perforated galvanized sheet steel having 3/32-inch-diameter perforations, with overall open area of 23 percent.

H. Formed-on Transverse Joints (Flanges): Select joint types and fabricate according to SMACNA's "HVAC Duct Construction Standards - Metal and Flexible," Figure 1-4, "Traverse (Girth) Joints," for static-pressure class, applicable sealing requirements, materials involved, duct-support intervals, and other provisions in SMACNA's "HVAC Duct Construction Standards - Metal and Flexible."

I. Longitudinal Seams: Select seam types and fabricate according to SMACNA's "HVAC Duct Construction Standards - Metal and Flexible," Figure 1-5, "Longitudinal Seams - Rectangular Ducts," for static-pressure class, applicable sealing requirements, materials involved, duct-support intervals, and other provisions in SMACNA's "HVAC Duct Construction Standards - Metal and Flexible."

2.3 SINGLE-WALL ROUND DUCTS AND FITTINGS

A. General Fabrication Requirements: Comply with SMACNA's "HVAC Duct Construction Standards - Metal and Flexible," Chapter 3, "Round, Oval, and Flexible Duct," based on indicated static-pressure class unless otherwise indicated.
   1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
      a. Lindab Inc.
      b. McGill AirFlow LLC.
      c. SEMCO Incorporated.
      d. Sheet Metal Connectors, Inc.
      e. Spiral Manufacturing Co., Inc.

B. Transverse Joints: Select joint types and fabricate according to SMACNA's "HVAC Duct Construction Standards - Metal and Flexible," Figure 3-2, "Transverse Joints - Round Duct," for static-pressure class, applicable sealing requirements, materials involved, duct-support intervals, and other provisions in SMACNA's "HVAC Duct Construction Standards - Metal and Flexible."
   1. Transverse Joints in Ducts Larger Than 60 Inches in Diameter: Flanged.

C. Longitudinal Seams: Select seam types and fabricate according to SMACNA's "HVAC Duct Construction Standards - Metal and Flexible," Figure 3-1, "Seams - Round Duct and Fittings," for static-pressure class, applicable sealing requirements, materials involved, duct-support intervals, and other provisions in SMACNA's "HVAC Duct Construction Standards - Metal and Flexible."
   1. Fabricate round ducts larger than 90 inches in diameter with butt-welded longitudinal seams.
   2. Fabricate flat-oval ducts larger than 72 inches in width (major dimension) with butt-welded longitudinal seams.

D. Tees and Laterals: Select types and fabricate according to SMACNA's "HVAC Duct Construction Standards - Metal and Flexible," Figure 3-4, "90 Degree Tees and Laterals," and Figure 3-5, "Conical Tees," for static-pressure class, applicable sealing requirements, materials involved, duct-support intervals, and other provisions in SMACNA's "HVAC Duct Construction Standards - Metal and Flexible."

2.4 SHEET METAL MATERIALS

A. General Material Requirements: Comply with SMACNA's "HVAC Duct Construction Standards - Metal and Flexible" for acceptable materials, material thicknesses, and duct construction methods unless otherwise indicated. Sheet metal materials shall be free of pitting, seam marks, roller marks, stains, discolorations, and other imperfections.

B. Galvanized Sheet Steel: Comply with ASTM A 653/A 653M.
1. Galvanized Coating Designation: G60 and G90.
2. Finishes for Surfaces Exposed to View: Mill phosphatized.

C. Carbon-Steel Sheets: Comply with ASTM A 1008/A 1008M, with oiled, matte finish for exposed ducts.

D. Stainless-Steel Sheets: Comply with ASTM A 480/A 480M, Type 304 or 316, as indicated in the "Duct Schedule" Article; cold rolled, annealed, sheet. Exposed surface finish shall be No. 2B, No. 2D, No. 3, or No. 4 as indicated in the "Duct Schedule" Article.

E. Aluminum Sheets: Comply with ASTM B 209 Alloy 3003, H14 temper; with mill finish for concealed ducts, and standard, one-side bright finish for duct surfaces exposed to view.

F. Reinforcement Shapes and Plates: ASTM A 36/A 36M, steel plates, shape, and bars; black and galvanized.
1. Where black- and galvanized-steel shapes and plates are used to reinforce aluminum ducts, isolate the different metals with butyl rubber, neoprene, or EPDM gasket materials.

G. Tie Rods: Galvanized steel, 1/4-inch minimum diameter for lengths 36 inches or less; 3/8-inch minimum diameter for lengths longer than 36 inches.

2.5 DUCT LINER

A. Fibrous-Glass Duct Liner: Comply with ASTM C 1071, NFPA 90A, or NFPA 90B; and with NAIMA AH124, "Fibrous Glass Duct Liner Standard."
1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
a. CertainTeed Corporation; Insulation Group.
b. Johns Manville.
c. Knauf Insulation.
d. Owens Corning.
e. Maximum Thermal Conductivity:
1) Type I, Flexible: 0.27 Btu x in./h x sq. ft. x deg F at 75 deg F mean temperature.
2) Type II, Rigid: 0.23 Btu x in./h x sq. ft. x deg F at 75 deg F mean temperature.
2. Antimicrobial Erosion-Resistant Coating: Apply to the surface of the liner that will form the interior surface of the duct to act as a moisture repellent and erosion-

resistant coating. Antimicrobial compound shall be tested for efficacy by an NRTL and registered by the EPA for use in HVAC systems.

3. Solvent or Water-Based Liner Adhesive: Comply with NFPA 90A or NFPA 90B and with ASTM C 916.
   a. For indoor applications, use adhesive that has a VOC content of 80 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).

I. Flexible Elastomeric Duct Liner: Preformed, cellular, closed-cell, sheet materials complying with ASTM C 534, Type II, Grade 1; and with NFPA 90A or NFPA 90B (where indicated on the drawings).
   1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
      a. Aeroflex USA Inc.
      b. Armacell LLC.
      c. Rubatex International, LLC
   2. Surface-Burning Characteristics: Maximum flame-spread index of 25 and maximum smoke-developed index of 50 when tested according to UL 723; certified by an NRTL.
   3. Liner Adhesive: As recommended by insulation manufacturer and complying with NFPA 90A or NFPA 90B.
      a. For indoor applications, use adhesive that has a VOC content of 50 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).

J. Natural-Fiber Duct Liner: 85 percent cotton, 10 percent borate, and 5 percent polybinding fibers, treated with a microbial growth inhibitor and complying with NFPA 90A or NFPA 90B.
   1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
      a. Bonded Logic, Inc.
      b. Reflectix Inc.
   2. Maximum Thermal Conductivity: 0.24 Btu x in./h x sq. ft. x deg F at 75 deg F mean temperature when tested according to ASTM C 518.
   3. Surface-Burning Characteristics: Maximum flame-spread index of 25 and maximum smoke-developed index of 50 when tested according to ASTM E 84; certified by an NRTL.
   4. Liner Adhesive: As recommended by insulation manufacturer and complying with NFPA 90A or NFPA 90B.
      a. For indoor applications, use adhesive that has a VOC content of 50 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).

K. Insulation Pins and Washers:
   1. Cupped-Head, Capacitor-Discharge-Weld Pins: Copper- or zinc-coated steel pin, fully annealed for capacitor-discharge welding, 0.135-inch- diameter shank, length to suit depth of insulation indicated with integral 1-1/2-inch galvanized carbon-steel washer.
   2. Insulation-Retaining Washers: Self-locking washers formed from 0.016-inch- thick galvanized steel and aluminum; with beveled edge sized as required to hold insulation securely in place but not less than 1-1/2 inches in diameter.

L. Shop Application of Duct Liner: Comply with SMACNA's "HVAC Duct Construction Standards - Metal and Flexible," Figure 2-19, "Flexible Duct Liner Installation."

1. Adhere a single layer of indicated thickness of duct liner with at least 90 percent adhesive coverage at liner contact surface area. Attaining indicated thickness with multiple layers of duct liner is prohibited.
2. Apply adhesive to transverse edges of liner facing upstream that do not receive metal nosing.
3. Butt transverse joints without gaps, and coat joint with adhesive.
4. Fold and compress liner in corners of rectangular ducts or cut and fit to ensure butted-edge overlapping.
5. Do not apply liner in rectangular ducts with longitudinal joints, except at corners of ducts, unless duct size and dimensions of standard liner make longitudinal joints necessary.
6. Secure liner with mechanical fasteners 4 inches from corners and at intervals not exceeding 12 inches transversely; at 3 inches from transverse joints and at intervals not exceeding 18 inches longitudinally.
7. Secure transversely oriented liner edges facing the airstream with metal nosings that have either channel or "Z" profiles or are integrally formed from duct wall. Fabricate edge facings at the following locations:
   a. Fan discharges.
   b. Intervals of lined duct preceding unlined duct.
   c. Upstream edges of transverse joints in ducts where air velocities are higher than 2500 fpm or where indicated.
8. Terminate inner ducts with buildouts attached to fire-damper sleeves, dampers, turning vane assemblies, or other devices. Fabricated buildouts (metal hat sections) or other buildout means are optional; when used; secure buildouts to duct walls with bolts, screws, rivets, or welds.

2.6 SEALANT AND GASKETS

A. General Sealant and Gasket Requirements: Surface-burning characteristics for sealants and gaskets shall be a maximum flame-spread index of 25 and a maximum smoke-developed index of 50 when tested according to UL 723; certified by an NRTL.

B. Two-Part Tape Sealing System:
1. Tape: Woven cotton fiber impregnated with mineral gypsum and modified acrylic/silicone activator to react exothermically with tape to form hard, durable, airtight seal.
2. Tape Width: 3 inches.
3. Sealant: Modified styrene acrylic.
4. Water resistant.
5. Mold and mildew resistant.
6. Maximum Static-Pressure Class: 10-inch wg, positive and negative.
7. Service: Indoor and outdoor.
8. Service Temperature: Minus 40 to plus 200 deg F.
9. Substrate: Compatible with galvanized sheet steel (both PVC coated and bare), stainless steel, or aluminum.
10. For indoor applications, use sealant that has a VOC content of 250 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).

C. Retain one of first two paragraphs below. If retaining second paragraph, verify acceptability with authorities having jurisdiction.

D. Water-Based Joint and Seam Sealant:
1. Application Method: Brush on.
2. Solids Content: Minimum 65 percent.
3. Shore A Hardness: Minimum 20.

4. Water resistant.
5. Mold and mildew resistant.
6. VOC: Maximum 75 g/L (less water).
7. Maximum Static-Pressure Class: 10-inch wg, positive and negative.
8. Service: Indoor or outdoor.
9. Substrate: Compatible with galvanized sheet steel (both PVC coated and bare), stainless steel, or aluminum sheets.

E. Flanged Joint Sealant: Comply with ASTM C 920.
1. General: Single-component, acid-curing, silicone, elastomeric.
2. Type: S.
3. Grade: NS.
4. Class: 25.
5. Use: O.
6. For indoor applications, use sealant that has a VOC content of 250 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).

F. Flange Gaskets: Butyl rubber, neoprene, or EPDM polymer with polyisobutylene plasticizer.

G. Round Duct Joint O-Ring Seals:
1. Seal shall provide maximum leakage class of 3 cfm/100 sq. ft. at 1-inch wg and shall be rated for 10-inch wg static-pressure class, positive or negative.
2. EPDM O-ring to seal in concave bead in coupling or fitting spigot.
3. Double-lipped, EPDM O-ring seal, mechanically fastened to factory-fabricated couplings and fitting spigots.

2.7 HANGERS AND SUPPORTS

A. Hanger Rods for Noncorrosive Environments: Cadmium-plated steel rods and nuts.

B. Hanger Rods for Corrosive Environments: Electrogalvanized, all-thread rods or galvanized rods with threads painted with zinc-chromate primer after installation.

C. Strap and Rod Sizes: Comply with SMACNA's "HVAC Duct Construction Standards - Metal and Flexible," Table 4-1, "Rectangular Duct Hangers Minimum Size," and Table 4-2, "Minimum Hanger Sizes for Round Duct."

D. Steel Cables for Galvanized-Steel Ducts: Galvanized steel complying with ASTM A 603.

E. Steel Cables for Stainless-Steel Ducts: Stainless steel complying with ASTM A 492.

F. Steel Cable End Connections: Cadmium-plated steel assemblies with brackets, swivel, and bolts designed for duct hanger service; with an automatic-locking and clamping device.

G. Duct Attachments: Sheet metal screws, blind rivets, or self-tapping metal screws; compatible with duct materials.

H. Trapeze and Riser Supports:
1. Supports for Galvanized-Steel Ducts: Galvanized-steel shapes and plates.
2. Supports for Stainless-Steel Ducts: Stainless-steel shapes and plates.
3. Supports for Aluminum Ducts: Aluminum or galvanized steel coated with zinc chromate.

PART 3 - EXECUTION

3.1 DUCT INSTALLATION

A. Drawing plans, schematics, and diagrams indicate general location and arrangement of duct system. Indicated duct locations, configurations, and arrangements were used to size ducts and calculate friction loss for air-handling equipment sizing and for other design considerations. Install duct systems as indicated unless deviations to layout are approved on Shop Drawings and Coordination Drawings.

B. Install ducts according to SMACNA's "HVAC Duct Construction Standards - Metal and Flexible" unless otherwise indicated.

C. Install ducts with fewest possible joints.

D. Install factory- or shop-fabricated fittings for changes in direction, size, and shape and for branch connections.

E. Unless otherwise indicated, install ducts vertically and horizontally, and parallel and perpendicular to building lines.

F. Install ducts close to walls, overhead construction, columns, and other structural and permanent enclosure elements of building.

G. Install ducts with a clearance of 1 inch, plus allowance for insulation thickness.

H. Route ducts to avoid passing through transformer vaults and electrical equipment rooms and enclosures.

I. Where ducts pass through non-fire-rated interior partitions and exterior walls and are exposed to view, cover the opening between the partition and duct or duct insulation with sheet metal flanges of same metal thickness as the duct. Overlap openings on four sides by at least 1-1/2 inches.

J. Where ducts pass through fire-rated interior partitions and exterior walls, install fire dampers. Comply with requirements in Division 23 Section "Air Duct Accessories" for fire and smoke dampers.

K. Protect duct interiors from moisture, construction debris and dust, and other foreign materials. Comply with SMACNA's "Duct Cleanliness for New Construction Guidelines."

3.2 INSTALLATION OF EXPOSED DUCTWORK

A. Protect ducts exposed in finished spaces from being dented, scratched, or damaged.

B. Trim duct sealants flush with metal. Create a smooth and uniform exposed bead. Do not use two-part tape sealing system.

C. Grind welds to provide smooth surface free of burrs, sharp edges, and weld splatter. When welding stainless steel with a No. 3 or 4 finish, grind the welds flush, polish the exposed welds, and treat the welds to remove discoloration caused by welding.

D. Maintain consistency, symmetry, and uniformity in the arrangement and fabrication of fittings, hangers and supports, duct accessories, and air outlets.

E. Repair or replace damaged sections and finished work that does not comply with these requirements.

3.3 ADDITIONAL INSTALLATION REQUIREMENTS FOR COMMERCIAL KITCHEN HOOD EXHAUST DUCT

A. Install commercial kitchen hood exhaust ducts without dips and traps that may hold grease, and sloped a minimum of 2 percent to drain grease back to the hood.

G. Install fire-rated access panel assemblies at each change in direction and at maximum intervals of 20 feet in horizontal ducts, and at every floor for vertical ducts, or as indicated on Drawings. Locate access panel on top or sides of duct a minimum of 1-1/2 inches from bottom of duct.

H. Do not penetrate fire-rated assemblies except as allowed by applicable building codes and authorities having jurisdiction.

3.4 DUCT SEALING

A. Seal ducts to the following seal classes according to SMACNA's "HVAC Duct Construction Standards - Metal and Flexible":
1. Comply with SMACNA's "HVAC Duct Construction Standards - Metal and Flexible."
2. Outdoor, Supply-Air Ducts: Seal Class A.
3. Outdoor, Exhaust Ducts: Seal Class C.
4. Outdoor, Return-Air Ducts: Seal Class C.
5. Unconditioned Space, Supply-Air Ducts in Pressure Classes 2-Inch wg and Lower: Seal Class B.
6. Unconditioned Space, Supply-Air Ducts in Pressure Classes Higher Than2-Inch wg: Seal Class A.
7. Unconditioned Space, Exhaust Ducts: Seal Class C.
8. Unconditioned Space, Return-Air Ducts: Seal Class B.
9. Conditioned Space, Supply-Air Ducts in Pressure Classes2-Inch wg and Lower: Seal Class C.
10. Conditioned Space, Supply-Air Ducts in Pressure Classes Higher Than 2-Inch wg: Seal Class B.
11. Conditioned Space, Exhaust Ducts: Seal Class B.
12. Conditioned Space, Return-Air Ducts: Seal Class C.

3.5 HANGER AND SUPPORT INSTALLATION

A. Comply with SMACNA's "HVAC Duct Construction Standards - Metal and Flexible," Chapter 4, "Hangers and Supports."

B. Building Attachments: Concrete inserts, powder-actuated fasteners, or structural-steel fasteners appropriate for construction materials to which hangers are being attached.
1. Where practical, install concrete inserts before placing concrete.
2. Install powder-actuated concrete fasteners after concrete is placed and completely cured.
3. Use powder-actuated concrete fasteners for standard-weight aggregate concretes or for slabs more than 4 inches thick.
4. Do not use powder-actuated concrete fasteners for lightweight-aggregate concretes or for slabs less than 4 inches thick.
5. Do not use powder-actuated concrete fasteners for seismic restraints.

C. Hanger Spacing: Comply with SMACNA's "HVAC Duct Construction Standards - Metal and Flexible," Table 4-1, "Rectangular Duct Hangers Minimum Size," and Table 4-2, "Minimum Hanger Sizes for Round Duct," for maximum hanger spacing; install hangers and supports within 24 inches of each elbow and within 48 inches of each branch intersection.

D. Hangers Exposed to View: Threaded rod and angle or channel supports.

E. Support vertical ducts with steel angles or channel secured to the sides of the duct with welds, bolts, sheet metal screws, or blind rivets; support at each floor and at a maximum intervals of 16 feet.

F. Install upper attachments to structures. Select and size upper attachments with pull-out, tension, and shear capacities appropriate for supported loads and building materials where used.

3.5 CONNECTIONS

A. Make connections to equipment with flexible connectors complying with Division 23 Section "Air Duct Accessories."

B. Comply with SMACNA's "HVAC Duct Construction Standards - Metal and Flexible" for branch, outlet and inlet, and terminal unit connections.

3.6 PAINTING

A. Paint interior of metal ducts that are visible through registers and grilles and that do not have duct liner. Apply one coat of flat, black, latex paint over a compatible galvanized-steel primer. Paint materials and application requirements are specified in Division 09 painting Sections.

3.7 FIELD QUALITY CONTROL

A. Perform tests and inspections.

B. Leakage Tests:
1. Comply with SMACNA's "HVAC Air Duct Leakage Test Manual." Submit a test report for each test.
2. Test the following systems:
   a. Ducts with a Pressure Class Higher Than 3-Inch wg: Test representative duct sections, selected by Engineer from sections installed, totaling no less than 25 percent of total installed duct area for each designated pressure class.
   b. Supply Ducts with a Pressure Class of 2-Inch wg or Higher: Test representative duct sections, selected by Engineer from sections installed, totaling no less than 50 percent of total installed duct area for each designated pressure class.
   c. Return Ducts with a Pressure Class of 2-Inch wg or Higher: Test representative duct sections, selected by Engineer from sections installed, totaling no less than 50 percent of total installed duct area for each designated pressure class.
   d. Exhaust Ducts with a Pressure Class of 2-Inch wg or Higher: Test representative duct sections, selected by Engineer from sections installed, totaling no less than 50 percent of total installed duct area for each designated pressure class.

e. Outdoor Air Ducts with a Pressure Class of 2-Inch wg or Higher: Test representative duct sections, selected by Engineer from sections installed, totaling no less than 50 percent of total installed duct area for each designated pressure class.

3. Disassemble, reassemble, and seal segments of systems to accommodate leakage testing and for compliance with test requirements.
4. Test for leaks before applying external insulation, wrap is installed and sealant applied to seams in vapor barrier.
5. Conduct tests at static pressures equal to maximum design pressure of system or section being tested. If static-pressure classes are not indicated, test system at maximum system design pressure. Do not pressurize systems above maximum design operating pressure.
6. Give seven days' advance notice for testing.

C. Duct System Cleanliness Tests:
1. Visually inspect duct system to ensure that no visible contaminants are present.
2. Test sections of metal duct system, chosen randomly by Owner, for cleanliness according to "Vacuum Test" in NADCA ACR, "Assessment, Cleaning and Restoration of HVAC Systems."
a. Acceptable Cleanliness Level: Net weight of debris collected on the filter media shall not exceed 0.75 mg/100 sq. cm.

D. Duct system will be considered defective if it does not pass tests and inspections.

E. Prepare test and inspection reports.

3.8 DUCT CLEANING

A. Clean new and existing duct system(s) before testing, adjusting, and balancing.

B. Use service openings for entry and inspection.
1. Create new openings and install access panels appropriate for duct static-pressure class if required for cleaning access. Provide insulated panels for insulated or lined duct. Patch insulation and liner as recommended by duct liner manufacturer. Comply with Division 23 Section "Air Duct Accessories" for access panels and doors.
2. Disconnect and reconnect flexible ducts as needed for cleaning and inspection.
3. Remove and reinstall ceiling to gain access during the cleaning process.

C. Particulate Collection and Odor Control:
1. When venting vacuuming system inside the building, use HEPA filtration with 99.97 percent collection efficiency for 0.3-micron-size (or larger) particles.
2. When venting vacuuming system to outdoors, use filter to collect debris removed from HVAC system, and locate exhaust downwind and away from air intakes and other points of entry into building.

D. Clean the following components by removing surface contaminants and deposits:
1. Air outlets and inlets (registers, grilles, and diffusers).
2. Supply, return, and exhaust fans including fan housings, plenums (except ceiling supply and return plenums), scrolls, blades or vanes, shafts, baffles, dampers, and drive assemblies.
3. Air-handling unit internal surfaces and components including mixing box, coil section, air wash systems, spray eliminators, condensate drain pans, humidifiers and dehumidifiers, filters and filter sections, and condensate collectors and drains.
4. Coils and related components.

5. Return-air ducts, dampers, actuators, and turning vanes except in ceiling plenums and mechanical equipment rooms.
6. Supply-air ducts, dampers, actuators, and turning vanes.
7. Dedicated exhaust and ventilation components and makeup air systems.

E. Mechanical Cleaning Methodology:
1. Clean metal duct systems using mechanical cleaning methods that extract contaminants from within duct systems and remove contaminants from building.
2. Use vacuum-collection devices that are operated continuously during cleaning. Connect vacuum device to downstream end of duct sections so areas being cleaned are under negative pressure.
3. Use mechanical agitation to dislodge debris adhered to interior duct surfaces without damaging integrity of metal ducts, duct liner, or duct accessories.
4. Clean fibrous-glass duct liner with HEPA vacuuming equipment; do not permit duct liner to get wet. Replace fibrous-glass duct liner that is damaged, deteriorated, or delaminated or that has friable material, mold, or fungus growth.
5. Clean coils and coil drain pans according to NADCA 1992. Keep drain pan operational. Rinse coils with clean water to remove latent residues and cleaning materials; comb and straighten fins.
6. Provide drainage and cleanup for wash-down procedures.
7. Antimicrobial Agents and Coatings: Apply EPA-registered antimicrobial agents if fungus is present. Apply antimicrobial agents according to manufacturer's written instructions after removal of surface deposits and debris.

3.9 START UP

A. Air Balance: Comply with requirements in Division 23 Section "Testing, Adjusting, and Balancing for HVAC."

3.10 DUCT SCHEDULE

A. Supply Ducts:
1. Ducts Connected to Fan Coil Units, Furnaces, Heat Pumps, and Terminal Units:
   a. Pressure Class: Positive 1-inch wg.
   b. Minimum SMACNA Seal Class: B.
   c. SMACNA Leakage Class for Rectangular: 24.
   d. SMACNA Leakage Class for Round and Flat Oval: 24.
2. Ducts Connected to Constant-Volume Air-Handling Units:
   a. Pressure Class: Positive 2-inch wg and 3-inch wg.
   b. Minimum SMACNA Seal Class: B.
   c. SMACNA Leakage Class for Rectangular: 24.
   d. SMACNA Leakage Class for Round and Flat Oval: 24.
3. Ducts Connected to Variable-Air-Volume Air-Handling Units:
   a. Pressure Class: Positive 3-inch wg and 4-inch wg.
   b. Minimum SMACNA Seal Class: B.
   c. SMACNA Leakage Class for Rectangular: 6.
   d. SMACNA Leakage Class for Round and Flat Oval: 6.
4. Ducts Connected to Equipment Not Listed Above:
   a. Pressure Class: Positive 2-inch wg and 3-inch wg.
   b. Minimum SMACNA Seal Class: B.
   c. SMACNA Leakage Class for Rectangular: 12.
   d. SMACNA Leakage Class for Round and Flat Oval: 12.

B. Return Ducts:
1. Ducts Connected to Fan Coil Units, Furnaces, Heat Pumps, and Terminal Units:

a. Pressure Class: Positive or negative 1-inch wg and 2-inch wg.
b. Minimum SMACNA Seal Class: B.
c. SMACNA Leakage Class for Rectangular: 24.
d. SMACNA Leakage Class for Round and Flat Oval: 24.

2. Ducts Connected to Air-Handling Units:
   a. Pressure Class: Positive or negative 2-inch wg and 3-inch wg.
   b. Minimum SMACNA Seal Class: B.
   c. SMACNA Leakage Class for Rectangular: 24.
   d. SMACNA Leakage Class for Round and Flat Oval: 24.
3. Ducts Connected to Equipment Not Listed Above:
   a. Pressure Class: Positive or negative 2-inch wg and 3-inch wg.
   b. Minimum SMACNA Seal Class: B.
   c. SMACNA Leakage Class for Rectangular: 12.
   d. SMACNA Leakage Class for Round and Flat Oval: 12.

C. Exhaust Ducts:
1. Ducts Connected to Fans Exhausting (ASHRAE 62.1, Class 1 and 2) Air:
   a. Pressure Class: Negative 1-inch wg and 2-inch wg.
   b. Minimum SMACNA Seal Class: B if negative pressure, and A if positive pressure.
   c. SMACNA Leakage Class for Rectangular: 24.
   d. SMACNA Leakage Class for Round and Flat Oval: 24.
2. Ducts Connected to Air-Handling Units:
   a. Pressure Class: Positive or negative 2-inch wg and 3-inch wg.
   b. Minimum SMACNA Seal Class: B if negative pressure, and A if positive pressure.
   c. SMACNA Leakage Class for Rectangular: 24.
   d. SMACNA Leakage Class for Round and Flat Oval: 24.
3. Ducts Connected to Commercial Kitchen Hoods: Comply with NFPA 96.
   a. Exposed to View: Type 304, stainless-steel sheet, No. 4 finish.
   b. Concealed: Carbon-steel sheet.
   c. Welded seams and joints.
   d. Pressure Class: Positive or negative 2-inch wg and 3-inch wg.
   e. Minimum SMACNA Seal Class: Welded seams, joints, and penetrations.
   f. SMACNA Leakage Class: 3.
4. Ducts Connected to Dishwasher Hoods:
   a. Type 304, stainless-steel sheet.
   b. Exposed to View: No. 4 finish.
   c. Concealed: No. 2D finish.
   d. Welded seams and flanged joints with watertight EPDM gaskets.
   e. Pressure Class: Positive or negative 2-inch wg.
   f. Minimum SMACNA Seal Class: Welded seams, joints, and penetrations.
   g. SMACNA Leakage Class: 3.
5. Ducts Connected to Fans Exhausting Laboratory and Process (ASHRAE 62.1, Class 3 and 4) Air:

D. Outdoor-Air (Not Filtered, Heated, or Cooled) Ducts:
1. Ducts Connected to Fan Coil Units, Furnaces, Heat Pumps, and Terminal Units Insert equipment:
   a. Pressure Class: Positive or negative 1-inch wg.
   b. Minimum SMACNA Seal Class: A.
   c. SMACNA Leakage Class for Rectangular: 12.
   d. SMACNA Leakage Class for Round and Flat Oval: 12.
2. Ducts Connected to Air-Handling Units:
   a. Pressure Class: Positive or negative 2-inch wg and 3-inch wg.

b. Minimum SMACNA Seal Class: A.
c. SMACNA Leakage Class for Rectangular: 12.
d. SMACNA Leakage Class for Round and Flat Oval: 12.

3. Ducts Connected to Equipment Not Listed Above:
a. Pressure Class: Positive or negative 2-inch wg and 3-inch wg.
b. Minimum SMACNA Seal Class: B.
c. SMACNA Leakage Class for Rectangular: 12.
d. SMACNA Leakage Class for Round and Flat Oval: 12.

E. Intermediate Reinforcement:
1. Galvanized-Steel Ducts: Galvanized steel or carbon steel coated with zinc-chromate primer.
2. PVC-Coated Ducts:
a. Exposed to Airstream: Match duct material.
b. Not Exposed to Airstream: Match duct material.
3. Stainless-Steel Ducts:
a. Exposed to Airstream: Match duct material.
b. Not Exposed to Airstream: Match duct material.
4. Aluminum Ducts: Aluminum.

F. Liner:
1. Supply Air Ducts: Fibrous glass, Type I, 1 inch thick.
2. Return Air Ducts: Fibrous glass, Type I, 1 inch thick.
3. Supply Fan Plenums: Fibrous glass, Type II or Flexible elastomeric, 1 inch thick.
4. Return- and Exhaust-Fan Plenums: Fibrous glass, Type II or Flexible elastomeric, 1 inch thick.
5. Transfer Ducts: Fibrous glass, Type I or Flexible elastomeric, 1 inch thick.

G. Double-Wall Duct Interstitial Insulation:
1. Supply Air Ducts: 1-1/2 inches thick.
2. Return Air Ducts: 1 inch thick.
3. Exhaust Air Ducts: 1 inch thick.

H. Elbow Configuration:
1. Rectangular Duct: Comply with SMACNA's "HVAC Duct Construction Standards - Metal and Flexible," Figure 2-2, "Rectangular Elbows."
a. Radius Type RE 1 with minimum 1.5 radius-to-diameter ratio.
b. Radius Type RE 3 with minimum 1.0 radius-to-diameter ratio and two vanes.
c. Mitered Type RE 2 with vanes complying with SMACNA's "HVAC Duct Construction Standards - Metal and Flexible," Figure 2-3, "Vanes and Vane Runners," and Figure 2-4, "Vane Support in Elbows."
2. Round Duct: Comply with SMACNA's "HVAC Duct Construction Standards - Metal and Flexible," Figure 3-3, "Round Duct Elbows."
a. Minimum Radius-to-Diameter Ratio and Elbow Segments: Comply with SMACNA's "HVAC Duct Construction Standards - Metal and Flexible," Table 3-1, "Mitered Elbows." Elbows with less than 90-degree change of direction have proportionately fewer segments.
1) Radius-to Diameter Ratio: 1.5.
b. Round Elbows, 12 Inches and Smaller in Diameter: Stamped or pleated.
c. Round Elbows, 14 Inches and Larger in Diameter: Welded.

I. Branch Configuration:
1. Rectangular Duct: Comply with SMACNA's "HVAC Duct Construction Standards - Metal and Flexible," Figure 2-6, "Branch Connections."
a. Rectangular Main to Rectangular Branch: 45-degree entry.

b. Rectangular Main to Round Branch: Spin in.

2. Round: Comply with SMACNA's "HVAC Duct Construction Standards - Metal and Flexible," Figure 3-4, "90 Degree Tees and Laterals," and Figure 3-5, "Conical Tees." Saddle taps are permitted in existing duct.
   a. Velocity 1000 fpm or Lower: 90-degree tap.
   b. Velocity 1000 to 1500 fpm: Conical tap.
   c. Velocity 1500 fpm or Higher: 45-degree lateral.

END OF DOCUMENT 233113

SECTION 23 3300 - AIR DUCT ACCESSORIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:
1. Backdraft and pressure relief dampers.
2. Barometric relief dampers.
3. Manual volume dampers.
4. Control dampers.
5. Fire dampers.
6. Ceiling dampers.
7. Combination fire and smoke dampers.
8. Flange connectors.
9. Duct silencers.
10. Turning vanes.
11. Remote damper operators.
12. Duct-mounted access doors.
13. Flexible connectors.
14. Flexible ducts.
15. Duct security bars.
16. Duct accessory hardware.

B. Related Sections:
1. Division 28 Section "Fire Detection and Alarm" for duct-mounted fire and smoke detectors.

1.3 SUBMITTALS

A. Product Data: For each type of product indicated.
1. For duct silencers, include pressure drop and dynamic insertion loss data. Include breakout noise calculations for high transmission loss casings.

B. Shop Drawings: For duct accessories. Include plans, elevations, sections, details and attachments to other work.
1. Detail duct accessories fabrication and installation in ducts and other construction. Include dimensions, weights, loads, and required clearances; and method of field assembly into duct systems and other construction. Include the following:
a. Special fittings.
b. Manual volume damper installations.
c. Control damper installations.
d. Fire-damper, smoke-damper, combination fire- and smoke-damper, ceiling, including sleeves; and duct-mounted access doors and remote damper operators.
e. Duct security bars.
f. Wiring Diagrams: For power, signal, and control wiring.

C. Coordination Drawings: Reflected ceiling plans, drawn to scale, on which ceiling-mounted access panels and access doors required for access to duct accessories are shown and coordinated with each other, using input from Installers of the items involved.

D. Source quality-control reports.

E. Operation and Maintenance Data: For air duct accessories to include in operation and maintenance manuals.

1.4 QUALITY ASSURANCE

A. Comply with NFPA 90A, "Installation of Air Conditioning and Ventilating Systems," and with NFPA 90B, "Installation of Warm Air Heating and Air Conditioning Systems."

B. Comply with AMCA 500-D testing for damper rating.

1.5 EXTRA MATERIALS

A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
1. Fusible Links: Furnish quantity equal to 10 percent of amount installed.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Comply with SMACNA's "HVAC Duct Construction Standards - Metal and Flexible" for acceptable materials, material thicknesses, and duct construction methods unless otherwise indicated. Sheet metal materials shall be free of pitting, seam marks, roller marks, stains, discolorations, and other imperfections.

B. Galvanized Sheet Steel: Comply with ASTM A 653/A 653M.
1. Galvanized Coating Designation: G90.
2. Exposed-Surface Finish: Mill phosphatized.

C. Stainless-Steel Sheets: Comply with ASTM A 480/A 480M, Type 304, and having a No. 2 finish for concealed ducts and No. 1 finish for exposed ducts.

D. Aluminum Sheets: Comply with ASTM B 209, Alloy 3003, Temper H14; with mill finish for concealed ducts and standard, 1-side bright finish for exposed ducts.

E. Extruded Aluminum: Comply with ASTM B 221, Alloy 6063, Temper T6.

F. Reinforcement Shapes and Plates: Galvanized-steel reinforcement where installed on galvanized sheet metal ducts; compatible materials for aluminum and stainless-steel ducts.

G. Tie Rods: Galvanized steel, 1/4-inch minimum diameter for lengths 36 inches or less; 3/8-inch minimum diameter for lengths longer than 36 inches.

2.2 BACKDRAFT AND PRESSURE RELIEF DAMPERS (Where indicated on the drawings)

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
1. Air Balance Inc.; a division of Mestek, Inc.
2. American Warming and Ventilating; a division of Mestek, Inc.

3. Cesco Products; a division of Mestek, Inc.
4. Duro Dyne Inc.
5. Greenheck Fan Corporation.
6. Lloyd Industries, Inc.
7. Nailor Industries Inc.
8. NCA Manufacturing, Inc.
9. Pottorff; a division of PCI Industries, Inc.
10. Ruskin Company.
11. SEMCO Incorporated.
12. Vent Products Company, Inc.

B. Description: Gravity balanced.

C. Maximum Air Velocity: 2000 fpm and 3000 fpm.

D. Maximum System Pressure: 1-inch wg and 2-inch wg.

E. Frame: 0.063-inch- thick extruded aluminum, with welded corners and mounting flange.

F. Blades: Multiple single-piece blades, center-pivoted, maximum 6-inch width, 0.050-inch-thick aluminum sheet or noncombustible, tear-resistant, neoprene-coated fiberglass with sealed edges.

G. Blade Action: Parallel.

H. Blade Seals: Neoprene, mechanically locked.

I. Blade Axles:
1. Material: Non-metallic or Aluminum.
2. Diameter: 0.20 inch.

J. Tie Bars and Brackets: Aluminum.

K. Return Spring: Adjustable tension.

L. Bearings: Steel ball or synthetic pivot bushings.

M. Accessories:
1. Adjustment device to permit setting for varying differential static pressure.
2. Counterweights and spring-assist kits for vertical airflow installations.
3. Electric actuators.
4. Chain pulls.
5. Screen Mounting: Front mounted in sleeve.
   a. Sleeve Thickness: 20-gage minimum.
   b. Sleeve Length: 6 inches minimum.
6. Screen Mounting: Rear mounted.
7. Screen Material: Aluminum.
8. Screen Type: Bird.
9. 90-degree stops.

2.3 BAROMETRIC RELIEF DAMPERS (Where indicated on the drawings)

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
1. Air Balance Inc.; a division of Mestek, Inc.

2. American Warming and Ventilating; a division of Mestek, Inc.
3. Cesco Products; a division of Mestek, Inc.
4. Duro Dyne Inc.
5. Greenheck Fan Corporation.
6. Lloyd Industries, Inc.
7. Nailor Industries Inc.
8. NCA Manufacturing, Inc.
9. Pottorff; a division of PCI Industries, Inc.
10. Ruskin Company.
11. SEMCO Incorporated.
12. Vent Products Company, Inc.

B. Suitable for horizontal or vertical mounting.

C. Maximum Air Velocity: 2000 fpm.

D. Maximum System Pressure: 2-inch wg.

E. Frame: 0.063-inch- thick extruded aluminum, with welded corners and mounting flange.

F. Blades:
1. Multiple, 0.050-inch- thick aluminum sheet.
2. Maximum Width: 6 inches.
3. Action: Parallel.
4. Balance: Gravity.
5. Eccentrically pivoted.

G. Blade Seals: Neoprene.

H. Blade Axles: Nonferrous metal.

I. Tie Bars and Brackets:
1. Material: Aluminum.
2. Rattle free with 90-degree stop.

J. Return Spring: Adjustable tension.

K. Bearings: Synthetic.

L. Accessories:
1. Flange on intake.
2. Adjustment device to permit setting for varying differential static pressures.

2.4 MANUAL VOLUME DAMPERS (Where indicated on the drawings)

A. Standard, Steel, Manual Volume Dampers:
1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
a. Air Balance Inc.; a division of Mestek, Inc.
b. American Warming and Ventilating; a division of Mestek, Inc.
c. Flexmaster U.S.A., Inc.
d. McGill AirFlow LLC.
e. METALAIRE, Inc.
f. Nailor Industries Inc.
g. Pottorff; a division of PCI Industries, Inc.

h. Ruskin Company.
i. Trox USA Inc.
j. Vent Products Company, Inc.

2. Standard leakage rating, with linkage outside airstream.
3. Suitable for horizontal or vertical applications.
4. Frames:
   a. Hat-shaped, galvanized-steel channels, 0.064-inch minimum thickness.
   b. Mitered and welded corners.
   c. Flanges for attaching to walls and flangeless frames for installing in ducts.
5. Blades:
   a. Multiple or single blade.
   b. Parallel- or opposed-blade design.
   c. Stiffen damper blades for stability.
   d. Galvanized-steel, 0.064 inch thick.
6. Blade Axles: Galvanized steel.
7. Bearings:
   a. Oil-impregnated bronze or Molded synthetic.
   b. Dampers in ducts with pressure classes of 3-inch wg or less shall have axle's full length of damper blades and bearings at both ends of operating shaft.
8. Tie Bars and Brackets: Galvanized steel.

B. Standard, Aluminum, Manual Volume Dampers:

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
   a. Air Balance Inc.; a division of Mestek, Inc.
   b. American Warming and Ventilating; a division of Mestek, Inc.
   c. Flexmaster U.S.A., Inc.
   d. McGill AirFlow LLC.
   e. METALAIRE, Inc.
   f. Nailor Industries Inc.
   g. Pottorff; a division of PCI Industries, Inc.
   h. Ruskin Company.
   i. Trox USA Inc.
   j. Vent Products Company, Inc.
2. Standard leakage rating, with linkage outside airstream.
3. Suitable for horizontal or vertical applications.
4. Frames: Hat-shaped, 0.10-inch- thick, aluminum sheet channels; frames with flanges for attaching to walls and flangeless frames for installing in ducts.
5. Blades:
   a. Multiple or single blade.
   b. Parallel- or opposed-blade design.
   c. Stiffen damper blades for stability.
   d. Roll-Formed Aluminum Blades: 0.10-inch- thick aluminum sheet.
   e. Extruded-Aluminum Blades: 0.050-inch- thick extruded aluminum.
6. Blade Axles: Galvanized steel.
7. Bearings:
   a. Oil-impregnated bronze or Molded synthetic.
   b. Dampers in ducts with pressure classes of 3-inch wg or less shall have axle's full length of damper blades and bearings at both ends of operating shaft.
8. Tie Bars and Brackets: Aluminum.

C. Low-Leakage, Steel, Manual Volume Dampers:

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
   a. Air Balance Inc.; a division of Mestek, Inc.
   b. American Warming and Ventilating; a division of Mestek, Inc.
   c. Flexmaster U.S.A., Inc.
   d. McGill AirFlow LLC.
   e. METALAIRE, Inc.
   f. Nailor Industries Inc.
   g. Pottorff; a division of PCI Industries, Inc.
   h. Ruskin Company.
   i. Trox USA Inc.
   j. Vent Products Company, Inc.

2. Low-leakage rating, with linkage outside airstream, and bearing AMCA's Certified Ratings Seal for both air performance and air leakage.
3. Suitable for horizontal or vertical applications.
4. Frames:
   a. Angle shaped.
   b. Galvanized-steel channels, 0.064 inch thick.
   c. Mitered and welded corners.
   d. Flanges for attaching to walls and flangeless frames for installing in ducts.
5. Blades:
   a. Multiple or single blade.
   b. Parallel- or opposed-blade design.
   c. Stiffen damper blades for stability.
   d. Galvanized, roll-formed steel, 0.064 inch thick.
6. Blade Axles: Galvanized steel.
7. Bearings:
   a. Oil-impregnated bronze or Molded synthetic.
   b. Dampers in ducts with pressure classes of 3-inch wg or less shall have axle's full length of damper blades and bearings at both ends of operating shaft.
8. Blade Seals: Neoprene.
9. Jamb Seals: Cambered aluminum.
10. Tie Bars and Brackets: Aluminum.
11. Accessories:
    a. Include locking device to hold single-blade dampers in a fixed position without vibration.

D. Low-Leakage, Aluminum, Manual Volume Dampers:
1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
   a. Air Balance Inc.; a division of Mestek, Inc.
   b. American Warming and Ventilating; a division of Mestek, Inc.
   c. Flexmaster U.S.A., Inc.
   d. McGill AirFlow LLC.
   e. METALAIRE, Inc.
   f. Nailor Industries Inc.
   g. Pottorff; a division of PCI Industries, Inc.
   h. Ruskin Company.
   i. Trox USA Inc.
   j. Vent Products Company, Inc.
2. Low-leakage rating, with linkage outside airstream, and bearing AMCA's Certified Ratings Seal for both air performance and air leakage.
3. Suitable for horizontal or vertical applications.

4. Frames: Angle-shaped, 0.10-inch- thick, aluminum sheet channels; frames with flanges for attaching to walls and flangeless frames for installing in ducts.
5. Blades:
   a. Multiple or single blade.
   b. Parallel- or opposed-blade design.
   c. Roll-Formed Aluminum Blades: 0.10-inch- thick aluminum sheet.
   d. Extruded-Aluminum Blades: 0.050-inch- thick extruded aluminum.
6. Blade Axles: Galvanized steel.
7. Bearings:
   a. Oil-impregnated bronze or Molded synthetic.
   b. Dampers in ducts with pressure classes of 3-inch wg or less shall have axle's full length of damper blades and bearings at both ends of operating shaft.
8. Blade Seals: Neoprene.
9. Jamb Seals: Cambered aluminum.
10. Tie Bars and Brackets: Aluminum.
11. Accessories:
    a. Include locking device to hold single-blade dampers in a fixed position without vibration.

E. Jackshaft:
1. Size: 1-inch diameter.
2. Material: Galvanized-steel pipe rotating within pipe-bearing assembly mounted on supports at each mullion and at each end of multiple-damper assemblies.
3. Length and Number of Mountings: As required to connect linkage of each damper in multiple-damper assembly.

F. Damper Hardware:
1. Zinc-plated, die-cast core with dial and handle made of 3/32-inch- thick zinc-plated steel, and a 3/4-inch hexagon locking nut.
2. Include center hole to suit damper operating-rod size.
3. Include elevated platform for insulated duct mounting.

2.5 CONTROL DAMPERS (Where indicated on the drawings)

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
1. American Warming and Ventilating; a division of Mestek, Inc.
2. Arrow United Industries; a division of Mestek, Inc.
3. Cesco Products; a division of Mestek, Inc.
4. Duro Dyne Inc.
5. Flexmaster U.S.A., Inc.
6. Greenheck Fan Corporation.
7. Lloyd Industries, Inc.
8. M&I Air Systems Engineering; Division of M&I Heat Transfer Products Ltd.
9. McGill AirFlow LLC.
10. METALAIRE, Inc.
11. Metal Form Manufacturing, Inc.
12. Nailor Industries Inc.
13. NCA Manufacturing, Inc.
14. Ruskin Company.
15. Vent Products Company, Inc.
16. Young Regulator Company.

B. Low-leakage rating, with linkage outside airstream, and bearing AMCA's Certified Ratings Seal for both air performance and air leakage.

C. Frames:
1. Angle shaped.
2. Galvanized-steel channels, 0.064 inch thick.
3. Mitered and welded corners.

D. Blades:
1. Multiple blade with maximum blade width of 8 inches.
2. Parallel- and opposed-blade design.
3. Galvanized steel.
4. 0.064 inch thick.
5. Blade Edging: Closed-cell neoprene edging.
6. Blade Edging: Inflatable seal blade edging, or replaceable rubber seals.

E. Blade Axles: 1/2-inch- diameter; galvanized steel; blade-linkage hardware of zinc-plated steel and brass; ends sealed against blade bearings.
7. Operating Temperature Range: From minus 40 to plus 200 deg F.

F. Bearings:
1. Oil-impregnated bronze or Molded synthetic.
2. Dampers in ducts with pressure classes of 3-inch wg or less shall have axle's full length of damper blades and bearings at both ends of operating shaft.
3. Thrust bearings at each end of every blade.

2.6 FIRE DAMPERS (Where indicated on the drawings)

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
1. Air Balance Inc.; a division of Mestek, Inc.
2. Arrow United Industries; a division of Mestek, Inc.
3. Cesco Products; a division of Mestek, Inc.
4. Greenheck Fan Corporation.
5. McGill AirFlow LLC.
6. METALAIRE, Inc.
7. Nailor Industries Inc.
8. NCA Manufacturing, Inc.
9. PHL, Inc.
10. Pottorff; a division of PCI Industries, Inc.
11. Prefco; Perfect Air Control, Inc.
12. Ruskin Company.
13. Vent Products Company, Inc.
14. Ward Industries, Inc.; a division of Hart & Cooley, Inc.

B. Type: Static and dynamic; rated and labeled according to UL 555 by an NRTL.

C. Closing rating in ducts up to 4-inch wg static pressure class and minimum 4000-fpm velocity.

T. Fire Rating: 1-1/2 and 3 hours.

E. Frame: Multiple-blade type or Curtain type with blades outside airstream except when located behind grille where blades may be inside airstream; fabricated with roll-formed, 0.034-inch- thick galvanized steel; with mitered and interlocking corners.

F. Mounting Sleeve: Factory- or field-installed, galvanized sheet steel.

1. Minimum Thickness: 0.052 or 0.138 inch thick, as indicated, and of length to suit application.
2. Exception: Omit sleeve where damper-frame width permits direct attachment of perimeter mounting angles on each side of wall or floor; thickness of damper frame must comply with sleeve requirements.

G. Mounting Orientation: Vertical or horizontal as indicated.

H. Blades: Roll-formed, interlocking, 0.034-inch- thick, galvanized sheet steel. In place of interlocking blades, use full-length, 0.034-inch- thick, galvanized-steel blade connectors.

I. Horizontal Dampers: Include blade lock and stainless-steel closure spring.

J. Heat-Responsive Device: Electric resettable link and switch package, factory installed, 165 deg F and 285 deg F rated.

2.7 SMOKE DAMPERS

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
1. Air Balance Inc.; a division of Mestek, Inc.
2. Cesco Products; a division of Mestek, Inc.
3. Greenheck Fan Corporation.
4. Nailor Industries Inc.
5. PHL, Inc.
6. Ruskin Company.

B. General Requirements: Label according to UL 555S by an NRTL.

C. Smoke Detector: Integral, factory wired for single-point connection.

D. Frame: Multiple-blade type or Curtain type with blades outside airstream except when located behind grille where blades may be inside airstream; fabricated with roll-formed, 0.034-inch- thick galvanized steel; with mitered and interlocking corners.

E. Blades: Roll-formed, horizontal, interlocking, 0.034-inch- thick, galvanized sheet steel. In place of interlocking blades, use full-length, 0.034-inch- thick, galvanized-steel blade connectors.

F. Leakage: Class I.

G. Rated pressure and velocity to exceed design airflow conditions.

H. Mounting Sleeve: Factory-installed, 0.052-inch- thick, galvanized sheet steel; length to suit wall or floor application with factory-furnished silicone calking.

I. Damper Motors: two-position action.

J. Default motor characteristics are specified in Division 23 Section "Common Motor Requirements for HVAC Equipment."

K. Comply with NEMA designation, temperature rating, service factor, enclosure type, and efficiency requirements for motors specified in Division 23 Section "Common Motor Requirements for HVAC Equipment."

1. Motor Sizes: Minimum size as indicated. If not indicated, large enough so driven load will not require motor to operate in service factor range above 1.0.
2. Controllers, Electrical Devices, and Wiring: Comply with requirements for electrical devices and connections specified in Division 26 Sections.
3. Permanent-Split-Capacitor or Shaded-Pole Motors: With oil-immersed and sealed gear trains.
4. Spring-Return Motors: Equip with an integral spiral-spring mechanism where indicated. Enclose entire spring mechanism in a removable housing designed for service or adjustments. Size for running torque rating of 150 in. x lbf and breakaway torque rating of 150 in. x lbf.
5. Outdoor Motors and Motors in Outdoor-Air Intakes: Equip with O-ring gaskets designed to make motors weatherproof. Equip motors with internal heaters to permit normal operation at minus 40 deg F.
6. Nonspring-Return Motors: For dampers larger than 25 sq. ft., size motor for running torque rating of 150 in. x lbf and breakaway torque rating of 300 in. x lbf.
7. Electrical Connection: 115 V, single phase, 60 Hz.

L. Accessories:
1. Auxiliary switches for signaling, fan control or position indication.
2. Test and reset switches, damper or remote mounted.

2.8 COMBINATION FIRE AND SMOKE DAMPERS

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
1. Air Balance Inc.; a division of Mestek, Inc.
2. Cesco Products; a division of Mestek, Inc.
3. Greenheck Fan Corporation.
4. Nailor Industries Inc.
5. Ruskin Company.

B. Type: Static and dynamic; rated and labeled according to UL 555 and UL 555S by an NRTL.

C. Closing rating in ducts up to 4-inch wg static pressure class and minimum 4000-fpm velocity.

D. Fire Rating: 1-1/2 hours.

E. Type 304, stainless-steel dampers are available for corrosive atmospheres.

F. Frame: Multiple-blade type or Curtain type with blades outside airstream except when located behind grille where blades may be inside airstream; fabricated with roll-formed, 0.034-inch- thick galvanized steel; with mitered and interlocking corners.

G. Heat-Responsive Device: Electric resettable link and switch package, factory installed, rated.

H. Smoke Detector: Integral, factory wired for single-point connection.

I. Frame: Multiple-blade type or Curtain type with blades outside airstream except when located behind grille where blades may be inside airstream; fabricated with roll-formed, 0.034-inch- thick galvanized steel; with mitered and interlocking corners.

J. Blades: Roll-formed, horizontal, interlocking, 0.034-inch- thick, galvanized sheet steel. In place of interlocking blades, use full-length, 0.034-inch- thick, galvanized-steel blade connectors.

K. Leakage: Class I.

L. Rated pressure and velocity to exceed design airflow conditions.

M. Mounting Sleeve: Factory-installed, 0.052-inch- thick, galvanized sheet steel; length to suit wall or floor application with factory-furnished silicone calking.

N. Master control panel for use in dynamic smoke-management systems.

O. Damper Motors: Two-position action.

P. Comply with NEMA designation, temperature rating, service factor, enclosure type, and efficiency requirements for motors specified in Division 23 Section "Common Motor Requirements for HVAC Equipment."
1. Motor Sizes: Minimum size as indicated. If not indicated, large enough so driven load will not require motor to operate in service factor range above 1.0.
2. Controllers, Electrical Devices, and Wiring: Comply with requirements for electrical devices and connections specified in Division 26 Sections.
3. Permanent-Split-Capacitor or Shaded-Pole Motors: With oil-immersed and sealed gear trains.
4. Spring-Return Motors: Equip with an integral spiral-spring mechanism where indicated. Enclose entire spring mechanism in a removable housing designed for service or adjustments. Size for running torque rating of 150 in. x lbf and breakaway torque rating of 150 in. x lbf.
5. Outdoor Motors and Motors in Outdoor-Air Intakes: Equip with O-ring gaskets designed to make motors weatherproof. Equip motors with internal heaters to permit normal operation at minus 40 deg F.
6. Nonspring-Return Motors: For dampers larger than 25 sq. ft., size motor for running torque rating of 150 in. x lbf and breakaway torque rating of 300 in. x lbf.
7. Electrical Connection: 115 V, single phase, 60 Hz.

Q. Accessories:
1. Auxiliary switches for signaling or position indication.
2. Test and reset switches, damper or remote mounted.

2.9 FLANGE CONNECTORS (Where indicated on the drawings)

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
1. Ductmate Industries, Inc.
2. Nexus PDQ; Division of Shilco Holdings Inc.
3. Ward Industries, Inc.; a division of Hart & Cooley, Inc.

B. Description: Add-on or roll-formed, factory-fabricated, slide-on transverse flange connectors, gaskets, and components.

C. Material: Galvanized steel.

D. Gage and Shape: Match connecting ductwork.

2.10 DUCT SILENCERS (Where indicated on the drawings)

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
1. Industrial Noise Control, Inc.
2. McGill AirFlow LLC.
3. Ruskin Company.
4. Vibro-Acoustics.

B. General Requirements:
1. Factory fabricated.
2. Fire-Performance Characteristics: Adhesives, sealants, packing materials, and accessory materials shall have flame-spread index not exceeding 25 and smoke-developed index not exceeding 50 when tested according to ASTM E 84.
3. Airstream Surfaces: Surfaces in contact with the airstream shall comply with requirements in ASHRAE 62.1-2004.

C. Shape:
1. Rectangular straight with splitters or baffles.
2. Round straight with center bodies or pods.
3. Rectangular elbow with splitters or baffles.
4. Round elbow with center bodies or pods.
5. Rectangular transitional with splitters or baffles.

D. Rectangular Silencer Outer Casing: ASTM A 653/A 653M, G90, galvanized sheet steel, 0.034 inch thick.

E. Round Silencer Outer Casing: ASTM A 653/A 653M, G90, galvanized sheet steel.
1. Sheet Metal Thickness for Units up to 24 Inches in Diameter: 0.034 inch thick.
2. Sheet Metal Thickness for Units 26 through 40 Inches in Diameter: 0.040 inch thick.
3. Sheet Metal Thickness for Units 42 through 52 Inches in Diameter: 0.052 inch thick.
4. Sheet Metal Thickness for Units 54 through 60 Inches in Diameter: 0.064 inch thick.

F. Inner Casing and Baffles: ASTM A 653/A 653M, G90 galvanized sheet metal, 0.034 inch thick, and with 1/8-inch- diameter perforations.

G. Special Construction:
1. Suitable for outdoor use.
2. High transmission loss to achieve STC 45.

H. Connection Sizes: Match connecting ductwork unless otherwise indicated.

I. Principal Sound-Absorbing Mechanism:
1. Controlled impedance membranes and broadly tuned resonators without absorptive media.
2. Dissipative or Film-lined type with fill material.
a. Fill Material: Inert and vermin-proof fibrous material, packed under not less than 15 percent compression and Moisture-proof nonfibrous material.
b. Erosion Barrier: Polymer bag enclosing fill, and heat sealed before assembly.
3. Lining: Mylar or Tedlar.

J. Fabricate silencers to form rigid units that will not pulsate, vibrate, rattle, or otherwise react to system pressure variations. Do not use mechanical fasteners for unit assemblies.
1. Flange connections.

2. Suspended Units: Factory-installed suspension hooks or lugs attached to frame in quantities and spaced to prevent deflection or distortion.
3. Reinforcement: Cross or trapeze angles for rigid suspension.

K. Accessories:
1. Integral 1-1/2-hour fire damper with access door. Access door to be high transmission loss to match silencer.
2. Factory-installed end caps to prevent contamination during shipping.
3. Removable splitters.
4. Airflow measuring devices.

L. Source Quality Control: Test according to ASTM E 477.
1. Testing to be witnessed by Owner's Representative.
2. Record acoustic ratings, including dynamic insertion loss and generated-noise power levels with an airflow of at least 2000-fpm face velocity.
3. Leak Test: Test units for airtightness at 200 percent of associated fan static pressure or 6-inch wg static pressure, whichever is greater.

2.11 TURNING VANES (Where indicated on the drawings)

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
1. Ductmate Industries, Inc.
2. Duro Dyne Inc.
3. METALAIRE, Inc.
4. SEMCO Incorporated.
5. Ward Industries, Inc.; a division of Hart & Cooley, Inc.

B. Manufactured Turning Vanes for Metal Ducts: Curved blades of galvanized sheet steel; support with bars perpendicular to blades set; set into vane runners suitable for duct mounting.
1. Acoustic Turning Vanes: Fabricate airfoil-shaped aluminum extrusions with perforated faces and fibrous-glass fill.

C. Manufactured Turning Vanes for Nonmetal Ducts: Fabricate curved blades of resin-bonded fiberglass with acrylic polymer coating; support with bars perpendicular to blades set; set into vane runners suitable for duct mounting.

D. General Requirements: Comply with SMACNA's "HVAC Duct Construction Standards - Metal and Flexible"; Figures 2-3, "Vanes and Vane Runners," and 2-4, "Vane Support in Elbows."

E. Vane Construction: Single wall.

F. Vane Construction: Single wall for ducts up to 48 inches wide and double wall for larger dimensions.

2.12 REMOTE DAMPER OPERATORS (Where indicated on the drawings)

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
1. Pottorff; a division of PCI Industries, Inc.
2. Ventfabrics, Inc.
3. Young Regulator Company.

B. Description: Cable system designed for remote manual damper adjustment.

C. Tubing: Brass.

D. Cable: Stainless steel.

E. Wall-Box Mounting: Recessed, 2 inches deep.

F. Wall-Box Cover-Plate Material: Steel.

2.13 DUCT-MOUNTED ACCESS DOORS (Where indicated on the drawings)

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
1. American Warming and Ventilating; a division of Mestek, Inc.
2. Cesco Products; a division of Mestek, Inc.
3. Ductmate Industries, Inc.
4. Flexmaster U.S.A., Inc.
5. Greenheck Fan Corporation.
6. McGill AirFlow LLC.
7. Nailor Industries Inc.
8. Pottorff; a division of PCI Industries, Inc.
9. Ventfabrics, Inc.
10. Ward Industries, Inc.; a division of Hart & Cooley, Inc.

B. Duct-Mounted Access Doors: Fabricate access panels according to SMACNA's "HVAC Duct Construction Standards - Metal and Flexible"; Figures 2-10, "Duct Access Doors and Panels," and 2-11, "Access Panels - Round Duct."
1. Door:
   a. Double wall, rectangular.
   b. Galvanized sheet metal with insulation fill and thickness as indicated for duct pressure class.
   c. Vision panel.
   d. Hinges and Latches: 1-by-1-inch butt or piano hinge and cam latches.
   e. Fabricate doors airtight and suitable for duct pressure class.
2. Frame: Galvanized sheet steel, with bend-over tabs and foam gaskets.
3. Number of Hinges and Locks:
   a. Access Doors Less Than 12 Inches Square: No hinges and two sash locks.
   b. Access Doors up to 18 Inches Square: Two hinges and two sash locks.
   c. Access Doors up to 24 by 48 Inches: Three hinges and two compression latches with outside and inside handles.
   d. Access Doors Larger Than 24 by 48 Inches: Four hinges and two compression latches with outside and inside handles.

C. Pressure Relief Access Door:
1. Door and Frame Material: Galvanized sheet steel.
2. Door: Double wall with insulation fill with metal thickness applicable for duct pressure class.
3. Operation: Open outward for positive-pressure ducts and inward for negative-pressure ducts.
4. Factory set at 10-inch wg.
5. Doors close when pressures are within set-point range.
6. Hinge: Continuous piano.
7. Latches: Cam.
8. Seal: Neoprene or foam rubber.

9. Insulation Fill: 1-inch- thick, fibrous-glass or polystyrene-foam board.

2.14 DUCT ACCESS PANEL ASSEMBLIES (Where indicated on the drawings)

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
1. Ductmate Industries, Inc.
2. Flame Gard, Inc.
3. 3M.

B. Labeled according to UL 1978 by an NRTL.

C. Panel and Frame: Minimum thickness 0.0528-inch carbon steel.

D. Fasteners: Carbon steel. Panel fasteners shall not penetrate duct wall.

E. Gasket: Comply with NFPA 96; grease-tight, high-temperature ceramic fiber, rated for minimum 2000 deg F.

F. Minimum Pressure Rating: 10-inch wg, positive or negative.

2.15 FLEXIBLE CONNECTORS (Where indicated on the drawings)

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
1. Ductmate Industries, Inc.
2. Duro Dyne Inc.
3. Ventfabrics, Inc.
4. Ward Industries, Inc.; a division of Hart & Cooley, Inc.

B. Materials: Flame-retardant or noncombustible fabrics.

C. Coatings and Adhesives: Comply with UL 181, Class 1.

D. Metal-Edged Connectors: Factory fabricated with a fabric strip 5-3/4 inches wide attached to 2 strips of 2-3/4-inch- wide, 0.028-inch- thick, galvanized sheet steel or 0.032-inch- thick aluminum sheets. Provide metal compatible with connected ducts.

E. Indoor System, Flexible Connector Fabric: Glass fabric double coated with neoprene.
1. Minimum Weight: 26 oz. /sq. yd.
2. Tensile Strength: 480 lbf/inch in the warp and 360 lbf/inch in the filling.
3. Service Temperature: Minus 40 to plus 200 deg F.

F. Outdoor System, Flexible Connector Fabric: Glass fabric double coated with weatherproof, synthetic rubber resistant to UV rays and ozone.
1. Minimum Weight: 24 oz. /sq. yd.
2. Tensile Strength: 530 lbf/inch in the warp and 440 lbf/inch in the filling.
3. Service Temperature: Minus 50 to plus 250 deg F.

G. High-Temperature System, Flexible Connectors: Glass fabric coated with silicone rubber.
1. Minimum Weight: 16 oz. /sq. yd.
2. Tensile Strength: 285 lbf/inch in the warp and 185 lbf/inch in the filling.
3. Service Temperature: Minus 67 to plus 500 deg F.

H. High-Corrosive-Environment System, Flexible Connectors: Glass fabric with chemical-resistant coating.
1. Minimum Weight: 14 oz. /sq. yd.
2. Tensile Strength: 450 lbf/inch in the warp and 340 lbf/inch in the filling.
3. Service Temperature: Minus 67 to plus 500 deg F.

I. Thrust Limits: Combination coil spring and elastomeric insert with spring and insert in compression, and with a load stop. Include rod and angle-iron brackets for attaching to fan discharge and duct.
1. Frame: Steel, fabricated for connection to threaded rods and to allow for a maximum of 30 degrees of angular rod misalignment without binding or reducing isolation efficiency.
2. Outdoor Spring Diameter: Not less than 80 percent of the compressed height of the spring at rated load.
3. Minimum Additional Travel: 50 percent of the required deflection at rated load.
4. Lateral Stiffness: More than 80 percent of rated vertical stiffness.
5. Overload Capacity: Support 200 percent of rated load, fully compressed, without deformation or failure.
6. Elastomeric Element: Molded, oil-resistant rubber or neoprene.
7. Coil Spring: Factory set and field adjustable for a maximum of 1/4-inch movement at start and stop.

2.16 FLEXIBLE DUCTS (Where indicated on the drawings)

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
1. Flexmaster U.S.A., Inc.
2. McGill AirFlow LLC.
3. Ward Industries, Inc.; a division of Hart & Cooley, Inc.

B. Non-insulated, Flexible Duct: UL 181, Class 1, 2-ply vinyl film supported by helically wound, spring-steel wire.
1. Pressure Rating: 10-inch wg positive and 1.0-inch wg negative.
2. Maximum Air Velocity: 4000 fpm.
3. Temperature Range: Minus 10 to plus 160 deg F.

C. Non-insulated, Flexible Duct: UL 181, Class 1, black polymer film supported by helically wound, spring-steel wire.
4. Pressure Rating: 4-inch wg positive and 0.5-inch wg negative.
5. Maximum Air Velocity: 4000 fpm.
6. Temperature Range: Minus 20 to plus 175 deg F.

D. Non-insulated, Flexible Duct: UL 181, Class 1, multiple layers of aluminum laminate supported by helically wound, spring-steel wire.
1. Pressure Rating: 10-inch wg positive and 1.0-inch wg negative.
2. Maximum Air Velocity: 4000 fpm.
3. Temperature Range: Minus 20 to plus 210 deg F.

E. Non-insulated, Flexible Duct: UL 181, Class 1, aluminum laminate and polyester film with latex adhesive supported by helically wound, spring-steel wire.
1. Pressure Rating: 10-inch wg positive and 1.0-inch wg negative.
2. Maximum Air Velocity: 4000 fpm.
3. Temperature Range: Minus 20 to plus 210 deg F.

F. Non-insulated, Flexible Duct: UL 181, Class 0, interlocking spiral of aluminum foil.

1. Pressure Rating: 8-inch wg positive or negative.
2. Maximum Air Velocity: 5000 fpm.
3. Temperature Range: Minus 100 to plus 435 deg F.

G. Insulated, Flexible Duct: UL 181, Class 1, 2-ply vinyl film supported by helically wound, spring-steel wire; fibrous-glass insulation; polyethylene vapor-barrier film.
1. Pressure Rating: 10-inch wg positive and 1.0-inch wg negative.
2. Maximum Air Velocity: 4000 fpm.
3. Temperature Range: Minus 10 to plus 160 deg F.
4. Insulation R-value: Comply with ASHRAE/IESNA 90.1-2004; or,

H. Insulated, Flexible Duct: UL 181, Class 1, black polymer film supported by helically wound, spring-steel wire; fibrous-glass insulation; polyethylene vapor-barrier film.
1. Pressure Rating: 4-inch wg positive and 0.5-inch wg negative.
2. Maximum Air Velocity: 4000 fpm.
3. Temperature Range: Minus 20 to plus 175 deg F.
4. Insulation R-Value: Comply with ASHRAE/IESNA 90.1-2004; or,

I. Insulated, Flexible Duct: UL 181, Class 1, multiple layers of aluminum laminate supported by helically wound, spring-steel wire; fibrous-glass insulation; polyethylene vapor-barrier film.
1. Pressure Rating: 10-inch wg positive and 1.0-inch wg negative.
2. Maximum Air Velocity: 4000 fpm.
3. Temperature Range: Minus 20 to plus 210 deg F.
4. Insulation R-value: Comply with ASHRAE/IESNA 90.1-2004; or,

J. Insulated, Flexible Duct: UL 181, Class 1, aluminum laminate and polyester film with latex adhesive supported by helically wound, spring-steel wire; fibrous-glass insulation; polyethylene vapor-barrier film.
1. Pressure Rating: 10-inch wg positive and 1.0-inch wg negative.
2. Maximum Air Velocity: 4000 fpm.
3. Temperature Range: Minus 20 to plus 210 deg F.
4. Insulation R-value: Comply with ASHRAE/IESNA 90.1-2004; or,

K. Insulated, Flexible Duct: UL 181, Class 0, interlocking spiral of aluminum foil; fibrous-glass insulation; polyethylene vapor-barrier film.
1. Pressure Rating: 8-inch wg positive or negative.
2. Maximum Air Velocity: 5000 fpm.
3. Temperature Range: Minus 20 to plus 250 deg F.
4. Insulation R-value: Comply with ASHRAE/IESNA 90.1-2004.

L. Flexible Duct Connectors:
1. Clamps: Stainless-steel band with cadmium-plated hex screw to tighten band with a worm-gear action in sizes 3 through 18 inches, to suit duct size.
2. Non-Clamp Connectors: Liquid adhesive plus tape.

2.17 DUCT ACCESSORY HARDWARE (Where indicated on the drawings)

A. Instrument Test Holes: Cast iron or cast aluminum to suit duct material, including screw cap and gasket. Size to allow insertion of pitot tube and other testing instruments and of length to suit duct-insulation thickness.

B. Adhesives: High strength, quick setting, neoprene based, waterproof, and resistant to gasoline and grease.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install duct accessories according to applicable details in SMACNA's "HVAC Duct Construction Standards - Metal and Flexible" for metal ducts and in NAIMA AH116, "Fibrous Glass Duct Construction Standards," for fibrous-glass ducts.

B. Install duct accessories of materials suited to duct materials; use galvanized-steel accessories in galvanized-steel and fibrous-glass ducts, stainless-steel accessories in stainless-steel ducts, and aluminum accessories in aluminum ducts.

C. Install control dampers at inlet of exhaust fans or exhaust ducts as close as possible to exhaust fan unless otherwise indicated.

D. Install volume dampers at points on supply, return, and exhaust systems where branches extend from larger ducts. Where dampers are installed in ducts having duct liner, install dampers with hat channels of same depth as liner, and terminate liner with nosing at hat channel.
   1. Install steel volume dampers in steel ducts.
   2. Install aluminum volume dampers in aluminum ducts.

E. Set dampers to fully open position before testing, adjusting, and balancing.

F. Install test holes at fan inlets and outlets and elsewhere as indicated.

G. Install fire and smoke dampers according to UL listing.

H. Install duct security bars. Construct duct security bars from 0.164-inch steel sleeve, continuously welded at all joints and 1/2-inch- diameter steel bars, 6 inches o.c. in each direction in center of sleeve. Weld each bar to steel sleeve and each crossing bar. Weld 2-1/2-by-2-1/2-by-1/4-inch steel angle to 4 sides and both ends of sleeve. Connect duct security bars to ducts with flexible connections. Provide 12-by-12-inch hinged access panel with cam lock in duct in each side of sleeve.

I. Connect ducts to duct silencers rigidly.

J. Install duct access doors on sides of ducts to allow for inspecting, adjusting, and maintaining accessories and equipment at the following locations:
   1. On both sides of duct coils.
   2. Upstreamand downstream from duct filters.
   3. At outdoor-air intakes and mixed-air plenums.
   4. At drain pans and seals.
   5. Downstream from manual volume dampers, control dampers, backdraft dampers, and equipment.
   6. Adjacent to and close enough to fire or smoke dampers, to reset or reinstall fusible links. Access doors for access to fire or smoke dampers having fusible links shall be pressure relief access doors and shall be outward operation for access doors installed upstream from dampers and inward operation for access doors installed downstream from dampers.
   7. At each change in direction and at maximum 50-foot spacing.
   8. Upstream or downstream from duct silencers.
   9. Control devices requiring inspection.
   10. Elsewhere as indicated.

K. Install access doors with swing against duct static pressure.

L. Access Door Sizes:
   1. One-Hand or Inspection Access: 8 by 5 inches.
   2. Two-Hand Access: 12 by 6 inches.
   3. Head and Hand Access: 18 by 10 inches.
   4. Head and Shoulders Access: 21 by 14 inches.
   5. Body Access: 25 by 14 inches.
   6. Body plus Ladder Access: 25 by 17 inches.

M. Label access doors according to Division 23 Section "Identification for HVAC Piping and Equipment" to indicate the purpose of access door.

N. Install flexible connectors to connect ducts to equipment.

O. For fans developing static pressures of 5-inch wg and more, cover flexible connectors with loaded vinyl sheet held in place with metal straps.

P. Connect terminal units to supply ducts directly or with maximum 12-inch lengths of flexible duct. Do not use flexible ducts to change directions.

Q. Connect diffusers or light troffer boots to ducts directly or with maximum 60-inch lengths of flexible duct clamped or strapped in place.

R. Connect flexible ducts to metal ducts with liquid adhesive plus tape and draw bands.

S. Install duct test holes where required for testing and balancing purposes.

T. Install thrust limits at centerline of thrust, symmetrical on both sides of equipment. Attach thrust limits at centerline of thrust and adjust to a maximum of 1/4-inch movement during start and stop of fans.

3.2 FIELD QUALITY CONTROL

A. Tests and Inspections:
   1. Operate dampers to verify full range of movement.
   2. Inspect locations of access doors and verify that purpose of access door can be performed.
   3. Operate fire, smoke, and combination fire and smoke dampers to verify full range of movement and verify that proper heat-response device is installed.
   4. Inspect turning vanes for proper and secure installation.
   5. Operate remote damper operators to verify full range of movement of operator and damper.

END OF DOCUMENT 233300

SECTION 233300 - DUCTWORK ACCESSORIES

GENERAL

1.1 SECTION INCLUDES

A. Air turning devices.

B. Duct access doors.

C. Duct test holes.

D. Flexible duct connections.

E. Fire dampers.

F. Volume control dampers.

G. Gravity backdraft dampers.

H. Remote damper operators

I. Control dampers

1.2 REFEREENCE SECTION 23 05 00 FOR THE FOLLOWING:

A. References.

B. Submittals.

C. Project record documents.

1 Record actual locations of access doors, test holes etc.

D. Qualifications.

1 Manufacturer: Company specializing in manufacturing the Products specified in this section with minimum five years documented experience.

E. Regulatory requirements.

1 Products Requiring Electrical Connection: UL Listed and classified.

F. Delivery, storage, and handling.

1 See Section 23 05 00.

G. Extra materials.

1 Provide two of each size and type of fusible link for fire and combination fire/smoke dampers.

1.3 PRODUCTS

1.4 AIR TURNING DEVICES

A. Note that air extractors or "scoops" shall not be used under any circumstances.

B. Fabricated turning vanes: Provide turning vanes and vane runners constructed in accordance with SMACNA "HVAC Construction Standards", current edition.

C. Manufactured turning vanes: Provide turning vanes constructed of 1-1/2" wide curved blades set at 3/4" o.c., supported with bars set at 2" o.c., and set into side strips suitable for mounting in ductwork.

1.5 DUCT ACCESS DOORS

A. Fabrication: Rigid and close-fitting of galvanized steel with sealing gaskets and quick fastening locking devices. For insulated ductwork, install minimum one inch thick insulation with sheet metal cover.

1 Less Than 12 Inches Square: Secure with sash locks.
2 Up to 18 Inches Square: Provide two hinges and two sash locks.
3 Up to 24 x 48 Inches: Three hinges and two compression latches with outside and inside handles.
4 Larger Sizes: Provide an additional hinge.

B. Access doors with sheet metal screw fasteners are not acceptable.

1.6 DUCT TEST HOLES

A. Temporary Test Holes: Cut or drill in ducts as required. Cap with neat patches, neoprene plugs, threaded plugs, or threaded or twist-on metal caps.

B. Permanent Test Holes: Factory fabricated, air tight flanged fittings with screw ca, Ventlok or approved equivalent. Provide extended neck fittings to clear insulation.

1.7 FLEXIBLE DUCT CONNECTIONS

A. Fabricate in accordance with SMACNA HVAC Duct Construction Standards - Metal and Flexible.

B. Construct flexible connector of neoprene coated flameproof fabric crimped into duct flanges for attachment to duct and equipment.

1.8 FIRE DAMPERS

1.9 Fabricate in accordance with NFPA 90A and UL 555, and as indicated.

A. Ceiling Dampers: Galvanized steel, 22 gage frame and 16 gage flap, two layers 0.125 inch ceramic fiber on top side, and one layer on bottom side for round flaps, with locking clip.

B. Curtain Type Dampers: Galvanized steel with interlocking blades. Provide stainless steel closure springs and latches. Configure with blades out of air stream.

C. Fusible Links: UL 33, separate at 160 degrees F with adjustable link straps for combination fire/balancing dampers.

1.10 VOLUME CONTROL DAMPERS

A. Fabricated in accordance with SMACNA HVAC Duct Construction Standards - Metal and Flexible, and as indicated.

1 Blade: Fabricate of double thickness sheet metal to streamline shape, secured with continuous hinge or rod.
2 Operator: Minimum 3/8 inch square shaft with nylon end bearings at each end to reduce air leakage.

B. Single Blade Dampers: Fabricate for duct sizes up to 6 x 30 inch.

C. Multi-Blade Damper: Fabricate of opposed blade pattern with maximum blade sizes 8 x 72 inch. Assemble center and edge crimped blades in prime coated or galvanized channel frame with suitable hardware.

D. End Bearings: Except in round ductwork 6 inches and smaller, provide nylon end bearings on each end. On multiple blade dampers, provide oil-impregnated nylon or sintered bronze bearings.

E. Quadrants:

1 Provide locking, indicating quadrant regulators on single and multi-blade dampers. Regulator shall be equivalent to Sheet Metal Connectors Model RP-3, with heavy-gauge steel regulator, wing nut locking assembly, and stamped dial indicating damper position.
2 On externally insulated ducts, mount quadrant regulators on stand-off mounting brackets, bases, or adapters to avoid damaging or compression of insulation.
3 Where rod lengths exceed 30 inches, provide regulator at both ends.

1.11 TAKEOFFS

A. Manufactured high-efficiency takeoff with 45-degree slope on the body, with gauge thickness equal to adjacent ductwork.

1.12 GRAVITY BACKDRAFT DAMPERS

A. Gravity Backdraft Dampers, Size 18 x 18 inches or Smaller, Furnished with Air Moving Equipment: Air moving equipment manufacturer’s standard construction.

B. Multi-Blade, Parallel Action Gravity Balanced Backdraft Dampers: 16 gage thick extruded aluminum, with blades of maximum 6 inch width, with felt or flexible vinyl sealed edges, linked together in rattle-free manner with 90 degree stop, steel ball bearings, and plated steel pivot pin; adjustment device to permit setting for varying differential static pressure.

1.13 EXECUTION

1.14 PREPARATION

A. Verify that electric power is available and of the correct characteristics.

1.15 INSTALLATION

A. Install accessories in accordance with manufacturer's instructions, NFPA 90A, and follow SMACNA HVAC Duct Construction Standards - Metal and Flexible. Refer to Section 23 31 13 for duct construction and pressure class.

B. Install duct accessories of materials suited to duct materials; use galvanized-steel accessories in galvanized-steel and fibrous-glass ducts and stainless-steel accessories in stainless-steel ducts.

C. Install duct access doors on sides of ducts to allow for inspecting, adjusting, and maintaining accessories and equipment at the following locations:

1 On both sides of duct coils.
2 Upstream from duct filters.
3 At outdoor-air intakes and mixed-air plenums.
4 At drain pans and seals.
5 Downstream from manual volume dampers, control dampers, backdraft dampers, and equipment.
6 Adjacent to and close enough to fire or smoke dampers, to reset or reinstall fusible links. Access doors for access to fire or smoke dampers having fusible links shall be pressure relief access doors and shall be outward operation for access doors installed upstream from dampers and inward operation for access doors installed downstream from dampers.
7 Upstream or downstream from duct silencers.
8 Control devices requiring inspection.
9 Elsewhere as indicated.

D. Unless duct access door size is explicitly indicated, provide minimum 24 x 18 inch size duct access doors wherever possible. Provide 18 x 18, 12 x 12 inch or 8 x 8 inch size elsewhere, using the largest size possible.

E. Install access doors with swing against duct static pressure.

F. Provide duct test holes where indicated and required for testing and balancing purposes. Coordinate all test hole locations with UNLBSM commissioning representatives. Install with minimum 24” clear dimension from any side wall or other obstruction.

G. Provide fire dampers, combination fire and smoke dampers and smoke dampers at locations indicated and where required by authorities having jurisdiction. Install with required perimeter mounting angles, sleeves, breakaway duct connections, corrosion resistant springs, bearings, bushings and hinges.

H. Coordinate installation of all fire dampers, combination fire and smoke dampers, and smoke dampers with all other disciplines to ensure a minimum of 24”x24” clear horizontal access area from the ceiling vertically to the damper. The clear access area will be used for the inspection of damper fusible links and damper operators, as well as for the resetting of damper. Clear access areas and appropriate wall/ceiling access panels, if required, shall be clearly shown on the coordination drawings.

I. Provide turning vanes on all 90 Deg mitered elbows and splitter vanes on all radius elbows unless the elbow has a center line radius of 1.5 times the width of the duct (SMACNA type RE1 elbow).

J. Do not install any volume control, fire or combination fire/smoke dampers in fume exhaust ducts.

K. Install smoke dampers and combination smoke and fire dampers in accordance with NFPA 92A.

L. All fire and combination fire/smoke dampers shall be commissioned (tested) in the presence of Owner representative following installation and before the corresponding fan systems are turned on. Contractor shall open all access doors for the inspection and close all doors in the presence of the inspector.

M. Demonstrate re-setting of fire dampers to Owner's representative.

N. Provide flexible connections immediately adjacent to equipment in ducts associated with fans and motorized equipment, and supported by vibration isolators. Install flexible connectors with adequate flexibility to allow for all thermal, axial, transverse and torsional movement. Provide airtight seal. For fans developing static pressures of 5.0 inches and over, cover connections with leaded vinyl sheet, held in place with metal straps.

O. Provide balancing dampers at points on supply, return, and exhaust systems where indicated on plans.

P. Set dampers to fully open position before testing, adjusting, and balancing.

Q. Provide a high-efficiency takeoff with 45-degree entry for each branch connection.

R. Provide balancing dampers on duct take-off to diffusers, grilles, and registers, unless dampers are specified as part of the diffuser, grille, or register assembly. Dampers shall be fitted with quadrant control and standoff to extend through insulation. Omit manual balancing damper at single diffuser served by a single air terminal box.

S. The use of splitter dampers is not acceptable.

T. Install remote damper actuators where the volume damper is not accessible. Field paint the remote actuator cap to match the adjacent ceiling finish.

1.16 FIELD QUALITY CONTROL

A. Tests and Inspections:

1 Operate dampers to verify full range of movement.
2 Inspect locations of access doors and verify that purpose of access door can be performed.
3 Operate and test fire, smoke, and combination fire and smoke dampers to verify full range of movement and verify that proper heat-response device is installed. All such tests shall be accomplished in the presence of a representative of BSM commissioning team.
4 Inspect turning vanes for proper and secure installation.
5 Operate remote damper operators to verify full range of movement of operator and damper.

END OF DOCUMENT 233300

SECTION 260100 - BASIC ELECTRICAL REQUIREMENTS

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Electrical materials and installation instruction common to most electrical systems and components including but not limited to: equipment, raceways, fittings, sleeve/seals, sleeves, wires and connectors, conductors, demolition, equipment installation requirements common to equipment sections, painting and finishing, concrete bases, supports and anchorages, general coordination, electrical wiring and device coordination.

1.2 DEFINITIONS

A. Following is a list of abbreviations generally used in Division 26.

1. AHJ – Authority Having Jurisdiction.
2. ETL – Electric Testing Laboratories.
3. NEC – National Electric Code.
4. NEMA – National Electrical Manufacturers Association.
5. NFPA – National Fire Protection Association.
6. OSHA – Occupational Safety and Health Administration.
7. UL – Underwriters Laboratories Inc.

B. Terms used on the drawings or in the specifications shall have the following meanings:

1. Approved Equal: An Item suggested by the Contractor that is allowed by the Engineer to replace an item listed in the Specifications or Drawings. The burden of proof of equality is the responsibility of the Contractor.
2. Furnish: Supply and deliver, ready for installation, assembly or intended use, all materials, labor, equipment, testing apparatus, controls, tests, accessories, and all other items customarily required for the proper and complete application for the particular work referred to.
3. Install: Includes unloading, unpacking, assembling, erecting, installation, applying, finishing, protecting, cleaning and similar operations at the project site as required to complete all items of work as required for the intended use/operation including all testing, certification, commissioning, and other requirements for final turnover to the Owner.
4. Provide: “Furnish” and “Install.”
5. Owner Furnished, Contractor Installed: The Owner will furnish at his cost and the Contractor shall receive, protect, store and install in the performance of the Work.
6. Finished Spaces: Spaces other than electrical equipment rooms, furred spaces, pipe and duct shafts, unheated spaces immediately below roof, spaces above ceilings, unexcavated spaces, crawlspaces, and tunnels.
7. Exposed, Exterior Installations: Exposed to view outdoors or subject to outdoor ambient temperatures and weather conditions. Examples include rooftop locations.
8. Concealed, Interior Installations: Concealed from view and protected from physical contact by building occupants. Examples include installations above ceilings, in shafts, trenches, partitions, or other enclosures.
9. Concealed, Exterior Installations: Concealed from view and protected from weather conditions and physical contact by building occupants but subject to outdoor ambient

temperatures. Examples include installations embedded in or below masonry or concrete construction, earthwork/trenches, within unheated shelters, crawl spaces or enclosures.

10. Wiring: All wires, raceways, fittings, conductors, connectors, tape, junction and outlet boxes, connectors, splices, and all other items necessary and/or required in connection with such work.
11. Raceway: All raceways, conduit, fittings, hangers, supports, sleeves, etc.

1.3 GENERAL REQUIREMENTS

A. Examine the Drawings, specifications and other Contract Documents relating to the Work and the work of all trades and become fully informed as to the extent and character of work required. Coordinate all work with that of others to ensure proper and complete installation of all materials, equipment and supports. It is the intent of the drawings, specifications and related contract Documents to provide a complete working installation of all systems and equipment called for, in proper operating condition, finished, tested and ready for its intended use (hereinafter “Design Intent”). Provide all items not specifically shown on the drawings, called for in the specifications or related Contract Documents, but required to conform to the labor, material and equipment to achieve the Design Intent and all scaffolding, access provisions, tools, appliances, consumables, fees, permits and licenses, debris removal/disposal, supervision and labor, including required start-up, check-out and training to provide complete and fully operable systems in full compliance with the Contract Documents.

B. Before submitting a bid and prior to the start of work, Contractor shall examine all conditions relating to the Work, including that associated with the work of other trades upon which Contractor’s work may rely or otherwise depend, to achieve the Design Intent, in accordance with the best trade practices, workmanship and highest quality product installation, taking into account the sequence of the work, delivery, storage and hoisting requirements, requirements for access, testing and temporary services and all other site limitations and project complexities. Report to the Architect/Engineer any conditions which might prevent installation of materials and/or equipment in the manner intended by the Contract Documents or contrary to applicable codes, standards or regulations.

C. No consideration or allowance will be granted for any alleged misunderstanding of materials, equipment or components to be furnished or work to be done; it being agreed that tender of proposal carries with it agreement to items, terms and conditions required by the Contract Documents.

D. Site Visit: Visit the site and verify the exact conditions relating to the work and obtain such information as may be necessary to present a complete and comprehensive bid. No allowance will be made for any extra expense due to Contractor’s failure to make such a visit and reasonably verify all actual/existing conditions. In the event of a conflict between existing conditions and the requirements of the Contract Documents, perform the necessary work to conform to Design Intent. The Owner or his representative will be the sole individual to interpret the intent of the Drawings in the event of a conflict between (1) existing conditions and those shown on the drawings, or (2) quality of existing material and quality of material indicated on the drawings or in the specifications. Wherever a conflict such as this occurs, the higher standard shall prevail.

1.4 SPECIAL REQUIREMENTS

A. When applicable, Contractor acknowledges the ongoing operations of the Owner at or in close proximity to the Project and agrees to coordinate the timing of the Work with the Owner’s ongoing operations; perform the Work in a manner that minimizes or eliminates an adverse impact upon

the Owner's ongoing operations; confine operations at the site to areas approved by Owner, permitted by law, permits and the Contract Documents; comply with the Owner's standard security, health and safety policies and procedures; not unreasonably encumber the site with any materials or equipment; and not place signs or advertising on or about the site without prior approval of Owner.

B. Where applicable, all seismic construction, restraints, bracing, mounts and hanging systems shall be in full compliance with the requirements of all Authorities Having Jurisdiction (AHJ's), pre-approval, certification and engineering (including certified engineering calculations and stamps). Contractor shall be solely responsible for obtaining and complying with all requirements of the AHJ.

1.5 SUBMITTALS

A. Reference Division 01 for submittal requirements.

B. Submittal Schedule: Provide a detailed submittal schedule including all requirements of this Division and its subdivisions to the Architect and Engineer within thirty days of contract award.

1. Contractor shall submit for the Engineer's approval a Submittal Schedule for the performance of the work that is consistent with the requirements of the project schedule. The Submittal Schedule shall allow reasonable time for the Architect and other consultants review as specified in Division 01 Submittal Procedures. If the time for Architects/Engineers review is not otherwise specified, the review period (from date of receipt) shall be fifteen business days. Once approved by the Architect/Engineer, submittal dates and time limits established by the Submittal Schedule shall not, except for reasonable cause, be changed or exceeded by the Contractor.
2. For each submittal required by the Contract Documents the schedule shall include: specification section number, subsection/paragraph identification number, item description (as stated in the applicable specification section, subsection or other Contract Document) and the scheduled delivery date to the Architect/Engineer.
3. Contractor shall be responsible to the Architect/Engineer and/or Owner for all costs, expenses and impact to the project schedule resulting from any deviation to the approved Submittal Schedule, including but not limited to; payment for required overtime, out-of-house resources/consultants or other higher cost resources of the Architect/Engineer as may be required to perform out of sequence, stacked, critical, delayed, unscheduled or multiple reviews of required submittals necessitated by rejection of a prior submittal, (cumulatively and hereinafter, "Additional Review Costs")

C. General:

1. Review is for general conformance with the Contract Documents and is not intended to otherwise approve or verify dimensions, quantities, or to coordinate the Work shown on shop drawings on or between Contractor and the work of other trades or Sections. Contractor is solely responsible for quantities, dimensions, means and methods. Dimensions shall be confirmed and correlated by Contractor at the jobsite prior to the start of the Work (procurement, fabrication, construction or other commencement activities). Contractor's failure to fully verify conditions at the jobsite prior to commencement of the work shall not relieve Contractor of its obligations under the Contract Documents and Contractor shall be responsible for all damages caused by or related to its failure to comply with the requirements of this provision.
2. Submittal review shall be performed to show compliance with the design intent. Contractor shall specifically note any deviations from the Contract Documents and explain the reason

and nature of the deviation. Such deviations will be reviewed or rejected on the submittal. Deviations not so identified shall not relieve the Contractor from the requirements of the Contract Documents.

3. Resubmittals will be reviewed for compliance with comment(s) made on the original submittal only. Architect/Engineer shall not be responsible for changes made upon resubmittal that are not clearly identified (highlighted) and respond directly to the initial rejection. Resubmittals should not be packaged with non-related first time submittals; all resubmittals must be marked with the resubmittal number and date and must otherwise comply with all submittal requirements.
4. Submit shop drawings, commissioning plan(s) and checklists, penetration locations, supplemental data, etc., as may be required by the Contract Documents for all materials, equipment and other components of the work included in all Sections of this Division and other provisions of the Contract Documents in accordance with the requirements of this Division and Division 01.
5. All submittals must be reviewed by Contractor, and bear Contractors review stamp and signoff for Conformity to the Contract Documents, prior to the submission of any required submittal to Architect/Engineer. Submittals that fail to meet this requirement will be considered incomplete, will not be reviewed by Architect/Engineer and will be returned to Contractor, without review and/or rejected and resubmittal will be required. Contractor shall be solely responsible for any and all Additional Review Costs and/or other project costs or schedule impact.
6. Forward all submittals to Architect/Engineer in a coherent, organized fashion, complete and packaged as required herein, Architect/Engineer may reject submittals that fail to comply with this or any other provision of the Contract Documents and Contractor shall be solely responsible for any and all Additional Review Costs and/or other project costs or schedule impact.
7. Subject to other provisions of the Contract Documents and in the absence of a more stringent requirement, Architect/Engineer will review a submittal not more than two (2) times. Contractor shall be solely responsible for any and all Additional Review Costs and/or other project costs or schedule impact.
8. Identify each submittal item by reference to Specification Section paragraph in which item is specified, or drawing/detail number, as applicable. In addition, for equipment submittals, include identification numbers appearing on the equipment schedule.
9. Identify each item by manufacturer, brand, trade name, number, size, rating, or whatever other data is necessary to properly identify and check materials and equipment. Words “as specified” are not sufficient identification.
10. Organize submittals in same sequence as they appear in specification sections, articles or paragraphs.
11. All materials and equipment submittals shall have a summary sheet at the front complete with catalog numbers. Where materials or equipment pertain to more than one building, submittals shall clearly indicate at which locations the materials or equipment is to be installed.
12. Submittals shall show physical arrangement, construction details, finishes, materials used in fabrications, provisions for piping and/or conduit entrance, access requirements for installation and maintenance, physical size and dimension, electrical characteristics and requirements, foundation/curbs and all permanent and temporary support details as well as all information relating to weight, including but not limited to live and dead weights.

D. Catalog Cuts and Submittal Literature: Catalog cuts, submittal literature and published material may be included to supplement scale drawings.

1. Prepare submittals electronically in accordance with the following and Division 01.
2. Submittal literature, drawings and diagrams shall be specifically applicable to this project and shall not contain extraneous material or optional choices. Clearly mark literature to indicate the proposed item.

3. Substitutions: Comply with Division 01 Product Substitution Procedures.

E. Shop Drawings:

1. Shop drawings shall include all significant Division systems, equipment and components, including but not limited to all terminal devices, connections and elevations. Include all related specialty rooms (i.e., electrical, data/technology). Drawings shall be at a minimum scale of 1/4 inch per 1 ft.-0 inch and shall be fully coordinated with the work of other trades and/or Sections.
2. Identify congested areas and clearly indicate solutions to space problems, developed in conjunction with the work of other trades and/or Sections. Identification of space problems without proposed solutions is not acceptable and is grounds for rejection. For such areas indicate, superimposed, the work of all trades and/or Sections involved and:

    a. Clearly identify each area of congestion and deviations from the Contract Documents, and:
    b. Proposed solution(s), clearly documented and signed-off by all other trades and/or Sections involved.

F. Anchorage and Supports: Submit details and calculations for support and anchors that are not specifically detailed on the drawings. All calculations must meet 2010 CBC.

1. Provide details and calculations for electrical equipment per 2010 CBC:

    a. Having an operating weight over 400 pounds or more and mounted directly to the floor.
    b. Having an operating weight over 20 pounds and suspended from the roof, floor, or wall or supported by vibration isolation devices.

2. Where pre-approved bracing systems will be employed, submit:

    a. System component brochure describing components used and detailed installation instructions.
    b. Loads to be transmitted to the structure at anchor points.

3. Where anchorage, support, and bracing are not detailed on the drawings, and pre-approved systems are not used, submit details and calculations of proposed systems. Include:

    a. [Detailed drawings showing system to be installed, stamped by a Structural Engineer registered in the State of California.]

        1) Calculations, stamped by a Structural Engineer registered in the State of Georgia.

    b. Anchorage and Supports:

        1) Where equipment substitutions change the weight, size, configuration, or other aspects of systems and equipment that will affect the performance of anchorages and/or supports, submit calculations for proposed anchors and supports, and install them as shown in these calculations.
        2) Where substitutions will have no effect on anchors and supports detailed on Contract Documents, submit information on sizes, weights, center of gravity and other relevant information to demonstrate this fact.

G. Shop Fabrication Drawings: Drawings are for the Contractor's use and shall be its responsibility. Do not submit shop fabrication documents unless specifically requested.

H. Testing and Balancing: Coordinate Shop Drawings to include any additional components for proper system testing and balancing.

I. Certificates: Submit final inspection certificates signed by governing authorities.

J. Operating and Maintenance Instructions and Manuals.

1. Instructions on major items, including but not limited to: switchgear, generators, pumps, air compressors, water heaters, water softeners, specialty units, fans, air handlers, AC units and temperature controls, shall be by representative of manufacturer of respective equipment.
2. Submit as identified below and as directed in Division 01.

    a. Names, addresses and phone numbers of contractors and subcontractors. Alphabetical list of all system components, with the name, address, and 24-hour phone number of the company responsible for servicing each item during the first year of operation.
    b. Complete operating and maintenance instructions and parts lists of all equipment and component parts. Data sheets to show complete internal wiring, and electrical ratings and characteristics, catalog data on component parts whether furnished by equipment manufacturer or others, names, addresses and telephone numbers of source of supply for parts subject to wear or failure, and description of operating, test, adjustment, and maintenance procedures.

        1) Where data sheets included in manual cover equipment, options, or other features not part of equipment actually furnished, line out these references or otherwise clearly mark so remaining text, diagrams, drawings, schedules, and similar information shall apply specifically to equipment furnished.

    c. Operating Instructions should include, but not be limited to:

        1) Normal starting, operational and shutdown procedures, including emergency procedures for each type of equipment/system.
        2) Equipment wiring diagrams.
        3) All other items as may be specified/required by this Section and the Contract Documents.

    d. Maintenance Instructions: All items as may be specified/required by this Section and the Contract Documents.
    e. Manufacturers Data (each piece of equipment):

        1) Installation instructions.
        2) Drawings and specifications.
        3) Parts List, including recommended stock and long lead parts/components.
        4) Wiring and riser diagrams.
        5) Warranties and guarantees for all equipment, materials and components, including repair, replacement and labor from both Contractor and manufacturer as required by the Contract Documents.
        6) Certificates of Installation – manufacturer's certification of supervision during equipment installation and start-up procedures.

7) Instruction certificates – certificates of compliance with Sections specific training and instruction programs.
8) All other items as may be specified/required by this Section and the Contract Documents.

K. Record Documents:

1. Maintain one complete set of blueline prints and specifications at the job site exclusively for recording deviations from the drawings which are necessary because of job conditions, request for information and/or approved change orders. Record locations and depths of buried and concealed conduits or other systems components from fixed, easily identifiable objects, such as building walls or other fixed physical objects. Where conduits are concealed in walls or other fixed physical objects, indicate distances from building corners or other building features not likely to be disturbed by fixture alterations. Drawings, specifications (as-builts) and approved submittals.
2. Where the project uses a BIM model the Contractor shall keep the model updated in a similar fashion, maintaining the current project record as described in (a), above and submit, an addition to all other requirements of this Section and other provisions of the Contract Documents a complete and accurate BIM model for the project.
3. Prior to Substantial Completion, obtain from the Architect a complete set of electronic CAD drawings. Record all revisions to these drawings to indicate as-built conditions. Indicate all changes, including RFI's, on this set of documents. Submit one set of blueprints of these revised drawings for review. Make necessary changes and deliver to Architect one set of reproducibles and one electronic copy, including and BIM model, upon Final Completion and Acceptance. Refer to Division 01 for additional requirements.
4. Provide full size copies of record one-line diagrams, in metal frames with glass front. Obtain Record prints from Owner's Representative at Contractor's cost and have prints framed by a firm normally engaged in this work. Locate diagrams as directed.
5. All test reports, certifications, and inspection reports.
6. AHJ/Specialty AHJ Approvals (i.e., Fire Marshal and/or Fire Department system approvals).
7. Substantial and Final inspection certificate signed by governing authorities.
8. All other items as may be specified/required by this Section and/or other provisions of the Contract Documents.

1.6 EQUIPMENT DEVIATIONS AND SUBSTITUTIONS

A. See Division 01 for requirements and procedures related to Deviations and Substitutions. Unless specified elsewhere in the Contract Documents, a minimum of two (2) weeks shall be allowed for evaluation. The burden of all systems re-engineering/design, testing, suitability and constructability is solely placed upon the Contractor for all deviations from the basis of design as reflected in the Contract Documents.

B. No substitutions will be allowed and/or considered unless the description of a product includes the phrase "approved equal" and then only upon a determination as to equivalency and impact upon the project budget, schedule and the work of others, including any redesign of the project or its system components by the Architect, Engineer or other trades. The final determination as to sufficiency or acceptance of any such substitution and/or deviation properly requested and submitted by Contractor will lie solely with the Architect/Engineer. Contractor may not implement substitutions that have not been approved by Architect/Engineer.

C. Where the Contractor proposes to use an item of equipment other than that specified or detailed on the drawings which requires any redesign of any portion of the project, including but not limited

to the mechanical, electrical, plumbing, structure, or architectural design or any of their respective subcomponents. Contractor shall be responsible to the Architect/Engineer and/or Owner for all costs, expenses and impact to the project budget and/or schedule resulting from any required investigation, analysis or redesign, including but not limited to; payment for required overtime, out-of-house resources/consultants or other higher cost resources of the Architect/Engineer, Owner or AHJ as may be required to perform the investigation, analysis or redesign (cumulatively and hereinafter, “Deviation Review Costs”).

D. If approved by Architect/Engineer, all such redesign, including all new drawings and detailing required, will be prepared by the Architect/Engineer and their sub-consultants for Change Order documentation for approval by Owner and the Authority Having Jurisdiction will be paid by the Contractor as part of the Deviation Review Costs.

E. Were such approved deviation requires a different quantity and arrangement of equipment, wiring, conduit, supports, foundations, pads, curbs, or equipment from that specified or indicated on the drawings or other Contract Documents, Contractor shall be responsible for all such costs, including the work of other trades and shall be solely responsible to furnish and install any such ductwork, piping, structural supports, insulation, controllers, motors, starters, electrical wiring and conduit, and any other additional equipment required by the system at no additional cost or schedule impact to the project (cumulatively and hereinafter “Deviation Construction Costs”).

1.7 COORDINATION

A. Drawings and corresponding electronic media are diagrammatic and indicate the general arrangement of systems and work included in the Work. Consult the drawings, details and other electronic media for locations of fixtures and equipment; where same are not definitely located, obtain this information from the Architect/Engineer.

B. The drawings and related electronic media have been made to scale with the best knowledge of conditions, dimensions and space requirements available at the time of design and shall be followed as closely as possible during performance of the Work and coordination with the work of others. The forgoing however shall not relieve Contractor from its responsibility to verify all conditions. Dimensions and space requirements prior to commencement of the Work and to immediately report any errors or discrepancies to the Architect/Engineer.

C. Check drawings and related electronic media of other trades to verify spaces and conditions in which work will be performed prior to commencement of the work.

D. If directed by the Architect/Engineer or required for proper installation, execution and coordination of the work, the Contractor shall, without extra charge, make reasonable modifications in the layout as needed.

E. Take all dimensions from Architectural and Structural Drawings, certified equipment drawings and from the actual field measurements before fabricating work. All conflicts shall immediately be reported to the Architect/Engineer. Contractor is solely responsible for conflicts known or which reasonably should have been known but not reported or resolved before commencement of the work.

F. Equipment furnished shall fit in allocated space with due provision for manufacturer’s recommended access and proper maintenance requirements. Verify and coordinate space requirements with all trades and equipment which comprise the Work.

G. Prior to construction, coordinate the Work with that of other trades and building components. Prepare coordination drawings (or other specified electronic media) for all major trades, utilities and other primary systems routing in conjunction with the contract documents to maximize the pre-installation planning and coordination of trades, utilities and systems and minimize the requirement to manage field coordination through the RFI's, ASI's or other similar processes.

H. Coordinate connection of systems with interior/exterior underground and overhead utilities and services. Comply with requirements of governing regulations, franchised service companies, and controlling agencies.

I. Before starting work, carefully examine the site and all Contract Documents. Become thoroughly familiar with new and existing conditions governing work on this project. Verify indicated elevations, building measurements, rough-in dimensions and equipment locations before proceeding with any of the work.

J. Drawings shall be accurately scaled to 1/8 inch – 1 foot or larger using the same version of AutoCAD or other electronic media as used by Architect/Engineer. Drawings shall include all addenda and Change Order items.

K. Contractor shall be solely responsible for coordination and shall bear the cost of its failure to coordinate installation or of failure to advise Architect/Engineer of installation conflicts.

L. Sequence, coordinate, and integrate installations of systems materials and equipment for efficient flow of the Work. Coordinate installation of large equipment requiring positioning prior to building enclosure.

1.8 ELECTRICAL WIRING AND COORDINATION

A. In general, power wiring will be provided under Division 26 – Electrical, and control wiring will be provided under Division 23 – Heating Ventilating and Air Conditioning, unless otherwise specified.

B. The following schedule summarizes the Division or work and material responsibilities.

ITEM	FURNISHED UNDER	SET IN PLACE OR MOUNTED UNDER	WIRED AND CONNECTED UNDER
Equipment motors	MD 1	MD 1	ED 2
Resistance heaters	MD	MD	ED
Fire protection controls, including remote switches, flow switches	MD	MD	ED
Liquid chiller starters, where specified	MD	MD	ED
Motor controls where specified as an integral package	MD	MD	ED
Motor controllers	ED 4	ED 4	ED
Resistance type heater controllers	MD 6	ED 4	ED
Magnetic contactors and magnetic starters with overload trip assembly	ED 4	ED 4	ED

ITEM	FURNISHED UNDER	SET IN PLACE OR MOUNTED UNDER	WIRED AND CONNECTED UNDER
Integral control transformers	MD 6	ED 4	ED
Cover-mounted control devices	MD 6	ED 4	ED
Manual motor starters with overload trip assembly	ED 4	ED 4	ED
Motor starter switches	ED 4	ED 4	D
Disconnect switches fused and unfused	ED 4	ED 4	ED
Thermal or thermal-magnetic circuit breakers	ED 4	ED 4	ED
Fuses	ED 4	ED 4	ED
Duct smoke detectors	ED	MD	ED 3
Smoke and fire/smoke dampers (with and without end switches)	MD	MD	ED 3
Control power source for temperature and equipment control panels	ED	ED	ED
Electric temperature control relays and miscellaneous devices	MD	MD 5	MD 5
Level and float switches	MD	MD 5	MD 5
Pipe mounted control devices such as flow switches, flow sensors, valves, and wells.	MD	MD 5	MD 5
Thermostats and space sensors.	MD	MD 5	MD 5
Duct mounted control devices such as temperature, humidity, flow and pressure sensors.	MD	MD 5	MD 5
Damper actuators.	MD	MD 5	MD 5
Control dampers.	MD	MD	--
Medical Gas Alarms	MD	MD	ED
Variable frequency drives (VFD) specified to be mounted on or in the mechanical equipment.	MD	MD	ED
VFD specified to be mounted separately from the mechanical equipment	MD	ED	ED

C. Notes: (1) MD: Mechanical Divisions 21, 22, 23. (2) ED: Electrical Division 26. (3) Fire Alarm related and power wiring provided under Division 26; Control-related wiring and relays provided under Divisions 21, 22, 23. (4) If furnished as part of factory equipment under Divisions 21, 22, 23, wiring and connections only by Electrical Division 26. (5) If any control devices carry the Full Load Current to any motor, they shall be furnished under Divisions 21, 22, 23, but shall be set in place and connected under Division 26. (6) Except where indicated as part of a motor control

center on the Electrical Drawings. (7) Division 26 shall provide the logic contact closure and the wiring to the local DDC temperature control panel. Division 26 shall also provide interface with the fire alarm system, proof of flow devices (duct/fan air flow switches), connecting wiring, smoke control logic, panel, relays, damper monitoring, and associated devices for a complete smoke control system.

1.9 ACCESSIBILITY

A. Contractor is responsible for verifying that equipment and devices will fit within the space shown on the drawings. Contractor shall locate all equipment which must be serviced, operated or maintained, if fully accessible positions.

B. Minor deviations from the drawings may be made to allow for better accessibility, but changes of magnitude or which involve extra cost shall not be made without approval from the Architect/Engineer.

1.10 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing the Products specified in this section with minimum five years documented experience.

B. Installer Qualifications: Company specializing in performing the work of this section with a minimum of five years documented experience. Company personnel shall be approved by manufacturer for all product installations and required training.

C. Conform to all applicable standards, codes and regulation and industry best practice requirements.

D. All materials and equipment shall be new, shall bear manufacturer’s name, and shall conform to the grade, quality and standards specified herein. Type, capacity and application shall be suitable and capable of satisfactory operation for the purpose intended. All equipment and components shall include UL label and/or marking on equipment body/device including manufacturer’s name, pressure rating(s), electrical classification(s), limits and ratings as applicable to individual components for the purpose specified and intended.

E. Equipment Selection: All items of a given type shall be the product of the same manufacturer. Equipment of greater or larger power, dimensions, capacities, and ratings may be considered provided such proposed equipment is approved in writing by Architect/Engineer and connecting electrical services, circuit breakers, conduit, motors, bases, and equipment spaces are increased. See Deviations and Substitutions for requirements. No additional costs will be approved for these increases, if larger equipment is approved. If minimum energy ratings of efficiencies of the equipment are specified, the equipment must meet the design requirements and commissioning requirements.

F. Listing and labeling: Provide motors that are listed and labeled. Terms “listed and labeled”: as defined by UL, NEC, Article 100 or other applicable recognized agency as specified in the Contract Documents.

G. Cutting and Patching: Unless otherwise required by the Contract Documents, Contractor shall be responsible for all cutting, fitting and patching required to complete the Work, or to make portions of the Work and existing conditions fit together properly, and all such areas shall be restored to

the conditions existing prior to the cutting, fitting and patching unless otherwise provided in the Contract Documents.

H. Contractor shall promptly correct any portion of the Work that is defective or not in accordance with the Contract Documents or rejected by the Architect/Engineer or Owner. Contractor shall be responsible for, and pay for all costs arising out of, any additional testing and inspections, demolition, uncovering and replacement and additional design and consulting services required to properly correct any portion of the Work.

I. Contractor **shall comply** with the Contract Documents and all Laws, standards and handling criteria regarding hazardous substances, wastes and materials, including asbestos-containing materials, lead-based paints, petroleum (or any constituent thereof), mold, radon, and polychlorinated biphenyl (PCB), ("Hazardous Materials") in performing the Work. Unless required by the Contract Documents, no Hazardous Materials shall be brought onto the Project.

J. Lead Free Requirements: Contractor shall endeavor to use lead free products and where required by law, ordinance, regulation or standard all materials products and practices shall comply with limitations and requirements as to the allowable limits and/or percentages of lead. Lead free products must be certified by and independent 3rd party.

1. This provision shall apply to any and all similarly regulated materials, products and practices that may be considered hazardous or are otherwise regulated by applicable law, ordinance regulation or standard in the project local.

1.11 DELIVERY, STORAGE, AND HANDLING

A. All materials and equipment shall be adequately covered and protected against dirt, water, chemical or mechanical damage, and theft. At completion, all work, equipment and materials shall be cleaned, and damage repaired by Contractor. Damaged equipment will be replaced by the Contractor if Owner does not accept repairs done to the equipment. Such replacement shall be scheduled to minimize building system interruption of occupied or scheduled for occupancy.

B. Material delivered at the site shall not be left exposed to the weather or left unattended. Deliver pipes, tubes and conduit with factory-applied end-caps. Contractor shall be responsible to maintain end-caps or provide temporary end caps on all open-ended piping, tubes and conduit through shipping, storage, and handling to prevent pipe-end damage and prevent entrance of dirt, debris, and moisture.

C. Protect stored material from moisture and dirt. Protect plastic pipes and materials from sunlight and support to prevent sagging and bending.

D. Elevate stored materials above grade. When stored inside, to not exceed structural capacity of the floor.

E. Provide protective coatings to materials to prevent damage and/or infiltration of moisture and dirt on all materials and equipment including but not limited to cast iron and steel valves.

F. Contractor shall check the openings in the building and the size of the doors, passages, and openings through which equipment is to be admitted. Wherever necessary, Contractor shall provide the equipment in sections or knocked down in order to admit the equipment through these openings.

G. Contractor shall provide all rigging, erection and hoisting equipment as required to handle or place equipment and piping in position. This rigging and hoisting equipment shall only be attached and placed on the structure in locations as approved by Architect/Engineer at the site.

1.12 PERMITS, FEES AND UTILITIES

A. Obtain and pay for all necessary permits, fees and utilities and inspections required to perform the Work.

B. Coordinate work with local regulatory entities, utility companies and others as required to fully comply with the requirements of this section and the Contract Documents, including those for both temporary and permanent services.

C. Permits, fees and utility expenses to be paid by Owner, if any, shall only where specifically required by the Contract Documents, and then only to the extent so specified.

1.13 DOCUMENT OWNERSHIP

A. The Drawings and Specifications, combined with the calculations, field data, notes, and reports, are the intellectual and real property of the Architect and/or Engineer. This covers all forms of written and recorded or electronic media. The reuse of these documents without specific permission of the Engineer is prohibited. The Drawings may be employed by the Owner and Contractor for the express use of constructing, commissioning and operating the facility only upon proper execution of the Agreement for Use of Electronic Files and Data.

1.14 GUARANTEE AND WARRANTY

A. Contractor warrants to Owner that the materials and equipment provided under the Contract will be of good quality and new unless the Contract Documents require or permit otherwise. Contractor further warrants that the Work will conform to the requirements of the Contract Documents and will be free from defects. Work, materials and equipment not conforming to these requirements, including substitutions not properly approved by Change Order, shall be considered defective. This warranty excludes remedy for damage caused by improper or insufficient maintenance, improper operation or normal wear, tear and usage. Contractor shall assign to Owner, or otherwise assure the Owner has the full benefit of, all warranties and guarantees of manufacturer, subcontractors, sub-subcontractors and suppliers, and Contractor shall perform the Work in a manner that does not adversely affect or invalidate any available warranties or guarantees.

B. Contractor shall warrant and guarantee all work against faulty material or workmanship for a period of one year from the date of final completion and written acceptance by the Owner, unless specified more stringently elsewhere in the Contract Documents.

C. If the project is occupied or the systems placed in operation in several phases at the request of the Owner, the guarantee of each system or piece of equipment used shall begin on the date each system or piece of equipment was placed in satisfactory operation, tested, commissioned and accepted, in writing, by the Owner. The use of building equipment for temporary service and testing or phases of work completed prior to the projects final completion and acceptance by the Owner does not constitute the commencement of the warranty period.

D. If a defect or deficiency in the Work is discovered within the one year Warranty and Guarantee period or within such longer period as may be prescribed by the Laws or by any specific guarantee, and Owner elects to have Contractor correct such defect or deficiency, Owner shall notify Contractor of such defect or deficiency in writing. This period of correction relates only to the specific obligation to correct defects and deficiencies and in no way otherwise limits the Contractor's responsibility for Work that is not in accordance with the Contract Documents, If Contractor fails to timely correct defects or deficiencies in the Work, Owner may, at its sole option, correct them and charge Contractor for all cost therefore.

E. See Division 01 – Closeout Submittals for additional warranty requirements.

F. Specific exclusions, if any, from this one year warrantee and guarantee period are listed in the individual specification sections.

1.15 LIMITATIONS OF LIABILITY

A. To the extent any of the following provisions are not more stringently included in the Contract Document the following Limitations of Liability shall apply:

B. Architect/Engineer is not responsible for Contractor's means, methods, techniques, sequences or procedures of construction, or the safety precautions and programs incident thereto, and is not responsible for Contractor's failure to perform or furnish the work in accordance with the Contract Documents.

C. In the event that Architect/Engineer's employees or sub-consultants make comments or issue warnings about safety issues, such comments and warnings shall be considered to have been offered by a Good Samaritan and shall not impose any obligation or responsibility.

D. Engineer will not be responsible for the acts or omissions of Owner, Contractor, any subcontractor, any supplier, or of any other person or organization performing or furnishing any of the portions of the work.

E. Contractor understands and acknowledges that Engineer is not authorized to order extra work or issue Change Orders to the work, however in the event and to the degree that Engineer may offer advice, suggestions, and opinions Contractor shall not rely on such advice, suggestions, and opinions unless directed in writing by Owner or its designated representative, and shall, in no event, make any claim against the Engineer for any such advice, suggestions, and opinions.

F. To the fullest extent permitted by law, Contractor shall indemnify and hold harmless Architect, Engineer, and their joint ventures, officers, directors, partners, employees and agents from and against any and all claims, costs, loses and damages (including but not limited to all fees and charge of engineers, architects, attorneys and other professionals and all court or arbitration or other dispute resolution costs) caused in whole or in part by the negligent acts or omissions of Contractor, Contractor's officers, directors, partners, employees, agents; or Contractor's subcontractors or material men in the performance of Work. Contractor shall direct its insurer to list Architect, Engineer, and their joint ventures, as Additional Insureds on general liability insurance policies covering this project. Prior to commencing work, Contractor shall submit copies of its certificate of insurance to both Architect and Engineer.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. In other Part 2 articles where subparagraph titles below introduce lists, the following requirements apply for product selection:

1. Manufacturers: Subject to compliance with requirements, provide products by the manufacturers specified.
2. Manufacturer: Unless otherwise specified, company specializing in manufacturing specified products for at least three years.

2.2 MATERIALS AND EQUIPMENT

A. The device numbers noted in this specification are generally those of a specific manufacturer and represent the minimum quality required as the basis of design for this project. Subject to the Substitutions and other provisions of the Contract Documents, Contractor may submit equivalent devices from the other manufacturers listed in the section.

B. Materials and equipment used in carrying out these specifications shall be new and have UL listing, or listing by other recognized testing laboratory when such listings are available.

C. All material shall bear manufacturer's name, model number, electrical characteristics and other identification and shall be the standard product of manufacturer regularly engaged in production of similar material.

D. Construction of equipment shall be as follows:

1. All prefabricated equipment shall be designed and constructed in such a manner that all parts of said equipment and the equipment as a whole, including attachments, will resist the forces (including seismic where applicable) to which they may be subjected.
2. Unless otherwise specified or required, design criteria shall be no less than 1.5g for lateral forces and 0.6g for vertical forces.
3. Provisions for support and anchorage of equipment shall be an integral part of each item and shall include the fastening means and all necessary internal and external bracing, brackets and connections.

E. Specifications for many items are or may be described on the drawings, including but not limited to wiring devices, lighting fixtures, control devices, etc., are or may be described on the drawings. Contractor shall promptly advise Architect of any conflicts or discrepancies.

F. Except for conduit, conduit fittings, outlet boxes, wire and cable (600V and below only), all items of equipment or material shall be the product of one manufacturer throughout.

G. The documents contain specifications regarding equipment design, including BIL levels, AIC ratings, and series ratings. In all cases provide equipment sufficient for the use intended. Do not provide materials whose ratings fall below those included in the Documents.

PART 3 - EXECUTION

3.1 DEMOLITION

A. Refer to Division 01 Sections for "Cutting and Patching" and "Selective Demolition" and “Minor Demolition” in this Section for general demolition requirements and procedures.

B. Disconnect, demolish, and remove systems, equipment, and components indicated to be removed.

1. Raceways to Be Removed: Remove portion of raceways and wire indicated to be removed and cap or plug remaining piping with same or compatible material.
2. Raceways to Be Abandoned in Place: Remove wire, cap or plug with same or compatible piping material.
3. Equipment to Be Removed: Disconnect and cap services and remove equipment.
4. Equipment to Be Removed and Reinstalled: Disconnect and cap services and remove, clean, and store equipment; when appropriate, reinstall, reconnect, and make equipment operational.
5. Equipment to Be Removed and Salvaged: Disconnect and cap services and remove equipment and deliver to Owner.

    a. If raceways, wire or other components or equipment to remain is damaged in appearance or is unserviceable, remove damaged or unserviceable portions and replace with new products of equal capacity and quality.

3.2 CONTINUITY OF SERVICES AND CONNECTION TO EXISTING WORK

A. Contractor, in the performance of the Work shall plan for and incorporate into the work the continuity of services. Where the continuity of service(s) is required to be interrupted Contractor shall plan and schedule the work to minimize interruptions to the facility and its normal operations, prearrange and coordinate all outages/interruptions with Owner’s representative, utilities and the work of others. Requests for system interruptions/outages must be submitted at least five days prior to intended shutdown time and then subject to Owner’s adjustment and/or approval.

B. For connections that require a significant down-time or interruption to facility operations (as determined by the Owner), Contractor shall provide for Owner’s written approval a detailed plan, schedule and description of the work for each system interruption. The plan shall include a description and schedule of each work item to be completed, designation of site supervisor and contact information, designated work crew as well as facility access and egress points for materials, manpower and equipment, contingency plan for parts, materials and equipment as well as a program to restore systems in the event of unplanned disruption or inability to complete the work in the timeframe scheduled and approved by Owner. Contractor shall confirm scheduled dates with the Owner and provide a minimum of five days advance notice for each operation.

C. Tap connections shall not be performed on “live,” “wet” or “hot,” systems.

D. Contractor shall include all costs for overtime labor, expedited materials, equipment and contingency planning as necessary to maintain continuity of services, schedule and complete necessary connections. Contractor shall also include provisions for maintaining any and all supplemental systems that may be required to remain in service for the safety, protection and critical operations of the facility and its occupants including but not limited to; Fire Alarm, Security, Phone/Data, BAS, Emergency Power and similarly related critical or emergency systems. Such

provisions shall include but not be limited to temporary power, lighting, materials, equipment and/or installations (including removal and cleanup thereof) required to maintain such systems and as required to safely and properly complete the work.

E. Contractor shall be liable for any and all damages resulting from unscheduled outages/interruptions or for those not confined to the pre-approved timeframes to complete the work.

3.3 UTILITY SERVICE(S)

A. Contractor shall be responsible for verifying and coordinating the work with local utility companies providing service to the facility and/or site and coordination with the work of others. This shall include, but not be limited to:

1. Confirmation of schedule and service routing and sequence of the work to be performed by each utility, Contractor, subcontractor or others to ensure that the work can be performed without impact to the project schedule and with minimum interruption to services.
2. Verification of utility services point of entry to the facility, including applicable invert elevations, proper placement of sleeves and/or penetrations and sealant thereof.
3. Establishing utility point of contact, documenting the local utility company representatives:

    a. Company:
    b. Contact Person:
    c. Contact Telephone Number:
    d. Provide required connections for each incoming utility service.

3.4 ELECTRICAL SYSTEMS

A. Visit site and observe conditions under which work must be performed.

B. Before starting work, carefully examine Architectural, Civil, Landscape, Structural, Plumbing, Heating, Ventilating and Air Conditioning drawings to become thoroughly familiar with conditions governing work on this project. Verify elevations, measurements, rough-in requirements of equipment and it installation location before proceeding with the work. Install equipment with access as required by the NEC.

C. Circuit "tags" on the Electrical Drawings in the form of arrows are used to indicate home runs of raceways to electrical distribution points. These tags show the circuits in each home run and the panel designation. Do not combine circuits other than those shown or allowed on the Drawings. Show the actual circuit numbers on the finished record drawing, and on the panel directory card. Provide an insulated grounding conductor sized in accordance with NEC in every power circuit.

D. The general directions and location of homeruns are indicated on Drawings and are to be extended to panels as though routes were completely shown. Items which are installed other than as shown on Drawings and without receiving prior written approval will be ordered removed and installed as shown without additional cost to Owner.

E. The Drawings do not indicate the exact number of wires in each conduit for the branch circuit wiring. Provide the correct quantity of wires as indicated by: the circuit numbers indicated, wiring diagrams, and by applicable requirements of the NEC.

F. Electrical Drawings are diagrammatic and shall not be scaled for exact sizes. Adjust location of conduits, panels, equipment, pull boxes and fixtures to accommodate the work and to prevent interferences.

1. Lines which pitch have right-of-way over those that do not. Lines whose elevation cannot be changed have right-of-way over lines whose elevations can.
2. Make offsets, transitions, and changes in direction in raceways as required to maintain proper headroom pitch of sloping lines.

G. Wire and cable routing shown on the Drawings is approximate. Route wire and cable as required to meet Project Conditions.

H. When wire and cable routing is not shown, and destination only is indicated, determine exact routing and lengths required.

I. The Drawings are diagrammatic. They do not show every offset, bend, conduit body, elbow or junction box that may be required to install work in the space provided and avoid conflicts. Follow the Drawings as closely as is practical and install additional bends, offsets and elbows where needed by local job site conditions. Provide necessary junction boxes to meet code regulations for the allowed number of conduit bends.

J. Establish sizes and locations of the various concrete bases required. Coordinate and provide all necessary anchor bolts together with templates for holding these bolts in position.

K. Provide supports, blocking, hangers, and auxiliary structural members required for support of work.

L. Furnish and set all sleeves for passage of raceways through structural, masonry, and concrete walls, floors, and elsewhere for proper protection of the raceways.

M. Establish size, location, and count of cast-in conduits or conduits to be concealed underneath the foundations. Coordinate with steel reinforcing.

N. The architectural drawings govern the locations and elevations of all electrical equipment, devices and fixtures. Resolve conflicts with the Architect prior to rough-in.

O. Verify that the physical dimension of each item of electrical equipment will fit the available space. Coordinate electrical equipment space requirements with the allotted space provisions, and access routes through the construction area.

P. Coordinate rough-in and wiring requirements for all mechanical, kitchen and other equipment with equipment supplier and installer. Make installation in accordance with rough-in and wiring diagrams provided by equipment supplier and installer.

Q. Coordinate all aspects of the electrical, telephone and other utility services with the appropriate serving utility company.

R. Coordinate underground work with other contractors working on the site. Common trenches may be used with other trades. In such areas, maintain clearances as required by codes and ordinances.

S. Coordinate underground work with foundation plans and work.

T. Existing wires, conduits, pipes, ducts or other service facilities are shown in a general way only. The Contractor shall visit the site and make exact determination of the existence of any such facilities prior to submission of his bid. It is understood that he will be responsible for making the exact determination of the location and condition of these facilities.

U. The location of utilities indicated on the plans is taken from existing public records. The exact location and elevation of public utilities must be determined by the Contractor. The Contractor shall ascertain whether any additional facilities other than those shown on the Drawings may be present.

V. Call to the attention of the Architect any error, conflict or discrepancy in Plans and/or Specifications. Do not proceed with any questionable items of work until clarification of same has been made. Supplementary Details and Plans may be supplied as required and they will become a part of the Contract Documents.

W. Arrange work to reduce interruption of any existing service to minimum. When interruptions are unavoidable, consult Owner or Utility involved and agree in writing, with copy to the Architect, upon a mutually satisfactory time and duration.

X. No circuits shall be turned off without prior approval from Owner. Coordinate with the operations, normal activities, building access, etc. Coordinate work with other crafts for proper scheduling.

3.5 EQUIPMENT INSTALLATION

A. Follow manufacturer's instructions.

B. Where the product has no manufacturer's instructions, follow these specifications. Where neither the manufacturer nor these specifications contain such instructions, install in accordance with the standards listed above. No allowance of any kind will be made for negligence on part of Contractor to foresee means of bringing in or installing equipment into position.

1. Verify all dimensions by field measurements.
2. Install systems, materials, and equipment to provide the maximum headroom possible.
3. Install systems, materials, and equipment to comply with approved submittal data, including coordination drawings
4. Install systems, materials, and equipment level and plumb, parallel and perpendicular to other building systems and components, where installed exposed in finished spaces.
5. Fit surface panels, devices and outlets with neat, appropriate trims, plates or covers, without over-hanging edges, protruding corners or raw edges, to leave a finished appearance.
6. Extend maintenance and access components (i.e., grease fittings, service panels, and similar items) to accessible locations.
7. Install equipment to allow right of way for piping installed at required slope.

C. Locations:

1. Verify all locations with actual field conditions, architectural, structural, electrical, plumbing, heating and ventilating plans to avert possible installation conflicts.
2. Architect reserves the right to make minor changes prior to installation without cost to Owner.
3. Coordinate work with that of other trades to assure symmetrical placing of fixtures, sprinkler heads and other exposed components with respect to ceiling tile, grilles, etc. See Architectural reflected ceiling plan for exact location of light fixtures and other equipment.

4. Any work which is incorrectly installed without prior verification without required coordination will be ordered removed and relocated and any changes or damage resulting to other work shall be repaired and/or replaced at no cost to the Owner.
5. In general, locate all finished devices or other exposed finished devices as indicated on or by symbols on drawings. Where devices or other exposed finished components occur in face, decks or base millwork, walls, ceilings or other finished surfaces carefully coordinate with details and arrangements of same.
6. All mounting heights shown on drawings are from finish floor to centerline unless otherwise indicated or required by code. Mounting heights at non-typical locations shown with (+) sign and height required noted adjacent to such device. Devices located in concrete block, brick or tile walls are to be adjusted in height to coordinate with modular joints of the materials. Verify requirements with Architect prior to installation.
7. Wiring Requirements: Install wiring complete to every outlet with all devices shown and/or required. All wiring to be in raceways and concealed throughout finished areas unless specifically noted otherwise. For the purpose of electrical specifications, all areas, with the exception of boiler rooms, mechanical rooms and mechanical spaces, are to be considered as finished areas.

D. Equipment Connections:

1. Coordinate the work with that of other trades to ensure all required connections are provided to ensure proper installation and operation.
2. Provide complete electrical connections for all items of equipment requiring such connections, including incidental wiring, materials, devices and labor necessary for a finished working installation.
3. Verify the location and method for connecting to each item of equipment prior to roughing-in. Check voltage and phase of each item of equipment before connection.
4. Make motor connections for the proper direction of rotation.

3.6 NOISE CONTROL

A. Provide insulation, isolators and other sound attenuation requirements as specified by Contract Documents.

B. Back to back or straight through boxes are not permitted unless specifically noted on the drawings.

C. Contactors, transformers, starters and similar noise producing devices shall not be placed on walls which are common to occupied spaces unless specifically called for on the drawings. Where equipment is mounted on wall common to occupied spaces, provide shock mounting or noise isolators to effectively prevent transmission to occupied spaces.

D. Ballasts, contactors, starters transformers and like equipment found noticeably noisier than similar equipment of same type are to be removed and replaced as directed by Architect at no cost to Owner.

E. Route raceways along corridors or other noncritical noise space to minimize penetrations through sound rated walls. Seal raceway penetrations through sound rated walls.

3.7 FIRE WALL PENETRATIONS

A. Perform necessary fire rated wall sealing for the work in accordance with Division 07 - Thermal and Moisture Protection.

B. Provide necessary wall material to maintain fire wall rating where flush mounted equipment or components installed.

C. Where systems or components penetrate floors, ceilings, ducts, chases and fire walls, provide fire stopping to maintain integrity of the fire assembly. Fire stopping method shall be approved by the authority having jurisdiction.

D. Where electrical boxes with total area exceeding 16 sq inches are located in fire resistive walls, fire stopping shall be provided to maintain integrity of the fire assembly.

E. Where electrical boxes are installed on opposite sides of a rated wall, horizontal separation between the boxes shall be a minimum of 24 inches. Horizontal separation of these boxes may be less than 24 inches if a UL approved protective material is utilized.

1. Electrical boxes shall not be installed back to back in rated walls.

    a. The aggregate surface area of the boxes shall not exceed 100 sq inches per 100 sq ft. of wall surface.

3.8 EQUIPMENT SUPPORT

A. General:

1. Provide a system of supporting devices and hangers for support and bracing of piping, conduit and equipment as required by code or as provided under this Division as indicated on plans and as described herein.
2. Do not install supporting devices so as to obstruct access to equipment.
3. Floor-mounted equipment shall not be held in place solely by its own dead weight. Include floor anchor fastening in all cases.
4. Do not support ductwork, piping, conduits, conductors, or equipment from other piping, conduits, ceiling grids, equipment, ductwork, or ceiling supports. In all cases, provide independent supports for such components and equipment.

B. Concrete Bases: Anchor equipment to concrete base according to equipment manufacturer's written instructions and according to code (including seismic codes where applicable).

1. Construct concrete bases and form equipment anchorages as detailed in the structural drawings.
2. Construct concrete bases of dimensions indicated, but not less than 4-inches larger in both directions than supported unit.
3. Install epoxy-coated anchor bolts for supported equipment that extend through concrete base, and anchor into structural concrete floor.
4. Place and secure anchorage devices. Use supported equipment manufacturer's setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.
5. Install anchor bolts to elevations required for proper attachment to supported equipment.
6. Install anchor bolts according to anchor-bolt manufacturer's written instructions.

7. Use concrete and reinforcement as specified in Division 03 Sections and the Structural Drawings.

C. Metal Supports and Anchorages:

1. Refer to local codes, practices and standards for installation and material requirements and limitations relating to the use of metal supports and anchorages (including applicable seismic requirements).
2. Refer to Division 05 Section "Metal Fabrications" for structural steel.
3. Field Welding: Comply with AWS D1.1.

D. Wood Supports and Anchorages:

1. Refer to local codes, practices and standards for installation and material requirements and limitations relating to the use of wood supports and anchorages (i.e., fire retardant materials).
2. Cut, fit, and place wood grounds, nailers, blocking, and anchorages to support, and anchor materials and equipment.
3. Select fastener sizes that will not penetrate members if opposite side will be exposed to view or will receive finish materials. Tighten connections between members. Install fasteners without splitting wood members.
4. Attach to substrates as required to support applied loads.

E. Grouting:

1. Mix and install grout for equipment base bearing surfaces, pump and other equipment base plates, and anchors.
2. Clean surfaces that will come into contact with grout.
3. Provide forms as required for placement of grout.
4. Avoid air entrapment during placement of grout.
5. Place grout, completely filling equipment bases.
6. Place grout on concrete bases and provide smooth bearing surface for equipment.
7. Place grout around anchors.
8. Cure placed grout.

3.9 PAINTING

A. Painting of systems, equipment, and components is specified in Division 09. Unless and to the extent that painting is not specified elsewhere in the Contract Documents, all exposed materials in finished areas and on exterior walls shall be painted to match surrounding surfaces.

B. Contractor shall be responsible for and shall coordinate the timing of painting with the work of other trades and to minimize the requirements for damage and touchup to the work.

C. Damage and Touchup: Repair marred and damaged factory-painted finishes with materials and procedures to match original factory finish.

3.10 CUTTING, PATCHING AND CORE DRILLING

A. General:

1. Refer to Divisions 01, 03, and other related provision of the Contract Documents, including Structural Drawings and Specifications for requirements relating to cutting, patching and core drilling of walls, floors and other surfaces.
2. Do not cut or break any steel or wood framing, concrete, masonry, or partitions, etc., without permission from the Architect or as shown on the Drawings.
3. Subject to the provisions of this Section and other portions of the Contract Documents cut, channel, chase and drill floors, walls, partitions and ceilings as necessary for the proper installation, support and anchorage of piping, ductwork, raceway, boxes, and other equipment.
4. Repair any damage to the building, piping, equipment, or finish.
5. Perform repairs with materials matching the original and install in accordance with appropriate sections of the Contract Documents.
6. Where trenching is done through existing paving, walks, curbs, etc., Contractor is responsible for patching and repairs to original condition.
7. In new work, patch and refinish all finished surfaces damaged by this Contractor to match adjacent surface.
8. Where new work is installed in the existing building, patch and refinish surfaces damaged to match existing. Refinishing to be as directed by the Architect.
9. All related refinishing to be as directed by the Architect.

B. All cutting, patching and/or core drilling of structural systems that are do not appear on or that deviate in any way from the Structural Drawings must be preapproved by the Structural Engineer and Contractor shall provide all data, calculations and/or other requirements as maybe required by the Structural Engineer, prior to commencement of the work, including but not limited to:

1. X-Ray of structural systems to show the actual location of reinforcement.
2. Size and dimensions of penetrating ductwork, piping or conduit including placement within desired opening and required clearances, means of fastening and/or support including all anchoring systems and fasteners.
3. As a general rule, subject to adjustment by Structural Engineer, penetrating ductwork, piping or conduit shall pass through the center of all structural openings, avoiding structural members by minimums specified on the Structural Drawings.

C. Core Drilling Layouts: Unless otherwise specified in the Contract Documents Contractor shall provide to the Structural Engineer a complete floor by floor core drilling layout for all required floor core penetrations in advance of the work for Structural Engineer's review and approval. Core drilling layouts shall include size, dimension and specific locations of core drilling for all trades. Contractor shall not be permitted to conduct independent coring without providing such layout to Structural Engineer.

3.11 EXCAVATION, BACKFILL AND WATERPROOFING

A. Refer to Divisions 01, 02, and other related provisions of the Contract Documents, including but not limited to Sitework and Structural Drawings and related specifications for requirements relating to excavation, backfill and waterproofing for each trade.

B. Do necessary trenching and excavating for installation of underground piping, raceways and equipment. Use necessary precautions not to affect the bearing value of soil under and near footings. Excavate trenches with proper pitch 6-inches deeper than required by line grade and prefill to line grade with pea gravel. Where trenching occurs through existing paving, walks, curbs, etc., patch and repair to original conditions. Compact backfill with vibratory or roller compaction equipment in 9-inch layers to 90 percent density. Dispose of excess excavated material as directed. Backfill under floor slabs and under hard surfaced yard areas (i.e., walks, drives, parking

areas) to be crushed rock unless otherwise indicated, compacted in 9-inch layers. Backfill material and compaction to comply with Site Work Section of these Specifications.

C. Provide and maintain ample means and devices with which to promptly remove and dispose of water entering the excavation during the time it is being prepared for the piping, raceways or equipment laying, during the laying of materials or equipment and until the backfill has been completed.

D. Avoid, if possible, penetrations of waterproof membranes. Where such penetration is required, perform it prior to waterproofing and in accordance with Architectural details. Where penetrations are not detailed or must be conducted through waterproof membranes, provide a detail of the penetrations for approval of the Architect.

3.12 SAFETY AND PROTECTION

A. The Contract Documents do not include nor is Architect/Engineer responsible for the design of construction details or instructions relating to Contractor' safety or protective measures or precautions or as it pertains to its means, methods, techniques, sequences or procedures required for to perform the work.

B. Provide necessary shoring, railing, barricades, protective devices, temporary systems/supports, safety instructions and procedures to perform the work safely and to comply with the Safety Requirements of the governing authorities.

C. Unless otherwise specifically detailed and included, the Contract Documents represent the finished state of all systems and components related to the work and it is Contractor's sole responsibility to provide the necessary means, methods, equipment and protection of the work and those performing the work during construction. Neither Architect/Engineer nor any of their respective subconsultants shall be responsible or liable for Contractors failure to adequately protect the work or those performing the work during construction.

3.13 FUTURE PROVISIONS TO BE INCLUDED IN THE WORK

A. The following provisions shall be provided for and included in the work:

1. Provide pull line in each empty conduit provided for future installation of wiring.
2. At all systems such as fire alarm, clock and program, intercom, etc., where future stations are to be fed from adjacent outlets or terminal cabinets, all conductors required for complete installation of additional units are to be provided to nearest outlet or terminal cabinet as required. In general, all wiring installed so it will not be necessary to remove existing conductors and re-pull additional wiring to install additional units. All spare conductors properly labeled and terminated in outlet boxes or at terminals in terminal cabinets.

3.14 CLEANING

A. General:

1. At all times keep the premises free from accumulation of waste materials or rubbish caused by the employees or the work. At the completion of the work, remove all superfluous materials, equipment and debris related to or resulting from the work.

2. All systems, equipment and component including but not limited to all panels, compartments, points of access, surface areas, panels, whether concealed or not shall be free from debris, filings, clippings, dirt, dust and debris and in a new condition. Touch up paint where necessary.
3. Where existing systems are expanded and/or remodeled, clean the new installation prior to making final connection to the existing systems.

3.15 ASBESTOS OR OTHER HAZARDOUS BEARING MATERIAL

A. If during the course of work, the Contractor observes the existence of asbestos, asbestos bearing material or other hazardous material, the Contractor shall immediately terminate further work and notify the Owner of the condition. The Owner will, after consolation with the Architect, determine a further course of action.

3.16 COOPERATION WITH OTHER TRADES

A. Contractor shall cooperate with and coordinate the work with that of all other trades in the performance of the work, including but not limited to; delivery of equipment and materials, furnishing material and location requirements of sleeves, bucks, chases, supports, mountings, backings, inserts, anchor bolts, cast-in-place box-out or steel embeds, routings, sequencing, locations, finished devices, etc., for proper installation of its work. Contractor shall be responsible for any and all removal, replacement or repairs to its work or the work of others for its failure to fully comply with this provision.

A. OPERATION AND INSTRUCTION

B. Upon completion of the work and prior to final acceptance, Contractor shall operate the equipment for a period as required to fully instruct the Owner and its authorized representatives in all details of operation, adjustment and maintenance. Absent more stringent requirements found elsewhere in the Contract Documents, Contractor shall, at a minimum:

1. Schedule with Owner and its designated representatives a single time and location for a one-day instruction class and submit three copies of certificate, signed by Owner's representatives, attesting to the Owner's authorized representatives having been so instructed. All arrangements shall be made through Architect and Owner's Representative.
2. Thoroughly review and instruct Owner and its designated representatives on all aspects of systems and facilities operations and maintenance utilizing the Instructions and Manuals submitted under the provisions of this Section. Any required instructions from manufacturer's representatives shall be given during this period.
3. This requirement is in addition to any “Operation Test” specified in the Contract Documents.

END OF SECTION 260100

SECTION 260519 - LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Copper building wire.
2. Aluminum building wire.
3. Metal-clad cable, Type MC.
4. Armored cable, Type AC.
5. Connectors and splices.

1.3 SUBMITTALS

A. Product Data: For each type of product.

B. Field quality-control reports.

PART 2 - PRODUCTS

2.1 COPPER BUILDING WIRE

A. Description: Flexible, insulated and uninsulated, drawn copper current-carrying conductor with an overall insulation layer or jacket, or both, rated 600-V or less.

B. Standards:

1. Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and use.
2. Conductor and Cable Marking: Comply with wire and cable marking according to UL's "Wire and Cable Marking and Application Guide."

C. Conductors: Copper, complying with ASTM B3 for bare annealed copper and with ASTM B8 for stranded conductors.

D. Conductor Insulation:

1. Type THHN and Type THWN-2: Comply with UL 83.

2.2 ALUMINUM BUILDING WIRE

A. Description: Flexible, insulated and uninsulated, drawn aluminum current-carrying conductor with an overall insulation layer or jacket, or both, rated 600-V or less.

B. Standards:

1. Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and use.
2. Conductor and Cable Marking: Comply with wire and cable marking according to UL's "Wire and Cable Marking and Application Guide."

C. Conductors: Aluminum, complying with ASTM B800 and ASTM B801.

D. Conductor Insulation:

1. Type THHN and Type THWN-2: Comply with UL 83.

2.3 METAL-CLAD CABLE, TYPE MC

A. Description: A factory assembly of one or more current-carrying insulated conductors in an overall metallic sheath.

B. Standards:

1. Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and use.
2. Comply with UL 1569.
3. Conductor and Cable Marking: Comply with wire and cable marking according to UL's "Wire and Cable Marking and Application Guide."

C. Circuits: Single circuit and multi-circuit with color-coded conductors.

D. Conductors: Copper, complying with ASTM B3 for bare annealed copper and with ASTM B8 for stranded conductors.

E. Ground Conductor: None.

F. Conductor Insulation:

1. Type TFN/THHN/THWN-2: Comply with UL 83.

G. Armor: **Steel**, **Aluminum**, interlocked.

2.4 ARMORED CABLE, TYPE AC

A. Description: A factory assembly of insulated current-carrying conductors without an equipment grounding conductor in an overall metallic sheath. Type AC Cable is constructed with soft-drawn

copper insulated conductors which are individually wrapped with a moisture-resistant, flame-retardant paper covering. Interlocking armor is applied over the assembly. An aluminum bond wire is placed inside the armor, runs longitudinally and is in intimate contact with the armor for its entire length.

B. Standards:

1. Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and use.
2. Comply with UL 4.
3. Conductor and Cable Marking: Comply with wire and cable marking according to UL's "Wire and Cable Marking and Application Guide."

C. Circuits: Single circuit and multi-circuit with color-coded conductors.

D. Conductors: Copper, complying with ASTM B3 for bare annealed copper and with ASTM B8 for stranded conductors.

E. Ground Conductor: None.

F. Conductor Insulation: Type THHN/THWN-2. Comply with UL 83.

G. Bonding Conductor: Bare solid aluminum.

H. Armor: **Steel, Aluminum**, interlocked.

2.5 COLOR CODING

A. All power conductors identified as to phase and voltage by means of color impregnated insulation, as follows:

1.

Voltage	ØA	ØB	ØC	Neutral	Ground	Travelers
208Y/120V	Black	Red	Blue	White	Green	Yellow
480Y/277V	Brown	Orange	Yellow	Gray	Green	Lavender

Note: Travelers are for 3 and 4-way switching.

2. Class 1 and 2 Control Cables: Black.
3. For wire sizes No. 8 AWG and larger, color banding tape, minimum 2-inches wide, may be used at all accessible locations in lieu of colored insulation.

2.6 CONNECTORS AND SPLICES

A. Description: Factory-fabricated connectors and splices of size, ampacity rating, material, type, and class for application and service indicated; listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and use.

PART 3 - EXECUTION

3.1 CONDUCTOR MATERIAL APPLICATIONS

A. Feeders: Copper; solid or stranded for No. 10 AWG and smaller; stranded for No. 8 AWG and larger.

B. Feeders: Copper for feeders smaller than No. 2 AWG; copper or aluminum for feeders No. 2 AWG and larger. Conductors shall be solid for No. 10 AWG and smaller; stranded for No. 8 AWG and larger.

C. Branch Circuits: Copper. Solid for No. 12 AWG and smaller; stranded for No. 10 AWG and larger.

3.2 CONDUCTOR INSULATION AND MULTICONDUCTOR CABLE APPLICATIONS AND WIRING METHODS

A. Feeders: **Type THHN/THWN-2 or XHHW-2, single conductors in raceway**, **Armored cable, Type AC**, **Metal-clad cable, Type MC**

B. Branch Circuits: **Type THHN/THWN-2, single conductors in raceway**, **Armored cable, Type AC**, **Metal-clad cable, Type MC.**

C. Homerun Circuits: Type THHN-THWN, single conductors in raceway.

D. Branch Circuits (from wiring device to homerun junction box): **Armored cable, Type AC Metal-clad cable, Type MC**. **Metal-clad cable, Type MC, HCF rated**.

E. Class 1 Control Circuits: Type THHN/THWN-2, in raceway.

F. Class 2 Control Circuits: Type THHN/THWN-2, in raceway.

3.3 INSTALLATION, GENERAL

A. Conceal cables in finished walls, ceilings, and floors unless otherwise indicated.

B. Complete raceway installation between conductor and cable termination points according to Section 260533 "Raceways and Boxes for Electrical Systems" prior to pulling conductors and cables.

C. Use manufacturer-approved pulling compound or lubricant where necessary; compound used must not deteriorate conductor or insulation. Do not exceed manufacturer's recommended maximum pulling tensions and sidewall pressure values.

D. Use pulling means, including fish tape, cable, rope, and basket-weave wire/cable grips that will not damage cables or raceway.

E. Install exposed cables parallel and perpendicular to surfaces of exposed structural members and follow surface contours where possible.

F. Support cables according to Section 260529 "Hangers and Supports for Electrical Systems."

3.4 CONNECTIONS

A. Tighten electrical connectors and terminals according to manufacturer's published torque-tightening values. If manufacturer's torque values are not indicated, use those specified in UL 486A-486B.

B. Make splices, terminations, and taps that are compatible with conductor material and that possess equivalent or better mechanical strength and insulation ratings than unspliced conductors.

1. Use oxide inhibitor in each splice, termination, and tap for aluminum conductors.

C. Wiring at Outlets: Install conductor at each outlet, with at least 6-inches of slack.

3.5 IDENTIFICATION

A. Identify and color-code conductors and cables according to this specification and Section 260553 “Identification for Electrical Systems.”

B. Identify each spare conductor at each end with identity number and location of other end of conductor, and identify as spare conductor.

3.6 SLEEVE AND SLEEVE-SEAL INSTALLATION FOR ELECTRICAL PENETRATIONS

A. Install sleeves and sleeve seals at penetrations of exterior floor and wall assemblies. Comply with requirements in Section 260544 "Sleeves and Sleeve Seals for Electrical Raceways and Cabling."

3.7 FIRESTOPPING

A. Apply firestopping to electrical penetrations of fire-rated floor and wall assemblies to restore original fire-resistance rating of assembly according to Section 078413 "Penetration Firestopping."

3.8 FIELD QUALITY CONTROL

A. Tests and Inspections:

1. After installing conductors and cables and before electrical circuitry has been energized, test service entrance and feeder conductors for compliance with requirements.
2. Perform each of the following visual and electrical tests:

a. Test bolted connections for high resistance using one of the following:

1) A low-resistance ohmmeter.
2) Calibrated torque wrench.

b. Inspect compression-applied connectors for correct cable match and indentation.

c. Inspect for correct identification.
d. Inspect cable jacket and condition.
e. Insulation-resistance (Megger) test on each conductor for ground and adjacent conductors. Apply a potential of 1000-V dc for 600-V rated cable for a one-minute duration.
f. Continuity test on each conductor and cable.
g. Uniform resistance of parallel conductors.

B. Cables will be considered defective if they do not pass tests and inspections.

C. Prepare test and inspection reports to record the following:

1. Procedures used.
2. Results that comply with requirements.
3. Results that do not comply with requirements, and corrective action taken to achieve compliance with requirements.

END OF SECTION 260519

SECTION 260526 - GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes grounding and bonding systems and equipment.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product indicated.

1.4 INFORMATIONAL SUBMITTALS

A. Field quality-control reports indicating overall resistance to ground and resistance of each electrode.

PART 2 - PRODUCTS

2.1 SYSTEM DESCRIPTION

A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

B. Comply with UL 467 for grounding and bonding materials and equipment.

2.2 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. ABB (Electrification Products Division).
2. Appleton - O-Z/Gedney; Emerson Electric Co., Automation Solutions.
3. Burndy; Hubbell Incorporated, Construction and Energy.
4. nVent (ERICO).

2.3 CONDUCTORS

A. Insulated Conductors: Copper wire or cable insulated for 600-V unless otherwise required by applicable Code or authorities having jurisdiction.

B. Bare Copper Conductors:

1. Stranded Conductors: ASTM B8.
2. Bonding Conductor: No. 4 or No. 6 AWG, stranded conductor.
3. Bonding Jumper: Copper tape, braided conductors terminated with copper ferrules; 1-5/8-inches (41-mm) wide and 1/16-inch (1.6-mm) thick.

C. Grounding Bus: Predrilled rectangular bars of annealed copper, [**1/4- by 4-inches (6.3- by 100-mm)**] in cross section, with 9/32-inch (7.14-mm) holes spaced 1-1/8-inches (28-mm) apart. Stand-off insulators for mounting shall comply with UL 891 for use in switchboards, 600-V and shall be Lexan or PVC, impulse tested at 5000-V.

2.4 CONNECTORS

A. Listed and labeled by an NRTL acceptable to authorities having jurisdiction for applications in which used and for specific types, sizes, and combinations of conductors and other items connected.

B. Welded Connectors: Exothermic-welding kits of types recommended by kit manufacturer for materials being joined and installation conditions.

C. Bus-Bar Connectors: Mechanical type, cast silicon bronze, solderless compression-type wire terminals, and long-barrel, two-bolt connection to ground bus bar.

D. Beam Clamps: Mechanical type, terminal, ground wire access from four directions, with dual, tin-plated or silicon bronze bolts.

E. Cable-to-Cable Connectors: Compression type, copper or copper alloy.

F. Cable Tray Ground Clamp: Mechanical type, zinc-plated malleable iron.

G. Conduit Hubs: Mechanical type, terminal with threaded hub.

H. Ground Rod Clamps: Mechanical type, copper or copper alloy, terminal with hex head bolt.

I. Lay-in Lug Connector: Mechanical type, copper rated for direct burial terminal with set screw.

J. Signal Reference Grid Clamp: Mechanical type, stamped-steel terminal with hex head screw.

K. Straps: Solid copper, copper lugs. Rated for 600-A.

L. U-Bolt Clamps: Mechanical type, copper or copper alloy, terminal listed for direct burial.

M. Water Pipe Clamps:

1. Mechanical type, two pieces with stainless-steel bolts.

a. Material: Die-cast zinc alloy.
b. Listed for direct burial.

2. U-bolt type with malleable-iron clamp and **copper ground connector**

2.5 GROUNDING ELECTRODES

A. Ground Rods: Copper-clad steel; 3/4-inch by 10-ft. (19-mm by 3-m).

PART 3 - EXECUTION

3.1 APPLICATIONS

A. Conductors: Install solid conductor for **No. 8** AWG and smaller, and stranded conductors for **No. 6** AWG and larger unless otherwise indicated.

1. Bury at least 30-inches (750-mm) below grade.

B. Grounding Conductors: Green-colored insulation.

C. Isolated Grounding Conductors: Green-colored insulation with continuous yellow stripe. On feeders with isolated ground, identify grounding conductor where visible to normal inspection, with alternating bands of green and yellow tape.

D. Grounding Bus: Install in electrical equipment rooms, in rooms housing service equipment, and elsewhere as indicated.

1. Install bus horizontally, on insulated spacers 2-inches (50-mm) minimum from wall, 18-inches (450-mm) above finished floor unless otherwise indicated.
2. Where indicated on both sides of doorways, route bus up to top of door frame, across top of doorway, and down; connect to horizontal bus.

E. Conductor Terminations and Connections:

1. Pipe and Equipment Grounding Conductor Terminations: Bolted connectors.
2. Underground Connections: Welded connectors except at test wells and as otherwise indicated.
3. Connections to Structural Steel: Welded connectors.

3.2 GROUNDING AT THE SERVICE

A. Equipment grounding conductors and grounding electrode conductors shall be connected to the ground bus. Install a main bonding jumper between the neutral and ground buses.

3.3 GROUNDING SEPARATELY DERIVED SYSTEMS

3.4 EQUIPMENT GROUNDING

A. Install insulated equipment grounding conductors with all feeders and branch circuits.

3.5 INSTALLATION

A. Grounding Conductors: Route along shortest and straightest paths possible unless otherwise indicated or required by Code. Avoid obstructing access or placing conductors where they may be subjected to strain, impact, or damage.

B. Ground Rods: Drive rods until tops are 2-inches (50-mm) below finished floor or final grade unless otherwise indicated.

1. Interconnect ground rods with grounding electrode conductor below grade and as otherwise indicated. Make connections without exposing steel or damaging coating if any.
2. Use exothermic welds for all below-grade connections.
3. For grounding electrode system, install at least two rods spaced at least two-rod length from each other and located at least the same distance from other grounding electrodes, and connect to the service grounding electrode conductor.

C. Bonding Straps and Jumpers: Install in locations accessible for inspection and maintenance except where routed through short lengths of conduit.

1. Bonding to Structure: Bond straps directly to basic structure, taking care not to penetrate any adjacent parts.
2. Bonding to Equipment Mounted on Vibration Isolation Hangers and Supports: Install bonding so vibration is not transmitted to rigidly mounted equipment.
3. Use exothermic-welded connectors for outdoor locations; if a disconnect-type connection is required, use a bolted clamp.

D. Grounding and Bonding for Piping:

1. Metal Water Service Pipe: Install insulated copper grounding conductors, in conduit, from building's main service equipment, or grounding bus, to main metal water service entrances to building. Connect grounding conductors to main metal water service pipes; use a bolted clamp connector or bolt a lug-type connector to a pipe flange by using one of the lug bolts of the flange. Where a dielectric main water fitting is installed, connect grounding conductor on street side of fitting. Bond metal grounding conductor conduit or sleeve to conductor at each end.
2. Water Meter Piping: Use braided-type bonding jumpers to electrically bypass water meters. Connect to pipe with a bolted connector.
3. Bond each aboveground portion of gas piping system downstream from equipment shutoff valve.

E. Concrete-Encased Grounding Electrode (Ufer Ground): Fabricate according to NFPA 70; use a minimum of 20-ft. (6-m) of bare copper conductor not smaller than No. 4 AWG.

1. If concrete foundation is less than 20-ft. (6-m) long, coil excess conductor within base of foundation.

2. Bond grounding conductor to reinforcing steel in at least four locations and to anchor bolts. Extend grounding conductor below grade and connect to building's grounding grid or to grounding electrode external to concrete.

F. Connections: Make connections so possibility of galvanic action or electrolysis is minimized. Select connectors, connection hardware, conductors, and connection methods so metals in direct contact are galvanically compatible.

1. Use electroplated or hot-tin-coated materials to ensure high conductivity and to make contact points closer in order of galvanic series.
2. Make connections with clean, bare metal at points of contact.
3. Make aluminum-to-steel connections with stainless-steel separators and mechanical clamps.
4. Make aluminum-to-galvanized-steel connections with tin-plated copper jumpers and mechanical clamps.
5. Coat and seal connections having dissimilar metals with inert material to prevent future penetration of moisture to contact surfaces.

3.6 FIELD QUALITY CONTROL

A. Perform tests and inspections.

B. Tests and Inspections:

1. After installing grounding system but before permanent electrical circuits have been energized, test for compliance with requirements.
2. Inspect physical and mechanical condition. Verify tightness of accessible, bolted, electrical connections with a calibrated torque wrench according to manufacturer's written instructions.
3. Test completed grounding system at each location where a maximum ground-resistance level is specified, at service disconnect enclosure grounding terminal[**, and at individual ground rods**]. Make tests at ground rods before any conductors are connected.

    a. Measure ground resistance no fewer than two full days after last trace of precipitation and without soil being moistened by any means other than natural drainage or seepage and without chemical treatment or other artificial means of reducing natural ground resistance.
    b. Perform tests by fall-of-potential method according to IEEE 81.

C. Grounding system will be considered defective if it does not pass tests and inspections.

D. Prepare test and inspection reports.

E. Report measured ground resistances that exceed 25 ohms.

F. Excessive Ground Resistance: If resistance to ground exceeds specified values, notify Architect promptly and include recommendations to reduce ground resistance.

END OF SECTION 260526

SECTION 260529 - HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Steel slotted support systems.
2. Aluminum slotted support systems.
3. Nonmetallic slotted support systems.
4. Conduit and cable support devices.
5. Support for conductors in vertical conduit.
6. Structural steel for fabricated supports and restraints.
7. Mounting, anchoring, and attachment components, including powder-actuated fasteners, mechanical expansion anchors, concrete inserts, clamps, through bolts, toggle bolts, and hanger rods.
8. Fabricated metal equipment support assemblies.

B. Related Requirements:

1. Section 260548.16 "Seismic Controls for Electrical Systems" for products and installation requirements necessary for compliance with seismic criteria.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for the following:

a. Slotted support systems, hardware, and accessories.
b. Clamps.
c. Hangers.
d. Sockets.
e. Eye nuts.
f. Fasteners.
g. Anchors.
h. Saddles.
i. Brackets.

2. Include rated capacities and furnished specialties and accessories.

B. Shop Drawings: Signed and sealed by a qualified professional engineer. For fabrication and installation details for electrical hangers and support systems.

1. Hangers: Include product data for components.
2. Slotted support systems.
3. Equipment supports.
4. Vibration Isolation Base Details: Detail fabrication including anchorages and attachments to structure and to supported equipment. Include adjustable motor bases, rails, and frames for equipment mounting.

C. Delegated-Design Submittal: For hangers and supports for electrical systems.

1. Include design calculations and details of hangers.
2. Include design calculations for seismic restraints.

1.4 INFORMATIONAL SUBMITTALS

A. Coordination Drawings: Reflected ceiling plan(s) and other details, drawn to scale, on which the following items are shown and coordinated with each other, using input from installers of the items involved:

1. Suspended ceiling components.
2. Ductwork, piping, fittings, and supports.
3. Structural members to which hangers and supports will be attached.
4. Size and location of initial access modules for acoustical tile.
5. Items penetrating finished ceiling, including the following:

    a. Luminaires.
    b. Air outlets and inlets.
    c. Speakers.
    d. Sprinklers.
    e. Access panels.
    f. Projectors.
    g.

B. Seismic Qualification Data: Certificates, for hangers and supports for electrical equipment and systems, accessories, and components, from manufacturer.

1. Basis for Certification: Indicate whether withstand certification is based on actual test of assembled components or on calculation.
2. Dimensioned Outline Drawings of Equipment Unit: Identify center of gravity and locate and describe mounting and anchorage provisions.
3. Detailed description of equipment anchorage devices on which the certification is based and their installation requirements.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Delegated Design: Engage a qualified professional engineer, as defined in Section 014000 "Quality Requirements," to design hanger and support system.

B. Seismic Performance: Hangers and supports shall withstand the effects of earthquake motions determined according to **ASCE/SEI 7**

1. The term "withstand" means "the supported equipment and systems will remain in place without separation of any parts when subjected to the seismic forces specified

2. Component Importance Factor: **1.5**.

C. Surface-Burning Characteristics: Comply with ASTM E 84; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

1. Flame Rating: Class 1.
2. Self-extinguishing according to ASTM D 635.

2.2 SUPPORT, ANCHORAGE, AND ATTACHMENT COMPONENTS

A. Steel Slotted Support Systems: Preformed steel channels and angles with minimum 13/32-inch (10-mm) diameter holes at a maximum of 8-inches (200-mm) o.c. in at least one surface.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work.
2. Standard: Comply with MFMA-4 factory-fabricated components for field assembly.
3. Material for Channel, Fittings, and Accessories: **Galvanized steel**
4. Channel Width: Selected for applicable load criteria.
5. Retain one or more of "Metallic Coatings," "Nonmetallic Coatings," and "Painted Coatings" subparagraphs below. Coordinate with appropriate coating or painting Section.
6. Metallic Coatings: Hot-dip galvanized after fabrication and applied according to MFMA-4.
7. Nonmetallic Coatings: Manufacturer's standard PVC, polyurethane, or polyester coating applied according to MFMA-4.
8. Painted Coatings: Manufacturer's standard painted coating applied according to MFMA-4.

9. Protect finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

B. Aluminum Slotted Support Systems: Extruded-aluminum channels and angles with minimum 13/32-inch (10-mm) diameter holes at a maximum of 8-inches (200-mm) o.c. in at least one surface.

1. Manufacturers: Subject to compliance with requirements, provide products by available manufacturers.
2. Standard: Comply with MFMA-4 factory-fabricated components for field assembly.
3. Channel Material: 6063-T5 aluminum alloy.
4. Fittings and Accessories Material: 5052-H32 aluminum alloy.

5. Channel Width: Selected for applicable load criteria.
6. Retain "Nonmetallic Coatings" or "Painted Coatings" Subparagraph below, or both. Coordinate with appropriate coating or painting Section.
7. Nonmetallic Coatings: Manufacturer's standard PVC, polyurethane, or polyester coating applied according to MFMA-4.
8. Painted Coatings: Manufacturer's standard painted coating applied according to MFMA-4.

9. Protect finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

C. Nonmetallic Slotted Support Systems: Structural-grade, factory-formed, glass-fiber-resin channels and angles with minimum 13/32-inch (10-mm) diameter holes at a maximum of 8-inches (200-mm) o.c., in at least one surface.

1. Standard: Comply with MFMA-4 factory-fabricated components for field assembly.

2. Channel Width: Selected for applicable load criteria.
3. Fittings and Accessories: Products provided by channel and angle manufacturer and designed for use with those items.
4. Fitting and Accessory Materials: Same as those for channels and angles**, except metal items may be stainless steel**.
5. Rated Strength: Selected to suit applicable load criteria.
6. Protect finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

D. Conduit and Cable Support Devices: **Steel Steel and malleable-iron** hangers, clamps, and associated fittings, designed for types and sizes of raceway or cable to be supported.

E. Support for Conductors in Vertical Conduit: Factory-fabricated assembly consisting of threaded body and insulating wedging plug or plugs for nonarmored electrical conductors or cables in riser conduits. Plugs shall have number, size, and shape of conductor gripping pieces as required to suit individual conductors or cables supported. Body shall be made of malleable iron.

F. Structural Steel for Fabricated Supports and Restraints: ASTM A 36/A 36M steel plates, shapes, and bars; black and galvanized.

G. Mounting, Anchoring, and Attachment Components: Items for fastening electrical items or their supports to building surfaces include the following:

1. Powder-Actuated Fasteners: Threaded-steel stud, for use in hardened Portland cement concrete, steel, or wood, with tension, shear, and pullout capacities appropriate for supported loads and building materials where used.

   a. Manufacturers: Approved for the application.

2. Mechanical-Expansion Anchors: Insert-wedge-type, [**zinc-coated**] [**stainless**] steel, for use in hardened Portland cement concrete, with tension, shear, and pullout capacities appropriate for supported loads and building materials where used.

   a. Manufacturers: Approved for the application.

3. Concrete Inserts: Steel or malleable-iron, slotted support system units are similar to MSS Type 18 units and comply with MFMA-4 or MSS SP-58.
4. Clamps for Attachment to Steel Structural Elements: MSS SP-58 units are suitable for attached structural element.
5. Through Bolts: Structural type, hex head, and high strength. Comply with ASTM A 325.
6. Toggle Bolts: [**All**] [**Stainless**]-steel springhead type.
7. Hanger Rods: Threaded steel.

2.3 FABRICATED METAL EQUIPMENT SUPPORT ASSEMBLIES

A. Description: Welded or bolted structural-steel shapes, shop or field fabricated to fit dimensions of supported equipment.

B. Materials: Comply with requirements in Section 055000 "Metal Fabrications" for steel shapes and plates.

PART 3 - EXECUTION

3.1 APPLICATION

A. Comply with the following standards for application and installation requirements of hangers and supports, except where requirements on Drawings or in this Section are stricter:

1. NECA 1.
2. NECA 101
3. NECA 102.
4. NECA 105.
5. NECA 111.

B. Comply with requirements in Section 078413 "Penetration Firestopping" for firestopping materials and installation for penetrations through fire-rated walls, ceilings, and assemblies.

C. Comply with requirements for raceways and boxes specified in Section 260533 "Raceways and Boxes for Electrical Systems."

D. Maximum Support Spacing and Minimum Hanger Rod Size for Raceways: Space supports for EMT, IMC, and RMC as **required by** NFPA 70. Minimum rod size shall be 1/4-inch (6-mm) in diameter.

E. Multiple Raceways or Cables: Install trapeze-type supports fabricated with steel slotted [**or other**]support system, sized so capacity can be increased by at least **25** percent in future without exceeding specified design load limits.

1. Secure raceways and cables to these supports with **two-bolt conduit clamps**

F. Spring-steel clamps designed for supporting single conduits without bolts may be used for 1-1/2-inch (38-mm) and smaller raceways serving branch circuits and communication systems above suspended ceilings, and for fastening raceways to trapeze supports.

3.2 SUPPORT INSTALLATION

A. Comply with NECA 1 and NECA 101 for installation requirements except as specified in this article.

B. Raceway Support Methods: In addition to methods described in NECA 1, **EMT** may be supported by openings through structure members, according to NFPA 70.

C. Strength of Support Assemblies: Where not indicated, select sizes of components so strength will be adequate to carry present and future static loads within specified loading limits. Minimum static design load used for strength determination shall be weight of supported components plus 200 lb (90 kg).

D. Mounting and Anchorage of Surface-Mounted Equipment and Components: Anchor and fasten electrical items and their supports to building structural elements by the following methods unless otherwise indicated by code:

1. To Wood: Fasten with lag screws or through bolts.
2. To New Concrete: Bolt to concrete inserts.
3. To Masonry: Approved toggle-type bolts on hollow masonry units and expansion anchor fasteners on solid masonry units.
4. To Existing Concrete: Expansion anchor fasteners.
5. Instead of expansion anchors, powder-actuated driven threaded studs provided with lock washers and nuts may be used in existing standard-weight concrete 4-inches (100-mm) thick or greater. Do not use for anchorage to lightweight-aggregate concrete or for slabs less than 4-inches (100-mm) thick.
6. To Light Steel: Sheet metal screws.
7. Items Mounted on Hollow Walls and Nonstructural Building Surfaces: Mount cabinets, panelboards, disconnect switches, control enclosures, pull and junction boxes, transformers, and other devices on slotted-channel racks attached to substrate

E. Drill holes for expansion anchors in concrete at locations and to depths that avoid the need for reinforcing bars.

3.3 INSTALLATION OF FABRICATED METAL SUPPORTS

A. Comply with installation requirements in Section 055000 "Metal Fabrications" for site-fabricated metal supports.

B. Cut, fit, and place miscellaneous metal supports accurately in location, alignment, and elevation to support and anchor electrical materials and equipment.

C. Field Welding: Comply with AWS D1.1/D1.1M.

3.4 PAINTING

A. Touchup: Clean field welds and abraded areas of shop paint. Paint exposed areas immediately after erecting hangers and supports. Use same materials as used for shop painting. Comply with SSPC-PA 1 requirements for touching up field-painted surfaces.

1. Apply paint by brush or spray to provide minimum dry film thickness of 2.0 mils (0.05-mm).

B. Galvanized Surfaces: Clean welds, bolted connections, and abraded areas and apply galvanizing-repair paint to comply with ASTM A 780.

END OF SECTION 260529

SECTION 260533 - RACEWAYS AND BOXES FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Metal conduits, tubing, and fittings.
2. Nonmetal conduits, tubing, and fittings.
3. Metal wireways and auxiliary gutters.
4. Nonmetal wireways and auxiliary gutters.
5. Surface raceways.
6. Boxes, enclosures, and cabinets.
7. Handholes and boxes for exterior underground cabling.

B. Related Requirements:

1. Section 260543 "Underground Ducts and Raceways for Electrical Systems" for exterior duct banks, manholes, and underground utility construction.
2. Section 270528 "Pathways for Communications Systems" for conduits, wireways, surface pathways, innerduct, boxes, faceplate adapters, enclosures, cabinets, and handholes serving communications systems.
3. Section 280528 "Pathways for Electronic Safety and Security" for conduits, surface pathways, innerduct, boxes, and faceplate adapters serving electronic safety and security.

1.3 DEFINITIONS

A. ARC: Aluminum rigid conduit.

B. GRC: Galvanized rigid steel conduit.

C. IMC: Intermediate metal conduit.

1.4 ACTION SUBMITTALS

A. Product Data: For surface raceways, wireways and fittings, floor boxes, hinged-cover enclosures, and cabinets.

B. Shop Drawings: For custom enclosures and cabinets. Include plans, elevations, sections, and attachment details.

1.5 INFORMATIONAL SUBMITTALS

A. Coordination Drawings: Conduit routing plans, drawn to scale, on which the following items are shown and coordinated with each other, using input from installers of items involved:

1. Structural members in paths of conduit groups with common supports.
2. HVAC and plumbing items and architectural features in paths of conduit groups with common supports.

B. Seismic Qualification Certificates: For enclosures, cabinets, and conduit racks and their mounting provisions, including those for internal components, from manufacturer.

1. Basis for Certification: Indicate whether withstand certification is based on actual test of assembled components or on calculation.
2. Dimensioned Outline Drawings of Equipment Unit: Identify center of gravity and locate and describe mounting and anchorage provisions.
3. Detailed description of equipment anchorage devices on which the certification is based and their installation requirements.
4. Detailed description of conduit support devices and interconnections on which the certification is based and their installation requirements.

C. Source quality-control reports.

PART 2 - PRODUCTS

2.1 METAL CONDUITS, TUBING, AND FITTINGS

A. Listing and Labeling: Metal conduits, tubing, and fittings shall be listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

B. GRC: Comply with ANSI C80.1 and UL 6.

C. ARC: Comply with ANSI C80.5 and UL 6A.

D. IMC: Comply with ANSI C80.6 and UL 1242.

E. PVC-Coated Steel Conduit: PVC-coated rigid steel conduit and IMC.

1. Comply with NEMA RN 1.
2. Coating Thickness: 0.040-inch (1-mm), minimum.

F. EMT: Comply with ANSI C80.3 and UL 797.

G. FMC: Comply with UL 1; **aluminum**.

H. LFMC: Flexible steel conduit with PVC jacket and complying with UL 360.

I. Fittings for Metal Conduit: Comply with NEMA FB 1 and UL 514B.

1. Conduit Fittings for Hazardous (Classified) Locations: Comply with UL 1203 and NFPA 70.

2. Fittings for EMT:

   a. Material: Steel.
   b. Type: Compression.

3. Expansion Fittings: PVC or steel to match conduit type, complying with UL 651, rated for environmental conditions where installed, and including flexible external bonding jumper.
4. Coating for Fittings for PVC-Coated Conduit: Minimum thickness of 0.040-inch (1-mm), with overlapping sleeves protecting threaded joints.

2.2 NONMETALLIC CONDUITS AND FITTINGS

A. Listing and Labeling: Nonmetallic conduits, tubing, and fittings shall be listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

B. Fiberglass:

   1. Comply with NEMA TC 14.
   2. Comply with UL 2515 for aboveground raceways.
   3. Comply with UL 2420 for belowground raceways.

C. ENT: Comply with NEMA TC 13 and UL 1653.

D. RNC: Type EPC-40-PVCcomplying with NEMA TC 2 and UL 651 unless otherwise indicated.

E. LFNC: Comply with UL 1660.

F. Rigid HDPE: Comply with UL 651A.

G. Continuous HDPE: Comply with UL 651A.

H. Coilable HDPE: Preassembled with conductors or cables and complying with ASTM D 3485.

I. RTRC: Comply with UL 2515A and NEMA TC 14.

J. Fittings for ENT and RNC: Comply with NEMA TC 3; match to conduit or tubing type and material.

K. Fittings for LFNC: Comply with UL 514B.

L. Solvents and Adhesives: As recommended by conduit manufacturer.

2.3 METAL WIREWAYS AND AUXILIARY GUTTERS

A. Description: Sheet metal, complying with UL 870 and NEMA 250, Type as required by the installation environment unless otherwise indicated, and sized according to NFPA 70.

   1. Metal wireways installed outdoors shall be listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

B. Fittings and Accessories: Include covers, couplings, offsets, elbows, expansion joints, adapters, hold-down straps, end caps, and other fittings to match and mate with wireways as required for complete system.

C. Wireway Covers: **Hinged type Screw-cover type Flanged-and-gasketed type** unless otherwise indicated.

D. Finish: Manufacturer's standard enamel finish.

2.4 NONMETALLIC WIREWAYS AND AUXILIARY GUTTERS

A. Listing and Labeling: Nonmetallic wireways and auxiliary gutters shall be listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

B. Description: Fiberglass polyester, extruded and fabricated to required size and shape, without holes or knockouts. Cover shall be gasketed with oil-resistant gasket material and fastened with captive screws treated for corrosion resistance. Connections shall be flanged and have stainless-steel screws and oil-resistant gaskets or PVC, extruded and fabricated to required size and shape, and having snap-on cover, mechanically coupled connections, and plastic fasteners.

C. Fittings and Accessories: Couplings, offsets, elbows, expansion joints, adapters, hold-down straps, end caps, and other fittings shall match and mate with wireways as required for complete system.

2.5 SURFACE RACEWAYS

A. Listing and Labeling: Surface raceways and tele-power poles shall be listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

B. Surface Metal Raceways: Galvanized steel with snap-on covers complying with UL 5. Manufacturer's standard enamel finish or as otherwise specified.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work.

C. Surface Nonmetallic Raceways: Two- or three-piece construction, complying with UL 5A, and manufactured of rigid PVC with texture and color selected by Architect from manufacturer's standard colors. Product shall comply with UL 94 V-0 requirements for self-extinguishing characteristics.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work.

D. Tele-Power Poles:

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work.
2. Material: Galvanized steel with ivory baked-enamel finish or Aluminum with clear anodized finish.

3. Fittings and Accessories: Dividers, end caps, covers, cutouts, wiring harnesses, devices, mounting materials, and other fittings shall match and mate with tele-power pole as required for complete system.

2.6 BOXES, ENCLOSURES, AND CABINETS

A. Manufacturers: Subject to compliance with requirements available manufacturers offering products that may be incorporated into the Work.

B. General Requirements for Boxes, Enclosures, and Cabinets: Boxes, enclosures, and cabinets installed in wet locations shall be listed for use in wet locations.

C. Sheet Metal Outlet and Device Boxes: Comply with NEMA OS 1 and UL 514A.

D. Cast-Metal Outlet and Device Boxes: Comply with NEMA FB 1, Type FD, with gasketed cover.

E. Nonmetallic Outlet and Device Boxes: Comply with NEMA OS 2 and UL 514C.

F. Metal Floor Boxes:

1. Listing and Labeling: Metal floor boxes shall be listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

G. Nonmetallic Floor Boxes: Nonadjustable

1. Listing and Labeling: Nonmetallic floor boxes shall be listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

H. Luminaire Outlet Boxes: Nonadjustable, designed for attachment of luminaire weighing 50-lb (23-kg). Outlet boxes designed for attachment of luminaires weighing more than 50-lb (23-kg) shall be listed and marked for the maximum allowable weight.

I. Paddle Fan Outlet Boxes: Nonadjustable, designed for attachment of paddle fan weighing 70-lb (32-kg).

1. Listing and Labeling: Paddle fan outlet boxes shall be listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

J. Small Sheet Metal Pull and Junction Boxes: NEMA OS 1.

K. Cast-Metal Access, Pull, and Junction Boxes: Comply with NEMA FB 1 and UL 1773.

L. Box extensions used to accommodate new building finishes shall be of same material as recessed box.

M. Hinged-Cover Enclosures: Comply with UL 50 and NEMA 250 and environment installed.

1. Metal Enclosures: Steel, finished inside and out with manufacturer's standard enamel.
2. Nonmetallic Enclosures: Plastic or Fiberglass.
3. Interior Panels: Steel; all sides finished with manufacturer's standard enamel.

N. Cabinets:

1. NEMA 250, NEMA type for environment installed galvanized-steel box with removable interior panel and removable front, finished inside and out with manufacturer's standard enamel.
2. Hinged door in front cover with flush latch and concealed hinge.
3. Key latch to match panelboards.
4. Metal barriers to separate wiring of different systems and voltage.
5. Accessory feet where required for freestanding equipment.
6. Nonmetallic cabinets shall be listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

2.7 HANDHOLES AND BOXES FOR EXTERIOR UNDERGROUND WIRING

A. General Requirements for Handholes and Boxes:

1. Boxes and handholes for use in underground systems shall be designed and identified as defined in NFPA 70, for intended location and application.
2. Boxes installed in wet areas shall be listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

B. Polymer-Concrete Handholes and Boxes with Polymer-Concrete Cover: Molded of sand and aggregate, bound together with polymer resin, and reinforced with steel, fiberglass, or a combination of the two.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work.
2. Standard: Comply with SCTE 77.

C. Fiberglass Handholes and Boxes: Molded of fiberglass-reinforced polyester resin.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work.
2. Standard: Comply with SCTE 77.

2.8 SOURCE QUALITY CONTROL FOR UNDERGROUND ENCLOSURES

A. Handhole and Pull-Box Prototype Test: Test prototypes of handholes and boxes for compliance with SCTE 77. Strength tests shall be for specified tier ratings of products supplied.

1. Strength tests of complete boxes and covers shall be by either an independent testing agency or manufacturer. A qualified registered professional engineer shall certify tests by manufacturer.
2. Testing machine pressure gages shall have current calibration certification complying with ISO 9000 and ISO 10012 and traceable to NIST standards.

PART 3 - EXECUTION

3.1 RACEWAY APPLICATION

A. Outdoors: Apply raceway products as specified below unless otherwise indicated:

1. Exposed Conduit: **GRC**
2. Concealed Conduit, Aboveground: **EMT**
3. Underground Conduit: RNC, **Type EPC-40-PVC**

4. Connection to Vibrating Equipment (Including Transformers and Hydraulic, Pneumatic, Electric Solenoid, or Motor-Driven Equipment): **LFMC**
5. Boxes and Enclosures, Aboveground: NEMA 250, **Type 3R**

B. Indoors: Apply raceway products as specified below unless otherwise indicated:

1. Exposed, Not Subject to Physical Damage: **EMT ENT or RNC**.
2. Exposed, Not Subject to Severe Physical Damage: **EMT RNC identified for such use**.
3. Exposed and Subject to Severe Physical Damage: **GRC IMC**. Raceway locations include the following:

    a. Loading dock.
    b. Corridors used for traffic of mechanized carts, forklifts, and pallet-handling units.
    c. Mechanical rooms.
    d. Gymnasiums.

4. Concealed in Ceilings and Interior Walls and Partitions: **EMT ENT or RNC, Type EPC-40-PVC**.
5. Connection to Vibrating Equipment (Including Transformers and Hydraulic, Pneumatic, Electric Solenoid, or Motor-Driven Equipment): FMC, except use LFMC in damp or wet locations.
6. Damp or Wet Locations: **GRC MC**.
7. Boxes and Enclosures: NEMA 250, Type 1, except use NEMA 250, Type 4 **stainless steel nonmetallic** in institutional and commercial kitchens and damp or wet locations.

C. Minimum Raceway Size: 3/4-inch trade size.

D. Raceway Fittings: Compatible with raceways and suitable for use and location.

1. Rigid and Intermediate Steel Conduit: Use threaded rigid steel conduit fittings unless otherwise indicated. Comply with NEMA FB 2.10.
2. PVC Externally Coated, Rigid Steel Conduits: Use only fittings listed for use with this type of conduit. Patch and seal all joints, nicks, and scrapes in PVC coating after installing conduits and fittings. Use sealant recommended by fitting manufacturer and apply in thickness and number of coats recommended by manufacturer.

3. EMT: Use **setscrew or compression**, **steel cast-metal** fittings. Comply with NEMA FB 2.10.
4. Flexible Conduit: Use only fittings listed for use with flexible conduit. Comply with NEMA FB 2.20.

E. Do not install aluminum conduits, boxes, or fittings in contact with concrete or earth.

F. Install surface raceways only where indicated on Drawings.

G. Do not install nonmetallic conduit where ambient temperature exceeds 120 deg F (49 deg C).

3.2 INSTALLATION

A. Comply with NECA 1 and NECA 101 for installation requirements except where requirements on Drawings or in this article are stricter. Comply with NECA 102 for aluminum conduits. Comply with NFPA 70 limitations for types of raceways allowed in specific occupancies and number of floors.

B. Keep raceways at least 6-inches (150-mm) away from parallel runs of flues and steam or hot-water pipes. Install horizontal raceway runs above water and steam piping.

C. Complete raceway installation before starting conductor installation.

D. Comply with requirements in Section 260529 "Hangers and Supports for Electrical Systems" for hangers and supports.

E. Arrange stub-ups so curved portions of bends are not visible above finished slab.

F. Conceal conduit and EMT within finished walls, ceilings, and floors unless otherwise indicated. Install conduits parallel or perpendicular to building lines.

G. Support conduit within 12-inches (300-mm) of enclosures to which attached.

H. Raceways Embedded in Slabs:

1. Run conduit larger than 1-inch (27-mm) trade size, parallel or at right angles to main reinforcement. Where at right angles to reinforcement, place conduit close to slab support. Secure raceways to reinforcement at maximum 10-ft. (3-m) intervals.
2. Arrange raceways to cross building expansion joints at right angles with expansion fittings.
3. Arrange raceways to keep a minimum of 2-inches (50-mm) of concrete cover in all directions.
4. Do not embed threadless fittings in concrete unless specifically approved by Architect for each specific location.

5. Change from ENT to **RNC, Type EPC-40-PVC, GRC or IMC** before rising above floor.

I. Stub-ups to Above Recessed Ceilings:

1. Use EMT, IMC, or RMC for raceways.
2. Use a conduit bushing or insulated fitting to terminate stub-ups not terminated in hubs or in an enclosure.

J. Coat field-cut threads on PVC-coated raceway with a corrosion-preventing conductive compound prior to assembly.

K. Install raceways square to the enclosure and terminate at enclosures with locknuts. Install locknuts hand tight plus 1/4 turn more.

L. Do not rely on locknuts to penetrate nonconductive coatings on enclosures. Remove coatings in the locknut area prior to assembling conduit to enclosure to assure a continuous ground path.

M. Cut conduit perpendicular to the length. For conduits 2-inch (53-mm) trade size and larger, use roll cutter or a guide to make cut straight and perpendicular to the length.

N. Install pull wires in empty raceways. Use polypropylene or monofilament plastic line with not less than 200-lb (90-kg) tensile strength. Leave at least 12-inches (300-mm) of slack at each end of pull wire. Cap underground raceways designated as spare above grade alongside raceways in use.

O. Surface Raceways:

1. Install surface raceway with a minimum 2-inch (50-mm) radius control at bend points.
2. Secure surface raceway with screws or other anchor-type devices at intervals not exceeding 48-inches (1200-mm) and with no less than two supports per straight raceway section. Support surface raceway according to manufacturer's written instructions. Tape and glue are not acceptable support methods.

P. Install raceway sealing fittings at accessible locations according to NFPA 70 and fill them with listed sealing compound. For concealed raceways, install each fitting in a flush steel box with a blank cover plate having a finish similar to that of adjacent plates or surfaces. Install raceway sealing fittings according to NFPA 70.

Q. Install devices to seal raceway interiors at accessible locations. Locate seals so no fittings or boxes are between the seal and the following changes of environments. Seal the interior of all raceways at the following points:

1. Where conduits pass from warm to cold locations, such as boundaries of refrigerated spaces.
2. Where an underground service raceway enters a building or structure.
3. Where otherwise required by NFPA 70.

R. Comply with manufacturer's written instructions for solvent welding RNC and fittings.

S. Expansion-Joint Fittings:

1. Install in each run of above ground RNC that is located where environmental temperature change may exceed 30 deg F (17 deg C) and that has straight-run length that exceeds 25-ft. (7.6-m). Install in each run of aboveground conduit that is located where environmental temperature change may exceed 100 deg F (55 deg C) and that has straight-run length that exceeds 100-ft. (30-m).
2. Install type and quantity of fittings that accommodate temperature change listed for each of the following locations:

   a. Outdoor Locations Not Exposed to Direct Sunlight: 125 deg F (70 deg C) temperature change.
   b. Outdoor Locations Exposed to Direct Sunlight: 155 deg F (86 deg C) temperature change.
   c. Indoor Spaces Connected with Outdoors without Physical Separation: 125 deg F (70 deg C) temperature change.
   d. Attics: 135 deg F (75 deg C) temperature change.

3. Install fitting(s) that provide expansion and contraction for at least 0.00041-inch per foot of length of straight run per deg F (0.06-mm per meter of length of straight run per deg C) of temperature change for PVC conduits. Install fitting(s) that provide expansion and contraction for at least 0.000078-inch per foot of length of straight run per deg F (0.0115-mm per meter of length of straight run per deg C) of temperature change for metal conduits.
4. Install expansion fittings at all locations where conduits cross building or structure expansion joints.
5. Install each expansion-joint fitting with position, mounting, and piston setting selected according to manufacturer's written instructions for conditions at specific location at time of installation. Install conduit supports to allow for expansion movement.

T. Flexible Conduit Connections: Comply with NEMA RV 3. Use a maximum of 72-inches (1830-mm) of flexible conduit for recessed and semi-recessed luminaires, equipment subject to vibration, noise transmission, or movement; and for transformers and motors.

1. Use LFMC in damp or wet locations subject to severe physical damage.
2. Use LFMC or LFNC in damp or wet locations not subject to severe physical damage.

U. Mount boxes at heights indicated on Drawings. If mounting heights of boxes are not individually indicated, give priority to ADA requirements. Install boxes with height measured to center of box unless otherwise indicated.

V. Recessed Boxes in Masonry Walls: Saw-cut opening for box in center of cell of masonry block and install box flush with surface of wall. Prepare block surfaces to provide a flat surface for a raintight connection between box and cover plate or supported equipment and box.

W. Horizontally separate boxes mounted on opposite sides of walls so they are not in the same vertical channel.

X. Locate boxes so that cover or plate will not span different building finishes.

Y. Support boxes of three gangs or more from more than one side by spanning two framing members or mounting on brackets specifically designed for the purpose.

Z. Fasten junction and pull boxes to or support from building structure. Do not support boxes by conduits.

AA. Set metal floor boxes level and flush with finished floor surface.

BB. Set nonmetallic floor boxes level. Trim after installation to fit flush with finished floor surface.

3.3 INSTALLATION OF UNDERGROUND CONDUIT

A. Direct-Buried Conduit:

1. Excavate trench bottom to provide firm and uniform support for conduit. Prepare trench bottom as specified in Section 312000 "Earth Moving" for pipe less than 6-inches (150-mm) in nominal diameter.
2. Install backfill as specified in Section 312000 "Earth Moving."
3. After installing conduit, backfill and compact. Start at tie-in point, and work toward end of conduit run, leaving conduit at end of run free to move with expansion and contraction as temperature changes during this process. Firmly hand tamp backfill around conduit to

provide maximum supporting strength. After placing controlled backfill to within 12-inches (300-mm) of finished grade, make final conduit connection at end of run and complete backfilling with normal compaction as specified in Section 312000 "Earth Moving."

4. Install manufactured rigid steel conduit elbows for stub-ups at poles and equipment and at building entrances through floor.

   a. Couple steel conduits to ducts with adapters designed for this purpose and encase coupling with 3-inches (75-mm) of concrete for a minimum of 12-inches (300-mm) on each side of the coupling.
   b. For stub-ups at equipment mounted on outdoor concrete bases and where conduits penetrate building foundations, extend steel conduit horizontally a minimum of 60-inches (1500-mm) from edge of foundation or equipment base. Install insulated grounding bushings on terminations at equipment.

5. Underground Warning Tape: Comply with requirements in Section 260553 "Identification for Electrical Systems."

3.4 INSTALLATION OF UNDERGROUND HANDHOLES AND BOXES

A. Install handholes and boxes level and plumb and with orientation and depth coordinated with connecting conduits to minimize bends and deflections required for proper entrances.

B. Unless otherwise indicated, support units on a level bed of crushed stone or gravel, graded from 1/2-inch (12.5-mm) sieve to No. 4 (4.75-mm) sieve and compacted to same density as adjacent undisturbed earth.

C. Elevation: In paved areas, set so cover surface will be flush with finished grade. Set covers of other enclosures 1-inch (25-mm) above finished grade.

D. Install handholes with bottom below frost line.

E. Install removable hardware, including pulling eyes, cable stanchions, cable arms, and insulators, as required for installation and support of cables and conductors and as indicated. Select arm lengths to be long enough to provide spare space for future cables but short enough to preserve adequate working clearances in enclosure.

F. Field-cut openings for conduits according to enclosure manufacturer's written instructions. Cut wall of enclosure with a tool designed for material to be cut. Size holes for terminating fittings to be used, and seal around penetrations after fittings are installed.

3.5 SLEEVE AND SLEEVE-SEAL INSTALLATION FOR ELECTRICAL PENETRATIONS

A. Install sleeves and sleeve seals at penetrations of exterior floor and wall assemblies. Comply with requirements in Section 260544 "Sleeves and Sleeve Seals for Electrical Raceways and Cabling."

3.6 FIRESTOPPING

A. Install firestopping at penetrations of fire-rated floor and wall assemblies. Comply with requirements in Section 078413 "Penetration Firestopping."

3.7 PROTECTION

A. Protect coatings, finishes, and cabinets from damage and deterioration.

1. Repair damage to galvanized finishes with zinc-rich paint recommended by manufacturer.
2. Repair damage to PVC coatings or paint finishes with matching touchup coating recommended by manufacturer.

END OF SECTION 260533

SECTION 260544 - SLEEVES AND SLEEVE SEALS FOR ELECTRICAL RACEWAYS AND CABLING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Sleeves.
2. Sleeve-seal systems.
3. Sleeve-seal fittings.
4. Grout.
5. Silicone sealants.

B. Related Requirements:

1. Section 078413 "Penetration Firestopping" for penetration firestopping installed in fire-resistance-rated walls, horizontal assemblies, and smoke barriers, with and without penetrating items.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

PART 2 - PRODUCTS

2.1 SLEEVES

A. Cast in place floor or wall sleeves: plastic pipe sleeve.

B. Sleeves for Rectangular Openings:

1. Material: Galvanized sheet steel.
2. Minimum Metal Thickness:

a. For sleeve cross-section rectangle perimeter less than 50-inches (1270-mm) and with no side larger than 16-inches (400-mm), thickness shall be 0.052-inch (1.3-mm).

b. For sleeve cross-section rectangle perimeter 50-inches (1270-mm) or more and one or more sides larger than 16-inches (400-mm), thickness shall be 0.138-inch (3.5-mm).

2.2 SLEEVE-SEAL SYSTEMS

A. Description: Modular sealing device, designed for field assembly, to fill annular space between sleeve and raceway or cable.

1.
2. Link-Seal or equal

3. Sealing Elements: EPDM rubber interlocking links shaped to fit surface of pipe. Include type and number required for pipe material and size of pipe.
4. Pressure Plates: Stainless steel.
5. Connecting Bolts and Nuts: Stainless steel of length required to secure pressure plates to sealing elements.

2.3 SLEEVE-SEAL FITTINGS

A. Description: Manufactured plastic, sleeve-type, waterstop assembly made for embedding in concrete slab or wall. Unit shall have plastic or rubber waterstop collar with center opening to match piping OD.

2.4 GROUT

A. Description: Nonshrink; recommended for interior and exterior sealing openings in non-fire-rated walls or floors.

B. Standard: ASTM C 1107/C 1107M, Grade B, post-hardening and volume-adjusting, dry, hydraulic-cement grout.

C. Design Mix: 5000-psi (34.5-MPa), 28-day compressive strength.

D. Packaging: Premixed and factory packaged.

2.5 SILICONE SEALANTS

A. Silicone Sealants: Single-component, silicone-based, neutral-curing elastomeric sealants of grade indicated below.

1. Grade: Pourable (self-leveling) formulation for openings in floors and other horizontal surfaces that are not fire rated.

B. Silicone Foams: Multicomponent, silicone-based liquid elastomers that, when mixed, expand and cure in place to produce a flexible, nonshrinking foam.

PART 3 - EXECUTION

3.1 SLEEVE INSTALLATION FOR NON-FIRE-RATED ELECTRICAL PENETRATIONS

A. Comply with NECA 1.

B. Comply with NEMA VE 2 for cable tray and cable penetrations.

C. Sleeves for Conduits Penetrating Above-Grade Non-Fire-Rated Concrete and Masonry-Unit Floors and Walls:

1. Interior Penetrations of Non-Fire-Rated Walls and Floors:

   a. Seal annular space between sleeve and raceway or cable, using joint sealant appropriate for size, depth, and location of joint. Comply with requirements in Section 079200 "Joint Sealants."
   b. Seal space outside of sleeves with mortar or grout. Pack sealing material solidly between sleeve and wall, so no voids remain. Tool exposed surfaces smooth; protect material while curing.

2. Use pipe sleeves unless penetration arrangement requires rectangular sleeved opening.
3. Size pipe sleeves to provide [1/4-inch (6.4-mm)] annular clear space between sleeve and raceway or cable unless sleeve seal is to be installed[or unless seismic criteria require different clearance].
4. Install sleeves for wall penetrations unless core-drilled holes or formed openings are used. Install sleeves during erection of walls. Cut sleeves to length for mounting flush with both surfaces of walls. Deburr after cutting.

5. Install sleeves for floor penetrations. Extend sleeves installed in floors [2-inches (50-mm)] above finished floor level. Install sleeves during erection of floors.

D. Sleeves for Conduits Penetrating Non-Fire-Rated Gypsum Board Assemblies:

1. Seal space outside of sleeves with approved joint compound for gypsum board assemblies.

E. Roof-Penetration Sleeves: Seal penetration of individual raceways and cables and refer to architectural documents for waterproofing.

F. Aboveground, Exterior-Wall Penetrations: Seal penetrations using mechanical sleeve seals. Allow for 1-inch (25-mm) annular clear space between pipe and sleeve for installing mechanical sleeve seals.

G. Underground, Exterior-Wall and Floor Penetrations: Allow for 1-inch (25-mm) annular clear space between raceway or cable and sleeve for installing sleeve-seal system.

3.2 SLEEVE-SEAL-SYSTEM INSTALLATION

A. Install sleeve-seal systems in sleeves in exterior concrete walls and slabs-on-grade at raceway entries into building.

B. Install type and number of sealing elements recommended by manufacturer for raceway or cable material and size. Position raceway or cable in center of sleeve. Assemble mechanical sleeve seals and install in annular space between raceway or cable and sleeve. Tighten bolts against pressure plates that cause sealing elements to expand and make watertight seal.

3.3 SLEEVE-SEAL-FITTING INSTALLATION

A. Install sleeve-seal fittings in new walls and slabs as they are constructed.

B. Assemble fitting components of length to be flush with both surfaces of concrete slabs and walls. Position waterstop flange to be centered in concrete slab or wall.

C. Secure nailing flanges to concrete forms.

D. Using grout, seal the space around outside of sleeve-seal fittings.

END OF SECTION 260544

SECTION 260553 - IDENTIFICATION FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Color and legend requirements for raceways, conductors, and warning labels and signs.
2. Labels.
3. Bands and tubes.
4. Tapes and stencils.
5. Tags.
6. Signs.
7. Cable ties.
8. Paint for identification.
9. Fasteners for labels and signs.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for electrical identification products.

B. Samples: For each type of label and sign to illustrate composition, size, colors, lettering style, mounting provisions, and graphic features of identification products.

C. Identification Schedule: For each piece of electrical equipment and electrical system components to be an index of nomenclature for electrical equipment and system components used in identification signs and labels. Use same designations indicated on Drawings.

D. Delegated-Design Submittal: For arc-flash hazard study.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Comply with ASME A13.1 and IEEE C2.

B. Comply with NFPA 70.

C. Comply with 29 CFR 1910.144 and 29 CFR 1910.145.

D. Comply with ANSI Z535.4 for safety signs and labels.

E. Comply with NFPA 70E and Section 260574 "Overcurrent Protective Device Arc-Flash Study" requirements for arc-flash warning labels.

F. Adhesive-attached labeling materials, including label stocks, laminating adhesives, and inks used by label printers, shall comply with UL 969.

G. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes.

1. Temperature Change: 120 deg F (67 deg C), ambient; 180 deg F (100 deg C), material surfaces.

2.2 COLOR AND LEGEND REQUIREMENTS

A. Raceways and Cables Carrying Circuits at 600-V or Less:

1. Black letters on an orange field.
2. Legend: Indicate voltage and system or service type.

B. Color-Coding for Phase-and Voltage-Level Identification, 600-V or Less: Use colors listed below for ungrounded service, feeder and branch-circuit conductors.

1. Color shall be factory applied or field applied for sizes larger than No. 8 AWG if authorities having jurisdiction permit.
2. Colors for 208/120-V Circuits:

    a. Phase A: Black.
    b. Phase B: Red.
    c. Phase C: Blue.
    d. Color for Neutral: White
    e. Color for Equipment Grounds: Green.

3. Colors for 240-V Circuits:

    a. Phase A: Black.
    b. Phase B: Red.
    c. Color for Neutral: White.
    d. Color for Equipment Grounds: Green.

4. Colors for 480/277-V Circuits:

    a. Phase A: Brown.
    b. Phase B: Orange.
    c. Phase C: Yellow.
    d. Color for Neutral: Gray.
    e. Color for Equipment Grounds: Green with a yellow stripe.

5. Colors for Isolated Grounds: Green with white stripe.

C. Raceways and Cables Carrying Circuits at More Than 600-V:

1. Black letters on an orange field.
2. Legend: "DANGER - CONCEALED HIGH VOLTAGE WIRING."

D. Warning Label Colors:

1. Identify system voltage with black letters on an orange background.

E. Warning labels and signs shall include, but are not limited to, the following legends:

1. Multiple Power Source Warning: "DANGER - ELECTRICAL SHOCK HAZARD - EQUIPMENT HAS MULTIPLE POWER SOURCES."

2.3 LABELS

A. Vinyl Wraparound Labels: Preprinted, flexible labels laminated with a clear, weather- and chemical-resistant coating and matching wraparound clear adhesive tape for securing label ends.

1. Manufacturers: Provide products designated for the application.

B. Snap-around Labels: Slit, pretension, flexible, preprinted, color-coded acrylic sleeves, with diameters sized to suit diameters and that stay in place by gripping action.

1. Manufacturers: Provide products designated for the application.

C. Self-Adhesive Wraparound Labels: Preprinted 3-mil thick, polyester or vinyl flexible label with acrylic pressure-sensitive adhesive.

1. Self-Lamination: Clear; UV-, weather- and chemical-resistant; self-laminating, protective shield over the legend. Labels sized such that the clear shield overlaps the entire printed legend.

2. Marker for Labels: Permanent, waterproof, black ink marker recommended by tag manufacturer.
3. Marker for Labels: Machine-printed, permanent, waterproof, black ink recommended by printer manufacturer.

D. Self-Adhesive Labels: Polyester or Vinyl, thermal, transfer-printed, 3-mil thick, multicolor, weather- and UV-resistant, pressure-sensitive adhesive labels, configured for intended use and location.

1. Minimum Nominal Size:

a. 1-1/2- by 6-inches for raceway and conductors.
b. 3-1/2- by 5-inches for equipment.
c. As required by authorities having jurisdiction.

2.4 BANDS AND TUBES

A. Snap-around, Color-Coding Bands: Slit, pretension, flexible, solid-colored acrylic sleeves, 2-inches long, with diameters sized to suit diameters and that stay in place by gripping action

B. Heat-Shrink Preprinted Tubes: Flame-retardant polyolefin tubes with machine-printed identification labels, sized to suit diameter and shrunk to fit firmly. Full shrink recovery occurs at a maximum of 200 deg F (93 deg C). Comply with UL 224.

2.5 TAPES AND STENCILS

A. Marker Tapes: Vinyl or vinyl-cloth, self-adhesive wraparound type, with circuit identification legend machine printed by thermal transfer or equivalent process.

B. Self-Adhesive Vinyl Tape: Colored, heavy duty, waterproof, fade resistant; not less than 3-mils thick by 1- to 2-inches wide; compounded for outdoor use.

C. Tape and Stencil: 4-inch wide black stripes on 10-inch centers placed diagonally over orange background and is 12-inches wide. Stop stripes at legends.

D. Floor Marking Tape: 2-inch wide, 5-mil pressure-sensitive vinyl tape, with yellow and black stripes and clear vinyl overlay.

E. Underground-Line Warning Tape:

1. Tape:

   a. Recommended by manufacturer for the method of installation and suitable to identify and locate underground electrical and communications utility lines.
   b. Printing on tape shall be permanent and shall not be damaged by burial operations.
   c. Tape material and ink shall be chemically inert and not subject to degradation when exposed to acids, alkalis, and other destructive substances commonly found in soils.

2. Color and Printing:

   a. Comply with ANSI Z535.1, ANSI Z535.2, ANSI Z535.3, ANSI Z535.4, and ANSI Z535.5.
   b. Inscriptions for Red-Colored Tapes: "ELECTRIC LINE, HIGH VOLTAGE"
   c. Inscriptions for Orange-Colored Tapes: "TELEPHONE CABLE, CATV CABLE, COMMUNICATIONS CABLE, OPTICAL FIBER CABLE".

3. Tag:

   a. Pigmented polyolefin, bright colored, continuous-printed on one side with the inscription of the utility, compounded for direct-burial service.
   b. Width: 3-inches (75-mm).
   c. Thickness: 4-mils (0.1-mm).
   d. Weight: 18.5 lb/1000 sq. ft. (9.0 kg/100 sq. m).
   e. Tensile according to ASTM D 882: 30-lbf (133.4-N) and 2500-psi (17.2-MPa).

F. Stenciled Legend: In nonfading, waterproof, black ink or paint. Minimum letter height shall be 1-inch.

2.6 TAGS

A. Metal Tags: Brass or aluminum, 2- by 2- by 0.05-inch with stamped legend, punched for use with self-locking cable tie fastener.

1. Manufacturers: Subject to compliance with requirements.

B. Nonmetallic Preprinted Tags: Polyethylene tags, 0.015-inch thick, color-coded for phase and voltage level, with factory screened or printed permanent designations; punched for use with self-locking cable tie fastener.

C. Write-on tags not permitted.

2.7 SIGNS

A. Baked-Enamel Signs:

1. Manufacturers: Subject to compliance with requirements
2. Preprinted aluminum signs, high-intensity reflective, punched or drilled for fasteners, with colors, legend, and size required for application.
3. 1/4-inch grommets in corners for mounting.
4. Nominal Size: 7- by 10-inches.

B. Metal-Backed Butyrate Signs:

1. Manufacturers: Subject to compliance with requirements.
2. Weather-resistant, nonfading, preprinted, cellulose-acetate butyrate signs, with 0.0396-inch (1-mm) galvanized-steel backing, punched and drilled for fasteners, and with colors, legend, and size required for application.
3. 1/4-inch (6.4-mm) grommets in corners for mounting.
4. Nominal Size: 10- by 14-inches (250 by 360-mm).

C. Laminated Acrylic or Melamine Plastic Signs:

1. Manufacturers: Subject to compliance with requirements.
2. Engraved legend.
3. Thickness:

    a. For signs up to 20-sq. inch (129-sq. cm), minimum 1/16-inch (1.6-mm) thick.
    b. For signs larger than 20-sq. inch (129-sq. cm), 1/8-inch (3.2-mm) thick.

    c. Engraved legend with **black letters on white face**
    d. Drilled for mechanical fasteners with 1/4-inch (6.4-mm) grommets in corners for mounting.
    e. Framed with mitered acrylic molding and arranged for attachment at applicable equipment.

2.8 CABLE TIES

A. Manufacturers: Subject to compliance with requirements.

B. General-Purpose Cable Ties: Fungus inert, self-extinguishing, one piece, self-locking, and Type 6/6 nylon.

1. Minimum Width: 3/16-inch (5-mm).
2. Tensile Strength at 73 deg F (23 deg C) according to ASTM D 638: 12,000-psi (82.7-MPa).
3. Temperature Range: Minus 40 to plus 185 deg F (Minus 40 to plus 85 deg C).
4. Color: Black, except where used for color-coding.

C. UV-Stabilized Cable Ties: Fungus inert, designed for continuous exposure to exterior sunlight, self-extinguishing, one piece, self-locking, and Type 6/6 nylon.

1. Minimum Width: 3/16-inch (5-mm).
2. Tensile Strength at 73 deg F (23 deg C) according to ASTM D 638: 12,000-psi (82.7-MPa).
3. Temperature Range: Minus 40 to plus 185 deg F (Minus 40 to plus 85 deg C).
4. Color: Black.

D. Plenum-Rated Cable Ties: Self-extinguishing, UV stabilized, one piece, and self-locking.

1. Minimum Width: 3/16-inch (5-mm).
2. Tensile Strength at 73 deg F (23 deg C) according to ASTM D 638: 7000-psi (48.2-MPa).
3. UL 94 Flame Rating: 94V-0.
4. Temperature Range: Minus 50 to plus 284 deg F (Minus 46 to plus 140 deg C).
5. Color: Black.

2.9 MISCELLANEOUS IDENTIFICATION PRODUCTS

A. Paint: Comply with requirements in painting Sections for paint materials and application requirements. Retain paint system applicable for surface material and location (exterior or interior).

B. Fasteners for Labels and Signs: Self-tapping, stainless-steel screws or stainless-steel machine screws with nuts and flat and lock washers.

PART 3 - EXECUTION

3.1 PREPARATION

A. Self-Adhesive Identification Products: Before applying electrical identification products, clean substrates of substances that could impair bond, using materials and methods recommended by manufacturer of identification product.

3.2 INSTALLATION

A. Verify and coordinate identification names, abbreviations, colors, and other features with requirements in other Sections requiring identification applications, Drawings, Shop Drawings, manufacturer's wiring diagrams, and operation and maintenance manual. Use consistent designations throughout Project.

B. Install identifying devices before installing acoustical ceilings and similar concealment.

C. Verify identity of each item before installing identification products.

D. Coordinate identification with Project Drawings, manufacturer's wiring diagrams, and operation and maintenance manual.

E. Apply identification devices to surfaces that require finish after completing finish work.

F. Install signs with approved legend to facilitate proper identification, operation, and maintenance of electrical systems and connected items.

G. System Identification for Raceways and Cables under 600-V: Identification shall completely encircle cable or conduit. Place identification of two-color markings in contact, side by side.

1. Secure tight to surface of conductor, cable, or raceway.

H. System Identification for Raceways and Cables over 600-V: Identification shall completely encircle cable or conduit. Place adjacent identification of two-color markings in contact, side by side.

1. Secure tight to surface of conductor, cable, or raceway.

I. Auxiliary Electrical Systems Conductor Identification: Identify field-installed alarm, control, and signal connections.

J. Emergency Operating Instruction Signs: Install instruction signs with white legend on a red background with minimum 3/8-inch (10-mm) high letters for emergency instructions at equipment used for power transfer and load shedding.

K. Elevated Components: Increase sizes of labels, signs, and letters to those appropriate for viewing from the floor.

L. Accessible Fittings for Raceways: Identify the covers of each junction and pull box of the following systems with the wiring system legend and system voltage. System legends shall be as follows:

1. "EMERGENCY POWER."
2. "POWER."
3. "UPS."

M. Vinyl Wraparound Labels:

1. Secure tight to surface of raceway or cable at a location with high visibility and accessibility.
2. Attach labels that are not self-adhesive type with clear vinyl tape, with adhesive appropriate to the location and substrate.

N. Snap-around Labels: Secure tight to surface at a location with high visibility and accessibility.

O. Self-Adhesive Wraparound Labels: Secure tight to surface at a location with high visibility and accessibility.

P. Self-Adhesive Labels:

1. On each item, install unique designation label that is consistent with wiring diagrams, schedules, and operation and maintenance manual.
2. Unless otherwise indicated, provide a single line of text with 1/2-inch (13-mm) high letters on 1-1/2-inch (38-mm) high label; where two lines of text are required, use labels 2-inches (50-mm) high.

Q. Snap-around Color-Coding Bands: Secure tight to surface at a location with high visibility and accessibility.

R. Heat-Shrink, Preprinted Tubes: Secure tight to surface at a location with high visibility and accessibility.

S. Marker Tapes: Secure tight to surface at a location with high visibility and accessibility.

T. Self-Adhesive Vinyl Tape: Secure tight to surface at a location with high visibility and accessibility.

1. Field-Applied, Color-Coding Conductor Tape: Apply in half-lapped turns for a minimum distance of 6-inches (150-mm) where splices or taps are made. Apply last two turns of tape with no tension to prevent possible unwinding.

U. Tape and Stencil: Comply with requirements in painting Sections for surface preparation and paint application.

V. Floor Marking Tape: Apply stripes to finished surfaces following manufacturer's written instructions.

W. Underground Line Warning Tape:

1. During backfilling of trenches, install continuous underground-line warning tape directly above cable or raceway at 6- to 8-inches (150- to 200-mm) below finished grade. Use multiple tapes where width of multiple lines installed in a common trench or concrete envelope exceeds 16-inches (400-mm) overall.

2. Limit use of underground-line warning tape to direct-buried cables.
3. Install underground-line warning tape for direct-buried cables and cables in raceways.

X. Metal Tags:

1. Place in a location with high visibility and accessibility.
2. Secure using cable ties.

Y. Nonmetallic Preprinted Tags:

1. Place in a location with high visibility and accessibility.
2. Secure using cable ties.

Z. Baked-Enamel Signs:

1. Attach signs that are not self-adhesive type with mechanical fasteners appropriate to the location and substrate.
2. Unless otherwise indicated, provide a single line of text with 1/2-inch (13-mm) high letters on minimum 1-1/2-inch (38-mm) high sign; where two lines of text are required, use signs minimum 2-inches (50-mm) high.

AA. Metal-Backed Butyrate Signs:

1. Attach signs that are not self-adhesive type with mechanical fasteners appropriate to the location and substrate.
2. Unless otherwise indicated, provide a single line of text with 1/2-inch (13-mm) high letters on 1-1/2-inch (38-mm) high sign; where two lines of text are required, use labels 2-inches (50-mm) high.

BB. Laminated Acrylic or Melamine Plastic Signs:

1. Attach signs that are not self-adhesive type with mechanical fasteners appropriate to the location and substrate.
2. Unless otherwise indicated, provide a single line of text with 1/2-inch (13-mm) high letters on 1-1/2-inch (38-mm) high sign; where two lines of text are required, use labels 2-inches (50-mm) high.

CC. Cable Ties: General purpose, for attaching tags, except as listed below:

1. Outdoors: UV-stabilized nylon.
2. In Spaces Handling Environmental Air: Plenum rated.

3.3 IDENTIFICATION SCHEDULE

A. Install identification materials and devices at locations for most convenient viewing without interference with operation and maintenance of equipment. Install access doors or panels to provide view of identifying devices.

B. Identify conductors, cables, and terminals in enclosures and at junctions, terminals, pull points, and locations of high visibility. Identify by system and circuit designation.

C. Concealed Raceways, Duct Banks, more than 600-V, within buildings: Tape and stencil. Stencil legend "DANGER - CONCEALED HIGH-VOLTAGE WIRING" with 3-inch (75-mm) high, black letters on 20-inch (500-mm) centers.

1. Locate identification at changes in direction, at penetrations of walls and floors, and at 10-ft. (3-m) maximum intervals.

D. Accessible Raceways, Armored and Metal-Clad Cables, More Than 600-V: Vinyl wraparound labels.

1. Locate identification at changes in direction, at penetrations of walls and floors, at 50-ft. (15-m) maximum intervals in straight runs, and at 25-ft. (7.6-m) maximum intervals in congested areas.

E. Accessible Raceways and Metal-Clad Cables, 600-V or Less, for Service, Feeder, and Branch Circuits, More Than 30-A and 120-V to Ground: Identify with self-adhesive raceway labels vinyl tape applied in bands.

1. Locate identification at changes in direction, at penetrations of walls and floors, at 50-ft. (15-m) maximum intervals in straight runs, and at 25-ft. (7.6-m) maximum intervals in congested areas.

F. Accessible Fittings for Raceways and Cables within Buildings: Identify the covers of each junction and pull box of the following systems with self-adhesive labels containing the wiring system legend and system voltage. System legends shall be as follows:

1. "EMERGENCY POWER."
2. "POWER."
3. "UPS."

G. Power-Circuit Conductor Identification, 600-V or Less: For conductors in vaults, pull and junction boxes, manholes, and handholes, use vinyl wraparound labels.

1. Locate identification at changes in direction, at penetrations of walls and floors, at 50-ft. (15-m) maximum intervals in straight runs, and at 25-ft. (7.6-m) maximum intervals in congested areas.

H. Power-Circuit Conductor Identification, More Than 600-V: For conductors in vaults, pull and junction boxes, manholes, and handholes, use nonmetallic preprinted tags colored and marked to indicate phase, and a separate tag with the circuit designation.

I. Control-Circuit Conductor Identification: For conductors and cables in pull and junction boxes, manholes, and handholes, use self-adhesive labels with the conductor or cable designation, origin, and destination.

J. Control-Circuit Conductor Termination Identification: For identification at terminations, provide self-adhesive labels with the conductor designation.

K. Conductors to Be Extended in the Future: Attach marker tape to conductors.

L. Auxiliary Electrical Systems Conductor Identification: Self-adhesive vinyl tape that is uniform and consistent with system used by manufacturer for factory-installed connections.

1. Identify conductors, cables, and terminals in enclosures and at junctions, terminals, and pull points. Identify by system and circuit designation.

M. Locations of Underground Lines: Underground-line warning tape for power, lighting, communication, and control wiring and optical-fiber cable.

N. Concealed Raceways and Duct Banks, More Than 600-V, within Buildings: Apply floor marking tape to the following finished surfaces:

1. Floor surface directly above conduits running beneath and within 12-inches (300-mm) of a floor that is in contact with earth or is framed above unexcavated space.
2. Wall surfaces directly external to raceways concealed within wall.
3. Accessible surfaces of concrete envelope around raceways in vertical shafts, exposed in the building, or concealed above suspended ceilings.

O. Workspace Indication: Apply floor marking tape or tape and stencil to finished surfaces. Show working clearances in the direction of access to live parts. Workspace shall comply with NFPA 70 and 29 CFR 1926.403 unless otherwise indicated. Do not install at flush-mounted panelboards and similar equipment in finished spaces.

P. Instructional Signs: Self-adhesive labels, including the color code for grounded and ungrounded conductors.

Q. Warning Labels for Indoor Cabinets, Boxes, and Enclosures for Power and Lighting: Baked-enamel warning signs.

1. Apply to exterior of door, cover, or other access.
2. For equipment with multiple power or control sources, apply to door or cover of equipment, including, but not limited to, the following:

    a. Power-transfer switches.
    b. Controls with external control power connections.

R. Arc Flash Warning Labeling: Self-adhesive labels.

S. Operating Instruction Signs: Baked-enamel warning signs or laminated acrylic or melamine plastic signs.

T. Emergency Operating Instruction Signs: Baked-enamel warning signs or laminated acrylic or melamine plastic signs with white legend on a red background with minimum 3/8-inch (10-mm) high letters for emergency instructions at equipment used for power transfer and load shedding.

U. Equipment Identification Labels:

1. Indoor Equipment: Baked-enamel signs or laminated acrylic or melamine plastic sign.
2. Outdoor Equipment: Laminated acrylic or melamine sign.
3. Equipment to Be Labeled:

    a. Panelboards: Typewritten directory of circuits in the location provided by panelboard manufacturer. Panelboard identification shall be in the form of an engraved laminated acrylic or melamine label.
    b. Enclosures and electrical cabinets.
    c. Access doors and panels for concealed electrical items.
    d. Switchgear.
    e. Switchboards.
    f. Transformers: Label that includes tag designation indicated on Drawings for the transformer, feeder, and panelboards or equipment supplied by the secondary.
    g. Substations.
    h. Emergency system boxes and enclosures.
    i. Motor-control centers.
    j. Enclosed switches.
    k. Enclosed circuit breakers.
    l. Enclosed controllers.
    m. Variable-speed controllers.
    n. Push-button stations.
    o. Power-transfer equipment.
    p. Contactors.
    q. Remote-controlled switches, dimmer modules, and control devices.
    r. Battery-inverter units.

s. Battery racks.
t. Power-generating units.
u. Monitoring and control equipment.
v. UPS equipment.

END OF SECTION 260553

SECTION 260923 - LIGHTING CONTROL DEVICES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Description:

1. Furnish and install a complete system for the control of lighting and other equipment as indicated on the plans, and as further defined herein. This specification is based on the system referenced in the drawings. An AutoCAD drawing of the facility showing coverage patterns and technical data must be provided with substitution request. All substitutions must clearly identify any and all exceptions to the specifications, with a detailed explanation as to the exception. If substitution is approved, the contractor shall bear the responsibility of a fully functional system to the Owner's and an Architect's satisfaction.
2. The lighting control system specified in this section shall provide time-based, sensor-based (both vacancy/occupancy and daylight), and manual lighting control without the use of any centrally hardwired switching equipment (relay panels). The system's control shall be exerted by directly switching lighting loads on and off and/or dimming.
3. The system shall include but not be limited by the following list: digital switches, digital photocells, Digital Time Clock (DTC) and interface cards to dimming systems, building automation systems, and other devices. Requirements are indicated elsewhere in these specifications for work including, but not limited to, raceways and electrical boxes and fittings required for installation of control equipment and wiring. They are not the work of this section.
4. The lighting control system shall include the ability to network lighting control devices and relays in multiple areas and or buildings. The system shall include the ability for remote access and control. Specific relays shall be able to be controlled remotely from multiple locations.

B. Section Includes:

1. Wall Switch Sensors
2. Ceiling and Corner Mount Sensors
3. Daylight (Photocell) Sensors
4. Power (Relay) Packs and Supplies
5. Scene Controllers
6. Communication Bridges
7. Sensors to perform vacancy and occupancy modes of control
8. Outdoor motion sensors
9. Emergency shunt relays

C. Related Requirements:

1. Section 265000 “General Lighting Provisions”
2. Section 265100 “Interior Lighting Systems”
3. Section 265600 “Exterior Lighting Systems”

4. Section 262726 "Wiring Devices" for wall-box dimmers, non-networkable wall-switch occupancy sensors, and manual light switches.

1.3 SUBMITTALS

A. Shop Drawings: Submit dimensioned drawings of lighting control system and accessories including, but not necessarily limited to, relay devices, switches, DTC, photocells, network interface devices, remote access, dimming modules and other interfaces. Shop drawings shall indicate exact location of each device or an RFI to confirm location. Plans are diagrammatical. EC to verify all lighting control material requirements from approved shop drawings. “Cut Sheet” submittal not acceptable.

B. Product Data: Submit for approval manufacturer's data on the specific lighting control system and components. Submittal shall be electronic format with hard copy available. To prevent departures from approved system operation, electronic files submitted shall be able to be directly downloaded to the specified system at manufacturer facility. Submit a complete bill of materials with part numbers, description and voltage specifications.

C. Manufacturer shall provide free software that can be used to specify the system, detail all programming and generate a single line in a format that can be dropped into industry standard CAD packages.

D. One Line Diagram: Submit a one-line diagram of the system configuration indicating the type, size and number of conductors between each component if it differs from that illustrated in the riser diagram in these specifications. Submittals that show typical riser diagrams are not acceptable.

1.4 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For each type of lighting control device to include in operation and maintenance manuals.

B. Software and Firmware Operational Documentation:

1. Software operating and upgrade manuals.
2. Program Software Backup: Provide names, versions, and website addresses for locations of installed software.
3. Device address list.
4. Printout of software application and graphic screens.
5. Provide video of training session for Owner.

1.5 WARRANTY

A. Manufacturer's Warranty: Manufacturer and Installer agree to repair or replace lighting control devices that fail(s) in materials or workmanship within specified warranty period.

1. Failures include, but are not limited to, the following:

    a. Faulty operation of lighting control software.
    b. Faulty operation of lighting control devices.

2. Warranty Period: Two year(s) from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 OCCUPANCY AND PHOTOCELLS

A. Passive Infrared (PIR) or PIR/Ultrasonic Dual Technology and Microphonic detection technologies shall be acceptable.

B. Sensors shall be available with zero, one, or two integrated Class 1 switching relays.

C. Sensors shall be available with one or two occupancy “poles,” each of which provides a programmable time delay.

D. Sensors shall be available in multiple lens options which are customized for specific applications.

E. Communication and Class 2 low voltage power shall be delivered to each device via standard CAT-5 low voltage cabling with RJ-45 connectors, or similar low voltage connection.

F. Every sensor parameter shall be available and configurable remotely from the software and locally via the device push-button.

G. Sensors shall be able to function together with other sensors in order to provide expanded coverage areas by simply daisy-chain wiring together the units with CAT-5 cabling.

H. Sensors shall be equipped with an automatic override for 100-hour burn-in of lamps. This feature must be available at any time for lamp.

2.2 WALL SWITCH SENSORS

A. Sensor shall recess into single-gang switch box and fit a standard GFI opening.

B. Sensor must meet NEC grounding requirements by providing a dedicated ground connection and grounding to mounting strap. Line and load wire connections shall be interchangeable. Sensor shall not allow current to pass to the load when sensor is in the unoccupied (Off) condition.

C. Sensor shall have optional features for photocell/daylight override, vandal resistant lens, and low temperature/high humidity operation.

D. Sensors shall be available in four colors (Ivory, White, Almond, Gray).

2.3 CEILING AND CORNER MOUNT SENSORS

A. Sensor shall have optional features for photocell/daylight override, dimming control, and low temperature/high humidity operation.

B. Sensors with dimming control can control 0- to 10-V dc dimmable ballasts by sinking up to 20-mA of Class 2 current (typically forty or more ballasts).

C. All sensors have at least one or two occupancy poles, each of which provides a programmable time delay.

2.4 DAYLIGHT (PHOTOCELL) SENSORS

A. Sensor shall provide for an On/Off set-point, and a deadband to prevent the electric light from cycling. Delay shall be incorporated into the photocell to prevent rapid response to passing clouds.

B. Sensors' set-point and deadband shall be automatically calibrated through the sensor's micro-controller by initiating the "Automatic Set-point Programming" subroutine. Further adjustment may be made manually if needed. Deadband setting shall be verified and modified by the sensor automatically every time the lights cycle to accommodate physical changes in the space (i.e., furniture layouts, lamp depreciation, or lamp outages).

C. Sensors with dimming control can control 0- to 10-V dc dimmable ballasts by sinking up to 20 mA of Class 2 current (typically forty or more ballasts).

D. Photocell sensor's set point shall be automatically calibrated through the sensor's micro-controller by initiating the "Automatic Set-point Programming" subroutine. Min and Max dim settings as well as set-point may be manually entered.

E. Dual zone option shall be available for On/Off Photocell, Automatic Dimming Control Photocell, or Combination units. The second zone shall be controlled as an "offset" from the primary zone and shall be the zone farthest from the natural light source.

2.5 POWER (RELAY) PACKS AND SUPPLIES

A. Power Packs shall accept 120- or 277-V ac (or optionally 347-V ac), be plenum rated, and provide Class 2 power to the system.

B. All devices shall have two RJ-45 ports.

C. Every Power Pack parameter shall be available and configurable remotely from the software and locally via the device pushbutton.

D. Power Pack shall securely mount to junction location through a threaded 1/2-inch chase nipple. Plastic clips into junction box shall not be accepted. All Class 1 wiring shall pass through chase nipple into adjacent junction box without any exposure of wire leads. Note: UL Listing under Energy Management or Industrial Control Equipment automatically meets this requirement, whereas Appliance Control Listing does not meet this safety requirement.

E. When required by local code, Power Pack must install inside standard electrical enclosure and provide UL recognized support to junction box. All Class 1 wiring is to pass through chase nipple into adjacent junction box without any exposure of wire leads.

F. Power Pack shall incorporate a Class 1 relay and contribute low voltage power to the rest of the system. Slave Packs shall incorporate the relay but shall not be required to contribute system power. Power Supplies shall provide system power only but are not required to switch line voltage circuit. Auxiliary Relay Packs shall switch low voltage circuits only.

G. Class 1 Relays used in Power (Slave) Packs shall provide 16-Amp switching of all load types and be rated for 400,000 cycles.

2.6 SCENE CONTROLLERS

A. Device shall recess into single-gang switch box and fit a standard GFI opening.

B. Device shall provide user control via pushbuttons. Touch screens are also acceptable in larger formats.

C. Communication and Class 2 low voltage power shall be delivered to each device via standard CAT-5 low voltage cabling with RJ-45 connectors.

D. All sensors shall have two RJ-45 ports.

E. Device shall have two or four buttons for selecting programmable lighting control profiles. Touch screens are also acceptable.

F. Device shall have LEDs indicating current selection.

2.7 COMMUNICATION BRIDGES

A. Device shall surface mount to a standard 4-inch x 4-inch square junction box.

B. Device shall have 8 RJ-45 ports.

C. Device shall be capable of aggregating communication with connected daisy-chains of system devices.

D. Device shall be powered with Class 2 low voltage supplied locally via a directly wired power supply or delivered via a CAT-5 cabled connection.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that field measurements are as shown on the drawings.

B. Verify that ratings and configurations of system components are consistent with the indicated requirements.

C. Verify that mounting surfaces are ready to receive system components.

D. Verify that conditions are satisfactory for installation prior to starting work.

3.2 EQUIPMENT INSTALLATION

A. Perform work in a neat and workmanlike manner in accordance with NECA 1 and, where applicable.

B. Install products in accordance with manufacturer's instructions.

C. Define each dimmer/relay load type, assign each load to a zone, and set control functions.

D. Sensor locations indicated are diagrammatic. Within the design intent, reasonably minor adjustments to locations may be made in order to optimize coverage and avoid conflicts or problems affecting coverage, in accordance with manufacturer's recommendations.

E. LED Light Engine/Array Lead Length: Do not exceed 100-ft. (31-m).

F. Switches: Provide outlet boxes, single or multi-gang, as shown on the plans for the low voltage digital switches. Mount switches as per plans. Supply faceplates per plans and specifications. EC is specifically responsible to supply and install the required low voltage cable between all switches and panels. All low voltage wire to be run in conduit, per local codes.

3.3 WIRING

A. Do not mix low voltage and high voltage conductors in the same conduit. No exceptions without written authorization from manufacturer.

B. Ensure low voltage conduits or control wires do not run parallel to current carrying conduits.

C. Follow manufacturer recommendations for all systems low voltage wiring. Contact manufacturer for maximum run lengths as needed.

D. The specified lighting control system shall be installed by the electrical contractor who shall make all necessary wiring connections to external devices and equipment, to include photocell. EC to wire per manufacturer instructions.

3.4 INSTALLATION AND SET-UP

A. Contractor to test all low voltage cable for integrity and proper operation prior to turn over. Verify with system manufacturer all wiring and testing requirements.

B. Before Substantial Completion, arrange and provide a one-day Owner instruction period to designated Owner personnel. Set-up, commissioning of the lighting control system and Owner instruction includes:

1. Confirmation of entire system operation and communication to each device.
2. Confirmation of operation of individual relays, switches, occupancy sensors and daylight sensors.

3. Confirmation of system Programming, photocell settings, override settings, etc.
4. Provide training to cover installation, maintenance, troubleshooting, programming, and repair and operation of the lighting control system.
5. Controls manufacturer to provide advanced on-site commissioning services. Controls manufacturer to provide commissioning schedule to Lighting Designer (or Architect) three weeks ahead of visit. Lighting Designer (or architect) to be on-site to provide final approval of lighting scenes, dimming ranges and lighting control function. Contractor to coordinate services at appropriate stages of construction.
6. Controls manufacturer to provide on-site training for facilities personnel and staff. Training to take place sixty to ninety days after system has been commissioned as stated in Section E. Contractor to coordinate services at appropriate stages of construction.

C. All devices shall be located so that they are readily accessible and not exposed to physical damage.

3.5 SERVICE AND OPERATION MANUALS

A. Submit operation and service manuals. Complete manuals shall be bound in flexible binders and data shall be typewritten or drafted. Electronic copies shall also be provided to the Owner.

B. Manuals shall include instructions necessary for proper operation and servicing of system and shall include complete wiring circuit diagrams of system, wiring destination schedules for circuits and replacement part numbers. Manuals shall include as-built cable Project site plot plans and floor plans indicating cables, both underground and in each building with conduit, and as-built color coding used on cables. Programming forms of systems shall be submitted with complete information.

C. Comply with energy code lighting control system “Acceptance Requirements.” Acceptance tests are used to verify that lighting controls were installed and calibrated correctly. These tests may require that a responsible party certify that controls are installed and calibrated properly. This is the installing contractor’s responsibility. Verify requirements with building authority.

3.6 DOCUMENTATION

A. Each relay shall have an identification label indicating the originating branch circuit number and panelboard name as indicated on the drawings. Each line side branch circuit conductor shall have an identification tag indicating the branch circuit number.

B. Provide a point-to-point wiring diagram for the entire lighting control system. Diagram must indicate exact mounting location of each system device. This accurate “as-built” shall indicate the loads controlled by each relay and the identification number for that relay, placement of switches and location of photocell. Original to be given to Owner, copies placed inside the door of each PLCP.

3.7 SERVICE AND SUPPORT

A. Start Up: EC shall contact and schedule Start-up with manufacturer. EC is responsible for coordinating with GC and the Owner the installation any communication devices needed for startup.

B. EC shall verify communication (telephone, internet, Ethernet, etc.) links and protocol needed for remote or on-site programming by manufacturer.

C. Provide a factory technician for on-site training of the Owners' representatives and maintenance personnel. Coordinate timing with General Contractor. Provide one to two days of factory on-site training. Video record training session and provide digital copy to Owner.

3.8 CLEANING

A. Division 01 General Requirements: Section 017700, "Final Cleaning" article.

B. Clean photocell lens as recommended by manufacturer.

C. Clean all switch faceplates.

END OF SECTION 260923

SECTION 262416 - PANELBOARDS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Distribution panelboards.
2. Lighting and appliance branch-circuit panelboards.

1.3 DEFINITIONS

A. ATS: Acceptance testing specification.

B. GFCI: Ground-fault circuit interrupter.

C. GFEP: Ground-fault equipment protection.

D. HID: High-intensity discharge.

E. MCCB: Molded-case circuit breaker.

F. SPD: Surge protective device.

G. VPR: Voltage protection rating.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of panelboard.

1. Include materials, switching and overcurrent protective devices, SPDs, accessories, and components indicated.
2. Include dimensions and manufacturers' technical data on features, performance, electrical characteristics, ratings, and finishes.

B. Shop Drawings: For each panelboard and related equipment.

1. Include dimensioned plans, elevations, sections, and details.
2. Show tabulations of installed devices with nameplates, conductor termination sizes, equipment features, and ratings.

3. Detail enclosure types including mounting and anchorage, environmental protection, knockouts, corner treatments, covers and doors, gaskets, hinges, and locks.
4. Detail bus configuration, current, and voltage ratings.
5. Short-circuit current rating of panelboards and overcurrent protective devices.
6. Include evidence of NRTL listing for SPD as installed in panelboard.
7. Detail features, characteristics, ratings, and factory settings of individual overcurrent protective devices and auxiliary components.

1.5 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For panelboards and components to include in emergency, operation, and maintenance manuals. In addition to items specified in Section 017823 "Operation and Maintenance Data," include the following:

1. Manufacturer's written instructions for testing and adjusting overcurrent protective devices.

1.6 QUALITY ASSURANCE

A. Manufacturer Qualifications: ISO 9001 or ISO 9002 certified.

1.7 FIELD CONDITIONS

A. Interruption of Existing Electric Service: Do not interrupt electric service to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary electric service according to requirements indicated:

1. Notify Owner no fewer than two days in advance of proposed interruption of electric service.
2. Do not proceed with interruption of electric service without Owner's written permission.
3. Comply with NFPA 70E.

1.8 WARRANTY

A. Manufacturer's Warranty: Manufacturer agrees to repair or replace panelboards that fail in materials or workmanship within specified warranty period.

1. Panelboard Warranty Period: Twelve months from date of Substantial Completion.

B. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace SPD that fails in materials or workmanship within specified warranty period.

1. SPD Warranty Period: Five years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PANELBOARDS COMMON REQUIREMENTS

A. Fabricate and test panelboards according to IEEE 344 to withstand seismic forces defined in Section 260548.16 "Seismic Controls for Electrical Systems."

B. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

C. Comply with NEMA PB 1.

D. Comply with NFPA 70.

E. Enclosures: Flush and Surface-mounted, dead-front cabinets.

1. Rated for environmental conditions at installed location.

    a. Indoor Dry and Clean Locations: NEMA 250, Type 1
    b. Outdoor Locations: NEMA 250, Type 3R
    c. Kitchen Areas: NEMA 250, Type 4X .
    d. Other Wet or Damp Indoor Locations: NEMA 250, Type 4

2. Height: 84-inches (2.13 m) maximum.
3. Front: Secured to box with concealed trim clamps. For surface-mounted fronts, match box dimensions; for flush-mounted fronts, overlap box. Trims shall cover all live parts and shall have no exposed hardware.
4. Hinged Front Cover: Entire front trim hinged to box and with standard door within hinged trim cover. Trims shall cover all live parts and shall have no exposed hardware.
5. Finishes:

    a. Panels and Trim: Steel, factory finished immediately after cleaning and pretreating with manufacturer's standard two-coat, baked-on finish consisting of prime coat and thermosetting topcoat.
    b. Back Boxes: Galvanized steel.

F. Incoming Mains:

1. Location: Top or Bottom, as needed for each panel’s specific installation.
2. Main Breaker: Main lug interiors up to 400 amperes shall be field convertible to main breaker.

G. Phase, Neutral, and Ground Buses:

1. Material: Hard-drawn copper, 98 percent conductivity.

    a. Bus shall be fully rated the entire length.

2. Interiors shall be factory assembled into a unit. Replacing protective devices shall not disturb adjacent units or require removing the main bus connectors.
3. Equipment Ground Bus: Adequate for feeder and branch-circuit equipment grounding conductors; bonded to box.

4. Full-Sized Neutral: Equipped with full-capacity bonding strap for service entrance applications. Mount electrically isolated from enclosure. Do not mount neutral bus in gutter.

H. Conductor Connectors: Suitable for use with conductor material and sizes.

1. Material: Hard-drawn copper, 98 percent conductivity.
2. Terminations shall allow use of 75 deg C rated conductors without derating.
3. Size: Lugs suitable for indicated conductor sizes, with additional gutter space, if required, for larger conductors.
4. Main and Neutral Lugs: Mechanical type, with a lug on the neutral bar for each pole in the panelboard.
5. Ground Lugs and Bus-Configured Terminators: Mechanical type, with a lug on the bar for each pole in the panelboard.
6. Feed-Through Lugs: Mechanical type, suitable for use with conductor material. Locate at opposite end of bus from incoming lugs or main device.

I. Future Devices: Panelboards shall have mounting brackets, bus connections, filler plates, and necessary appurtenances required for future installation of devices.

1. Refer to spares and spaces shown on the one-line diagram and/or panel schedules.

J. Panelboard Short-Circuit Current Rating: Fully rated to interrupt symmetrical short-circuit current available at terminals. Assembly listed by an NRTL for 100 percent interrupting capacity.

1. Panelboards and overcurrent protective devices rated 240-V or less shall have short-circuit ratings as shown on Drawings, but not less than 10,000-A rms symmetrical.
2. Panelboards and overcurrent protective devices rated above 240-V and less than 600-V shall have short-circuit ratings as shown on Drawings, but not less than 14,000-A rms symmetrical.

2.2 PERFORMANCE REQUIREMENTS

A. Seismic Performance: Panelboards shall withstand the effects of earthquake motions determined according to ASCE/SEI 7

1. The term "withstand" means "the unit will remain in place without separation of any parts from the device when subjected to the seismic forces specified."

B. Surge Suppression: Factory installed as an integral part of indicated panelboards, complying with UL 1449 SPD Type 2.

2.3 POWER PANELBOARDS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Eaton.
2. Schneider Electric USA (Square D).
3. Siemens Industry, Inc., Energy Management Division.

B. Panelboards: NEMA PB 1, distribution type with factory-installed, integral SPD; labeled by an NRTL for compliance with UL 67 and UL 1449 after installing SPD.

C. Mains: Circuit breaker

D. Branch Overcurrent Protective Devices for Circuit-Breaker Frame Sizes 125-A and Smaller: Plug-in circuit breakers where individual positive-locking device requires mechanical release for removal.

E. Branch Overcurrent Protective Devices for Circuit-Breaker Frame Sizes Larger Than 125-A: Plug-in circuit breakers where individual positive-locking device requires mechanical release for removal.

F. SPD: All Power Panelboards

1. Peak Surge Current Rating: The minimum single-pulse surge current withstand rating per phase shall not be less than 100-kA. The peak surge current rating shall be the arithmetic sum of the ratings of the individual MOVs in a given mode.
2. Protection modes and UL 1449 VPR for grounded wye circuits with 208Y/120-V, three-phase, four-wire circuits shall not exceed the following:

    a. Line to Neutral: 700-V for 208Y/120-V.
    b. Line to Ground: 700-V for 208Y/120-V.
    c. Neutral to Ground: 700-V for 208Y/120-V.
    d. Line to Line: 1200-V for 208Y/120-V.

3. SCCR: Equal to or exceed 200-kA.
4. Inominal Rating: 20-kA.

2.4 LIGHTING AND APPLIANCE BRANCH-CIRCUIT PANELBOARDS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Eaton.
2. Schneider Electric USA (Square D).
3. Siemens Industry, Inc., Energy Management Division.

B. Panelboards: NEMA PB 1, lighting and appliance branch-circuit type,with factory-installed, integral SPD; labeled by an NRTL for compliance with UL 67 and UL 1449 after installing SPD.

C. Mains: Circuit breaker or lugs only

D. Branch Overcurrent Protective Devices: Bolt-on circuit breakers, replaceable without disturbing adjacent units.

E. Doors: Concealed hinges; secured with flush latch with tumbler lock; keyed alike.

F. Doors: Door-in-door construction with concealed hinges; secured with multipoint latch with tumbler lock; keyed alike. Outer door shall permit full access to the panel interior. Inner door shall permit access to breaker operating handles and labeling, but current carrying terminals and bus shall remain concealed.

2.5 DISCONNECTING AND OVERCURRENT PROTECTIVE DEVICES

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Eaton.
2. Schneider Electric USA (Square D).
3. Siemens Industry, Inc., Energy Management Division.

B. MCCB: Comply with UL 489, with interrupting capacity to meet available fault currents.

1. Thermal-Magnetic Circuit Breakers:

   a. Inverse time-current element for low-level overloads.
   b. Instantaneous magnetic trip element for short circuits.
   c. Adjustable instantaneous magnetic trip setting for circuit-breaker frame sizes 250-A and larger.

2. Electronic Trip Circuit Breakers:

   a. RMS sensing.
   b. Field-replaceable rating plug or electronic trip.
   c. Digital display of settings, trip targets, and indicated metering displays.
   d. Multi-button keypad to access programmable functions and monitored data.
   e. Ten-event, trip-history log. Each trip event shall be recorded with type, phase, and magnitude of fault that caused the trip.
   f. Integral test jack for connection to portable test set or laptop computer.
   g. Field-Adjustable Settings:

      1) Instantaneous trip.
      2) Long- and short-time pickup levels.
      3) Long and short time adjustments.
      4) Ground-fault pickup level, time delay, and I squared T response.

3. GFCI Circuit Breakers: Single- and double-pole configurations with Class A ground-fault protection (6-mA trip).
4. GFEP Circuit Breakers: Class B ground-fault protection (30-mA trip).
5. Arc-Fault Circuit Interrupter Circuit Breakers: Comply with UL 1699; 120/240-V, single-pole configuration
6. MCCB Features and Accessories:

   a. Standard frame sizes, trip ratings, and number of poles.
   b. Breaker handle indicates tripped status.
   c. Lugs: Mechanical style, suitable for number, size, trip ratings, and conductor materials.
   d. Application Listing: Appropriate for application; Type SWD for switching fluorescent lighting loads; Type HID for feeding fluorescent and HID lighting circuits.
   e. Rating Plugs: Three-pole breakers with ampere ratings greater than [150] <Insert value> amperes shall have interchangeable rating plugs or electronic adjustable trip units.
   f. Multipole units enclosed in a factory assembled to operate as a single unit.

2.6 IDENTIFICATION

A. Panelboard Label: Manufacturer's name and trademark, voltage, amperage, number of phases, and number of poles shall be located on the interior of the panelboard door.

B. Breaker Labels: Faceplate shall list current rating, UL and IEC certification standards, and AIC rating.

C. Circuit Directory: Directory card inside panelboard door, mounted in transparent card holder or metal frame with transparent protective cover.

1. Circuit directory shall identify specific purpose with detail sufficient to distinguish it from all other circuits.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify actual conditions with field measurements prior to ordering panelboards to verify that equipment fits in allocated space in, and comply with, minimum required clearances specified in NFPA 70.

B. Receive, inspect, handle, and store panelboards according to NEMA PB 1.1.

C. Examine panelboards before installation. Reject panelboards that are damaged, rusted, or have been subjected to water saturation.

D. Examine elements and surfaces to receive panelboards for compliance with installation tolerances and other conditions affecting performance of the Work.

E. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. Coordinate layout and installation of panelboards and components with other construction that penetrates walls or is supported by them, including electrical and other types of equipment, raceways, piping, encumbrances to workspace clearance requirements, and adjacent surfaces. Maintain required workspace clearances and required clearances for equipment access doors and panels.

B. Comply with NECA 1.

C. Install panelboards and accessories according to NEMA PB 1.1.

D. Equipment Mounting:

1. Install panelboards on cast-in-place concrete equipment base(s). Comply with requirements for equipment bases and foundations specified in Section 033000 "Cast-in-Place Concrete."
2. Attach panelboard to the vertical finished or structural surface behind the panelboard.

3. Comply with requirements for seismic control devices specified in Section 260548.16 "Seismic Controls for Electrical Systems."

E. Temporary Lifting Provisions: Remove temporary lifting eyes, channels, and brackets and temporary blocking of moving parts from panelboards.

F. Comply with mounting and anchoring requirements specified in Section 260548.16 "Seismic Controls for Electrical Systems."

G. Mount top of trim 90-inches (2286-mm) above finished floor unless otherwise indicated.

H. Mount panelboard cabinet plumb and rigid without distortion of box.

I. Mount recessed panelboards with fronts uniformly flush with wall finish and mating with back box.

J. Mount surface-mounted panelboards to steel slotted supports [5/8-inch (16-mm)] [1-1/4-inch (32-mm)] in depth. Orient steel slotted supports vertically.

K. Install overcurrent protective devices and controllers not already factory installed.

1. Set field-adjustable, circuit-breaker trip ranges.
2. Tighten bolted connections and circuit breaker connections using calibrated torque wrench or torque screwdriver per manufacturer's written instructions.

L. Make grounding connections and bond neutral for services and separately derived systems to ground. Make connections to grounding electrodes, separate grounds for isolated ground bars, and connections to separate ground bars.

M. Install filler plates in unused spaces.

N. [Stub four 1-inch (25-mm) empty conduits from panelboard into accessible ceiling space or space designated to be ceiling space in the future].

3.3 IDENTIFICATION

A. Identify field-installed conductors, interconnecting wiring, and components; install warning signs complying with requirements in Section 260553 "Identification for Electrical Systems."

B. Create a directory to indicate installed circuit loads; incorporate Owner's final room designations. Obtain approval before installing. Handwritten directories are not acceptable. Install directory inside panelboard door.

C. Panelboard Nameplates: Label each panelboard with a nameplate complying with requirements for identification specified in Section 260553 "Identification for Electrical Systems."

D. Device Nameplates: Label each branch circuit device in power panelboards with a nameplate complying with requirements for identification specified in Section 260553 "Identification for Electrical Systems."

E. Install warning signs complying with requirements in Section 260553 "Identification for Electrical Systems" identifying source of remote circuit.

3.4 FIELD QUALITY CONTROL

A. Perform tests and inspections.

B. Tests and Inspections:

1. Perform each visual and mechanical inspection and electrical test for low-voltage air circuit breakers and low-voltage surge arrestors stated in NETA ATS, Paragraph 7.6 Circuit Breakers[and Paragraph 7.19.1 Surge Arrestors, Low-Voltage.
2. Correct malfunctioning units on-site, where possible, and retest to demonstrate compliance; otherwise, replace with new units and retest.

C. Panelboards will be considered defective if they do not pass tests and inspections.

D. Prepare test and inspection reports.

3.5 ADJUSTING

A. Adjust moving parts and operable components to function smoothly and lubricate as recommended by manufacturer.

B. Set field-adjustable circuit-breaker trip ranges as specified in Section 260573.16 "Coordination Studies."

END OF SECTION 262416

SECTION 262726 - WIRING DEVICES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Straight-blade convenience, and tamper-resistant receptacles.
2. USB charger devices.
3. GFCI receptacles.
4. SPD receptacles.
5. Hazardous (classified) location receptacles.
6. Twist-locking receptacles.
7. Pendant cord-connector devices.
8. Cord and plug sets.
9. Toggle switches.
10. Decorator-style convenience.
11. Wall switch sensor light switches with dual technology sensors.
12. Wall switch sensor light switches with passive infrared sensors.
13. Wall switch sensor light switches with ultrasonic sensors.
14. Digital timer light switches.
15. Residential devices.
16. Wall-box dimmers.
17. Wall plates.
18. Floor service outlets.
19. Poke-through assemblies.
20. Prefabricated multioutlet assemblies.
21. Service poles.

1.3 DEFINITIONS

A. Abbreviations of Manufacturers' Names:

1. Cooper: Cooper Wiring Devices; Division of Cooper Industries, Inc.
2. Hubbell: Hubbell Incorporated: Wiring Devices-Kellems.
3. Leviton: Leviton Mfg. Company, Inc.
4. Pass & Seymour: Pass& Seymour/Legrand.

B. BAS: Building automation system.

C. EMI: Electromagnetic interference.

D. GFCI: Ground-fault circuit interrupter.

E. Pigtail: Short lead used to connect a device to a branch-circuit conductor.

F. RFI: Radio-frequency interference.

G. SPD: Surge protective device.

H. UTP: Unshielded twisted pair.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of product.

1.5 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For wiring devices to include in all manufacturers' packing-label warnings and instruction manuals that include labeling conditions.

1.6 MAINTENANCE MATERIAL SUBMITTALS

Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

PART 2 - PRODUCTS

2.1 GENERAL WIRING-DEVICE REQUIREMENTS

A. Wiring Devices, Components, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

B. Comply with NFPA 70.

C. Devices that are manufactured for use with modular plug-in connectors may be substituted under the following conditions:

1. Connectors shall comply with UL 2459 and shall be made with stranding building wire.
2. Devices shall comply with the requirements in this Section.

D. Devices for Owner-Furnished Equipment:

1. Receptacles: Match plug configurations.
2. Cord and Plug Sets: Match equipment requirements.

E. Source Limitations: Obtain each type of wiring device and associated wall plate from single source from single manufacturer.

2.2 STRAIGHT-BLADE RECEPTACLES

A. Duplex Convenience Receptacles: 125-V, 20-A; comply with NEMA WD 1, NEMA WD 6 Configuration 5-20R, UL 498, and FS W-C-596.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

a. Eaton (Arrow Hart).
b. Hubbell Incorporated; Wiring Device-Kellems.
c. Leviton Manufacturing Co., Inc.
d. Pass & Seymour/Legrand (Pass & Seymour).

B. Hospital-Grade, Duplex Convenience Receptacles: 125-V, 20-A; comply with NEMA WD 1, NEMA WD 6 Configuration 5-20R, UL 498 Supplement sd, and FS W-C-596.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

a. Eaton (Arrow Hart).
b. Hubbell Incorporated; Wiring Device-Kellems.
c. Leviton Manufacturing Co., Inc.
d. Manufactures: Approved for the application.

2. Description: Single-piece, rivetless, nickel-plated, all-brass grounding system. Nickel-plated, brass mounting strap.

C. Isolated-Ground, Duplex Convenience Receptacles: 125-V, 20-A; comply with NEMA WD 1, NEMA WD 6 Configuration 5-20R, UL 498, and FS W-C-596.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

a. Eaton (Arrow Hart).
b. Hubbell Incorporated; Wiring Device-Kellems.
c. Leviton Manufacturing Co., Inc.

D. Tamper-Resistant Convenience Receptacles: 125-V, 20-A; comply with NEMA WD 1, NEMA WD 6 Configuration 5-20R, UL 498, and FS W-C-596.

1. Description: Labeled and complying with NFPA 70, "Health Care Facilities" Article, "Pediatric Locations" Section.

2.3 USB CHARGER DEVICES

A. Tamper-Resistant, USB Charger Receptacles: 12-V dc, 2.0-A, USB Type A; comply with NEMA WD 1, NEMA WD 6 Configuration 5-20R, UL 498, UL 1310, and FS W-C-596.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

a. Eaton (Arrow Hart).
b. Hubbell Incorporated; Wiring Device-Kellems.

c. Leviton Manufacturing Co., Inc.

2. Description: Single-piece, rivetless, nickel-plated, all-brass grounding system. Nickel-plated, brass mounting strap.
3. USB Receptacles: as identified on the drawings Type A.
4. Line Voltage Receptacles: as identified on the drawings, two pole, three wire, and self-grounding.

B. Hospital-Grade, USB Charger Receptacles: 12-V dc, 2.0-A, USB Type A; comply with NEMA WD 1, NEMA WD 6 Configuration 5-20R, UL 498 Supplement sd, UL 1310, and FS W-C-596.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

a. Eaton (Arrow Hart).
b. Hubbell Incorporated; Wiring Device-Kellems.
c. Leviton Manufacturing Co., Inc.

2. Description: Labeled and complying with NFPA 70, "Health Care Facilities" Article, "Pediatric Locations" Section.
3. USB Receptacles: as identified on the drawings Type A.
4. Line Voltage Receptacles: as identified on the drawings, two pole, three wire, and self-grounding.

2.4 GFCI RECEPTACLES

A. General Description:

1. 125-V, 20-A, straight blade, feed and non-feed-through type as required by the application.
2. Comply with NEMA WD 1, NEMA WD 6 Configuration 5-20R, UL 498, UL 943 Class A, and FS W-C-596.
3. Include indicator light that shows when the GFCI has malfunctioned and no longer provides proper GFCI protection.

B. Tamper-Resistant, Duplex GFCI Convenience Receptacles:

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work.

C. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

a. Eaton (Arrow Hart).
b. Hubbell Incorporated; Wiring Device-Kellems.
c. Leviton Manufacturing Co., Inc.]

D. General Description: Comply with NEMA WD 1, NEMA WD 6 Configuration 5-20R, UL 498, UL 1449, and FS W-C-596, with integral SPD in line to ground, line to neutral, and neutral to ground.

1. 125-V, 20-A, straight-blade type.

2. SPD Components: Multiple metal-oxide varistors; with a nominal clamp-level rating of 400-V and minimum single transient pulse energy dissipation of 240 J, according to IEEE C62.41.2 and IEEE C62.45.
3. Active SPD Indication: Visual and audible, with light visible in face of device to indicate device is "active" or "no longer in service."

E. Duplex SPD Convenience Receptacles:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

    a. Eaton (Arrow Hart).
    b. Hubbell Incorporated; Wiring Device-Kellems.
    c. Leviton Manufacturing Co., Inc.

F. Isolated-Ground, Duplex SPD Convenience Receptacles:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

    a. Eaton (Arrow Hart).
    b. Hubbell Incorporated; Wiring Device-Kellems.
    c. Leviton Manufacturing Co., Inc.

2. Grounding: Equipment grounding contacts shall be connected only to the green grounding screw terminal of the device and with inherent electrical isolation from mounting strap. Isolation shall be integral to receptacle construction and not dependent on removable parts.

G. Hospital-Grade, Duplex SPD Convenience Receptacles: Comply with UL 498 Supplement sd.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

    a. Eaton (Arrow Hart).
    b. Hubbell Incorporated; Wiring Device-Kellems.
    c. Leviton Manufacturing Co., Inc.

H. Isolated-Ground Hospital-Grade Duplex SPD Convenience Receptacles: Comply with UL 498 Supplement.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

    a. Eaton (Arrow Hart).
    b. Hubbell Incorporated; Wiring Device-Kellems.
    c. Leviton Manufacturing Co., Inc.

2. Grounding: Equipment grounding contacts shall be connected only to the green grounding screw terminal of the device and with inherent electrical isolation from mounting strap. Isolation shall be integral to receptacle construction and not dependent on removable parts.

2.5 HAZARDOUS (CLASSIFIED) LOCATION RECEPTACLES

A. Hazardous (Classified) Locations Receptacles: Comply with NEMA FB 11 and UL 1010.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

   a. Eaton (Arrow Hart).
   b. EGS/Appleton Electric.

2.6 TWIST-LOCKING RECEPTACLES

A. Twist-Lock, Single Convenience Receptacles: 125-V, 20-A; comply with NEMA WD 1, NEMA WD 6 Configuration L5-20R, and UL 498.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

   a. Eaton (Arrow Hart).
   b. Hubbell Incorporated; Wiring Device-Kellems.
   c. Leviton Manufacturing Co., Inc.

B. Twist-Lock, Isolated-Ground, Single Convenience Receptacles: 125-V, 20-A; comply with NEMA WD 1, NEMA WD 6 Configuration L5-20R, and UL 498.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

   a. Eaton (Arrow Hart).
   b. Hubbell Incorporated; Wiring Device-Kellems.
   c. Leviton Manufacturing Co., Inc.

2. Grounding: Equipment grounding contacts shall be connected only to the green grounding screw terminal of the device and with inherent electrical isolation from mounting strap. Isolation shall be integral to receptacle construction and not dependent on removable parts.

2.7 PENDANT CORD-CONNECTOR DEVICES

A. Description:

1. Matching, locking-type plug and receptacle body connector.
2. NEMA WD 6 Configurations L5-20P and L5-20R, heavy-duty grade, and FS W-C-596.
3. Body: Nylon, with screw-open, cable-gripping jaws and provision for attaching external cable grip.
4. External Cable Grip: Woven wire-mesh type made of high-strength, galvanized-steel wire strand, matched to cable diameter, and with attachment provision designed for corresponding connector.

2.8 CORD AND PLUG SETS

A. Description:

1. Match voltage and current ratings and number of conductors to requirements of equipment being connected.
2. Cord: Rubber-insulated, stranded-copper conductors, with Type SOW-A jacket; with green-insulated grounding conductor and ampacity of at least 130 percent of the equipment rating.
3. Plug: Nylon body and integral cable-clamping jaws. Match cord and receptacle type for connection.

2.9 TOGGLE SWITCHES

A. Comply with NEMA WD 1, UL 20, and FS W-S-896.

B. Switches, 120/277-V, 20-A:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

    a. Eaton (Arrow Hart).
    b. Hubbell Incorporated; Wiring Device-Kellems.
    c. Leviton Manufacturing Co., Inc.

C. Pilot-Light Switches: 120/277-V, 20-A.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

    a. Eaton (Arrow Hart).
    b. Hubbell Incorporated; Wiring Device-Kellems.
    c. Leviton Manufacturing Co., Inc.

2. Description: Single pole, with LED-lighted handle, illuminated when switch is off.

D. Key-Operated Switches: 120/277-V, 20-A.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

    a. Eaton (Arrow Hart).
    b. Hubbell Incorporated; Wiring Device-Kellems.
    c. Leviton Manufacturing Co., Inc.

2. Description: Single pole, with factory-supplied key in lieu of switch handle.

E. Single-Pole, Double-Throw, Momentary-Contact, Center-off Switches: 120/277-V, 20-A; for use with mechanically held lighting contactors.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

a. Eaton (Arrow Hart).
b. Hubbell Incorporated; Wiring Device-Kellems.
c. Leviton Manufacturing Co., Inc.

F. Key-Operated, Single-Pole, Double-Throw, Momentary-Contact, Center-off Switches: 120/277-V, 20-A; for use with mechanically held lighting contactors, with factory-supplied key in lieu of switch handle.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

a. Eaton (Arrow Hart).
b. Hubbell Incorporated; Wiring Device-Kellems.
c. Leviton Manufacturing Co., Inc.

2.10 DECORA-STYLE DEVICES

A. Convenience Receptacles: Square face (Decora style), 125-V, 15-A; comply with NEMA WD 1, NEMA WD 6 Configuration 5-15R, and UL 498.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

a. Eaton (Arrow Hart).
b. Hubbell Incorporated; Wiring Device-Kellems.
c. Leviton Manufacturing Co., Inc.

B. Tamper-Resistant Convenience Receptacles: Square face, 125-V, 15-A; comply with NEMA WD 1, NEMA WD 6 Configuration 5-15R, and UL 498.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

a. Eaton (Arrow Hart).
b. Hubbell Incorporated; Wiring Device-Kellems.
c. Leviton Manufacturing Co., Inc.

2. Description: Labeled to comply with NFPA 70, "Receptacles, Cord Connectors, and Attachment Plugs (Caps)" Article, "Tamper-Resistant Receptacles in Dwelling Units" Section.

C. Tamper-Resistant and Weather-Resistant Convenience Receptacles: Square face, 125-V, 15-A; comply with NEMA WD 1, NEMA WD 6 Configuration 5-15R, and UL 498.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

a. Eaton (Arrow Hart).
b. Hubbell Incorporated; Wiring Device-Kellems.
c. Leviton Manufacturing Co., Inc.

2. Description: Labeled to comply with NFPA 70, "Receptacles, Cord Connectors, and Attachment Plugs (Caps)" Article, "Tamper-Resistant Receptacles in Dwelling Units" Section, when installed in wet and damp locations.]

D. GFCI, Feed Through Type, Convenience Receptacles: Square face, 125-V, 15-A; comply with NEMA WD 1, NEMA WD 6 Configuration 5-15R, UL 498, and UL 943 Class A.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

a. Eaton (Arrow Hart).
b. Hubbell Incorporated; Wiring Device-Kellems.
c. Leviton Manufacturing Co., Inc.

E. GFCI, Tamper-Resistant and Weather-Resistant Convenience Receptacles: Square face, 125-V, 15-A; comply with NEMA WD 1, NEMA WD 6 Configuration 5-15R, UL 498, and UL 943 Class A.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

a. Eaton (Arrow Hart).
b. Hubbell Incorporated; Wiring Device-Kellems.

2. Description: Labeled to comply with NFPA 70, "Receptacles, Cord Connectors, and Attachment Plugs (Caps)" Article, "Tamper-Resistant Receptacles in Dwelling Units" Section.

F. Toggle Switches: Square Face, 120/277-V, 15-A; comply with NEMA WD 1, UL 20, and FS W-S-896.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

a. Eaton (Arrow Hart).
b. Hubbell Incorporated; Wiring Device-Kellems.
c. Leviton Manufacturing Co., Inc.

G. Lighted Toggle Switches: Square Face, 120-V, 15-A; comply with NEMA WD 1 and UL 20.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

a. Eaton (Arrow Hart).
b. Hubbell Incorporated; Wiring Device-Kellems.
c. Leviton Manufacturing Co., Inc.

Description: With LED-lighted handle, illuminated when switch is off.

2.11 LIGHTING CONTROL DEVICES

A. Reference lighting control device sections for the following lighting control devices:

1. Wall Switch Sensor Light Switch, Dual Technology.
2. Wall Switch Sensor Light Switch, Passive Infrared.
3. Wall Switch Sensor Light Switch, Ultrasonic.
4. Digital Timer Light Switch.
5. Wall box dimmers.

2.12 WALL PLATES

A. Single and combination types shall match corresponding wiring devices.

1. Plate-Securing Screws: Metal with head color to match plate finish.

2. Material for Finished Spaces: As required by Division 01 of this specification.
3. Material for Unfinished Spaces: As required by Division 01 of this specification.

B. Wet-Location, Weatherproof Cover Plates: NEMA 250, complying with Type 3R, weather-resistant die-cast aluminum with lockable cover.

2.13 FINISHES

A. Device Color:

1. Wiring Devices Connected to Normal Power System: As selected by Architect unless otherwise indicated or required by NFPA 70 or device listing.

B. Wall Plate Color: For plastic covers, match device color.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Comply with NECA 1, including mounting heights listed in that standard, unless otherwise indicated.

B. Coordination with Other Trades:

1. Protect installed devices and their boxes. Do not place wall finish materials over device boxes and do not cut holes for boxes with routers that are guided by riding against outside of boxes.
2. Keep outlet boxes free of plaster, drywall joint compound, mortar, cement, concrete, dust, paint, and other material that may contaminate the raceway system, conductors, and cables.
3. Install device boxes in brick or block walls so that the cover plate does not cross a joint unless the joint is troweled flush with the face of the wall.
4. Install wiring devices after all wall preparation, including painting, is complete.

C. Conductors:

1. Do not strip insulation from conductors until right before they are spliced or terminated on devices.
2. Strip insulation evenly around the conductor using tools designed for the purpose. Avoid scoring or nicking of solid wire or cutting strands from stranded wire.
3. The length of free conductors at outlets for devices shall meet provisions of NFPA 70, Article 300, without pigtails.
4. Existing Conductors:

    a. Cut back and pigtail or replace all damaged conductors.
    b. Straighten conductors that remain and remove corrosion and foreign matter.
    c. Pigtailing existing conductors is permitted, provided the outlet box is large enough.

D. Device Installation:

1. Replace devices that have been in temporary use during construction and that were installed before building finishing operations were complete.
2. Keep each wiring device in its package or otherwise protected until it is time to connect conductors.
3. Do not remove surface protection, such as plastic film and smudge covers, until the last possible moment.
4. Connect devices to branch circuits using pigtails that are not less than 6-inches (152-mm) in length.
5. When there is a choice, use side wiring with binding-head screw terminals. Wrap solid conductor tightly clockwise, two-thirds to three-fourths of the way around terminal screw.
6. Use a torque screwdriver when a torque is recommended or required by manufacturer.
7. When conductors larger than No. 12 AWG are installed on 15- or 20-A circuits, splice No. 12 AWG pigtails for device connections.
8. Tighten unused terminal screws on the device.
9. When mounting into metal boxes, remove the fiber or plastic washers used to hold device-mounting screws in yokes, allowing metal-to-metal contact.

E. Receptacle Orientation:

1. Install ground pin of vertically mounted receptacles **down**, and on horizontally mounted receptacles to the **right**.

2. Install hospital-grade receptacles in patient-care areas with the ground pin or neutral blade at the top.

F. Device Plates: Do not use oversized or extra-deep plates. Repair wall finishes and remount outlet boxes when standard device plates do not fit flush or do not cover rough wall opening.

G. Dimmers:

1. Install dimmers within terms of their listing.
2. Verify that dimmers used for fan-speed control are listed for that application.
3. Install unshared neutral conductors online and load side of dimmers according to manufacturers' device listing conditions in the written instructions.

H. Arrangement of Devices: Unless otherwise indicated, mount flush, with long dimension vertical and with grounding terminal of receptacles on top. Group adjacent switches under single, multigang wall plates.

I. Adjust locations of floor service outlets and service poles to suit arrangement of partitions and furnishings.

3.2 GFCI RECEPTACLES

A. Install non-feed-through-type GFCI receptacles where protection of downstream receptacles is not required.

3.3 IDENTIFICATION

A. Comply with Section 260553 "Identification for Electrical Systems."

B. Identify each receptacle with panelboard identification and circuit number. Use hot, stamped, or engraved machine printing with **black**-filled lettering on face of plate, and durable wire markers or tags inside outlet boxes.

3.4 FIELD QUALITY CONTROL

A. Test Instruments: Use instruments that comply with UL 1436.

END OF SECTION 262726

SECTION 262813 - FUSES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Cartridge fuses rated 600-V ac and less for use in the following:

    a. Control circuits.
    b. Motor-control centers.
    c. Panelboards.
    d. Switchboards.
    e. Enclosed controllers.
    f. Enclosed switches.

2. Spare-fuse cabinets.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for spare-fuse cabinets. Include the following for each fuse type indicated:

1. Ambient Temperature Adjustment Information: If ratings of fuses have been adjusted to accommodate ambient temperatures, provide list of fuses with adjusted ratings.

    a. For each fuse having adjusted ratings, include location of fuse, original fuse rating, local ambient temperature, and adjusted fuse rating.
    b. Provide manufacturer's technical data on which ambient temperature adjustment calculations are based.

2. Dimensions and manufacturer's technical data on features, performance, electrical characteristics, and ratings.

3. Current-limitation curves for fuses with current-limiting characteristics.

4. Time-current coordination curves (average melt) and current-limitation curves (instantaneous peak let-through current) for each type and rating of fuse. Submit in PDF format.
5. Coordination charts and tables and related data.

6. Fuse sizes for elevator feeders and elevator disconnect switches.

1.4 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For fuses to include in emergency, operation, and maintenance manuals. In addition to items specified in **Section 017700 "Closeout Procedures,"** include the following:

1. Ambient temperature adjustment information.
2. Current-limitation curves for fuses with current-limiting characteristics.
3. Time-current coordination curves (average melt) and current-limitation curves (instantaneous peak let-through current) for each type and rating of fuse used on the Project. Submit **in electronic format suitable for use in coordination software**] [**and**] [**in PDF format**.
4. Coordination charts and tables and related data.

1.5 MAINTENANCE MATERIAL SUBMITTALS

A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Fuses: Equal to **ten** percent of quantity installed for each size and type, but no fewer than **three** of each size and type.

1.6 FIELD CONDITIONS

A. Where ambient temperature to which fuses are directly exposed is less than **40 deg F** more than **100 deg F**, apply manufacturer's ambient temperature adjustment factors to fuse ratings.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Bussmann, an Eaton business.
2. Mersen (formerly Ferraz Shawmut): ferrazshawmut.mersen.com
3. Littelfuse, Inc.

B. Source Limitations: Obtain fuses, for use within a specific product or circuit, from single source from single manufacturer.

2.2 CARTRIDGE FUSES

A. Characteristics: NEMA FU 1, current-limiting, nonrenewable cartridge fuses with voltage ratings consistent with circuit voltages.

1. Main Service Switches Larger than 600 amperes: Class L (time delay) with interrupting rating at 200,000 amperes RMS.
2. Main Service Switches: Class RK1 (time delay) with interrupting rating of 200,000 amperes RMS.
3. Power Load Feeder Switches Larger than 600 amperes: Class L (time delay).
4. Power Load Feeder Switches: Class RK1 (time delay).
5. Motor Load Feeder Switches: Class Hi-cap, Type KRP-C, UL Class L.
6. Lighting Load Feeder Switches Larger than 600 amperes: Class L time delay.
7. Lighting Load Feeder Switches: Class RK1 (time delay).
8. Other Feeder Switches Larger than 600 amperes: L time delay.
9. Other Feeder Switches: Class RK1 (time delay).
10. General Purpose Branch Circuits: Class RK1 (time delay).
11. Motor Branch Circuits: Class L time delay.

B. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

C. Comply with NEMA FU 1 for cartridge fuses.

D. Comply with NFPA 70.

E. Coordinate fuse ratings with utilization equipment nameplate limitations of maximum fuse size and with system short-circuit current levels.

2.3 SPARE-FUSE CABINET

A. Characteristics: Wall-mounted steel unit with full-length, recessed piano-hinged door and key-coded cam lock and pull.

1. Size: Adequate for storage of spare fuses specified with [**15**] <**Insert number**> percent spare capacity minimum.
2. Finish: Gray, baked enamel.
3. Identification: "SPARE FUSES" in 1-1/2-inch high letters on exterior of door.
4. Fuse Pullers: For each size of fuse, where applicable and available, from fuse manufacturer.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine fuses before installation. Reject fuses that are moisture damaged or physically damaged.

B. Examine holders to receive fuses for compliance with installation tolerances and other conditions affecting performance, such as rejection features.

C. Examine utilization equipment nameplates and installation instructions. Install fuses of sizes and with characteristics appropriate for each piece of equipment.

D. Evaluate ambient temperatures to determine if fuse rating adjustment factors must be applied to fuse ratings.

E. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 FUSE APPLICATIONS

A. Cartridge Fuses:

1. Main Service Switches Larger than 600 amperes: Class L (time delay) with interrupting rating at 200,000 amperes RMS.
2. Main Service Switches: Class RK1 (time delay) with interrupting rating of 200,000 amperes RMS.
3. Power Load Feeder Switches Larger than 600 amperes: Class L (time delay).
4. Power Load Feeder Switches: Class RK1 (time delay).
5. Motor Load Feeder Switches: Class Hi-cap, Type KRP-C, UL Class L.
6. Lighting Load Feeder Switches Larger than 600 amperes: Class L time delay.
7. Lighting Load Feeder Switches: Class RK1 (time delay).
8. Other Feeder Switches Larger than 600 amperes: L time delay.
9. Other Feeder Switches: Class RK1 (time delay).
10. General Purpose Branch Circuits: Class RK1 (time delay).
11. Motor Branch Circuits: Class L time delay.
12. Control Transformer Circuits: Class CC, time delay, control transformer duty.
13. Provide open-fuse indicator fuses or fuse covers with open fuse indication.

3.3 INSTALLATION

A. Install fuses in fusible devices. Arrange fuses so rating information is readable without removing fuse.

B. Install spare-fuse cabinet(s) in location shown on the Drawings or as indicated in the field by **Owner**.

C. Do not install fuses until circuits are ready to be energized.

D. Install fuses with label oriented such that manufacturer, type, and size are easily read.

3.4 IDENTIFICATION

A. Install labels complying with requirements for identification specified in Section 260553 "Identification for Electrical Systems" and indicating fuse replacement information inside of door of each fused switch and adjacent to each fuse block, socket, and holder.

END OF SECTION 262813

SECTION 262816 - ENCLOSED SWITCHES AND CIRCUIT BREAKERS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Fusible switches.
2. Nonfusible switches.
3. Receptacle switches.
4. Shunt trip switches.
5. Molded-case circuit breakers (MCCBs).
6. Molded-case switches.
7. Enclosures.

1.3 DEFINITIONS

A. NC: Normally closed.

B. NO: Normally open.

C. SPDT: Single pole, double throw.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of enclosed switch, circuit breaker, accessory, and component indicated. Include nameplate ratings, dimensioned elevations, sections, weights, and manufacturers' technical data on features, performance, electrical characteristics, ratings, accessories, and finishes.

1. Enclosure types and details for types other than NEMA 250, Type 1.
2. Current and voltage ratings.
3. Short-circuit current ratings (interrupting and withstand, as appropriate).

4. Include evidence of a nationally recognized testing laboratory (NRTL) listing for series rating of installed devices.
5. Detail features, characteristics, ratings, and factory settings of individual overcurrent protective devices, accessories, and auxiliary components.

6. Include time-current coordination curves (average melt) for each type and rating of overcurrent protective device; include selectable ranges for each type of overcurrent protective device. Provide in PDF electronic format.

B. Shop Drawings: For enclosed switches and circuit breakers.

1. Include plans, elevations, sections, details, and attachments to other work.
2. Include wiring diagrams for power, signal, and control wiring.

1.5 INFORMATIONAL SUBMITTALS

A. Qualification Data: For qualified testing agency.

B. Seismic Qualification Certificates: For enclosed switches and circuit breakers, accessories, and components, from manufacturer.

1. Basis for Certification: Indicate whether withstand certification is based on actual test of assembled components or on calculation.
2. Dimensioned Outline Drawings of Equipment Unit: Identify center of gravity and locate and describe mounting and anchorage provisions.
3. Detailed description of equipment anchorage devices on which the certification is based and their installation requirements.

C. Field quality-control reports.

1.6 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For enclosed switches and circuit breakers to include in emergency, operation, and maintenance manuals.

1. In addition to items specified in Section 017823 "Operation and Maintenance Data," include the following:

a. Manufacturer's written instructions for testing and adjusting enclosed switches and circuit breakers.
b. Time-current coordination curves (average melt) for each type and rating of overcurrent protective device; include selectable ranges for each type of overcurrent protective device. Provide in PDF electronic format.

1.7 MAINTENANCE MATERIAL SUBMITTALS

A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Fuses: Equal to 10 percent of quantity installed for each size and type, but no fewer than three of each size and type.
2. Fuse Pullers: Two for each size and type.

1.8 QUALITY ASSURANCE

A. Testing Agency Qualifications: Accredited by NETA.

1. Testing Agency's Field Supervisor: Currently certified by NETA to supervise on-site testing.

1.9 FIELD CONDITIONS

A. Environmental Limitations: Rate equipment for continuous operation under the following conditions unless otherwise indicated:

1. Ambient Temperature: Not less than minus 22 deg F and not exceeding 104 deg F.
2. Altitude: Not exceeding 6600-ft.

1.10 WARRANTY

A. Manufacturer's Warranty: Manufacturer and Installer agree to repair or replace components that fail in materials or workmanship within specified warranty period.

1. Warranty Period: One year from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Seismic Performance: Enclosed switches and circuit breakers shall withstand the effects of earthquake motions determined according to ASCE/SEI 7.

1. The term "withstand" means "the unit will remain in place without separation of any parts from the device when subjected to the seismic forces specified and the unit will be fully operational after the seismic event."

2.2 GENERAL REQUIREMENTS

A. Source Limitations: Obtain enclosed switches and circuit breakers, overcurrent protective devices, components, and accessories, within same product category, from single manufacturer.

B. Product Selection for Restricted Space: Drawings indicate maximum dimensions for enclosed switches and circuit breakers, including clearances between enclosures, and adjacent surfaces and other items. Comply with indicated maximum dimensions.

C. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by an NRTL, and marked for intended location and application.

D. Comply with NFPA 70.

2.3 NONFUSIBLE SWITCHES

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Eaton Corporation; Cutler-Hammer Products: www.eaton.com.
2. General Electric Company: www.geindustrial.com.
3. Schneider Electric; Square D Products: www.schneider-electric.us.

B. Type GD, General Duty, Three Pole, Single Throw, 240-V ac, 600-A and Smaller: UL 98 and NEMA KS 1, horsepower rated, lockable handle with capability to accept two padlocks, and interlocked with cover in closed position.

C. Type HD, Heavy Duty, Three Pole, Single Throw, [240] [600]-V ac, 1200-A and Smaller: UL 98 and NEMA KS 1, horsepower rated, lockable handle with capability to accept three padlocks, and interlocked with cover in closed position.

D. Type HD, Heavy Duty, Six Pole, Single Throw, [240] [600]-V ac, 200-A and Smaller: UL 98 and NEMA KS 1, horsepower rated, lockable handle with capability to accept three padlocks, and interlocked with cover in closed position.

E. Accessories:

1. Equipment Ground Kit: Internally mounted and labeled for copper and aluminum ground conductors.
2. Neutral Kit: Internally mounted; insulated, capable of being grounded and bonded; labeled for copper and aluminum neutral conductors.
3. Isolated Ground Kit: Internally mounted; insulated, labeled for copper and aluminum neutral conductors.

4. Lugs: Mechanical type, suitable for number, size, and conductor material.
5. Service-Rated Switches: Labeled for use as service equipment.

2.4 MOLDED-CASE CIRCUIT BREAKERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Eaton Corporation; Cutler-Hammer Products: www.eaton.com.
2. General Electric Company: www.geindustrial.com.
3. Schneider Electric; Square D Products: www.schneider-electric.us.

B. Circuit breakers shall be constructed using glass-reinforced insulating material. Current carrying components shall be completely isolated from the handle and the accessory mounting area.

C. Circuit breakers shall have a toggle operating mechanism with common tripping of all poles, which provides quick-make, quick-break contact action. The circuit-breaker handle shall be over center, be trip free, and reside in a tripped position between on and off to provide local trip indication. Circuit-breaker escutcheon shall be clearly marked on and off in addition to providing international I/O markings. Equip circuit breaker with a push-to-trip button, located on the face of the circuit breaker to mechanically operate the circuit-breaker tripping mechanism for maintenance and testing purposes.

D. The maximum ampere rating and UL, IEC, or other certification standards with applicable voltage systems and corresponding interrupting ratings shall be clearly marked on face of circuit breaker. Circuit breakers shall be 100 percent rated or series rated as indicated on the Drawings. Circuit breaker/circuit breaker combinations for series connected interrupting ratings shall be listed by UL as recognized component combinations. Any series rated combination used shall be marked on the end-use equipment along with the statement "Caution - Series Rated System. _____-Amps Available. Identical Replacement Component Required."

E. MCCBs shall be equipped with a device for locking in the isolated position.

F. Lugs shall be suitable for 194 deg F rated wire, sized according to the 167 deg F temperature rating in NFPA 70.

G. Standards: Comply with UL 489 and NEMA AB 3, with interrupting capacity to comply with available fault currents.

H. Thermal-Magnetic Circuit Breakers: Inverse time-current thermal element for low-level overloads and instantaneous magnetic trip element for short circuits. Adjustable magnetic trip setting for circuit-breaker frame sizes 250-A and larger.

I. Adjustable, Instantaneous-Trip Circuit Breakers: Magnetic trip element with front-mounted, field-adjustable trip setting.

J. Electronic Trip Circuit Breakers: Field-replaceable rating plug, rms sensing, with the following field-adjustable settings:

1. Instantaneous trip.
2. Long- and short-time pickup levels.
3. Long- and short-time time adjustments.
4. Ground-fault pickup level, time delay, and I-squared t response.

K. Current-Limiting Circuit Breakers: Frame sizes 400-A and smaller, and let-through ratings less than NEMA FU 1, RK-5.

L. Integrally Fused Circuit Breakers: Thermal-magnetic trip element with integral limiter-style fuse listed for use with circuit breaker and trip activation on fuse opening or on opening of fuse compartment door.

M. Ground-Fault Circuit-Interrupter (GFCI) Circuit Breakers: Single- and two-pole configurations with Class A ground-fault protection (6-mA trip).

N. Ground-Fault Equipment-Protection (GFEP) Circuit Breakers: With Class B ground-fault protection (30-mA trip).

O. Features and Accessories:

1. Standard frame sizes, trip ratings, and number of poles.

2. Lugs: Mechanical type, suitable for number, size, trip ratings, and conductor material.
3. Application Listing: Appropriate for application; Type SWD for switching fluorescent lighting loads; Type HID for feeding fluorescent and high-intensity discharge lighting circuits.

4. Ground-Fault Protection: Comply with UL 1053; integrally mounted, self-powered type with mechanical ground-fault indicator; relay with adjustable pickup and time-delay settings, push-to-test feature, internal memory, and shunt trip unit; and three-phase, zero-sequence current transformer/sensor.
5. Shunt Trip: Trip coil energized from separate circuit, with coil-clearing contact.

6. Undervoltage Trip: Set to operate at 35 to 75 percent of rated voltage without intentional time delay.
7. Auxiliary Contacts: One SPDT switch with "a" and "b" contacts; "a" contacts mimic circuit-breaker contacts, "b" contacts operate in reverse of circuit-breaker contacts.
8. Alarm Switch: One NC contact that operates only when circuit breaker has tripped.
9. Key Interlock Kit: Externally mounted to prohibit circuit-breaker operation; key shall be removable only when circuit breaker is in off position.

10. Electrical Operator: Provide remote control for on, off, and reset operations.

11. Accessory Control Power Voltage: Integrally mounted, self-powered; 120-V ac.

2.5 MOLDED-CASE SWITCHES

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Eaton Corporation; Cutler-Hammer Products: www.eaton.com.
2. General Electric Company: www.geindustrial.com.
3. Schneider Electric; Square D Products: www.schneider-electric.us.

B. Description: MCCB with fixed, high-set instantaneous trip only, and short-circuit withstand rating equal to equivalent breaker frame size interrupting rating.

C. Features and Accessories:

1. Standard frame sizes and number of poles.

2. Lugs:

   a. [Mechanical] [Compression] type, suitable for number, size, trip ratings, and conductor material.
   b. Lugs shall be suitable for 194 deg F rated wire, sized according to the 167 deg F temperature rating in NFPA 70.

3. Ground-Fault Protection: Comply with UL 1053; remote-mounted and powered type with mechanical ground-fault indicator; relay with adjustable pickup and time-delay settings, push-to-test feature, internal memory, and shunt trip unit; and three-phase, zero-sequence current transformer/sensor.
4. Shunt Trip: Trip coil energized from separate circuit, with coil-clearing contact.

5. Undervoltage Trip: Set to operate at 35 to 75 percent of rated voltage without intentional time delay.
6. Auxiliary Contacts: [One SPDT switch] [Two SPDT switches] with "a" and "b" contacts; "a" contacts mimic switch contacts, "b" contacts operate in reverse of switch contacts.
7. Alarm Switch: One [NO] [NC] contact that operates only when switch has tripped.

8. Key Interlock Kit: Externally mounted to prohibit switch operation; key shall be removable only when switch is in off position.
9. Zone-Selective Interlocking: Integral with ground-fault shunt trip unit; for interlocking ground-fault protection function.
10. Electrical Operator: Provide remote control for on, off, and reset operations.

2.6 ENCLOSURES

A. Enclosed Switches and Circuit Breakers: UL 489, NEMA KS 1, NEMA 250, and UL 50, to comply with environmental conditions at installed location.

B. Enclosure Finish: The enclosure shall be finished with gray baked enamel paint, electrodeposited on cleaned, phosphatized steel (NEMA 250 Type 1)

C. Conduit Entry: NEMA 250 Types 4, 4X, and 12 enclosures shall contain no knockouts. NEMA 250 Types 7 and 9 enclosures shall be provided with threaded conduit openings in both endwalls.

D. Operating Mechanism: The circuit-breaker operating handle shall be externally operable with the operating mechanism being an integral part of the box, not the cover] [directly operable through the front cover of the enclosure (NEMA 250 Type 1) The cover interlock mechanism shall have an externally operated override. The override shall not permanently disable the interlock mechanism, which shall return to the locked position once the override is released. The tool used to override the cover interlock mechanism shall not be required to enter the enclosure in order to override the interlock.

E. Enclosures designated as NEMA 250 Type 4, 4X stainless steel, 12, or 12K shall have a dual cover interlock mechanism to prevent unintentional opening of the enclosure cover when the circuit breaker is ON and to prevent turning the circuit breaker ON when the enclosure cover is open.

F. NEMA 250 Type 7/9 enclosures shall be furnished with a breather and drain kit to allow their use in outdoor and wet location applications.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine elements and surfaces to receive enclosed switches and circuit breakers for compliance with installation tolerances and other conditions affecting performance of the Work.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

1. Commencement of work shall indicate Installer's acceptance of the areas and conditions as satisfactory.

3.2 PREPARATION

A. Interruption of Existing Electric Service: Do not interrupt electric service to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary electric service according to requirements indicated:

1. Notify Owner no fewer than seven days in advance of proposed interruption of electric service.
2. Indicate method of providing temporary electric service.
3. Do not proceed with interruption of electric service without Owner's written permission.
4. Comply with NFPA 70E.

3.3 ENCLOSURE ENVIRONMENTAL RATING APPLICATIONS

A. Enclosed Switches and Circuit Breakers: Provide enclosures at installed locations with the following environmental ratings.

1. Indoor, Dry and Clean Locations: NEMA 250, Type 1.
2. Outdoor Locations: NEMA 250, Type 3R
3. Wash-Down Areas: NEMA 250, Type 4X
4. Other Wet or Damp, Indoor Locations: NEMA 250, Type 4.
5. Indoor Locations Subject to Dust, Falling Dirt, and Dripping Noncorrosive Liquids: NEMA 250, Type 12.

6. Hazardous Areas Indicated on Drawings: NEMA 250, Type 7 with cover attached by Type 316 stainless steel bolts.

3.4 INSTALLATION

A. Coordinate layout and installation of switches, circuit breakers, and components with equipment served and adjacent surfaces. Maintain required workspace clearances and required clearances for equipment access doors and panels.

B. Install individual wall-mounted switches and circuit breakers with tops at uniform height unless otherwise indicated.

C. Comply with mounting and anchoring requirements specified in Section 260548.16 "Seismic Controls for Electrical Systems."

D. Temporary Lifting Provisions: Remove temporary lifting of eyes, channels, and brackets and temporary blocking of moving parts from enclosures and components.

E. Install fuses in fusible devices.

F. Comply with NFPA 70 and NECA 1.

3.5 IDENTIFICATION

A. Comply with requirements in Section 260553 "Identification for Electrical Systems."

1. Identify field-installed conductors, interconnecting wiring, and components; provide warning signs.
2. Label each enclosure with engraved metal or laminated-plastic nameplate.

3.6 FIELD QUALITY CONTROL

A. Testing Agency: Owner will engage a qualified testing agency to perform tests and inspections.

B. Testing Agency: Engage a qualified testing agency to perform tests and inspections.

C. Manufacturer's Field Service: Engage a factory-authorized service representative to test and inspect components, assemblies, and equipment installations, including connections.

D. Perform tests and inspections[with the assistance of a factory-authorized service representative].

E. Tests and Inspections for Switches:

1. Visual and Mechanical Inspection:

a. Inspect physical and mechanical condition.
b. Inspect anchorage, alignment, grounding, and clearances.
c. Verify that the unit is clean.
d. Verify blade alignment, blade penetration, travel stops, and mechanical operation.
e. Verify that fuse sizes and types match the Specifications and Drawings.
f. Verify that each fuse has adequate mechanical support and contact integrity.
g. Inspect bolted electrical connections for high resistance using one of the two following methods:

1) Use a low-resistance ohmmeter.

a) Compare bolted connection resistance values to values of similar connections. Investigate values that deviate from those of similar bolted connections by more than 50 percent of the lowest value.

2) Verify tightness of accessible bolted electrical connections by calibrated torque-wrench method in accordance with manufacturer's published data or NETA ATS Table 100.12.

a) Bolt-torque levels shall be in accordance with manufacturer's published data. In the absence of manufacturer's published data, use NETA ATS Table 100.12.

h. Verify that operation and sequencing of interlocking systems is as described in the Specifications and shown on the Drawings.
i. Verify correct phase barrier installation.
j. Verify lubrication of moving current-carrying parts and moving and sliding surfaces.

2. Electrical Tests:

a. Perform resistance measurements through bolted connections with a low-resistance ohmmeter. Compare bolted connection resistance values to values of

similar connections. Investigate values that deviate from adjacent poles or similar switches by more than 50 percent of the lowest value.

b. Measure contact resistance across each switchblade fuseholder. Drop values shall not exceed the high level of the manufacturer's published data. If manufacturer's published data are not available, investigate values that deviate from adjacent poles or similar switches by more than 50 percent of the lowest value.

c. Perform insulation-resistance tests for one minute on each pole, phase-to-phase and phase-to-ground with switch closed, and across each open pole. Apply voltage in accordance with manufacturer's published data. In the absence of manufacturer's published data, use Table 100.1 from the NETA ATS. Investigate values of insulation resistance less than those published in Table 100.1 or as recommended in manufacturer's published data.

d. Measure fuse resistance. Investigate fuse-resistance values that deviate from each other by more than 15 percent.

e. Perform ground fault test according to NETA ATS 7.14 "Ground Fault Protection Systems, Low-Voltage."

F. Tests and Inspections for Molded Case Circuit Breakers:

1. Visual and Mechanical Inspection:

a. Verify that equipment nameplate data are as described in the Specifications and shown on the Drawings.

b. Inspect physical and mechanical condition.

c. Inspect anchorage, alignment, grounding, and clearances.

d. Verify that the unit is clean.

e. Operate the circuit breaker to ensure smooth operation.

f. Inspect bolted electrical connections for high resistance using one of the two following methods:

1) Use a low-resistance ohmmeter.

a) Compare bolted connection resistance values to values of similar connections. Investigate values that deviate from those of similar bolted connections by more than 50 percent of the lowest value.

2) Verify tightness of accessible bolted electrical connections by calibrated torque-wrench method in accordance with manufacturer's published data or NETA ATS Table 100.12.

a) Bolt-torque levels shall be in accordance with manufacturer's published data. In the absence of manufacturer's published data, use NETA ATS Table 100.12.

g. Inspect operating mechanism, contacts, and chutes in unsealed units.

h. Perform adjustments for final protective device settings in accordance with the coordination study.

2. Electrical Tests:

a. Perform resistance measurements through bolted connections with a low-resistance ohmmeter. Compare bolted connection resistance values to values of

similar connections. Investigate values that deviate from adjacent poles or similar switches by more than 50 percent of the lowest value.

b. Perform insulation-resistance tests for one minute on each pole, phase-to-phase and phase-to-ground with circuit breaker closed, and across each open pole. Apply voltage in accordance with manufacturer's published data. In the absence of manufacturer's published data, use Table 100.1 from the NETA ATS. Investigate values of insulation resistance less than those published in Table 100.1 or as recommended in manufacturer's published data.

c. Perform a contact/pole resistance test. Drop values shall not exceed the high level of the manufacturer's published data. If manufacturer's published data are not available, investigate values that deviate from adjacent poles or similar switches by more than 50 percent of the lowest value.

d. Perform insulation resistance tests on all control wiring with respect to ground. Applied potential shall be 500-V dc for 300-V rated cable and 1000-V dc for 600-V rated cable. Test duration shall be one minute. For units with solid state components, follow manufacturer's recommendation. Insulation resistance values shall be no less than two megohms.

e. Determine the following by primary current injection:

1) Long-time pickup and delay. Pickup values shall be as specified. Trip characteristics shall not exceed manufacturer's published time-current characteristic tolerance band, including adjustment factors.
2) Short-time pickup and delay. Short-time pickup values shall be as specified. Trip characteristics shall not exceed manufacturer's published time-current characteristic tolerance band, including adjustment factors.
3) Ground-fault pickup and time delay. Ground-fault pickup values shall be as specified. Trip characteristics shall not exceed manufacturer's published time-current characteristic tolerance band, including adjustment factors.
4) Instantaneous pickup. Instantaneous pickup values shall be as specified and within manufacturer's published tolerances.

f. Test functionality of the trip unit by means of primary current injection. Pickup values and trip characteristics shall be as specified and within manufacturer's published tolerances.

g. Perform minimum pickup voltage tests on shunt trip and close coils in accordance with manufacturer's published data. Minimum pickup voltage of the shunt trip and close coils shall be as indicated by manufacturer.

h. Verify correct operation of auxiliary features such as trip and pickup indicators; zone interlocking; electrical close and trip operation; trip-free, anti-pump function; and trip unit battery condition. Reset all trip logs and indicators. Investigate units that do not function as designed.

i. Verify operation of charging mechanism. Investigate units that do not function as designed.

3. Correct malfunctioning units on-site, where possible, and retest to demonstrate compliance; otherwise, replace with new units and retest.

4. Perform the following infrared scan tests and inspections and prepare reports:

a. Initial Infrared Scanning: After Substantial Completion, but not more than sixty days after Final Acceptance, perform an infrared scan of each enclosed switch and circuit breaker. Remove front panels so joints and connections are accessible to portable scanner.

b. Follow-up Infrared Scanning: Perform an additional follow-up infrared scan of each enclosed switch and circuit breaker eleven months after date of Substantial Completion.

c. Instruments and Equipment: Use an infrared scanning device designed to measure temperature or to detect significant deviations from normal values. Provide calibration record for device.

5. Test and adjust controls, remote monitoring, and safeties. Replace damaged and malfunctioning controls and equipment.

G. Enclosed switches and circuit breakers will be considered defective if they do not pass tests and inspections.

H. Prepare test and inspection reports.

1. Test procedures used.
2. Include identification of each enclosed switch and circuit breaker tested and describe test results.
3. List deficiencies detected, remedial action taken, and observations after remedial action.

3.7 ADJUSTING

A. Adjust moving parts and operable components to function smoothly and lubricate as recommended by manufacturer.

B. Set field-adjustable circuit-breaker trip ranges to values indicated on the Drawings.

END OF SECTION 262816

SECTION 265100 - INTERIOR LIGHTING SYSTEMS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes the all Luminaires used on the interior of the building.

B. Related Requirements:

1. Section 260923 “Lighting Control Devices.”
2. Section 260943 “Digital Lighting Controls - Central Panel.”
3. Section 265000 “General Lighting Provisions.”
4. Section 265600 “LED Exterior Lighting Systems.”

1.3 DEFINITIONS

A. CCT: Correlated color temperature.

B. CRI: Color Rendering Index.

C. Fixture: See "Luminaire."

D. IP: International Protection or Ingress Protection Rating.

E. LED: Light-emitting diode.

F. Lumen: Measured output of lamp and luminaire, or both.

G. Luminaire: Complete lighting unit, including lamp, reflector, and housing.

1.4 SUBMITTALS, SAMPLES, HANDLINGAND SHOP DRAWINGS

A. See Section 265000 “General Lighting Provisions.”

B. See Luminaire Schedule located on drawings for additional information.

1.5 WARRANTY

A. See Section 265000 “General Lighting Provisions.”

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Seismic Performance: Luminaires shall withstand the effects of earthquake motions determined according to [ASCE 7] <Insert requirement>.

B. Seismic Performance: Luminaires and lamps shall be labeled vibration and shock resistant.

1. The term "withstand" means "the luminaire will remain in place without separation of any parts when subjected to the seismic forces specified[and the luminaire will be fully operational during and after the seismic event]."

2.2 LUMINAIRE REQUIREMENTS

A. Manufacturers: See Luminaire Schedule on drawings for acceptable manufacturers of individual luminaires.

B. General:

1. Furnish all luminaires of type, kind and with the light sources as indicated in the Luminaire Schedule, on drawings and/or specified herein.
2. All luminaires shall be free of light leaks, warps, or other irregularities. Lenses shall be free of cracks, chips or discolorations.
3. All metal surfaces shall be bonderized, galvanized, or sheradized after fabrication and treated to provide rust inhibiting and finish coat adherence properties.
4. All luminaires installed where exposed to weather and/or cold temperatures shall be weatherproof and suitable for efficient operation at the temperatures and conditions encountered.

2.3 METAL FINISHES

A. Variations in finishes are unacceptable in the same piece. Variations in finishes of adjoining components are acceptable if they are within the range of approved Samples and if they can be and are assembled or installed to minimize contrast.

2.4 LUMINAIRE SUPPORT

A. Comply with Division 26 Section “Basic Electrical Materials and Methods” for channel and angle iron supports and nonmetallic channel and angle supports.

B. Provide luminaire hickeys, fixture studs, seismic components, emergency lighting components, “red iron” supports, etc., as required for appropriate installation.

C. Aircraft Cable Support: Use cable, anchorages, and intermediate supports recommended by luminaire manufacturer.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

B. Examine roughing-in for luminaire to verify actual locations of luminaire and electrical connections before luminaire installation. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. General:

1. Comply with NECA 1.
2. Install luminaires level, plumb, and square with ceilings and walls unless otherwise indicated.
3. Completely connect and securely mount all luminaires. Provide all additional supports and hangers as may be necessary to securely fasten and support all luminaires to ceiling or structure, adhering to adhering to all local codes and conditions.
4. Clean luminaires, remove construction dirt, dust, paints, etc., and leave luminaires in first class condition upon completion of work.
5. Continuous rows of luminaires shall be installed such that the rows of the continuous system are without visible vertical or horizontal undulation.

B. Supports:

1. Sized and rated for luminaire weight.
2. Able to maintain luminaire position after cleaning and relamping.
3. Provide support for luminaire without causing deflection of ceiling or wall.
4. Luminaire mounting devices shall be capable of supporting a horizontal force of 100 percent of luminaire weight and vertical force of 400 percent of luminaire weight.

END OF SECTION 265100

SECTION 265619 – LED EXTERIOR LIGHTING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Exterior solid-state luminaires that are designed for and exclusively use LED lamp technology.
2. Luminaire supports.
3. Luminaire-mounted photoelectric relays.

B. Related Requirements:

1. Section 260923 "Lighting Control Devices" for automatic control of lighting, including time switches, photoelectric relays, occupancy sensors, and multipole lighting relays and contactors.
2. Section 260926 "Lighting Control Panelboards" for panelboard-based lighting control.
3. Section 260943.16 "Addressable-Fixture Lighting Controls" and Section 260943.23 "Relay-Based Lighting Controls" for manual or programmable control systems with low-voltage control wiring or data communication circuits.
4. Section 265613 "Lighting Poles and Standards" for poles and standards used to support exterior lighting equipment.

1.2 DEFINITIONS

A. CCT: Correlated color temperature.

B. CRI: Color rendering index.

C. Fixture: See "Luminaire."

D. IP: International Protection or Ingress Protection Rating

E. Lumen: Measured output of lamp and luminaire, or both.

F. Luminaire: Complete lighting unit, including lamp, reflector, and housing.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of luminaire.

B. Shop Drawings: For nonstandard or custom luminaires.

1. Include plans, elevations, sections, and mounting and attachment details.

2. Include details of luminaire assemblies. Indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection.
3. Include diagrams for power, signal, and control wiring.

C. LEED Submittals:

1. Product Data for Credit EA 5: For specified metering equipment.
2. Product Data for Credit MR 4: For products having recycled content, documentation indicating percentages by weight of postconsumer and preconsumer recycled content. Include statement indicating cost for each product having recycled content.

1.4 INFORMATIONAL SUBMITTALS

A. Coordination Drawings: Plans, drawn to scale and coordinated.

B. Seismic Qualification Certificates: For luminaires, accessories, and components, from manufacturer.

C. Product Certificates: For each type of the following:

1. Luminaire.
2. Photoelectric relay.

D. Sample warranty.

1.5 CLOSEOUT SUBMITTALS

A. Operation and maintenance data.

1. Provide a list of all lamp types used on Project. Use ANSI and manufacturers' codes.
2. Provide a list of all photoelectric relay types used on Project; use manufacturers' codes.

1.6 FIELD CONDITIONS

A. Mark locations of exterior luminaires for approval by Architect prior to the start of luminaire installation.

1.7 WARRANTY

A. Warranty: Manufacturer and Installer agree to repair or replace components of luminaires that fail in materials or workmanship within specified warranty period.

1. Warranty Period: 2 year(s) from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

2.2 LUMINAIRE REQUIREMENTS

A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

B. NRTL Compliance: Luminaires shall be listed and labeled for indicated class and division of hazard by an NRTL.

C. FM Global Compliance: Luminaires for hazardous locations shall be listed and labeled for indicated class and division of hazard by FM Global.

D. UL Compliance: Comply with UL 1598 and listed for wet location.

E. Lamp base complying with ANSI C81.61.

F. CRI of minimum 80 CCT of 3000 K.

G. L70 lamp life of 50,000 hours.

H. Lamps dimmable from 100 percent to 0 percent of maximum light output.

I. Nominal Operating Voltage: 120 V ac.

J. In-line Fusing: On the primary for each luminaire.

K. Lamp Rating: Lamp marked for outdoor use

L. Source Limitations: Obtain luminaires from single source from a single manufacturer.

M. Source Limitations: For luminaires, obtain each color, grade, finish, type, and variety of luminaire from single source with resources to provide products of consistent quality in appearance and physical properties.

2.3 MATERIALS

A. Metal Parts: Free of burrs and sharp corners and edges.

B. Sheet Metal Components: corrosion-resistant aluminum Form and support to prevent warping and sagging.

C. Doors, Frames, and Other Internal Access: Smooth operating, free of light leakage under operating conditions, and designed to permit relamping without use of tools. Designed to prevent doors, frames, lenses, diffusers, and other components from falling accidentally during relamping and when secured in operating position. Doors shall be removable for cleaning or replacing lenses.

D. Diffusers and Globes:

1. Acrylic Diffusers: 100 percent virgin acrylic plastic, with high resistance to yellowing and other changes due to aging, exposure to heat, and UV radiation.
2. Glass: Annealed crystal glass unless otherwise indicated.
3. Lens Thickness: At least 0.125 inch ((3.175 mm)) minimum unless otherwise indicated.

E. Lens and Refractor Gaskets: Use heat- and aging-resistant resilient gaskets to seal and cushion lenses and refractors in luminaire doors.

F. Reflecting surfaces shall have minimum reflectance as follows unless otherwise indicated:

1. White Surfaces: 85 percent.
2. Specular Surfaces: 83 percent.
3. Diffusing Specular Surfaces: 75 percent.

G. Housings:

1. Rigidly formed, weather- and light-tight enclosure that will not warp, sag, or deform in use.
2. Provide filter/breather for enclosed luminaires.

2.4 FINISHES

A. Variations in Finishes: Noticeable variations in same piece are unacceptable. Variations in appearance of adjoining components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

B. Luminaire Finish: Manufacturer's standard paint applied to factory-assembled and -tested luminaire before shipping. Where indicated, match finish process and color of pole or support materials.

C. Factory-Applied Finish for Aluminum Luminaires: Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.

1. Finish designations prefixed by AA comply with the system established by the Aluminum Association for designating aluminum finishes.
2. Natural Satin Finish: Provide fine, directional, medium satin polish (AA-M32); buff complying with AA-M20 requirements; and seal aluminum surfaces with clear, hard-coat wax.
3. Class I, Clear-Anodic Finish: AA-M32C22A41 (Mechanical Finish: Medium satin; Chemical Finish: Etched, medium matte; Anodic Coating: Architectural Class I, clear coating 0.018 mm or thicker) complying with AAMA 611.
4. Class I, Color-Anodic Finish: AA-M32C22A42/A44 (Mechanical Finish: Medium satin; Chemical Finish: Etched, medium matte; Anodic Coating: Architectural Class I, integrally colored or electrolytically deposited color coating 0.018 mm or thicker), complying with AAMA 611.

    a. Color:Dark bronze

D. Factory-Applied Finish for Steel Luminaires: Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.

1. Surface Preparation: Clean surfaces to comply with SSPC-SP 1, to remove dirt, oil, grease, and other contaminants that could impair paint bond. Grind welds and polish surfaces to a smooth, even finish. Remove mill scale and rust, if present, from uncoated steel, complying with SSPC-SP 5/NACE No. 1 or SSPC-SP 8.
2. Exterior Surfaces: Manufacturer's standard finish consisting of one or more coats of primer and two finish coats of high-gloss, high-build polyurethane enamel.

    a. Color: As selected from manufacturer's standard catalog of colors.
    b. Color: Match Architect's sample of manufacturer's standard color.
    c. Color: As selected by Architect from manufacturer's full range.

2.5 LUMINAIRE SUPPORT COMPONENTS

A. Comply with requirements in Section 260529 "Hangers and Supports for Electrical Systems" for channel and angle iron supports and nonmetallic channel and angle supports.

PART 3 - EXECUTION

3.1 GENERAL INSTALLATION REQUIREMENTS

A. Comply with NECA 1.

B. Use fastening methods and materials selected to resist seismic forces defined for the application and approved by manufacturer.

C. Install lamps in each luminaire.

D. Fasten luminaire to structural support.

E. Supports:

1. Sized and rated for luminaire weight.
2. Able to maintain luminaire position after cleaning and relamping.
3. Support luminaires without causing deflection of finished surface.
4. Luminaire-mounting devices shall be capable of supporting a horizontal force of 100 percent of luminaire weight and a vertical force of 400 percent of luminaire weight.

3.2 INSTALLATION OF INDIVIDUAL GROUND-MOUNTED LUMINAIRES

A. Aim as indicated on Drawings.

B. Install on concrete base with top **4 inches (100 mm)** above finished grade or surface at luminaire location. Cast conduit into base, and finish by troweling and rubbing smooth. Concrete materials, installation, and finishing are specified in Section 033000 "Cast-in-Place Concrete."

3.3 CORROSION PREVENTION

A. Aluminum: Do not use in contact with earth or concrete. When in direct contact with a dissimilar metal, protect aluminum by insulating fittings or treatment.

B. Steel Conduits: Comply with Section 260533 "Raceways and Boxes for Electrical Systems." In concrete foundations, wrap conduit with 0.010-inch- (0.254-mm-) thick, pipe-wrapping plastic tape applied with a 50 percent overlap.

3.4 IDENTIFICATION

A. Identify system components, wiring, cabling, and terminals. Comply with requirements for identification specified in Section 260553 "Identification for Electrical Systems."

3.5 FIELD QUALITY CONTROL

A. Inspect each installed luminaire for damage. Replace damaged luminaires and components.

B. Perform the following tests and inspections with the assistance of a factory-authorized service representative]

1. Operational Test: After installing luminaires, switches, and accessories, and after electrical circuitry has been energized, test units to confirm proper operation.
2. Verify operation of photoelectric controls.

C. Illumination Tests:

1. Measure light intensities at night. Use photometers with calibration referenced to NIST standards. Comply with the following IES testing guide(s):

   a. IES LM-5.
   b. IES LM-50.
   c. IES LM-52.
   d. IES LM-64.
   e. IES LM-72.

2. Operational Test: After installing luminaires, switches, and accessories, and after electrical circuitry has been energized, test units to confirm proper operation.

D. Luminaire will be considered defective if it does not pass tests and inspections.

E. Prepare a written report of tests, inspections, observations, and verifications indicating and interpreting results. If adjustments are made to lighting system, retest to demonstrate compliance with standards.

3.6 DEMONSTRATION

A. Train Owner's maintenance personnel to adjust, operate, and maintain luminaires and photocell relays.

END OF SECTION 26 56 19

GAINESVILLE INSPECTION SERVICES

REVIEWED FOR CODE COMPLIANCE

By reviewing the plans/specs for Code Compliance does not relieve the owner, design professionals, contractors or their representatives from the responsibility to comply with all local, state and national codes and standards in effect at time of permit issuance. Our review is not a check of every item and does not prevent this department from requiring corrections during construction. Any changes/alterations to approved plans shall be approved to avoid voiding the permit.

Joe Davidson — PLAN REVIEWER — 10/10/2022 — DATE

GEORGIA MOUNTAIN FOOD BANK

1642 CALVARY INDUSTRIAL DRIVE SW
GAINESVILLE, GA 30507



GAINESVILLE INSPECTION SERVICES

REVIEWED FOR CODE COMPLIANCE

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Joe Davidson — PLAN REVIEWER — 10/10/2022 — DATE

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STATE OF GEORGIA — GARFIELD PEART — CERTIFICATE NO. 13901 — REGISTERED ARCHITECT

09/20/22

Syntony Design Collaborative LLC.

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Drawing Revisions:

1 PLAN REVIEW COMMENTS 10.07.22

GENERAL NOTES

CONSTRUCTION NOTES:

1. ALL WORK SHALL BE PERFORMED AS TO COMPLY WITH ALL GOVERNING STATUTES, ORDINANCES, GOVERNMENTAL AND JURISDICTIONAL PERMITS AND APPROVALS AS OBTAINED.
2. THE ABBREVIATION OF "NIC" INDICATES WORK AND OR MATERIALS THAT IS NOT IN THE CONTRACT OF THE GENERAL CONTRACTOR. HOWEVER THIS DOES NOT RELIEVE THE GC OF THE RESPONSIBILITY OF COORDINATION.
3. IN ADDITION TO THE GENERAL NOTES LISTED HEREIN, AIA DOCUMENT A201 GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION SHALL APPLY.
4. ANY DISCREPANCIES WITHIN THESE DRAWINGS AND/OR BETWEEN THESE DRAWINGS, SPECIFICATIONS AND EXISTING CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT BY THE GC BEFORE START OF ANY WORK.
5. GC SHALL REMOVE ALL DEBRIS AND LEAVE JOB SITE CLEAN UPON COMPLETION.
6. GC SHALL BEAR FULL RESPONSIBILITY AND COSTS FOR THE FOLLOWING;
   a. ALL PERMITS, LICENSES AND FEES, UNO
   b. ALL TEMPORARY POWER AND UTILITIES.
   c. ALL POWER, SEWER, AND UTILITY HOOK-UPS
   d. ALL PLUMBING CONNECTIONS NECESSARY FOR FULLY OPERATIONAL BATHROOM FIXTURES
7. PRIOR TO BEGINNING WORK THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UTILITIES AND PROTECTING THEM FROM DAMAGE DURING CONSTRUCTION. SHOULD DAMAGE OCCUR THE CONTRACTOR SHALL MAKE REPAIRS AT NO COST TO THE OWNER.
8. CONTRACTOR TO FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF WORK.
9. ALL WORK SHALL BE PERFORMED IN A PROFESSIONAL MANNER AND SHALL BE IN GOOD AND USABLE CONDITION AT THE DATE OF COMPLETION THEREOF.
10. ALL CONCEALED WOOD BLOCKING IN WALLS AND CEILING SHALL BE TREATED AND FLAME RETARDANT.
11. ALL WALL AND CEILING CONSTRUCTION SHALL BE SUPPORTED BY STRUCTURE AND NOT BY ROOF DECK IF APPLICABLE.
12. ALL PENETRATIONS THROUGH RATED ASSEMBLIES SHALL BE SEALED TOMAINTAIN RATING.
13. THE OWNER IS RESPONSIBLE FOR ENGAGING ONE OR MORE APPROVEDTHIRD-PARTY SPECIAL INSPECTORS IN ACCORDANCE WITH CHAPTER 17 OF THE INTERNATIONAL BUILDING CODE TO MONITOR THE MATERIALS AND WORKMANSHIP CRITICAL TO THE INTEGRITY OF THE BUILDING STRUCTURE.
14. ALL WALLS HAVING PLUMBING ARE TO BE SIZED TO ACCOMMODATE THE PLUMBING. CONTACT ARCHITECT IF CONFLICT EXISTS BEFORE PROCEEDING.
15. CONTRACTOR IS RESPONSIBLE TO ENSURE APPROPRIATE WEATHER SEALS AS REQUIRED TO RECEIVE INTERIOR FINISHES AND MEET INDUSTRY STANDARDS. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT.
16. KITCHEN EQUIPMENT AND LAYOUT: SHALL BE ADDRESSED UNDER A SEPARATE CONTRACT.
17. CONTRACTOR TO COORDINATE DOOR HARDWARE REQUIREMENTS WITH OWNER.

DRAWING NOTES:

1. ALL EXTERIOR DIMENSIONS ARE TO FACE OF STRUCTURE, U.N.O.
2. ALL WOOD AND METAL FRAME INTERIOR DIMENSIONS ARE TO CENTER OF STRUCTURE, UNO. ALL CMU INTERIOR DIMENSIONS ARE TO FACE OF STRUCTURE,UNO.
3. ALL DIMENSIONS FOR DOORS AND WINDOWS ARE TO EDGE OF OPENING IN ALL STUD WALLS AND IN MASONRY AND CONCRETE WALLS.
4. WRITTEN DIMENSIONS AND NOTES TAKE PRECEDENCE OVER INDICATED DRAWING SCALES. DRAWINGS SHALL NOT BE SCALED.

CODES AND ANALYSIS

JURISDICTION:
CITY OF GAINESVILLE, GEORGIA
HALL COUNTY, GEORGIA

APPLICABLE CODES:

HALL COUNTY CONSTRUCTION CODE (2015 VERSION)
HALL COUNTY UNIFIED DEVELOPMENT ORDINANCE (UDO)
2018 INTERNATIONAL PROPERTY MAINTENANCE CODE
2018 INTERNATIONAL BUILDING CODE WITH 2020 GEORGIA AMENDMENTS
2018 NFPA 101 LIFE SAFETY CODE
2018 INTERNATONAL MECHANICAL CODE WITH 2020 GEORGIA AMENDMENTS
2018 INTERNATIONAL FUEL GAS CODE WITH 2020 GEORGIA AMENDMENTS
2018 INTERNATIONAL PLUMBING CODE WITH 2020 GEORGIA AMENDMENTS AND IPC APPENDIX F 2017 NATIONAL ELECTRIC CODE
2020 NATIONAL ELECTRICAL CODE
2015 INTERNATIONAL ENERGY CONSERVATION CODE WITH 2020 GEORGIA AMENDMENTS
2018 INTERNATIONAL FIRE CODE
2010 ADA STANDARDS

ANALYSIS:
OCCUPANCY
LIFE SAFETY CODE OCCUPANCY CLASSIFICATION : LOW HAZARD STORAGE (FOOD STORAGE) BUSINESS (OFFICES)
NA (STORAGE)

IBC OCCUPANCY TYPE - S-2 LOW HAZARD STORAGE; B - BUSINESS
IBC CHAPTER 5 CONSTRUCTION TYPE IIIA

BUILDING HEIGHT LIMITATIONS (TABLE 504.3):
S-2: 85 FEET
B: 85 FEET
ACTUAL BUILDING HEIGHT: 27 FEET 4 INCHES

BUILDING AREA LIMITATIONS (IBC TBL 506.2)
S-2: 156,000 SQUARE FEET (S1) ACTUAL BUILDING AREA: 27,236 SQUARE FEET
B: 85,500 SQUARE FEET (SM) ACTUAL BUILDING AREA: 5,528 SQUARE FEET

TOTAL ACTUAL SQUARE AREA: 32,764 SQUARE FEET

IBC OCCUPANCY LOADS:

LOW HAZARD STORAGE AREA (S-2): 27,236 SQUARE FEET

OCCUPANT LOAD FACTOR 1 PERSON PER 500 SQ. FT. = 55 PEOPLE (IBC TBL 1004.1.1)
MAX ANTICIPATED OCCUPANT LOAD = 50 PEOPLE

BUSINESS OCCUPANCY AREA (B): 5,528 SQUARE FEET
OCCUPANT LOAD FACTOR 1 PERSON PER 150 SQ. FT. = 37 PEOPLE (IBC TBL 1004.1.1)
MAX ANTICIPATED OCCUPANT LOAD = 30 PEOPLE

PLUMBING FIXTURES REQUIRED (IPC): TBD
STORAGE AREA: 0 WC (M/F); 0 LAV (M/F); 1 SVC SINK - 1 FIXTURES
BUSINESS: 2 WC (M/F); 1 LAV (M/F); 1 SVC SINK - 4 FIXTURES

PROVIDED:
2 WC (M); 2 WC (F); 2 LAV (M); 2 LAV (M); 0 SVC SINK

GRAPHIC SYMBOLS

ROOM NUMBER — XXX
DOOR NUMBER — XX
PARTITION TAG — P-X
COLUMN GRID — XX
KEY NOTE — X
KEY NOTE — X
WINDOW TAG — X
KEY NOTE — X
ELEVATION TAG — XXX / X — SHEET NO. / DRAWING NO.
SECTION TAG — X / XXX — DRAWING NO. / SHEET NO.
DETAIL TAG — X / XXX — DRAWING NO. / SHEET NO.

PERMIT SET. RELEASED OR ISSUED FOR CONSTRUCTION.

PROJECT TEAM

OWNER:
GEORGIA MOUNTAIN FOOD BANK
1642 CALVARY INDUSTRIAL DRIVE SW
GAINESVILLE, GA 30507
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MECHANICAL, ELECTRICAL, PLUMBING ENGINEER:
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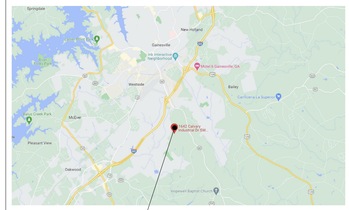
CIVIL ENGINEER:
PINNACLE LAND DEVELOPMENT
457 YOUNG JAMES CIR.
STOCKBRIDGE, GA 30281
678-382-5314 voice

LOCATION PLAN



1642 CALVARY
INDUSTRIAL DRIVE SW
GAINESVILLE, GA 30507

PROJECT DESCRIPTION

THE PROPOSED PROJECT IS AN EXPANSION OF THE EXISTING BOOMERSHINE FAMILY LOGISTIC CENTER (GEORGIA MOUNTAIN FOOD BANK) AND NEW PARKING ON 2.5 ACRES OF RECENTLY ACQUIRED LAND. THE ENTIRE PROJECT WILL ACCOMMODATE A NEW 10,000 SQUARE FOOT EXPANSION WITH ADDITIONAL LOADING DOCKS, COVERED PALLET STORAGE AREAS, ONE ADDITIONAL FREEZER AND REFRIGERATOR AND ADDITIONAL PARKING OF 52 SPACES.

EXISTING SECOND FLOOR OFFICES WILL RENOVATED AND NEW TWO-STORY SHIPPING AND RECEIVING OFFICES WILL BE PROVIDED IN THE WAREHOUSE AS SHOWN ON THE DRAWINGS. NEW MECHANICAL AND ELECTRICAL EQUIPMENT WILL BE INSTALLED IN THE ABOVE-REFERENCED AREAS.

VICINITY MAP



GEORGIA MOUNTAIN FOOD BANK
1642 CALVARY INDUSTRIAL DRIVE SW
GAINESVILLE, GA 30507

Drawing Date:	07/14/2022
Project Number:	220001
Drawn By:	AP
Checked By:	GLP

Drawing Description:
COVER SHEET

G100

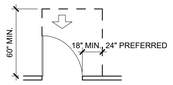
GENERAL NOTES:

1. DETAILS AND NOTES ON THIS SHEET SHALL GOVERN STANDARD DIMENSIONS, CLEARANCES, AND MOUNTING LOCATIONS. CONTRACTOR SHALL IMMEDIATELY BRING TO ARCHITECT'S ATTENTION ANY DISCREPENCIES BETWEEN INFORMATION ON THIS SHEET AND ANY OTHER INFORMATION IN PLANS.
2. ALL NOTES, ABBREVIATIONS AND DETAILS MAY NOT APPLY.
3. REFER TO PROJECT MANUAL FOR DESIGN STANDARDS AND PROJECT SPECIFICATIONS NOT SPECIFIED WITHIN CONSTRUCTION DOCUMENTS

ABBREVIATIONS:

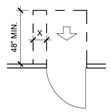
A	AMPERES	F.F.E.	FINISH FLOOR ELEVATION	OPNG.	OPENING
A.B.	ANCHOR BOLT	F.N.	FIELD NAILING	OPPO.	OPPOSITE
A.F.F.	ABOVE FINISHED FLOOR	F.O.	FACE OF	P.C.	PRECAST CONCRETE
A.F.G.	ABOVE FINISHED GRADE	F.S.	FLOOR SINK	P.L. or P ⊥	PROPERTY LINE
A/C	AIR CONDITIONING	F/G	FIBERGLASS	P.LAM.	PLASTIC LAMINATE
ABC	AGGREGATE BASE COURSE	FAB.	FABRICATE	P.O.C.	POINT OF CONNECTION
ABS	ACRYLONITRILE-BUTADIENE-STYRENE	FACP	FIRE ALARM CONTROL PANEL	PERF.	PERFORATED
ABV.	ABOVE	FDC	FIRE DEPARTMENT CONNECTION	PERP. or ⊥	PERPENDICULAR
ACB	ASBESTOS-CEMENT BOARD	FDN.	FOUNDATION	PH or	PHASE
ACOU.	ACOUSTIC	FHC	FIRE HOSE CABINET	PL.	PLASTER
ACT	ACOUSTICAL CEILING TILE	FIN.	FINISH	PL. or P ⊥	PLATE
ADD.	ADDITION or ADDENDUM	FL	FLOOR	PLAS.	PLASTIC
AG	ABOVE GRADE	FLG.	FLOORING	PLUMB.	PLUMBING
AHU	AIR HANDLING UNIT	FLUOR.	FLUORESCENT	PLYWD.	PLYWOOD
AL. or ALUM.	ALUMINUM	FP	FIRE PROOF	PORC.	PORCELAIN
ALT.	ALTERNATE	FRP	FIBER REINFORCED PLASTIC	PREFAB.	PREFABRICATED
ANL	ANNEALED	FTG.	FOOTING	PSF	POUNDS PER SQUARE FOOT
ASPH.	ASPHALT	FURN.	FURNISH	PSI	POUNDS PER SQUARE INCH
AVG	AVERAGE	G.I.	GALVANIZED IRON	PTN.	PARTITION
AWG	AMERICAN WIRE GAUGE	GA.	GAUGE	PVC	POLYVINYLCLORIDE
∠	ANGLE	GALV.	GALVANIZED	PWR.	POWER
B.M.	BENCH MARK	GAR.	GARAGE	Q.T.	QUARRY TILE
B.N.	BOUNDARY NAILING	GFCI	GROUND FAULT CIRCUIT INTERRUPTER	QTY.	QUANTITY
B.O.	BOTTOM OF			R	RADIUS
B.O.F.	BOTTOM OF FOOTING	GFI	GROUND FAULT INTERRUPTER	R/C/P	REINFORCED CONCRETE PIPE
B.U.	BUILT UP	GL	GLASS	R.D.L.	ROOF DRAIN LEADER
B/C	BACK OF CURB	GLB	GLUE LAMINATED BEAM	R.D.O.	ROOF DRAIN OVERFLOW
BD.	BOARD	GM	GRADE MARK	R.O.	ROUGH OPENING
BLDG	BUILDING	GV	GATE VALVE	R.O.W. or	RIGHT OF WAY
BLK.	BLOCK	GRC	GALVANIZED RIGID TUBING	R/W	
BLKG.	BLOCKING	GYP.	GYPSUM	REF	REFRIGERATOR
BM.	BEAM	GYP. BD.	GYPSUM BOARD	RE:	REFERENCE
BR	BRASS	H.B.	HOSE BIBB	REINF.	REINFORCED
BRG.	BEARING	H.C.	HOLLOW CORE	REQ'D.	REQUIRED
BRZ	BRONZE	H.M.	HOLLOW METAL	RET.	RETURN
C.A.P.	CONCRETE ASBESTOS PIPE	H/C	HANDICAPPED	REV.	REVISION
C.D.	CONSTRUCTION DOCUMENTS	HDBD.	HARDBOARD	RM	ROOM
C.I.P.	CAST IN PLACE	HDW	HARDWARE	RMV.	REMOVE
C.J.	CONTROL JOINT	HGT.	HEIGHT	S.C.	SOLID CORE
C.O.	CLEAN OUT	HOR.	HORIZONTAL	S.D.	SMOKE DETECTOR
C.T.	CERAMIC TILE	HTR	HEATER	S.O.V.	SHUT OFF VALVE
CAB	CABINET	HVAC	"HEATING, VENTILATING & AIR CONDITIONING"	S/L	SKYLIGHT
CAM.	CAMBER			S/S	STAINLESS STEEL
CCTV	CLOSED CIRCUIT TELEVISION	HW	HOT WATER	SC	SELF CLOSING
CEM.	CEMENT	HYD.	HYDRAULIC	SCHED.	SCHEDULE
CER	CERAMIC	I.C.	INTERCOM OUTLET	SECT.	SECTION
CFM	CUBIC FEET PER MINUTE	I.D.	INSIDE DIAMETER	SES	SERVICE ENTRANCE SECTION
CH or ⊏	CHANNEL	I.F.	INSIDE FACE	SH	SHEET
CKT. BKR.	CIRCUIT BREAKER	ID	IDENTIFICATION	SHTG.	SHEATHING
CL or C ℄	CENTERLINE	IG	ISOLATED GROUND	SIM.	SIMILAR
CLG.	CEILING	IMC	INTERMEDIATE METALLIC CONDUIT	SPA.	SPACE
CLKG.	CAULKING	IMPG	IMPREGNATED	SPECS	SPECIFICATIONS
CLO.	CLOSET	INCL.	"INCLUDE, INCLUSIVE"	SPKR.	SPEAKER
CLR.	CLEAR	INSUL.	INSULATION	SQ.FT. or SF	SQUARE FEET
CMP	CORRUGATED METAL PIPE	INT.	INTERIOR	SQ. IN.	SQUARE INCHES
CMU	CONCRETE MASONRY UNIT	J-BOX	JUNCTION BOX	STC	SOUND TRANSMISSION CLASS
CNTRD.	CENTERED	JCT	JUNCTION	STD.	STANDARD
COL.	COLUMN	JST.	JOIST	STL.	STEEL
COMB.	COMBINATION	JT.	JOINT	SUSP.	SUSPENDED
CONC.	CONCRETE	K-D	KNOCK DOWN	SW	SWITCH
CONST.	CONSTRUCTION	KD	KILN DRIED	SYM.	SYMMETRICAL
CONT.	CONTINUOUS	KO	KNOCK OUT	SYS.	SYSTEM
CONTR.	CONTRACTOR	L.E.D.	LIGHT EMITTING DIODE	T & G	TONGUE AND GROOVE
CU	COPPER	L.FT.	LINEAR FEET	T.B.	THROUGH BOLT
d	PENNY	LAM	LAMINATE	T.M.B.	TELEPHONE MOUNTING BOARD
D.F.	DRINKING FOUNTAIN	LAT.	LATERAL	T.O.	TOP OF
D.G.	DECOMPOSED GRANITE	LAV	LAVATORY	T.O.B.	TOP OF BEAM
D.S.	DOWN SPOUT	LD.	LEAD	T.O.C.	TOP OF CURB
D/W	DISHWASHER	LIN.	LINEAR	T.O.F.	TOP OF FOOTING
DBL.	DOUBLE	LINO.	LINOLEUM	T.O.J.	TOP OF JOIST
DEMO	DEMOLITION	LT.	LIGHT	T.O.M.	TOP OF MASONRY
DIA. or	DIAMETER	LTG.	LIGHTING	T.O.S.	TOP OF SLAB or TOP OF STEEL
DIAG.	DIAGONAL	LVL	LAMINATED VENEER LUMBER	T.O.W.	TOP OF WALL
DIM.	DIMENSION	M.B.	MACHINE BOLT	T.S.	TUBE STEEL
DL	DEAD LOAD	M.H.	MANHOLE	T.V.	TELEVISION OUTLET
DN.	DOWN	MJ.	MALLEABLE IRON	TEL.	TELEPHONE
DR	DOOR	M.O.	MASONRY OPENING	TH.	THRESHOLD
E.A.	EXPANSION ANCHOR	MAR.	MARBLE	THD.	THREADED
E.F.	EXHAUST FAN	MAS.	MASONRY	THK.	THICK
E.J.	EXPANSION JOINT	MAT'L	MATERIAL	THRU	THROUGH
E.N.	END NAILING	MAX.	MAXIMUM	TLT.	TOILET
E.W.	EACH WAY	MECH.	MECHANICAL	TRANS.	TRANSFORMER
EA.	EACH	MED.	MEDIUM	TYP.	TYPICAL
EL	ELEVATION	MFG.	MANUFACTURING	UNF.	UNFINISHED
ELECT.	"ELECTRIC, ELECTRICAL"	MFR.	MANUFACTURER	U.N.O.	UNLESS NOTED OTHERWISE
ELEV.	ELEVATOR	MIN.	MINIMUM	UR	URINAL
EMC	ELECTRICAL METALLIC CONDUIT	MISC.	MISCELLANEOUS	V.B.	VAPOR BARRIER
EMT	ELECTRICAL METALLIC TUBING	MOD	MODULAR	V.I.F.	VERIFY IN FIELD
ENT	ELECTRICAL NON-METALLIC TUBING	MTL.	METAL	VA	VOLT AMPERE
EQ.	EQUAL	MUL	MULLION	VCT	VINYL COMPOSITION TILE
EQUIP.	EQUIPMENT	N.I.C.	NOT IN CONTRACT	VERT.	VERTICAL
EST.	ESTIMATE	N.T.S.	NOT TO SCALE	V.O.J.	VERIFY ON JOB
EVAP.	EVAPORATIVE COOLER	NCM	NON-CORROSIVE METAL	W/C	WATER CLOSET
EWC	ELECTRIC DRINKING COOLER	NFC	NOT FOR CONSTRUCTION	WDW	WINDOW
EXC	EXCAVATE	NLR.	NAILER	WCT	WAINSCOT
EXH.	EXHAUST	NO.	NUMBER	WP	WEATHER PROOF
EXIST.	EXISTING	NOM.	NOMINAL	WT.	WEIGHT
EXT.	EXTERIOR	O.C.	ON CENTER	W/	WITH
F.A.	FIRE ALARM	O.D.	OUTSIDE DIAMETER	W/O	WITHOUT
F.C.	FAN COIL	O.H.	OVER HANG	WD.	WOOD
F.C.O.	FLOOR CLEAN OUT	O.I.	ORNAMENTAL IRON	W.I.	WROUGHT IRON
F.D.	FLOOR DRAIN	O.R.	OUTSIDE RADIUS	YD.	YARD
F.E.	FIRE EXTINGUISHER	OAI	OUTSIDE AIR INTAKE		
F.F.	FINISH FLOOR	OH	OVER HEAD		

PULL SIDE



NOTE: ALL DOORS IN ALCOVES SHALL COMPLY WITH THE CLEARANCES FOR FRONT APPROACHES.

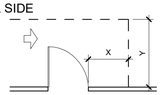
PUSH SIDE



NOTE: X = 12 IN IF DOOR HAS BOTH A LATCH AND CLOSER

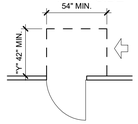
FRONT APPROACHES - SWINGING DOORS

PULL SIDE



NOTE: X = 36IN MINIMUM IF Y = 60IN; X = 42IN MINIMUM IF Y = 54IN

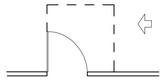
PUSH SIDE



NOTE: Y = 48IN MINIMUM IF DOOR HAS BOTH A LATCH AND CLOSER

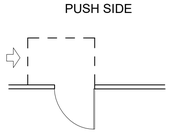
HINGE SIDE APPROACHES - SWINGING DOORS

PULL SIDE

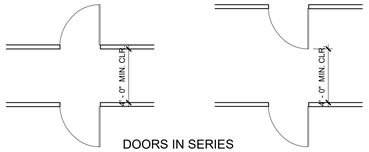


NOTE: ALL REQUIRED CLEAR FOOR AREA SHALL BE LEVEL. EXTERIOR LANDINGS SHALL BE SLOPED NO GREATER THAN 1:50

PUSH SIDE



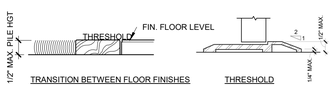
LATCH SIDE APPROACHES - SWINGING DOORS



DOORS IN SERIES

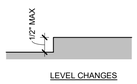
1 DOOR CLEARANCES

3/4" = 1'-0"



TRANSITION BETWEEN FLOOR FINISHES

THRESHOLD



LEVEL CHANGES

NOTES:

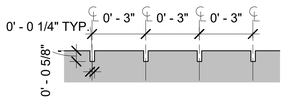
1. 1/2" MAXIMUM TOTAL HEIGHT WITH 1/4" MAXIMUM VERTICAL CHANGE AT EDGE.
2. 1:2 SLOPED BEVEL REQUIRED IF LEVEL CHANGE IS OVER 1/4" VERITCAL LEVEL CHANGE.
3. 1/4" MAXIMUM VERTICAL LEVEL CHANGE.

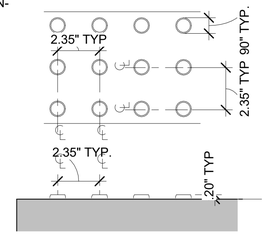
2 THRESHOLD/LEVEL CHANGES

3/4" = 1'-0"

DETECTABLE WARNING SURFACES INSIDE PROPERTY LINES:
DETECTABLE WARNING AREAS SHALL CONSIST OF A REGULARLY
SPACED, CONTINUOUS PATTERN OF GROOVES RUNNING PERPENDICULAR TO THE RUN OF A CURB RAMP OR PARALLEL TO THE EDGE BETWEEN A CIRCULATION PATH AND A HAZARDOUS AREA.
GROOVES SHALL BE 1/4" WIDE BY 5/8" DEEP SPACED 3" O.C.
WARNING AREAS SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES, EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT.

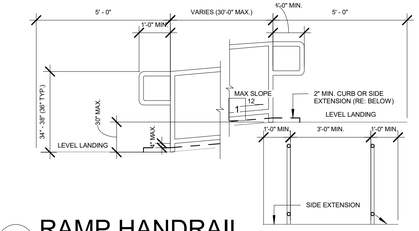
DETECTABLE WARNING SURFACES OUTSIDE PROPERTY LINES:
DETECTABLE WARNINGS SHALL CONSIST OF RAISED TRUNCATED DOMES WITH A DIAMETER OF NOMINAL 0.9", A HEIGHT OF NOMINAL 0.2" AND A CENTER-TO-CENTER SPACING OF NOMINAL 2.35" AND SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES, EITHER LIGHT-ON-DARK, OR
DARK-ON-LIGHT.





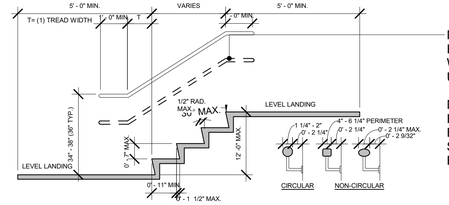
3 DETECTABLE WARNING SURFACES

3" = 1'-0"



4 RAMP HANDRAIL

3/8" = 1'-0"

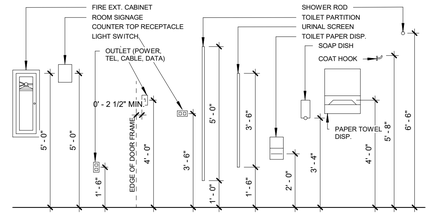


NOTE: PROVIDE SECOND SET OF HANDRAILS AT 24" A.F.F. WHEN CHILDREN ARE PRIMARY USERS.

NOTE: ENDS OF NON-CONTINUOUS HANDRAILS SHALL BE EITHER ROUNDED OR RETURNED SMOOTHLY TO FLOOR, WALL, OR POST.

5 STAIR HANDRAIL

3/4" = 1'-0"

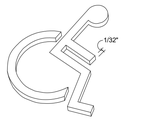


6 STANDARD MOUNTING HEIGHTS

3/8" = 1'-0"



INTERNATIONAL ACCESSIBILITY SYMBOL



RAISED









PROPORTIONS INTERNATIONAL ACCESSIBILITY SYMBOL



INTERNATIONAL TDD SYMBOL



INTERNATIONAL SYMBOL OF ACCESS FOR HEARING IMPAIRED

LETTERS AND NUMBERS:

1. LETTERS AND NUMBERS ON SIGNS SHALL BE RAISED 1/32" MINIMUM AND SHALL BE SANS-SERIF UPPERCASE CHARACTERS ACCOMPANIED BY GRADE 2 BRAILLE.
2. RAISED CHARACTERS OR SYMBOLS SHALL BE A MINIMUM OF 5/8" HIGH.
3. PICTORIAL SYMBOL SIGNS (PICTOGRAMS) SHALL BE ACCOMPANIED BY THE EQUIVALENT VERBAL DESCRIPTION PLACED DIRECTLY BELOW THE PICTOGRAM. THE BORDER DIMENSION OF THE PICTOGRAM SHALL BE A MINIMUM OF 6" IN HEIGHT.
4. LETTERS AND NUMBERS ON SIGNS SHALL HAVE A WIDTH-TO-HEIGHT RATIO BETWEEN 3:5 AND 1:1 AND A STROKE WIDTH-TO-HEIGHT RATIO BETWEEN 1:5 AND 1:10.
5. CHARACTERS AND SYMBOLS SHALL CONTRAST WITH THEIR BACKGROUND, EITHER LIGHT CHARACTERS ON A DARK BACKGROUND OR DARK CHARACTERS ON A LIGHT BACKGROUND.
6. CHARACTERS AND NUMBERS ON SIGNS SHALL BE SIZED ACCORDING TO THE VIEWING DISTANCE FROM WHICH THEY ARE USED TO BE READ. THE MINIMUM HEIGHT IS MEASURED USING AN UPPERCASE X. LOWER CASE CHARACTERS ARE PERMITTED. FOR SIGNS SUSPENDED OR PROJECTED GREATER THAN 80" ABOVE THE FINISH FLOOR, THE MINIMUM CHARACTER HEIGHT SHALL BE 3".
7. CONTRACTED GRADE 2 BRAILLE SHALL BE USED WHEREVER BRAILLE SYMBOLS ARE SPECIFICALLY REQUIRED IN OTHER PORTIONS OF THESE REGULATIKONS. DOTS SHALL BE 1/10" ON CENTERS IN EACH CELL WITH 2/10" SPACE BETWEEN CELLS. DOTS SHALL BE RAISED A MINIMUM OF 1/40" ABOVE THE BACKGROUND.

SIGN LOCATIONS:

8. ALL BUILDING ENTRANCES THAT ARE ACCESSIBLE TO AND USABLE BY PERSONS WITH DISABILITIES AND AT EVERY MAJOR JUNCTION ALONG OR LEADING TO AN ACCESSIBLE ROUTE OF TRAVEL SHALL BE IDENTIFIED WITH A SIGN DISPLAYING THE INTERNATIONAL SYMBOL OF ACCESSIBILITY AND WITH ADDITIONAL DIRECTIONAL SIGNS, AS REQUIRED, TO BE VISIBLE TO PERSONS ALONG APPROACHING PEDESTRIAN WAYS.
9. WHEN PERMANENT IDENTIFICATION IS PROVIDED FOR ROOMS AND SPACES, RAISED LETTERS SHALL BE PROVIDED AND SHALL BE ACCOMPANIED BY BRAILLE. SIGNS SHALL BE INSTALLED ON THE WALL ADJACENT TO THE LATCH OUTSIDE OF THE DOOR. WHERE THERE IS NO WALL SPACE ON THE LATCH SIDE, INCLUDING AT LEAF DOORS, SIGNS SHALL BE PLACE ON THE NEAREST ADJACENT WALL, PREFERABLY ON THE RIGHT. MOUNTING HEIGHT SHALL BE 60" ABOVE THE FINISH FLOOR TO THE CENTERLINE OF THE SIGN. MOUNTING LOCATION SHALL BE DETERMINED SO THAT THE PERSON MAY APPROACH WITHIN 3" OF THE SIGNAGE WITHOUT ENCOUNTERING PROTRUDING OBJECTS OR STANDING WITHIN THE SWING OF A DOOR.
10. ADDITIONAL DIRECTIONAL SIGNS ALONG ACCESSIBLE PATH OF TRAVEL ARE REQUIRED.
11. BUILDINGS REMODELED TO PROVIDE ACCESSIBLE SANITARY FACILITIES FOR PUBLIC USE SHALL HAVE INFORMATION POSTED IN THE LOBBY AS PART OF THE BUILDING DIRECTORY.

INTERNATIONAL SYMBOL OF ACCESSIBILITY:

12. STANDARD USED TO IDENTIFY ACCESSIBLE FACILITIES.
13. WHITE FIGURE ON BLUE BACKGROUND.
14. WHEN ENFORCING AGENCY DETERMINES, IF APPROPRIATE, SPECIAL DESIGNS AND COLORS MAY BE APPROVED.

BRAILLE:

15. USE CONTRASTED GRADE 2 BRAILLE. DOTS TO BE 0.1 INCH ON CENTER IN EACH CELL.
16. 0.2 INCH SPACE BETWEEN CELLS.
17. DOTS RAISED MINIMUM 0.025 INCH ABOVE BACKGROUND.

7 ACCESSIBLE SIGNAGE

1" = 1'-0"

PERMIT SET. RELEASED OR ISSUED FOR CONSTRUCTION.

STATE OF GEORGIA
GARFIELD PEART
CERTIFICATE NO. 13801
REGISTERED ARCHITECT
09/20/22

Syntony Design Collaborative LLC.

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Drawing Revisions:

1 PLAN REVIEW COMMENTS 10.07.22

Drawing Date:	09/20/2022
Project Number:	220001
Drawn By:	AP
Checked By:	GLP

GEORGIA MOUNTAIN FOOD BANK
1642 CALVARY INDUSTRIAL DRIVE SW
GAINESVILLE, GA 30507

Drawing Description:

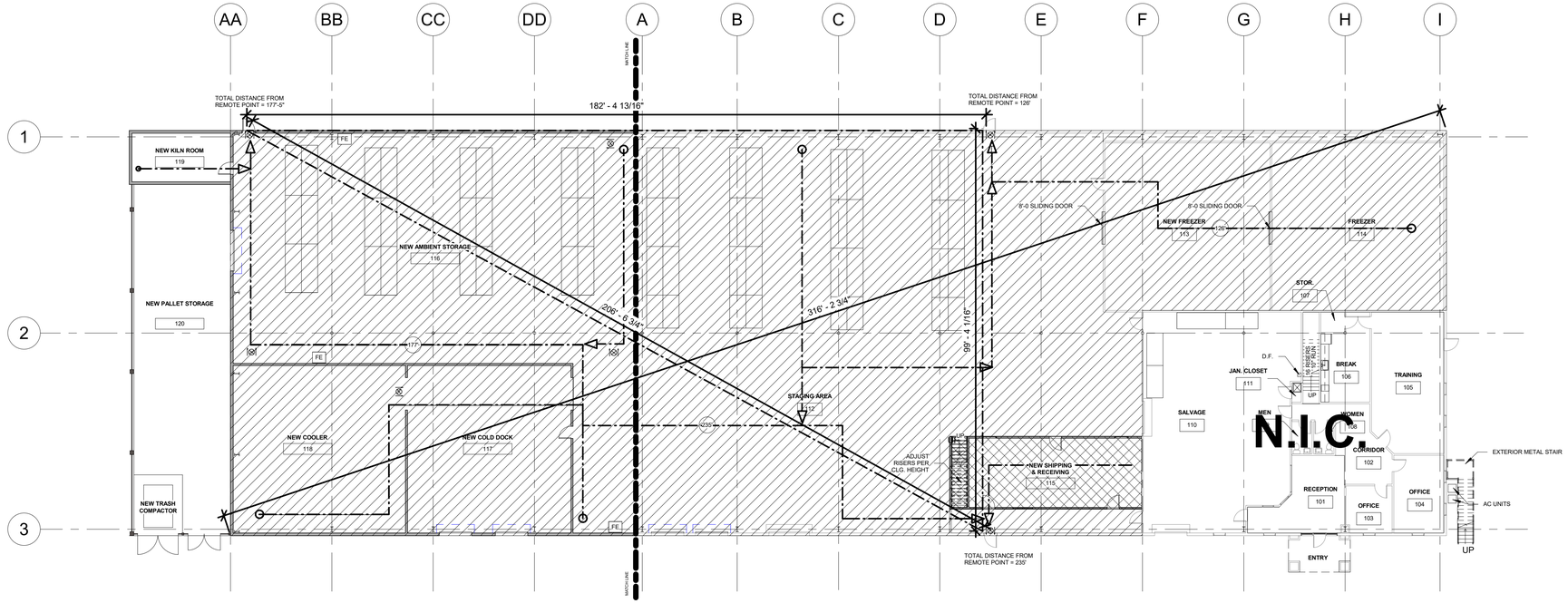
PROJECT STANDARDS AND ABBREVIATIONS

G101

GAINESVILLE BUILDING SERVICES

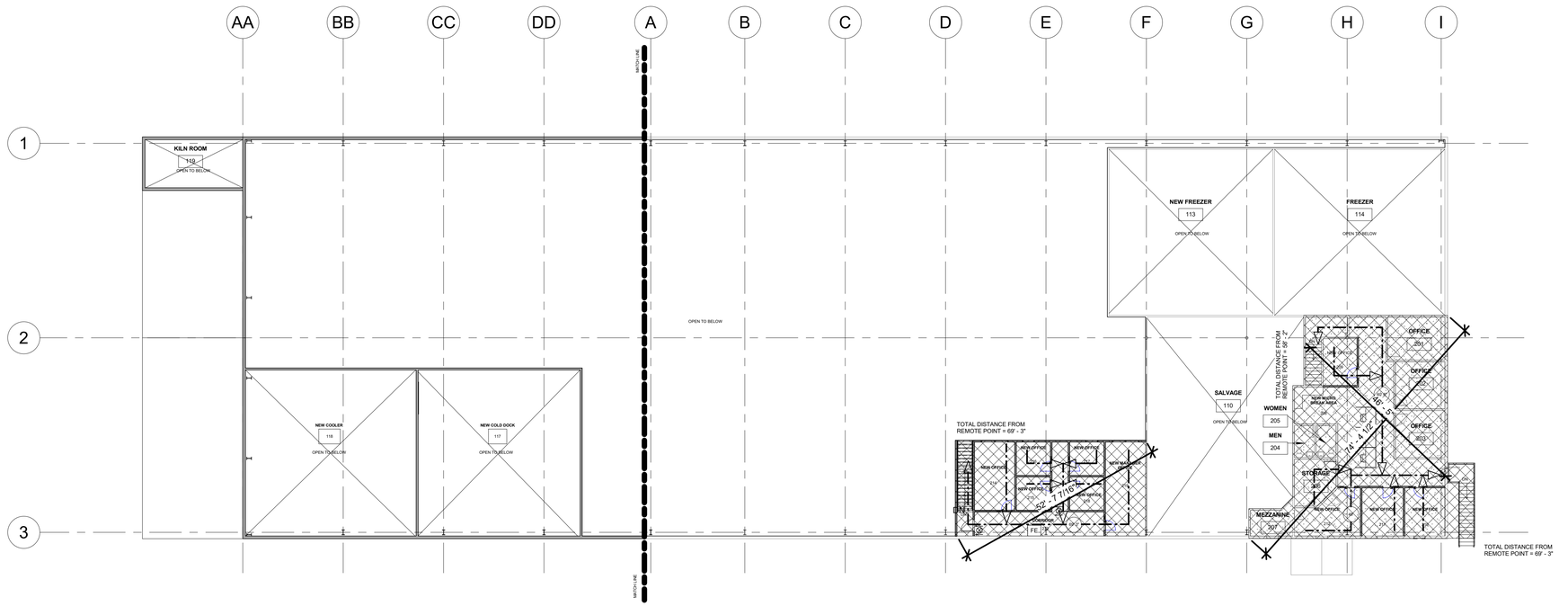
gcvtrcr.cse - 10/10/2022 - By reviewing the plans/specs for Code Compliance does not relieve the owner, design professionals, contractors or their representatives from the responsibility to comply with all local, state and national codes and standards in effect at time of permit issuance. Our review is not a check of every item and does not prevent this department from requiring corrections during construction. Any change/alteration is supported plans shall be approved by us prior to being implemented.

PERMIT SET. RELEASED OR ISSUED FOR CONSTRUCTION.

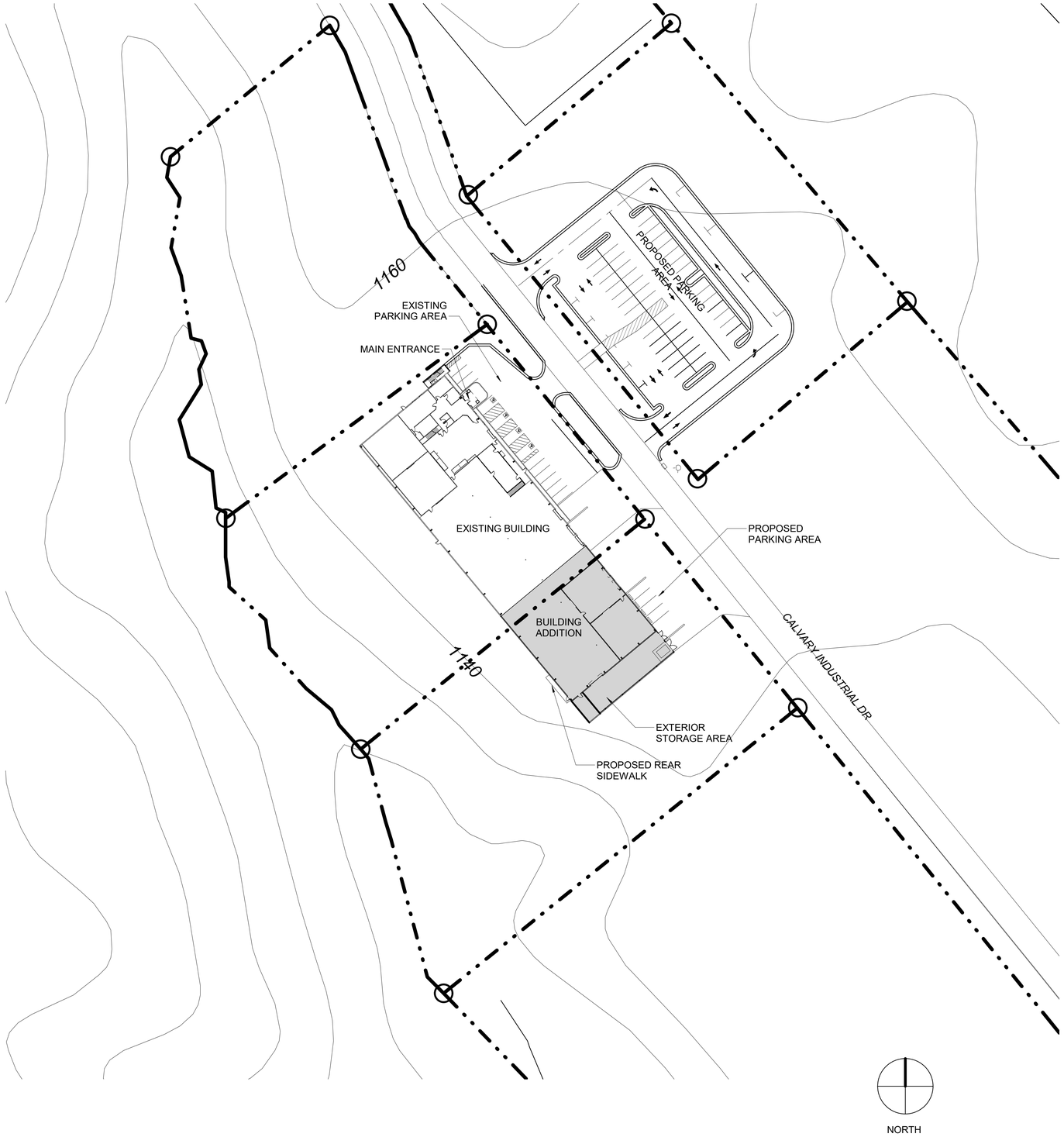


1 PROPOSED FIRST LEVEL PLAN -LIFE SAFETY PLAN

1/16" = 1'-0"



PERMIT SET. RELEASED OR ISSUED FOR CONSTRUCTION.



1 ARCHITECTURAL SITE PLAN
1" = 50'-0"

ZONING INFORMATION

ZONING: LIGHT/ HEAVY INDUSTRIAL

MAXIMIUM HEIGHT ALLOWED: 75'
ACTUAL HEIGHT: 27' 4"

FRONT SETBACK REQUIRED: 30'/40'

SIDE SETBACK REQUIRED: 0'

REAR SETBACK REQUIRED: 0' LOT

AREA: SEE SURVEY

MAX. LOT COVERAGE: 70%

PARKING

TOTAL SPACES: 52

ADA SPACES: 4 (IBC TABLE 1106.1)

STATE OF GEORGIA
GARFIELD PEART
CERTIFICATE NO. 13901
REGISTERED ARCHITECT

09/20/22

Syntony Design Collaborative LLC.

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Drawing Revisions:

1 PLAN REVIEW COMMENTS 10.07.22

Drawing Date:	09/20/2022
Project Number:	220001
Drawn By:	AP
Checked By:	GLP

GEORGIA MOUNTAIN FOOD BANK
1642 CALVARY INDUSTRIAL DRIVE SW
GAINESVILLE, GA 30507

Drawing Description:
ARCHITECTURAL SITE PLAN

G500

gmfb0022-csite - 20220922 By reviewing the plans/specs for Code Compliance does not relieve the owner, design professionals, contractors or their representatives from the responsibility to comply with all local, state and national codes and standards in effect at time of permit issuance. Our review is not a check of every item and does not prevent the requirement from rejecting corrections during construction. Any changes/additions to approved plans shall be approved as a new submittal.

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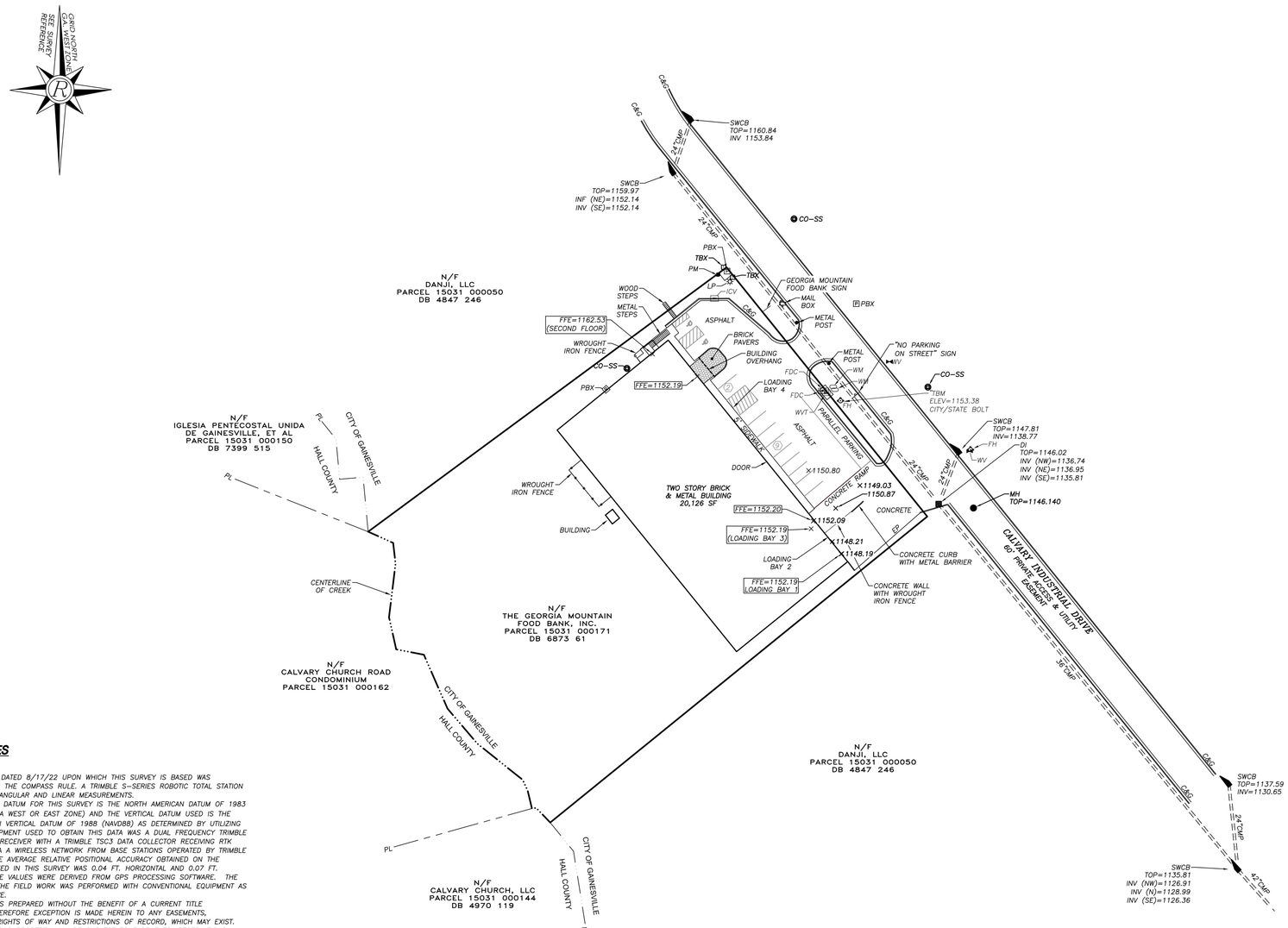

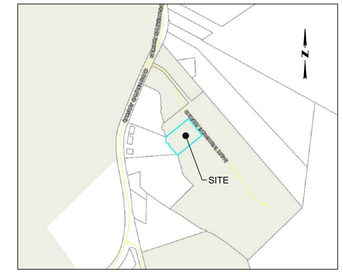

VICINITY MAP
SCALE: NTS

SURVEY NOTES

1. *THE FIELD DATA DATED 8/17/22 UPON WHICH THIS SURVEY IS BASED WAS ADJUSTED USING THE COMPASS RULE. A TRIMBLE S-SERIES ROBOTIC TOTAL STATION WAS USED FOR ANGULAR AND LINEAR MEASUREMENTS.*
2. *THE HORIZONTAL DATUM FOR THIS SURVEY IS THE NORTH AMERICAN DATUM OF 1983 (NAD 83 GEORGIA WEST OR EAST ZONE) AND THE VERTICAL DATUM USED IS THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) AS DETERMINED BY UTILIZING GPS. THE EQUIPMENT USED TO OBTAIN THIS DATA WAS A DUAL FREQUENCY TRIMBLE R10 GNSS GPS RECEIVER WITH A TRIMBLE TSC3 DATA COLLECTOR RECEIVING RTK CORRECTIONS VIA A WIRELESS NETWORK FROM BASE STATIONS OPERATED BY TRIMBLE NAVIGATION. THE AVERAGE RELATIVE POSITIONAL ACCURACY OBTAINED ON THE POSITIONS UTILIZED IN THIS SURVEY WAS 0.04 FT. HORIZONTAL AND 0.07 FT. VERTICAL. THESE VALUES WERE DERIVED FROM GPS PROCESSING SOFTWARE. THE REMAINDER OF THE FIELD WORK WAS PERFORMED WITH CONVENTIONAL EQUIPMENT AS DESCRIBED ABOVE.*
3. *THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A CURRENT TITLE COMMITMENT; THEREFORE EXCEPTION IS MADE HEREIN TO ANY EASEMENTS, RESERVATIONS, RIGHTS OF WAY AND RESTRICTIONS OF RECORD, WHICH MAY EXIST. FURTHERMORE, THIS PROPERTY MAY BE SUBJECT TO EASEMENTS, RESERVATIONS, RIGHTS OF WAY, OR RESTRICTIONS, WHICH ARE NOT RECORDED OR NOT DISCLOSED BY THE TITLE COMMITMENT OR OTHERWISE UNKNOWN TO THE SURVEYOR; THEREFORE EXCEPTION IS TAKEN TO ANY SUCH ITEMS.*
4. *THE UTILITIES SHOWN HEREON HAVE BEEN LOCATED FROM ABOVE GROUND, VISIBLE EVIDENCE. THE SURVEYOR MAKES NO GUARANTEE THAT THE UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED, ALTHOUGH HE DOES CERTIFY THE THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.*
5. *THIS PROPERTY MAY OR MAY NOT CONTAIN WETLAND AREAS. NO EFFORTS HAVE BEEN MADE BY THIS SURVEYOR TO IDENTIFY OR LOCATE ANY WETLAND AREAS ON THIS PROPERTY. A QUALIFIED WETLAND SPECIALIST OR BIOLOGIST, PRIOR TO ANY LAND DISTURBANCE, SHOULD PERFORM WETLAND IDENTIFICATION AND DELINEATION.*
6. *THIS PROPERTY IS LOCATED IN FLOOD HAZARD ZONE "X" PER F.E.M.A. INSURANCE RATE MAP OF THE CITY OF GAINESVILLE AND HALL COUNTY, GEORGIA. MAP NO. 13139C0302F, REVISED DATE SEPTEMBER 29, 2006.*
7. *DURING THE FIELD SURVEY PERFORMED ON THIS SITE THERE WAS NO VISIBLE ABOVE GROUND EVIDENCE OF A HUMAN BURIAL AREA OR CEMETERY OBSERVED. HOWEVER, THIS SURVEYOR DID NOT PERFORM A THOROUGH INSPECTION OF THE INTERIOR OF THIS SITE. THEREFORE EXCEPTION IS MADE HEREIN TO ANY HUMAN AREAS OR CEMETERIES THAT MAY EXIST WITHIN THE BOUNDARIES OF THIS SITE.*
8. *THIS PLAT IS FOR THE EXCLUSIVE USE OF THE ENTITIES SHOWN HEREON; ANY USE BY THIRD PARTIES IS AT THEIR OWN RISK.*
9. *ALL DISTANCES AS SHOWN ARE HORIZONTAL GROUND DISTANCES IN U.S. SURVEY FEET (39.37 INCHES = 1 METER).*

NOTE
THIS PLAT IS NOT FOR RECORDING. THIS PLAT DOES NOT CONTAIN THE SURVEYOR'S CERTIFICATION REQUIRED BY O.C.G.A. SECTION 15-6-16 FOR RECORDING. THIS SURVEY COMPLIES WITH ALL OTHER REQUIREMENTS OF THE MINIMUM STANDARDS AND SPECIFICATIONS OF THE STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS.

NOTE
THIS IS NOT A BOUNDARY SURVEY AND IS NOT INTENDED TO TRANSFER PROPERTY.

REFERENCES

1. *REFERENCE IS HEREBY MADE TO THAT CERTAIN DIVISION OF A PARENT TRACT FOR DANJI, LLC & WALTERS MANAGEMENT COMPANY, PREPARED BY ROCHESTER | DCCM, DATED 11/03/21, LAST REVISED 7/7/22, RECORDED IN PLAT BOOK 882, PAGE 147 OF THE HALL COUNTY, GEORGIA RECORDS.*

LEGEND

C&G	–	CURB & GUTTER
CBX	–	CABLE BOX
CI	–	CURB INLET
CMP	–	CORRUGATED METAL PIPE
CO-SS	–	CLEANOUT-SANITARY SEWER
CONC	–	CONCRETE
DI	–	DROP INLET
DWCB	–	DOUBLE-WING CATCH BASIN
EP	–	EDGE OF PAVEMENT
FDC	–	FIRE DEPARTMENT CONNECTION
FFE	–	FINISHED FLOOR ELEVATION
FH	–	FIRE HYDRANT
GP	–	GUY POLE
GV	–	GAS VALVE
HC	–	HANDICAP PARKING SPACE
ICV	–	IRRIGATION CONTROL VALVE
LP	–	LIGHT POLE
MH	–	MANHOLE
N/F	–	NOW OR FORMERLY
PBX	–	POWER BOX
PL	–	PROPERTY LINE
PM	–	POWER METER
POB	–	POINT OF BEGINNING
PP	–	POWER POLE
PLP	–	POWER & LIGHT POLE
PTLP	–	POWER, TELEPHONE & LIGHT POLE
PTP	–	POWER & TELEPHONE POLE
PVC	–	POLYVINYLCHLORIDE PIPE
RCP	–	REINFORCED CONCRETE PIPE
R/W	–	RIGHT OF WAY
-S-	–	SANITARY SEWER LINE
SF	–	SQUARE FEET
SWCB	–	SINGLE-WING CATCH BASIN
TBM	–	TEMPORARY BENCHMARK
TBX	–	TELEPHONE BOX
TMH	–	TELEPHONE MANHOLE
TP	–	TELEPHONE POLE
WM	–	WATER METER
WV	–	WATER VALVE
(#)	–	PARKING SPACE NUMBER

GRAPHIC SCALE 0' 20' 40' 80' 120'

GEORGIA REGISTERED No. 3049 LAND SURVEYOR RICHARD E. MILLARD

SHEET 1 OF 1
DATE: 8/18/22
SCALE: 1"=40'
JOB NO.: G2050037
DRAWN BY: LJG
DWG NO.: GMBFSUB

Rochester | DCCM
425 Oak St NW, Gainesville, GA 30501
770.718.0600 p | www.rochester-assoc.com

AS-BUILT SURVEY FOR
THE GEORGIA MOUNTAIN FOOD BANK, INC.
LOCATED IN G.M.D. 985 CITY OF GAINESVILLE, HALL COUNTY, GEORGIA

NO.	DATE	REVISIONS DESCRIPTION
1	8-31-22	REVISED PER CLIENT REQUEST

STATE OF GEORGIA
GARFIELD PEART
CERTIFICATE NO. 13901
REGISTERED ARCHITECT
09/20/22

Syntony Design Collaborative LLC.

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Drawing Revisions:

1 PLAN REVIEW COMMENTS 10.07.22

Drawing Date: 09/20/2022
Project Number: 220001
Drawn By: CR
Checked By: GLP

GEORGIA MOUNTAIN FOOD BANK
1642 CALVARY INDUSTRIAL DRIVE SW
GAINESVILLE, GA 30507

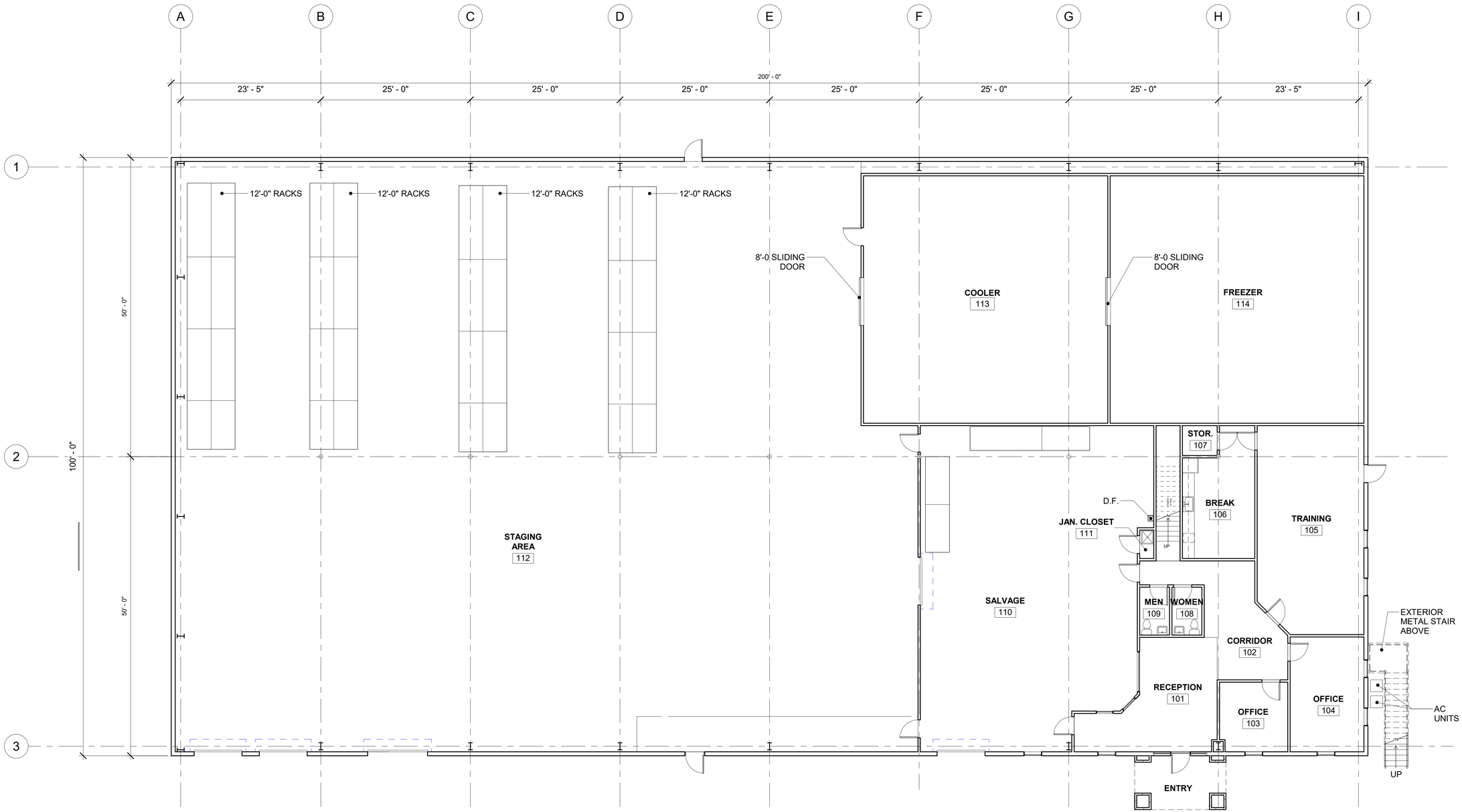
Drawing Description:
SURVEY

G501

GNEB2022.rtzee - 09202022 By reviewing the plan/specs for Code Compliance does not relieve the owner, design professionals, contractors or their representatives from the responsibility to comply with all local, state and national codes and standards in effect at time of permit issuance. Our review is not a check of every item and does not prevent this department from requiring corrections during construction. Any changes/deviations to approved plans shall be approved and noted by permit.

GAINESVILLE PLANNING & ZONING

PERMIT SET. RELEASED OR ISSUED FOR CONSTRUCTION.



1 EXISTING FIRST LEVEL FLOOR PLAN
1/8" = 1'-0"

STATE OF GEORGIA
GARFIELD PEART
CERTIFICATE NO. 13901
REGISTERED ARCHITECT
09/20/22

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Drawing Revisions:

1 PLAN REVIEW COMMENTS 10.07.22

Drawing Date: 09/20/2022
Project Number: 220001
Drawn By: AP
Checked By: GLP

GEORGIA MOUNTAIN FOOD BANK
1642 CALVARY INDUSTRIAL DRIVE SW
GAINESVILLE, GA 30507

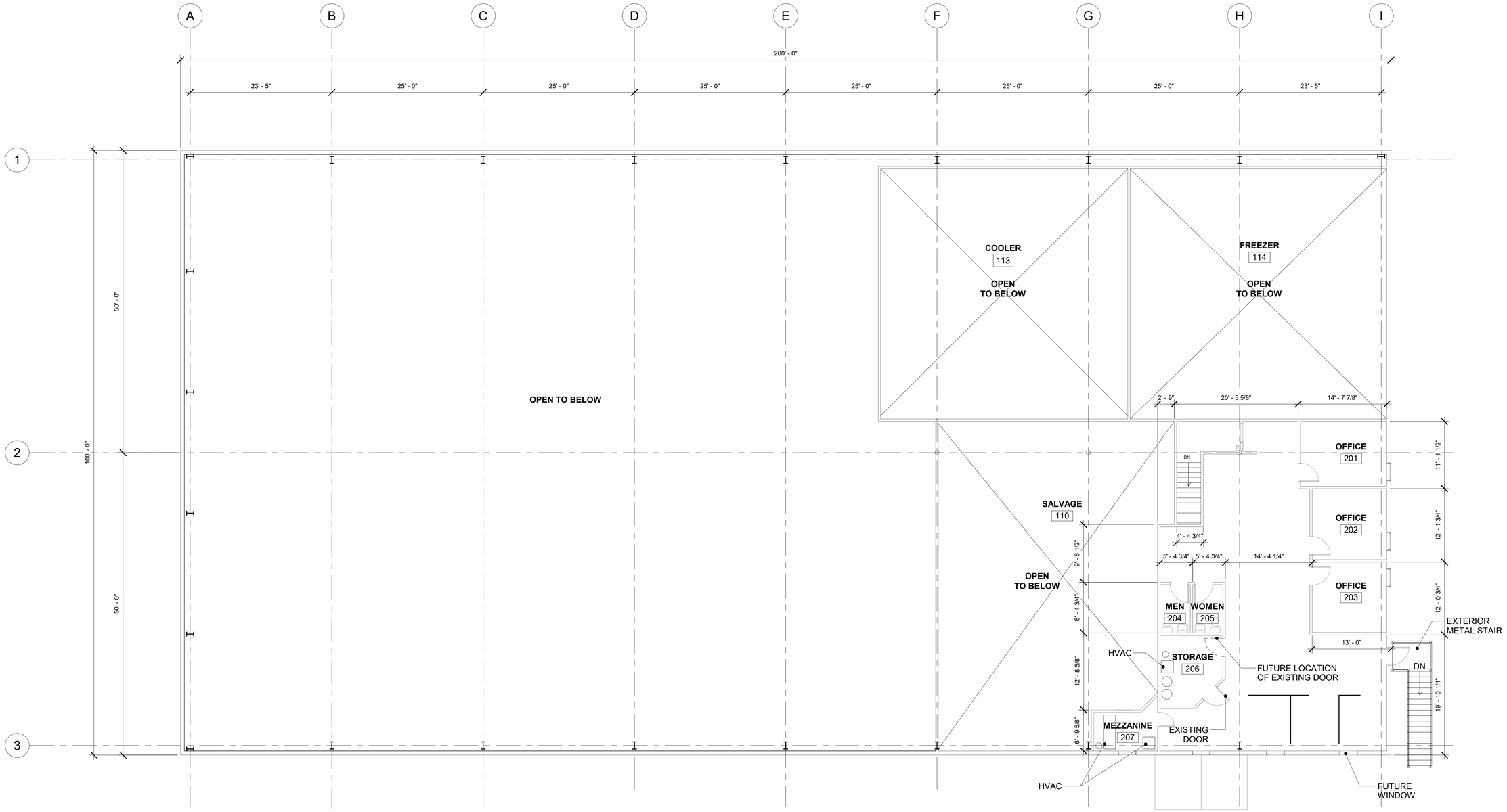
Drawing Description:
EXISTING FIRST LEVEL FLOOR PLAN

A101

CHEMYZ/Date - 20220922 By reviewing the plans/specs for Code Compliance does not relieve the owner, design professionals, contractors or their representatives from the responsibility to comply with all local, state and national codes and standards in effect at time of permit issuance. You review is not a check of every item and does not prevent the department from requiring corrections during construction. Any changes/deviations to approved plans must be approved by the AHJ.

GAINESVILLE BUILDING SERVICES

PERMIT SET. RELEASED OR ISSUED FOR CONSTRUCTION.



1 EXISTING SECOND LEVEL FLOOR PLAN
1/8" = 1'-0"

NORTH

STATE OF GEORGIA
GARFIELD PEART
CERTIFICATE NO. 13901
REGISTERED ARCHITECT
09/20/22

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Drawing Revisions:

1 PLAN REVIEW COMMENTS 10.07.22

Drawing Date:	09/20/2022
Project Number:	220001
Drawn By:	AP
Checked By:	GLP

GEORGIA MOUNTAIN FOOD BANK
1642 CALVARY INDUSTRIAL DRIVE SW
GAINESVILLE, GA 30507

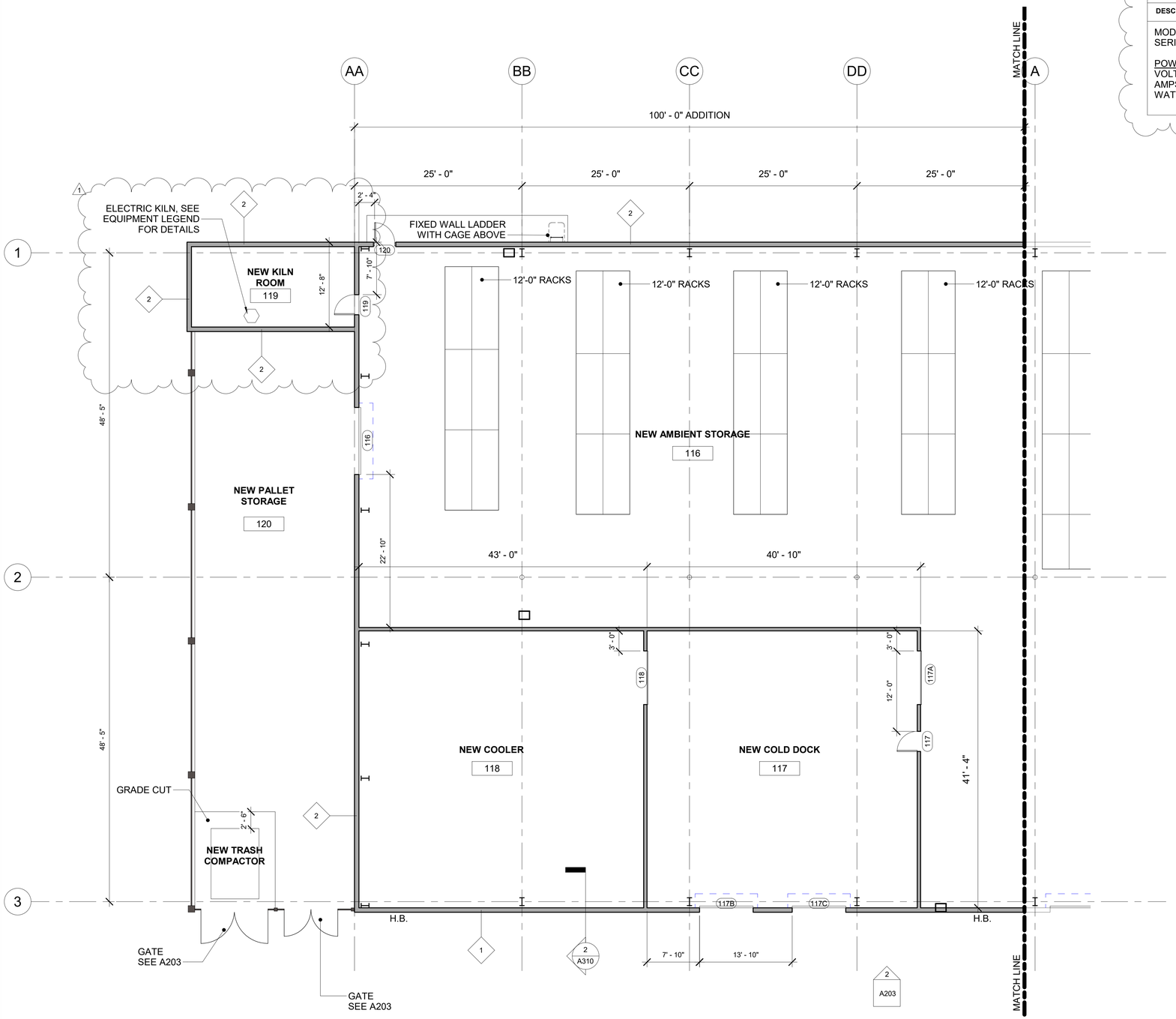
Drawing Description:
EXISTING SECOND LEVEL FLOOR PLAN

A102

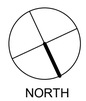
GCNEW2.0.0a - 10/10/2022 - By reviewing the plans/specs for Code Compliance does not relieve the owner, design professionals, contractors or their representatives from the responsibility to comply with all local, state and national codes and standards in effect at time of permit issuance. Our review is not a check of every item and does not prevent this department from requiring corrections during construction. Any changes/deviations to approved plans shall be approved and noted during the permit.

GAINESVILLE
GEORGIA

PERMIT SET. RELEASED OR ISSUED FOR CONSTRUCTION.



1 PROPOSED FIRST LEVEL FLOOR PLAN - SECTION A
1/8" = 1'-0"



KEY PLAN

A	B

1

EQUIPMENT - ELECTRIC KILN	
MANUFACTURER	
L&L MANUFACTURING CO.	
DESCRIPTION	
MODEL NO: J236 SERIAL NO: 61488 POWER VOLTS: 240/1 PHASE AMPS: 14.66 WATTS: 3,518	

SHEET NOTES

1. ALL DIMENSIONS TO BE VERIFIED IN THE FIELD BY THE G.C. PRIOR TO ANY INSTALLATION OF NEW WORK
2. ALL EXPOSED GYPSUM BOARD IN LEASE AREA SHALL BE SEALED AND PRIMED ONLY
3. GENERAL CONTRACTOR SHALL BE REQUIRED TO VISIT PREMISE TO INSPECT EXISTING CONDITIONS AND VERIFY WORK TO BE PERFORMED.
4. ALL WORK PERFORMED SHALL BE IN STRICT COMPLIANCE WITH GOVERNING FEDERAL, STATE AND LOCAL BUILDING CODES REQUIREMENTS.
5. FIRE SEAL ALL PENETRATIONS THRU RATED WALLS, FLOORS, AND CEILINGS WITH APPROVED FIRE RATED CAULK AS DIRECTED BY LOCAL JURISDICTIONS.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF TRASH AND DEBRIS FROM THE JOB SITE ON A DAILY BASIS.
7. REFER TO MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS FOR EQUIPMENT AND RELATED DETAILS.
8. REFER TO STRUCTURAL DRAWINGS FOR FOUNDATION DETAILS.
9. SEE STRUCTURAL DRAWINGS FOR ALL SLAB ON GRADE DETAILS AND SPECIFICATIONS
10. FOR LOCATION OF MOP SINKS AND FLOOR DRAINS SEE PLUMBING DRAWINGS.
11. ALL FRAMING DIMENSIONS ARE ROUGH FRAMING, AND DO NOT INCLUDE ANY FINISH MATERIALS UNLESS OTHERWISE NOTED.
12. ALL WALLS SHALL BE OF 6" OR 4" METAL STUDS UNLESS OTHERWISE NOTED.
13. APPLY BORIC ACID ON TOP OF THE MUD SILL OR BOTTOM PLATE, PRIOR TO CLOSING ALL WALLS.
14. PROVIDE BLOCKING FOR RESTROOM ACCESSORIES, DOOR STOPS, EXP. JOINTS, CABINETS, ETC.
15. INSTALL OCCUPANT LOAD SIGN PER LOCAL FIRE MARSHALL. COORDINATE LOCATION WITH OWNER/FIRE MARSHALL.
16. PROVIDE MASTIC OR APPROVED SEALANT UNDER ALL EXT. PLATES
17. SEE DRAWING A601 FOR DOOR TYPES, SCHEDULE INTERIOR FINISH PLAN AND HARDWARE SCHEDULE.
18. SEE MECHANICAL DRAWING FOR NEW COOLER AND COLD DOCK SPECIFICATIONS.
19. SEE MECHANICAL DRAWING AND MANUFACTURER ICC FOR CONVERSION OF EXISTING COOLER TO FREEZER

WALL TYPES

1. EXTERIOR - BRICK VENEER TO 4' A.F.F. / 26 GAUGE PBR MTL. PANELS STARTING AT 4' A.F.F ON EXTERIOR SHEATHING ON WALL GIRTS W/ R-20 BATT INSULATION AND WATERPROOF COVER

2. EXTERIOR - 26 GAUGE PBR MTL. PANELS ON EXTERIOR SHEATHING ON WALL GIRTS W/ R-20 BATT INSULATION AND WATERPROOF COVER

3. INTERIOR - 3 5/8" MTL. STUD AT 16" O.C. ON 1 LAYER 1/2" GWB (BOTH SIDES) W/ SOUND ATTENTUATION INSULATION

STATE OF GEORGIA
GARFIELD PEART
CERTIFICATE NO. 12901
REGISTERED ARCHITECT
09/20/22

Syntony Design Collaborative LLC.

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Drawing Revisions:

1 PLAN REVIEW COMMENTS 10.07.22

Drawing Date:	09/20/2022
Project Number:	220001
Drawn By:	AP
Checked By:	GLP

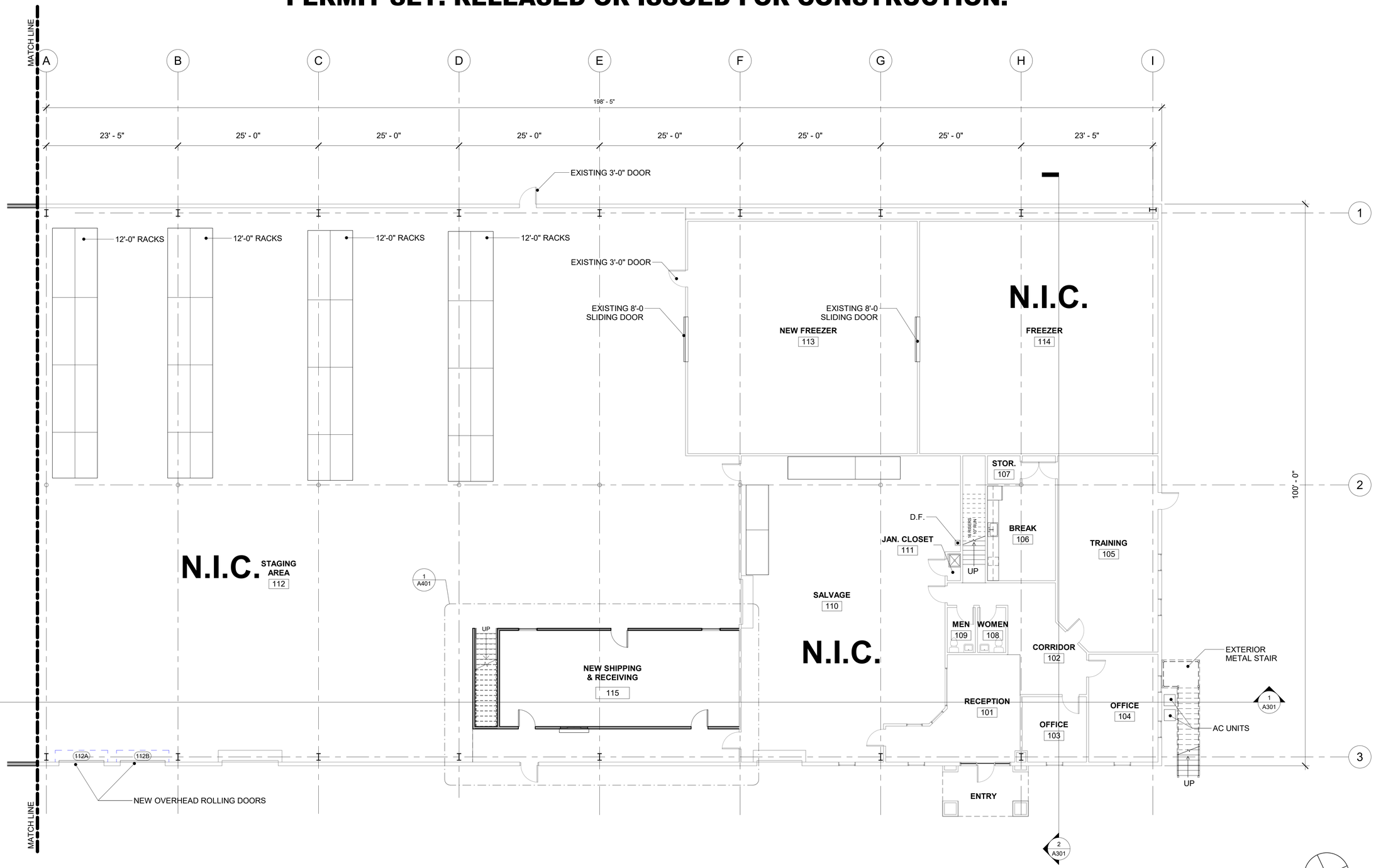
GEORGIA MOUNTAIN FOOD BANK
1642 CALVARY INDUSTRIAL DRIVE SW
GAINESVILLE, GA 30507

Drawing Description:
PROPOSED FIRST LEVEL FLOOR PLAN

A103

ICC#2012/2018 - 10/20/2022 By reviewing the plans/specs for Code Compliance does not relieve the owner, design professionals, contractors or their representatives from the responsibility to comply with all local, state and national codes and standards in effect at time of permit issuance. Our review is not a breach of every item and does not prevent the department from requiring corrections during construction. Any changes/alterations to approved plans shall be approved by plans examiner.

PERMIT SET. RELEASED OR ISSUED FOR CONSTRUCTION.



1 PROPOSED FIRST LEVEL FLOOR PLAN - SECTION B
1/8" = 1'-0"

KEY PLAN

A	B

STATE OF GEORGIA
GARFIELD PEART
CERTIFICATE NO. 13001
REGISTERED ARCHITECT
09/20/22

Syntony Design Collaborative LLC.

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Drawing Revisions:

1 PLAN REVIEW COMMENTS 10.07.22

Drawing Date:	09/20/2022
Project Number:	220001
Drawn By:	AP
Checked By:	GLP

GEORGIA MOUNTAIN FOOD BANK
1642 CALVARY INDUSTRIAL DRIVE SW
GAINESVILLE, GA 30507

Drawing Description:

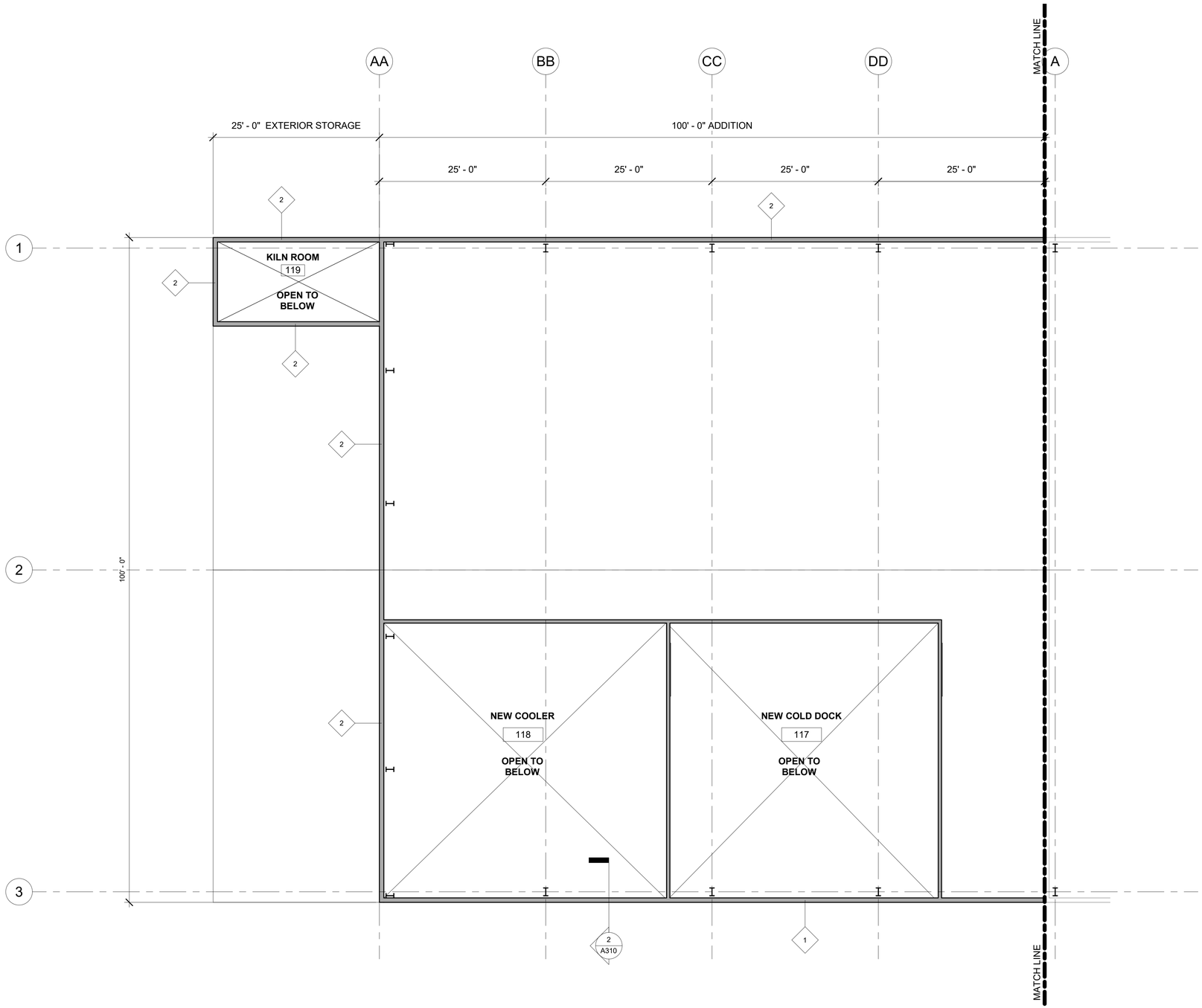
PROPOSED FIRST LEVEL FLOOR PLAN

A104

GCNEW22-0146 10/10/2022 By reviewing the plans/specs for Code Compliance does not relieve the owner, design professionals, contractors or their representatives from the responsibility to comply with all local, state and national codes and standards in effect at time of permit issuance. Our review is not a check of every item and does not prevent this department from requiring corrections during construction. Any changes/alterations to approved plans shall be approved to avoid voiding the permit.

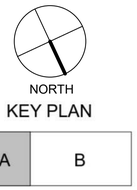
GAINESVILLE INSPECTION SERVICES

PERMIT SET. RELEASED OR ISSUED FOR CONSTRUCTION.



PROPOSED SECOND LEVEL FLOOR PLAN - SECTION A

1 1/8" = 1'-0"



SHEET NOTES

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6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF TRASH AND DEBRIS FROM THE JOB SITE ON A DAILY BASIS.
7. REFER TO MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS FOR EQUIPMENT AND RELATED DETAILS.
8. REFER TO STRUCTURAL DRAWINGS FOR FOUNDATION DETAILS.
9. SEE STRUCTURAL DRAWINGS FOR ALL SLAB ON GRADE DETAILS AND SPECIFICATIONS
10. FOR LOCATION OF MOP SINKS AND FLOOR DRAINS SEE PLUMBING DRAWINGS.
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14. PROVIDE BLOCKING FOR RESTROOM ACCESSORIES, DOOR STOPS, EXP. JOINTS, CABINETS, ETC.
15. INSTALL OCCUPANT LOAD SIGN PER LOCAL FIRE MARSHALL. COORDINATE LOCATION WITH OWNER/FIRE MARSHALL.
16. PROVIDE MASTIC OR APPROVED SEALANT UNDER ALL EXT. PLATES
17. SEE DRAWING A601 FOR DOOR TYPES, SCHEDULE AND HARDWARE SCHEDULE.
18. SEE MECHANICAL DRAWING FOR NEW COOLER AND COLD DOCK SPECIFICATIONS.

WALL TYPES

1. EXTERIOR - BRICK VENEER TO 4' A.F.F. / 26 GAUGE PBR MTL. PANELS STARTING AT 4' A.F.F ON EXTERIOR SHEATHING ON WALL GIRTS W/ R-20 BATT INSULATION AND WATERPROOF COVER

2. EXTERIOR - 26 GAUGE PBR MTL. PANELS ON EXTERIOR SHEATHING ON WALL GIRTS W/ R-20 BATT INSULATION AND WATERPROOF COVER

3. INTERIOR - 3 5/8" MTL. STUD AT 16" O.C. ON 1 LAYER 1/2" GWB (BOTH SIDES) W/ SOUND ATTENTUATION INSULATION

STATE OF GEORGIA
GARFIELD PEART
CERTIFICATE NO. 12901
REGISTERED ARCHITECT
09/20/22

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Drawing Revisions:

1 PLAN REVIEW COMMENTS 10.07.22

Drawing Date:	09/20/2022
Project Number:	220001
Drawn By:	AP
Checked By:	GLP

GEORGIA MOUNTAIN FOOD BANK
1642 CALVARY INDUSTRIAL DRIVE SW
GAINESVILLE, GA 30507

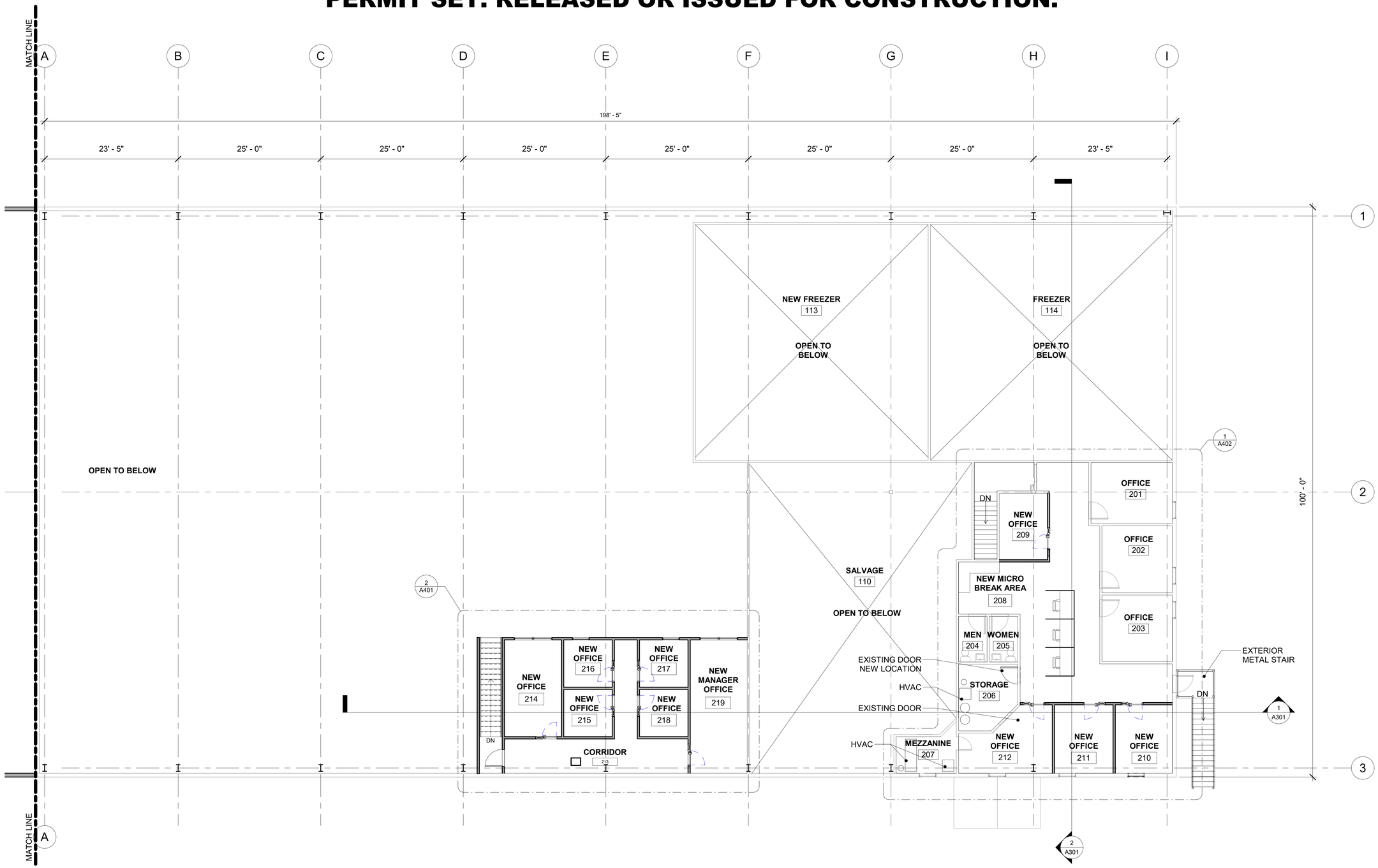
Drawing Description:

PROPOSED SECOND LEVEL FLOOR PLAN

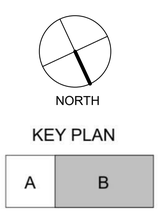
A105

cr2server.rcae - 20220922 By reviewing the plans/specs for Codes Compliance does not relieve the owner, design professionals, contractors or their representatives from the responsibility to comply with all local, state and national codes and standards in effect at time of permit issuance. Our review is not a check of every item and does not prevent the department from requiring corrections during construction. Any changes/alterations to approved plans shall be approved by owner's design professional and shall be approved by the authority having jurisdiction prior to construction.

PERMIT SET. RELEASED OR ISSUED FOR CONSTRUCTION.



1 PROPOSED SECOND LEVEL FLOOR PLAN - SECTION B
1/8" = 1'-0"



STATE OF GEORGIA
GARFIELD PEART
CERTIFICATE NO. 13001
REGISTERED ARCHITECT
09/20/22

Syntony Design Collaborative LLC.

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Drawing Revisions:

1 PLAN REVIEW COMMENTS 10.07.22

Drawing Date:	09/20/2022
Project Number:	220001
Drawn By:	AP
Checked By:	GLP

GEORGIA MOUNTAIN FOOD BANK
1642 CALVARY INDUSTRIAL DRIVE SW
GAINESVILLE, GA 30507

Drawing Description:

PROPOSED SECOND LEVEL FLOOR PLAN

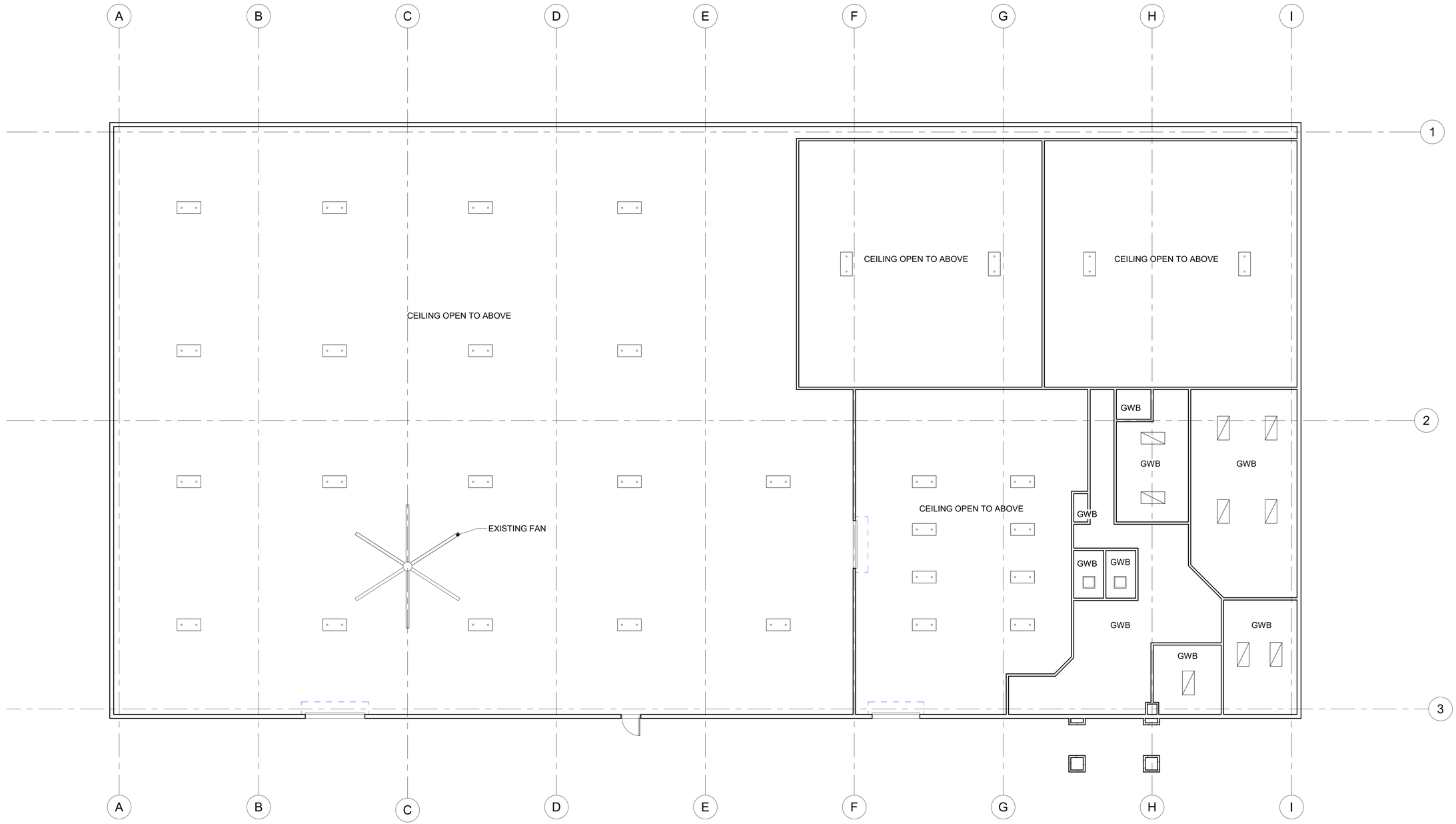
A106

GCNEW22-0146 10/10/2022 By reviewing the plans/specs for Code Compliance does not relieve the owner, design professionals, contractors or their representatives from the responsibility to comply with all local, state and national codes and standards in effect at time of permit issuance. Our review is not a check of every item and does not prevent this department from requiring corrections during construction. Any changes/alterations to approved plans shall be approved to avoid voiding the permit.

GAINESVILLE INSPECTION SERVICES

PERMIT SET. RELEASED OR ISSUED FOR CONSTRUCTION.

INTERIOR FIXTURE SCHEDULE		
MARK	SYMBOL	DESCRIPTION
A		2' x 4' NEW LIGHTING FIXTURE
B		2' x 2' RECESSED FIXTURE
C		2' x 4' EXISTING LIGHTING FIXTURE
G		1' x 4' WALL MOUNTED LED
T		FLUORESCENT STRIP LIGHTING FIXTURE
W		LED WALLPACK
RETURN		2' x 2'
SUPPLY		2' x 2'
EMERGENCY EXIT LIGHT		EMERGENCY EXIT LIGHT
EMERGENCY LIGHT UNIT		SELF-CONTAINED EMERGENCY LIGHTING BATTERY UNIT



1 EXISTING REFLECTED CEILING PLAN - FIRST LEVEL
1/8" = 1'-0"

STATE OF GEORGIA
GARFIELD PEART
CERTIFICATE NO. 12901
REGISTERED ARCHITECT
09/20/22

Syntony Design Collaborative LLC.

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Drawing Revisions:

1 PLAN REVIEW COMMENTS 10.07.22

Drawing Date:	09/20/2022
Project Number:	220001
Drawn By:	CR
Checked By:	GLP

GEORGIA MOUNTAIN FOOD BANK
1642 CALVARY INDUSTRIAL DRIVE SW
GAINESVILLE, GA 30507

Drawing Description:
EXISTING FIRST LEVEL REFLECTED CEILING PLAN

A107

(C)CEV22.0144 - 20200222 By reviewing the plans/specs for Code Compliance does not relieve the owner, design professionals, contractors or their representatives from the responsibility to comply with all local, state and national codes and standards in effect at time of permit issuance. Our review is not a check of every item and does not prevent the department from requiring corrections during construction. Any changes/alterations to approved plans shall be approved by the AHJ prior to building.

PERMIT SET. RELEASED OR ISSUED FOR CONSTRUCTION.

INTERIOR FIXTURE SCHEDULE		
MARK	SYMBOL	DESCRIPTION
A		2' x 4' NEW LIGHTING FIXTURE
B		2' x 2' RECESSED FIXTURE
C		2' x 4' EXISTING LIGHTING FIXTURE
G		1' x 4' WALL MOUNTED LED
T		FLUORESCENT STRIP LIGHTING FIXTURE
W		LED WALLPACK
RETURN		2' x 2'
SUPPLY		2' x 2'
EMERGENCY EXIT LIGHT		EMERGENCY EXIT LIGHT
EMERGENCY LIGHT UNIT		SELF-CONTAINED EMERGENCY LIGHTING BATTERY UNIT



1 EXISTING REFLECTED CEILING PLAN - SECOND LEVEL
1/8" = 1'-0"

STATE OF GEORGIA
GARFIELD PEART
CERTIFICATE NO. 13001
REGISTERED ARCHITECT
09/20/22

Syntony Design Collaborative LLC.

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Drawing Revisions:

1 PLAN REVIEW COMMENTS 10.07.22

Drawing Date:	09/20/2022
Project Number:	220001
Drawn By:	CR
Checked By:	GLP

GEORGIA MOUNTAIN FOOD BANK
1642 CALVARY INDUSTRIAL DRIVE SW
GAINESVILLE, GA 30507

Drawing Description:

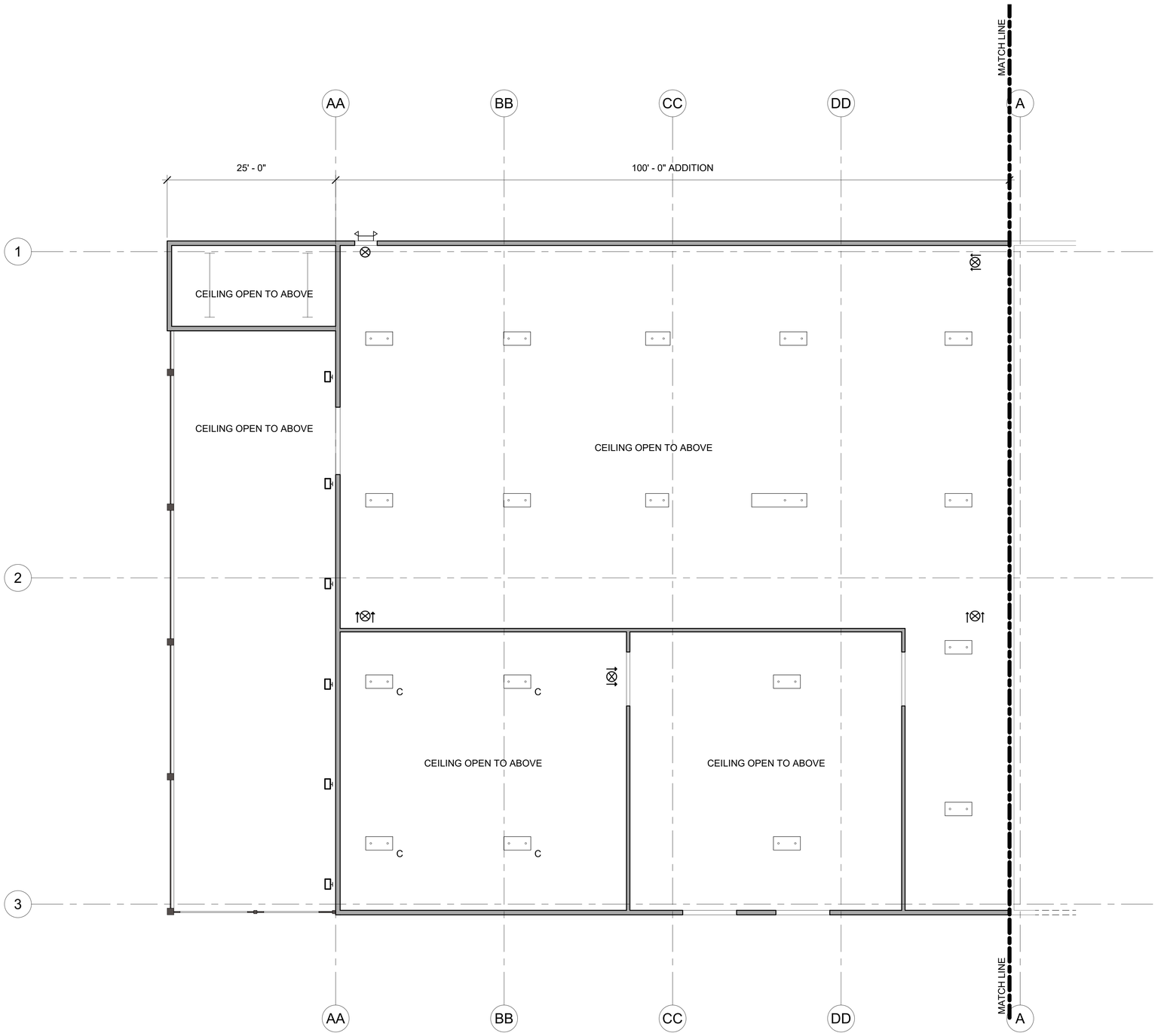
EXISTING SECOND LEVEL REFLECTED CEILING PLAN

A108

GCNEW22-0146 10/10/2022 By reviewing the plans/specs for Code Compliance does not relieve the owner, design professionals, contractors or their representatives from the responsibility to comply with all local, state and national codes and standards in effect at time of permit issuance. Our review is not a check of every item and does not prevent this department from requiring corrections during construction. Any changes/alterations to approved plans shall be approved to avoid voiding the permit.

GAINESVILLE INSPECTION SERVICES

PERMIT SET. RELEASED OR ISSUED FOR CONSTRUCTION.



PROPOSED REFLECTED CEILING PLAN - FIRST LEVEL - SECTION A

1 1/8" = 1'-0"

INTERIOR FIXTURE SCHEDULE		
MARK	SYMBOL	DESCRIPTION
A		2' x 4' NEW LIGHTING FIXTURE
B		2' x 2' RECESSED FIXTURE
C		2' x 4' EXISTING LIGHTING FIXTURE
G		1' x 4' WALL MOUNTED LED
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EMERGENCY EXIT LIGHT		EMERGENCY EXIT LIGHT
EMERGENCY LIGHT UNIT		SELF-CONTAINED EMERGENCY LIGHTING BATTERY UNIT

CEILING FINISHES		
SYMBOL	LABEL	MATERIAL
	ACT	2'x2' ACOUSTIC CEILING TILE
	GWB	GYPSUM WALL BOARD

RCP NOTES

NOTES:

1. GENERAL CONTRACTOR SHALL COORDINATE WITH ALL TRADES INVOLVED TO PROVIDE CLEARANCES FOR FIXTURES, DUCTS, CEILING, ETC. NECESSARY TO MAINTAIN THE SPECIFIED FINISHED CEILING HEIGHT ABOVE THE FINISHED FLOOR SLAB AS NOTED ON DRAWINGS. NOTIFY OWNER OF ANY DISCREPANCIES.
2. GENERAL CONTRACTOR IS RESPONSIBLE FOR ALL ROOF PENETRATIONS FOR HVAC EQUIPMENT AND PLUMBING - ALL ROOF FLASHING TO COMPLY WITH ROOF OR METAL BUILDING MANUFACTURER'S GUIDELINES AND DETAILS.
3. COORDINATE LOCATIONS OF RATED WALL WITH FIRE/SMOKE DAMPERS & PENETRATIONS SEALS. REFERENCE LIFE SAFETY DIAGRAMS FOR EXTENTS OF UL RATED WALL, CEILING AND ROOF CONSTRUCTION AND CONSULTANT ENGINEERING DRAWINGS. NOTIFY OWNER OF ANY DISCREPANCIES.
4. COORDINATE ALL ACCESS PANEL LOCATIONS IN GWB CEILINGS AND RATED WALL ASSEMBLIES WITH MECHANICAL DRAWINGS.
5. CONTRACTOR TO COORDINATE LOCATION OF WATER HEATER AND ACCESS ABOVE GWB CEILING WITH MECHANICAL DRAWINGS
6. ALL EXPOSED GYPSUM BOARD SHALL BE SEALED WITH ONE COAT OF SEALER AND TWO COATS SEMI-GLOSS ENAMEL. (RE: SPECS.)
7. FOR DETAILS NOT CALLED NOT OUT ON REFLECTED CEILING PLAN, SEE INTERIOR ROOM ELEVATIONS.
8. ALL AV EQUIPMENT TO INCLUDE ELECTRONIC MENUS, MONITORS ETC. SHALL BE DONE BY OTHERS
9. CEILING HEIGHTS SHOWN ARE FROM FINISHED CEILING SURFACE TO CONCRETE SLAB.
10. LOCATE ALL LIGHTS AND CEILING REGISTERS AS SHOWN.
11. REFER TO MECH. DRAWINGS FOR ALL REGISTERS AND DIFFUSERS.
12. REFER TO ELEC. DRAWINGS FOR ALL LIGHTING FIXTURES AND SPECIFICATION.
13. VERIFY AND LOCATE QUANTITY OF EXIT SIGNS, EMERGENCY LIGHTING AND SMOKE/HEAT DETECTION DEVICES AS REQUIRED BY CODE AND LICENSED ELECTRICAL SUB-CONTRACTOR.

LIGHTING FIXTURES :

1. ALL FIXTURES AND DEVICES SHALL BE CENTERED IN THE CEILING TILE UNLESS OTHERWISE NOTED.
2. ALL FIXTURES SHALL BE CONTRACTOR FURNISHED AND INSTALLED.
3. ALL LIGHT FIXTURES ARE SHOWN IN FIXTURE SCHEDULE FOR GRAPHICAL INDICATION ONLY.
4. ALL WET AREAS RECEIVE APPROPRIATE WET CONDITION FIXTURES.
5. ALL LIGHTING FIXTURES SHALL BE POSITIVELY ATTACHED TO THE SUSP. CEILING SYSTEM. THE ATTACHMENT DEVICE SHALL HAVE A CAPACITY OF 100% OF THE LIGHTING FIXTURE WEIGHT ACTING IN ANY DIRECTION NO. 12 GA. HANGERS SHALL BE ATTACHED TO THE GRID MEMBERS WITHIN 3" OF EACH CORNER OF EACH FIXTURE. TANDEM FIXTURES MAY UTILIZE COMMON WIRES.
6. LIGHTING FIXTURE WEIGHING LESS THAN 56 LBS. SHALL HAVE, IN ADDITION TO THE REQUIREMENTS OUTLINED ABOVE, TWO NO. 12 GA. HANGERS CONNECTED FROM THE FIXTURE HOUSING TO THE STRUCTURE ABOVE. THESE WIRES MAY BE SLACK.
7. LIGHTING FIXTURES 56 LBS. OR MORE SHALL BE SUPPORTED BY DIRECTLY FROM THE STRUCTURE ABOVE BY APPROVED HANGERS.
8. PENDANT-HUNG LIGHTING FIXTURES SHALL BE SUPPORTED DIRECTLY FROM THE STRUCTURE ABOVE USING NO. 9 GA. WIRE OR APPROVED ALTERNATE SUPPORT WITHOUT USING THE CEILING SUSPENSION ITEM FOR DIRECT SUPPORT.

KEY PLAN

A	B

STATE OF GEORGIA
GARFIELD PEART
CERTIFICATE NO. 13901
REGISTERED ARCHITECT
09/20/22

Syntony Design Collaborative LLC.

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Drawing Revisions:

1 PLAN REVIEW COMMENTS 10.07.22

Drawing Date: 09/20/2022
Project Number: 220001
Drawn By: AP
Checked By: GLP

GEORGIA MOUNTAIN FOOD BANK
1642 CALVARY INDUSTRIAL DRIVE SW
GAINESVILLE, GA 30507

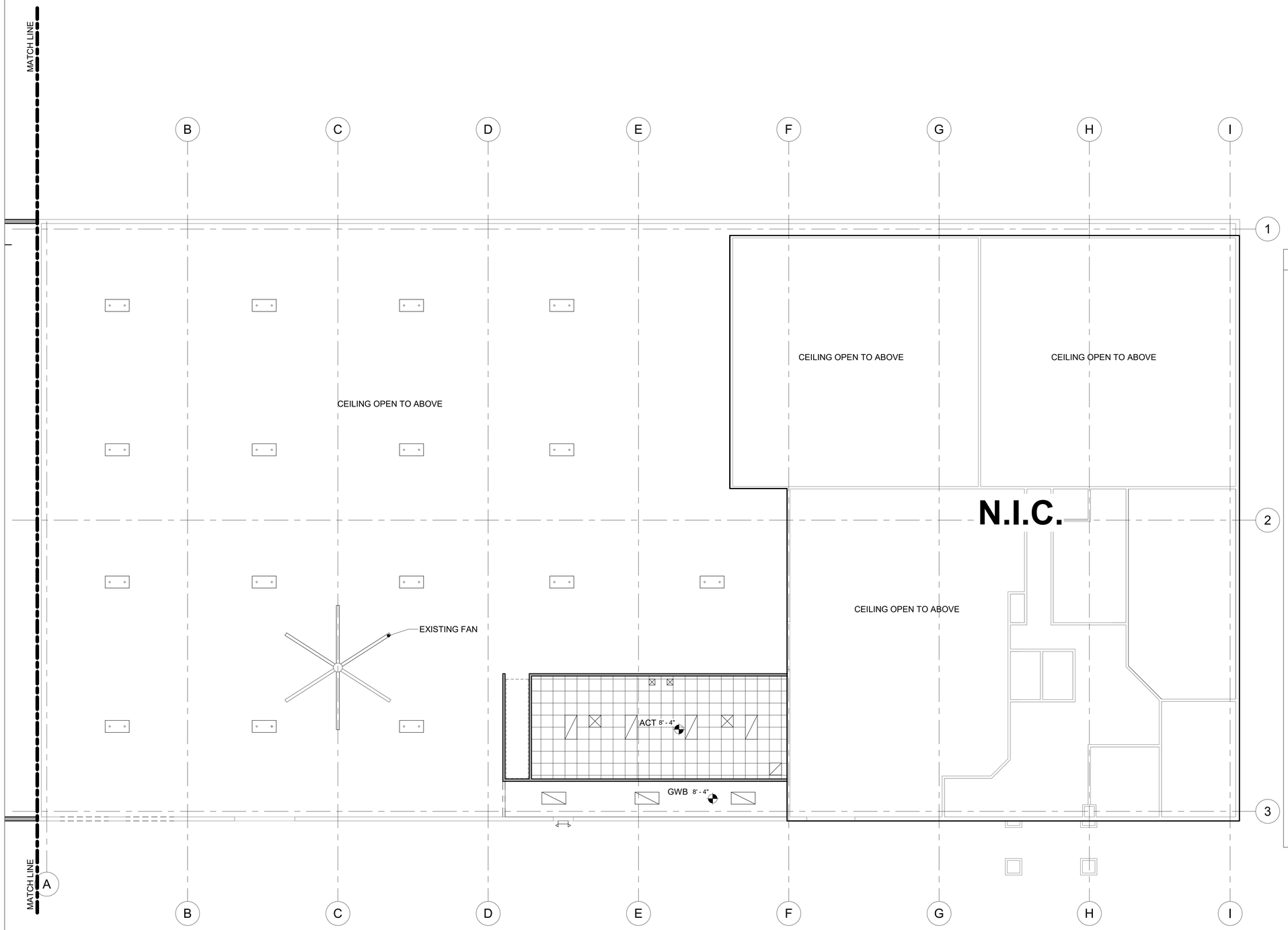
Drawing Description:
PROPOSED FIRST LEVEL REFLECTED CEILING PLAN

A109

GOVERNMENT - 10/01/2022 By reviewing the plans/specs for Code Compliance does not relieve the owner, design professionals, contractors or their representatives from the responsibility to comply with all local, state and national codes and standards in effect at time of permit issuance. Our review is not a check of every item and does not prevent this department from requiring corrections during construction. Any change/alteration to approved plans shall be approved to avoid voiding the permit.

GAINESVILLE GEORGIA

PERMIT SET. RELEASED OR ISSUED FOR CONSTRUCTION.



PROPOSED REFLECTED CEILING PLAN - FIRST LEVEL - SECTION B

1 1/8" = 1'-0"

INTERIOR FIXTURE SCHEDULE

MARK	SYMBOL	DESCRIPTION
A		2' x 4' NEW LIGHTING FIXTURE
B		2' x 2' RECESSED FIXTURE
C		2' x 4' EXISTING LIGHTING FIXTURE
G		1' x 4' WALL MOUNTED LED
T		FLUORESCENT STRIP LIGHTING FIXTURE
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RETURN		2' x 2'
SUPPLY		2' x 2'
EMERGENCY EXIT LIGHT		EMERGENCY EXIT LIGHT
EMERGENCY LIGHT UNIT		SELF-CONTAINED EMERGENCY LIGHTING BATTERY UNIT

CEILING FINISHES

SYMBOL	LABEL	MATERIAL
	ACT	2'x2' ACOUSTIC CEILING TILE
	GWB	GYPSUM WALL BOARD

RCP NOTES

NOTES:

1. GENERAL CONTRACTOR SHALL COORDINATE WITH ALL TRADES INVOLVED TO PROVIDE CLEARANCES FOR FIXTURES, DUCTS, CEILING, ETC. NECESSARY TO MAINTAIN THE SPECIFIED FINISHED CEILING HEIGHT ABOVE THE FINISHED FLOOR SLAB AS NOTED ON DRAWINGS. NOTIFY OWNER OF ANY DISCREPANCIES.
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KEY PLAN

A	B

STATE OF GEORGIA
GARFIELD PEART
CERTIFICATE NO. 12901
REGISTERED ARCHITECT
09/20/22

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Drawing Revisions:

1 PLAN REVIEW COMMENTS 10.07.22

Drawing Date: 09/20/2022
Project Number: 220001
Drawn By: AP
Checked By: GLP

GEORGIA MOUNTAIN FOOD BANK
1642 CALVARY INDUSTRIAL DRIVE SW
GAINESVILLE, GA 30507

Drawing Description:
PROPOSED FIRST LEVEL REFLECTED CEILING PLAN

A110

GENEVIVE10546 - 10/20/2022 - By reviewing the plans/specs for Code Compliance does not relieve the owner, design professionals, contractors or their representatives from the responsibility to comply with all local, state and national codes and standards in effect at time of permit issuance. Our review is not a check of every item and does not prevent field inspections during construction. Any changes/revisions to approved plans must be approved and noted by permit.

GAINESVILLE
PLANNING & DEVELOPMENT

PERMIT SET. RELEASED OR ISSUED FOR CONSTRUCTION.



PROPOSED REFLECTED CEILING PLAN - SECOND LEVEL - SECTION B

1 1/8" = 1'-0"

INTERIOR FIXTURE SCHEDULE

MARK	SYMBOL	DESCRIPTION
A		2' x 4' NEW LIGHTING FIXTURE
B		2' x 2' RECESSED FIXTURE
C		2' x 4' EXISTING LIGHTING FIXTURE
G		1' x 4' WALL MOUNTED LED
T		FLUORESCENT STRIP LIGHTING FIXTURE
W		LED WALLPACK
RETURN		2' x 2'
SUPPLY		2' x 2'
EMERGENCY EXIT LIGHT		EMERGENCY EXIT LIGHT
EMERGENCY LIGHT UNIT		SELF-CONTAINED EMERGENCY LIGHTING BATTERY UNIT

CEILING FINISHES

SYMBOL	LABEL	MATERIAL
	ACT	2'x2' ACOUSTIC CEILING TILE
	GWB	GYPSUM WALL BOARD

RCP NOTES

NOTES:

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KEY PLAN

A	B

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GARFIELD PEART
CERTIFICATE NO. 12901
REGISTERED ARCHITECT
09/20/22

Syntony Design Collaborative LLC.

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Drawing Revisions:

1 PLAN REVIEW COMMENTS 10.07.22

Drawing Date: 09/20/2022
Project Number: 220001
Drawn By: AP
Checked By: GLP

GEORGIA MOUNTAIN FOOD BANK
1642 CALVARY INDUSTRIAL DRIVE SW
GAINESVILLE, GA 30507

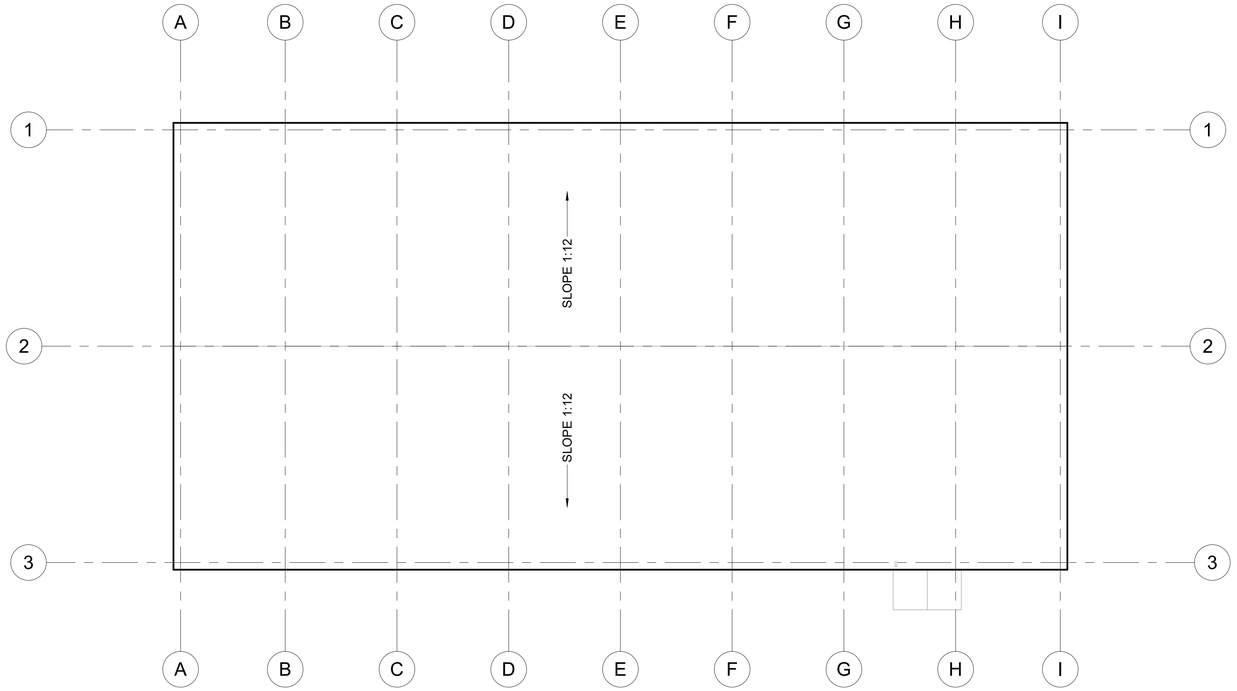
Drawing Description:

PROPOSED SECOND LEVEL REFLECTED CEILING PLAN

A111

gcnezvcrcbse - 10/2/2022 - By reviewing the plans/specs for Code Compliance does not relieve the owner, design professionals, contractors or their representatives from the responsibility to comply with all local, state and national codes and standards in effect at time of permit issuance. Our review is not a check of every item and does not prevent field, equipment, or room layering corrections during construction. Any changes/alternates to approved plans have to be approved and verified by permit.

GAINESVILLE

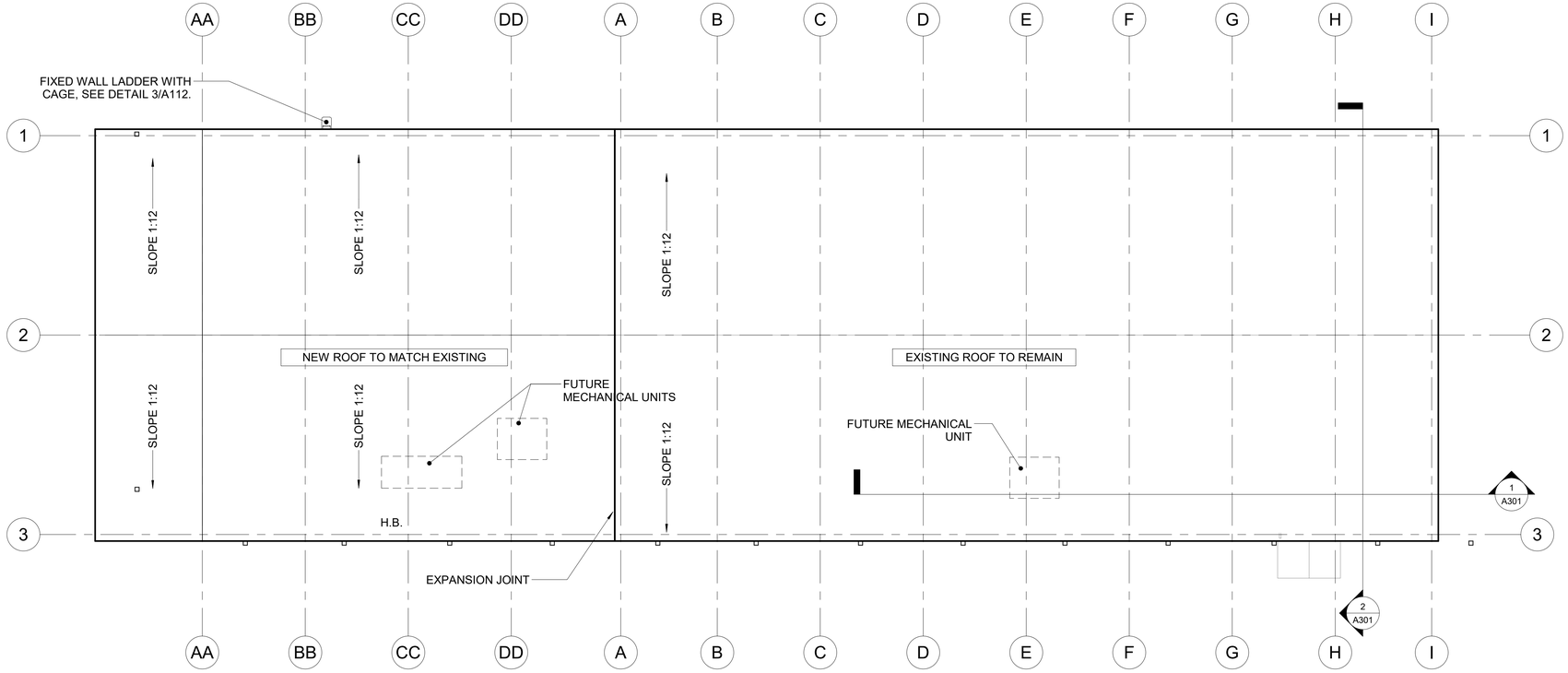


1 EXISTING ROOF PLAN
1/16" = 1'-0"

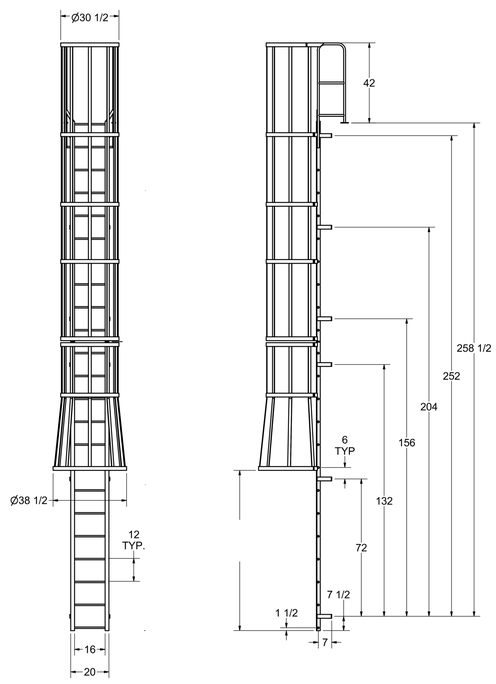
PERMIT SET. RELEASED OR ISSUED FOR CONSTRUCTION.

ROOF NOTES

1. GENERAL CONTRACTOR IS RESPONSIBLE FOR ALL ROOF PENETRATIONS FOR HVAC EQUIPMENT AND PLUMBING - ALL ROOF FLASHING TO COMPLY WITH ROOF MANUFACTURER'S GUIDELINES AND DETAILS.
2. FOR ALL STRUCTURAL FRAMING MEMBER, SIZES AND ADDITIONAL INFORMATION, SEE STRUCTURAL DRAWINGS
3. ALL ROOFING INSTALLATION SHALL BE IN COMPLIANCE WITH ROOFING MANUFACTURER RECOMMENDATIONS TO ENSURE REQUIRED WARRANTY. SEE SPECIFICATIONS FOR INSTALLATION INSTRUCTIONS OF ROOFING SYSTEM INFORMATION.
4. COORDINATE EXACT LOCATION OF DET OPENING W/EQUIPMENT MANUFACTURER – SEE MECHANICAL DRAWINGS. PROVIDE (2) 2X6 BLOCKING UNDER EXHAUST FAN AND RTU CURBS. PROVIDE (1) 2X6 FRAMING AT RTU DUCT OPENINGS. CONTRACTOR SHALL COORDINATE FRAME SIZE WITH EQUIPEMENT DETAILS.
5. ALL EQUIPMENT CURBS SHALL BE BUILT WITH TOP LEVEL
6. ALL VENT PIPES TO BE FLUSH WITH THE TOP PARAPET U.N.O.
7. DIMENSIONS FROM FACE OF STUD U.N.O.
8. CONTRACTOR SHALL FIELD VERIFY DIMENSION FROM FINISH FLOOR TO BOTTOM OF EAVE BEFORE INSTALLATION. SEE SPECIFICATIONS FOR FINISH ON EXTERIOR ROOF ACCESS LADDER.
9. ALL FLAT ROOF SECTIONS INCLUDE 1/4" PER FOOT TAPER INSULATION. ALL CRICKETS ARE 1/2" PER FOOT AT SCUPPERS AND DRAINS.
10. RECOMMENDED ROOF SYSTEM: PURLIN BEARING R PANEL (SCHULTE BUILDING SYSTEMS)



2 PROPOSED ROOF PLAN
1/16" = 1'-0"



3 FIXED WALL LADDER WITH CAGE
N.T.S.

STATE OF GEORGIA
GARFIELD PEART
CERTIFICATE NO. 13901
REGISTERED ARCHITECT
09/20/22

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Drawing Revisions:

1 PLAN REVIEW COMMENTS 10.07.22

Drawing Date:	09/20/2022
Project Number:	220001
Drawn By:	AP
Checked By:	GLP

GEORGIA MOUNTAIN FOOD BANK
1642 CALVARY INDUSTRIAL DRIVE SW
GAINESVILLE, GA 30507

Drawing Description:

EXISTING AND PROPOSED ROOF PLAN

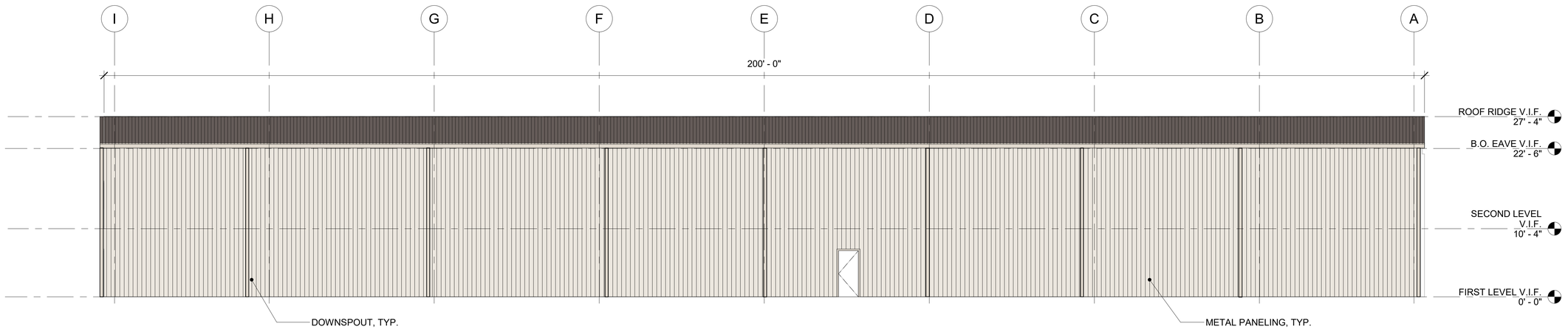
A112

GAINESVILLE

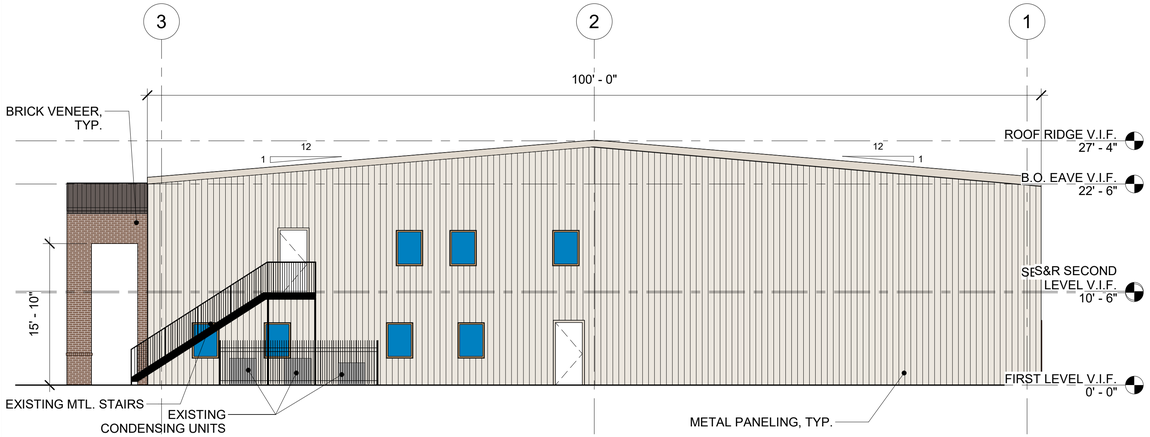
PERMIT SET. RELEASED OR ISSUED FOR CONSTRUCTION.



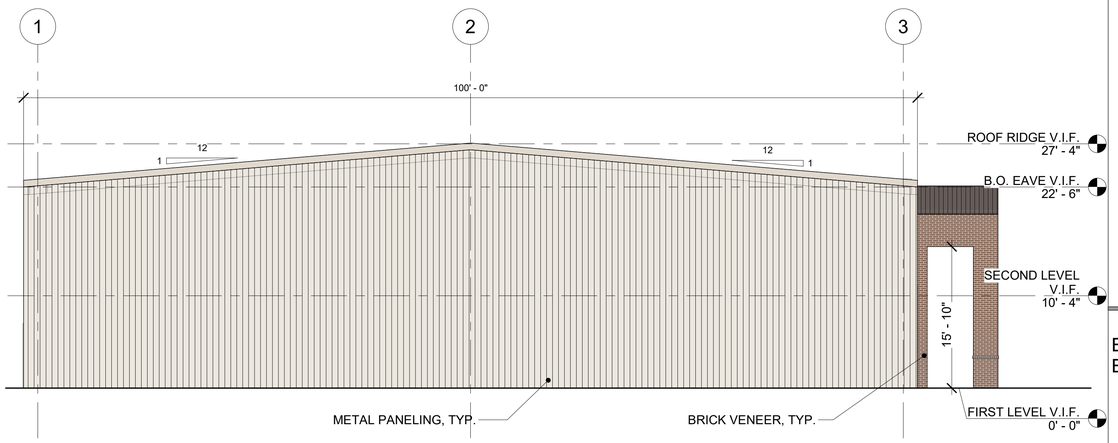
1 EXISTING EAST ELEVATION
1/8" = 1'-0"



2 EXISTING WEST ELEVATION
1/8" = 1'-0"



3 EXISTING NORTH ELEVATION
1/8" = 1'-0"



4 EXISTING SOUTH ELEVATION
1/8" = 1'-0"

STATE OF GEORGIA
GARFIELD PEART
CERTIFICATE NO. 13901
REGISTERED ARCHITECT
09/20/22

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Drawing Revisions:

1 PLAN REVIEW COMMENTS 10.07.22

Drawing Date:	09/20/2022
Project Number:	220001
Drawn By:	AP
Checked By:	GLP

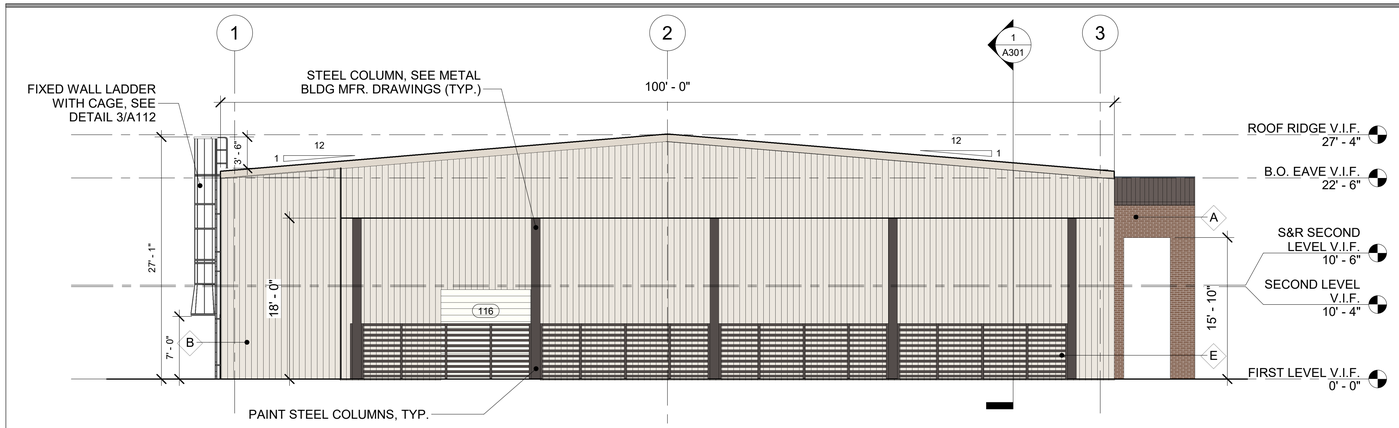
GEORGIA MOUNTAIN FOOD BANK
1642 CALVARY INDUSTRIAL DRIVE SW
GAINESVILLE, GA 30507

Drawing Description:
EXISTING ELEVATIONS

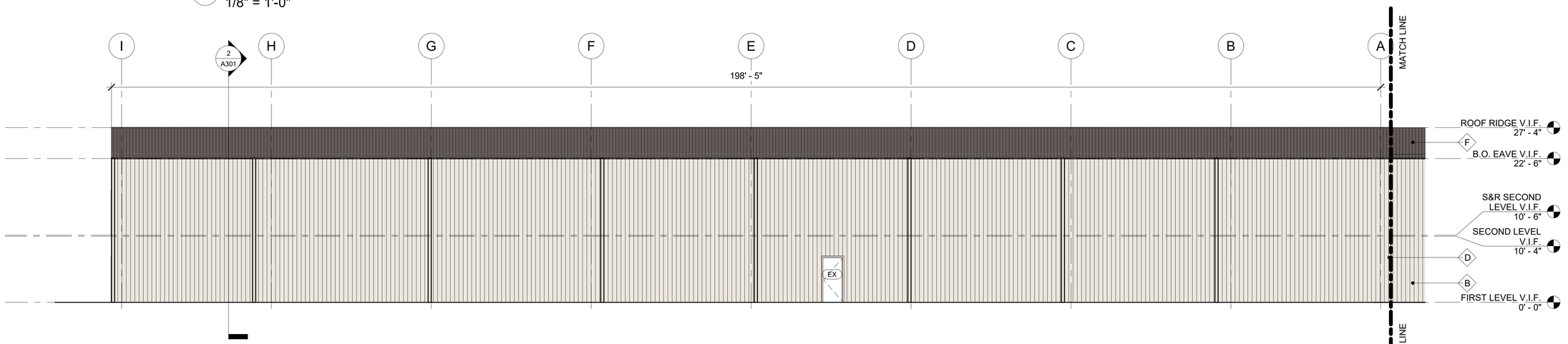
A201

GCNEW22-0146 10/10/2022 By reviewing the plans/specs for Code Compliance does not relieve the owner, design professionals, contractors or their representatives from the responsibility to comply with all local, state and national codes and standards in effect at time of permit issuance. Our review is not a check of every item and does not prevent this department from requiring corrections during construction. Any changes/alterations to approved plans shall be approved to avoid voiding the permit.

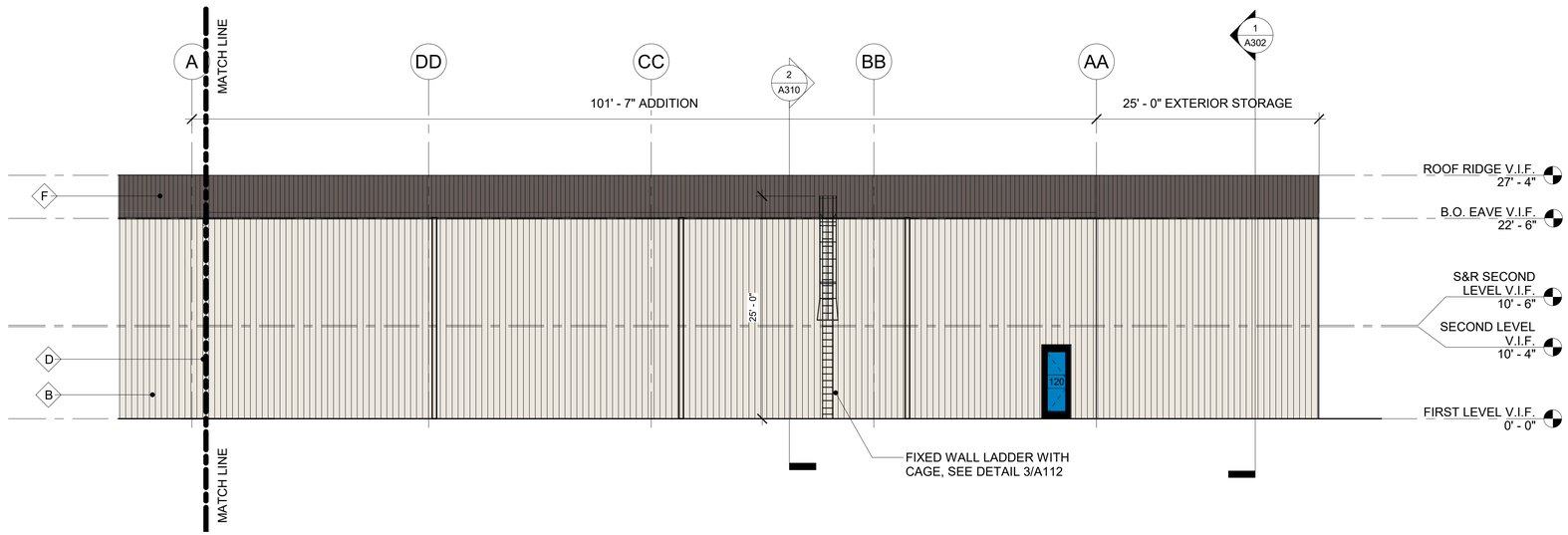
GAINESVILLE INSPECTION SERVICES



1 PROPOSED SOUTH ELEVATION
1/8" = 1'-0"



2 PROPOSED WEST ELEVATION - SECTION B
1/8" = 1'-0"



3 PROPOSED WEST ELEVATION - SECTION A
1/8" = 1'-0"

EXTERIOR FINISHES SCHEDULE

SYMBOL	MATERIAL	DESCRIPTION
A	BRICK	MFR/TYPE: CHEROKEE BRICK, SHELMAN'S BLUFF
B	METAL PANELING	26 GAUGE PV PANELS, COLOR TO MATCH EXISTING
C	WOODEN GATES	
D	SEAMLESS GUTTER AND DOWNSPOUT	6" SEAMLESS GUTTER & DOWNSPOUT SYSTEM, COLOR TO MATCH EXISTING
E	METAL FENCE	
F	ROOF METAL PANELING	26 GAUGE PV PANELS, COLOR TO MATCH EXISTING

NOTES:

1. PREPARE ALL SURFACES TO BE PAINTED AS PER MANUFACTURERS RECOMMENDATIONS
2. TEST. S.W. COLORS TO COLORS ON SITE - ADJUST SW COLORS AS REQ'D TO MATCH
3. ALL COLORS AND FINISHES SHALL BE PRESENTED TO OWNER FOR APPROVAL PRIOR TO INSTALLATION
4. BUILDING DOOR NUMBER SIGNAGE TO MATCH EXISTING.

PERMIT SET. RELEASED OR ISSUED FOR CONSTRUCTION.

STATE OF GEORGIA
GARFIELD PEART
CERTIFICATE NO. 13901
REGISTERED ARCHITECT
09/20/22

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Drawing Revisions:

1 PLAN REVIEW COMMENTS 10.07.22

Drawing Date: 09/20/2022
Project Number: 220001
Drawn By: AP
Checked By: GLP

GEORGIA MOUNTAIN FOOD BANK
1642 CALVARY INDUSTRIAL DRIVE SW
GAINESVILLE, GA 30507

Drawing Description:
PROPOSED ELEVATIONS

A202

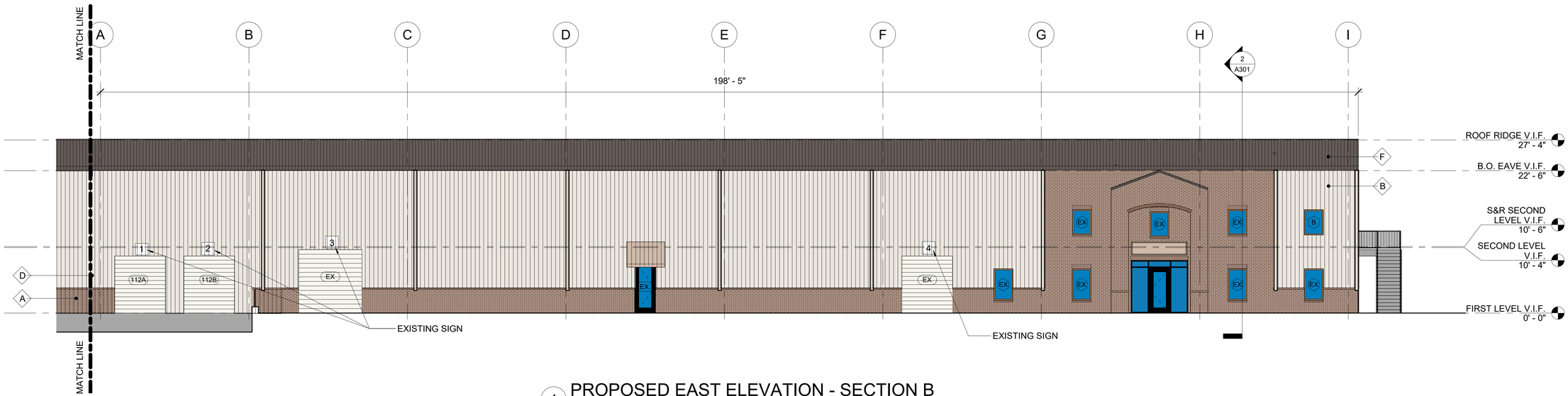
contractor to verify all dimensions and conditions prior to construction. Any changes/deviations to approved plans must be approved by the architect and may require additional permits. By reviewing the plans/specs for Codes Compliance does not relieve the owner, design professionals, contractors or their representatives from the responsibility to comply with all local, state and national codes and standards in effect at time of permit issuance. Our review is not a check of every item and does not prevent this department from requiring corrections during construction. Any changes/deviations to approved plans must be approved by the architect and may require additional permits.

PERMIT SET. RELEASED OR ISSUED FOR CONSTRUCTION.

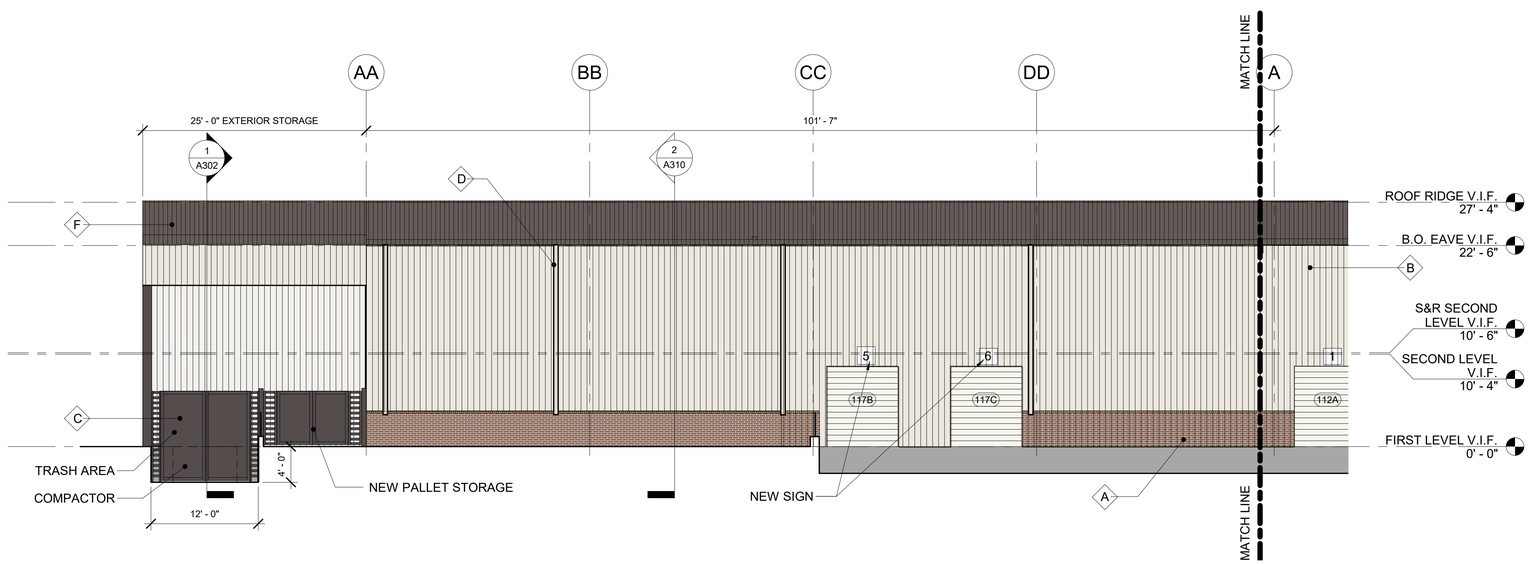
EXTERIOR FINISHES SCHEDULE		
SYMBOL	**MATERIAL**	**DESCRIPTION**
A	BRICK	MFR/TYPE: CHEROKEE BRICK, SHELMAN'S BLUFF
B	METAL PANELING	26 GAUGE PV PANELS, COLOR TO MATCH EXISTING
C	WOODEN GATES	
D	SEAMLESS GUTTER AND DOWNSPOUT	6" SEAMLESS GUTTER & DOWNSPOUT SYSTEM, COLOR TO MATCH EXISTING
E	METAL FENCE	
F	ROOF METAL PANELING	26 GAUGE PV PANELS, COLOR TO MATCH EXISTING

NOTES:

1. PREPARE ALL SURFACES TO BE PAINTED AS PER MANUFACTURERS RECOMMENDATIONS
2. TEST. S.W. COLORS TO COLORS ON SITE - ADJUST SW COLORS AS REQ'D TO MATCH
3. ALL COLORS AND FINISHES SHALL BE PRESENTED TO OWNER FOR APPROVAL PRIOR TO INSTALLATION
4. BUILDING DOOR NUMBER SIGNAGE TO MATCH EXISTING.



1 PROPOSED EAST ELEVATION - SECTION B
1/8" = 1'-0"



2 PROPOSED EAST ELEVATION - SECTION A
1/8" = 1'-0"

STATE OF GEORGIA
GARFIELD PEART
CERTIFICATE NO. 12901
REGISTERED ARCHITECT
09/20/22

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Drawing Revisions:

1 PLAN REVIEW COMMENTS 10.07.22

Drawing Date: 09/20/2022
Project Number: 220001
Drawn By: AP
Checked By: GLP

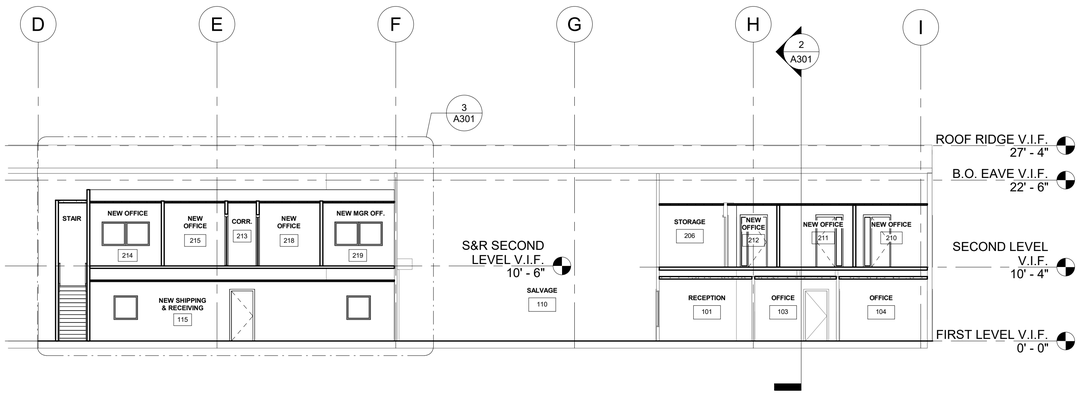
GEORGIA MOUNTAIN FOOD BANK
1642 CALVARY INDUSTRIAL DRIVE SW
GAINESVILLE, GA 30507

Drawing Description:
PROPOSED ELEVATIONS

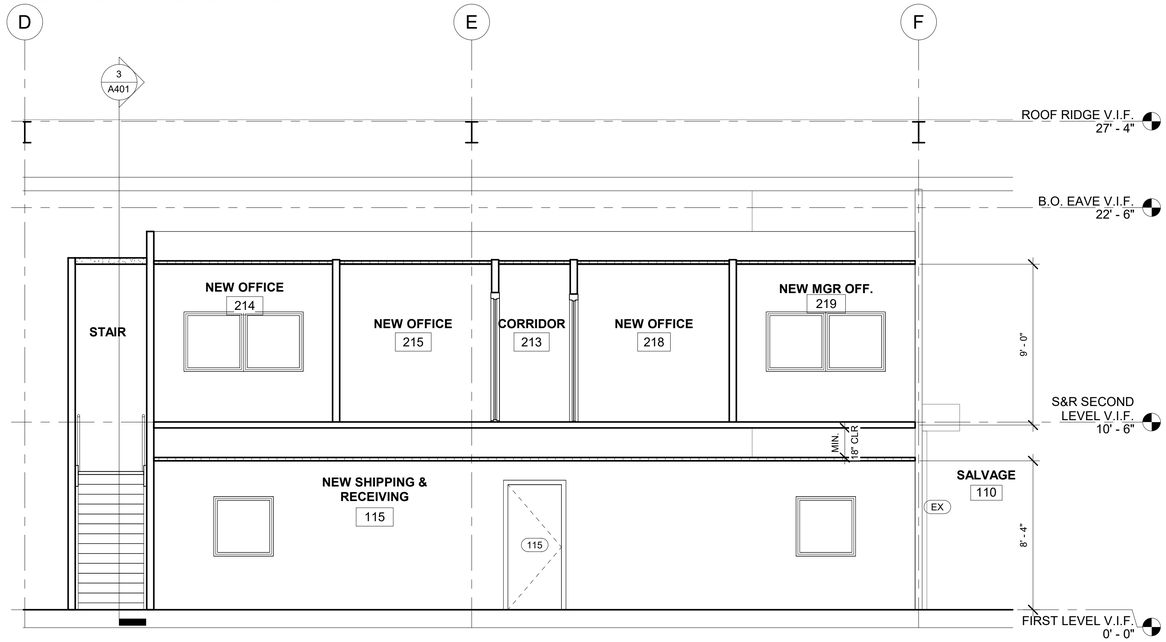
A203

orders/22-rcse_ 20220922 By reviewing the plans/specs for Code Compliance does not relieve the owner, design professionals, contractors or their representatives from the responsibility to comply with all local, state and national codes and standards in effect at time of permit issuance. Our review is not a check of every item and does not prevent the department from requiring corrections during construction. Any changes/deviations to approved plans shall be approved by us prior to building for permit.

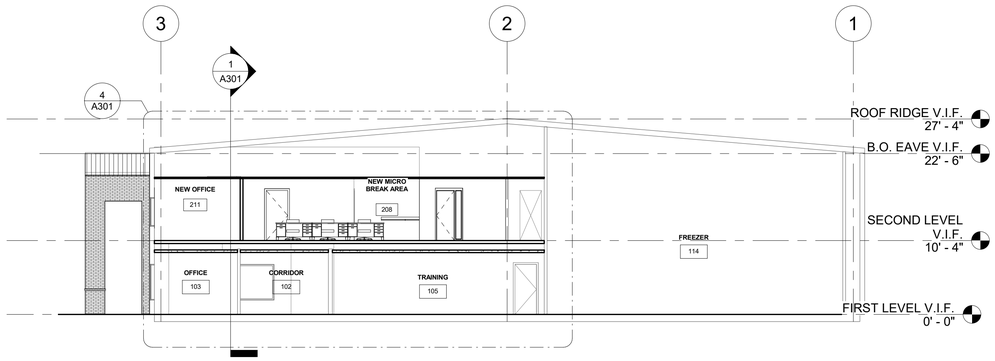
PERMIT SET. RELEASED OR ISSUED FOR CONSTRUCTION.



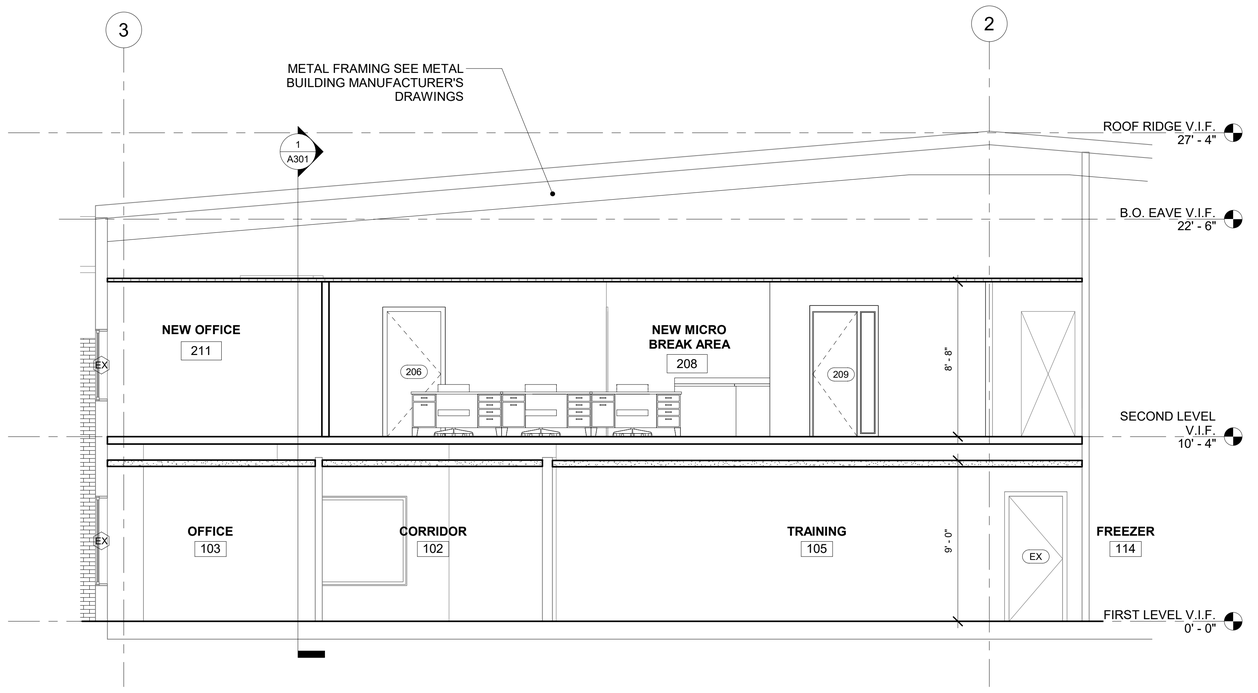
1 PROPOSED BUILDING SECTION 1
1" = 10'-0"



3 ENLARGED SECTION - SHIPPING AND RECEIVING
1/4" = 1'-0"



2 PROPOSED BUILDING SECTION 2
1" = 10'-0"



4 ENLARGED SECTION - ADMIN
1/4" = 1'-0"

STATE OF GEORGIA
GARFIELD PEART
CERTIFICATE NO. 13901
REGISTERED ARCHITECT
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Drawing Revisions:

1 PLAN REVIEW COMMENTS 10.07.22

Drawing Date:	09/20/2022
Project Number:	220001
Drawn By:	AP
Checked By:	GLP

GEORGIA MOUNTAIN FOOD BANK
1642 CALVARY INDUSTRIAL DRIVE SW
GAINESVILLE, GA 30507

Drawing Description:
PROPOSED BUILDING SECTIONS

A301

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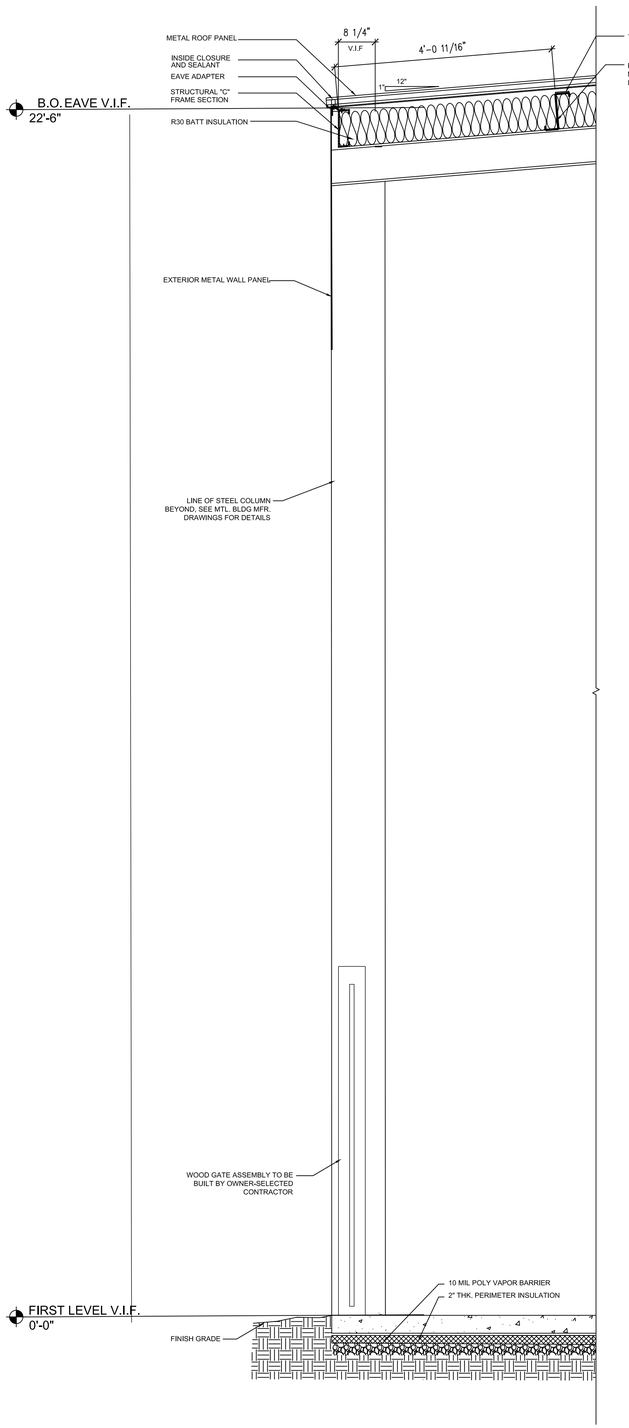
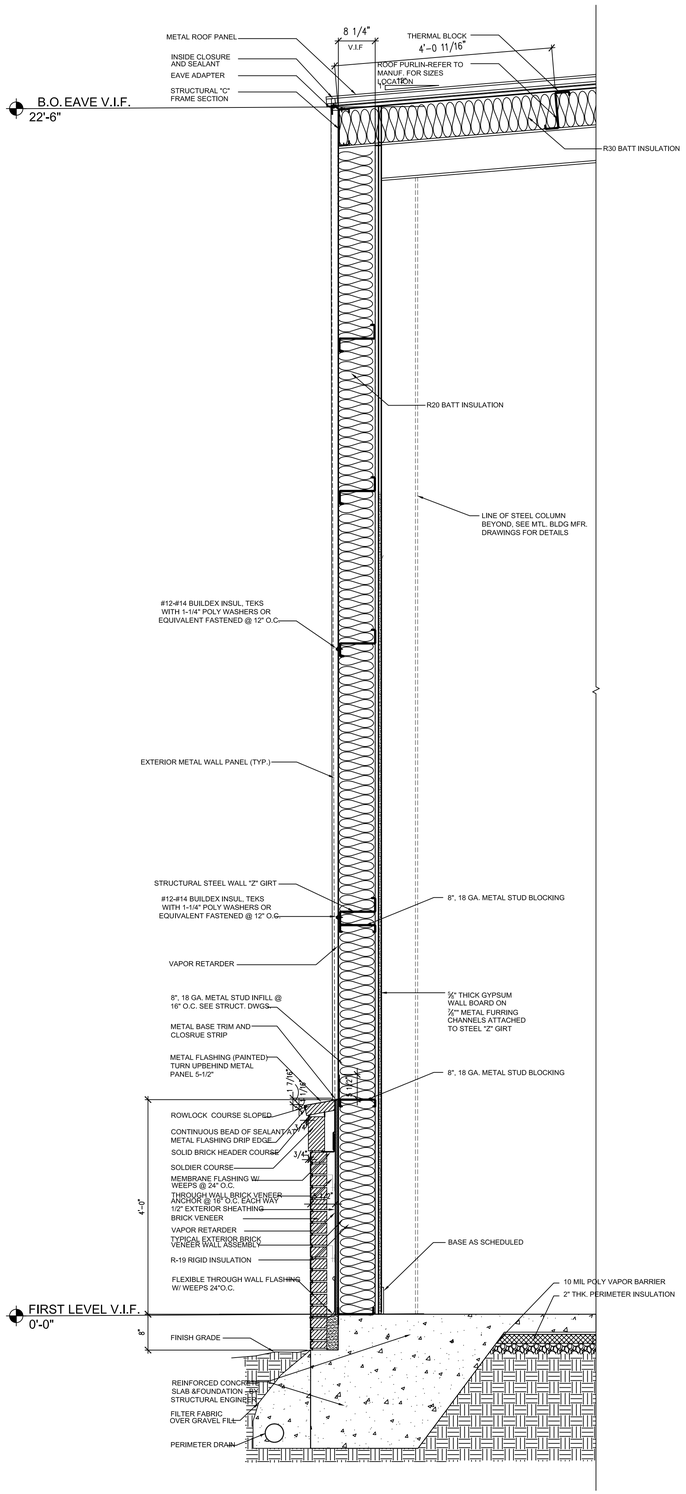
GAINESVILLE

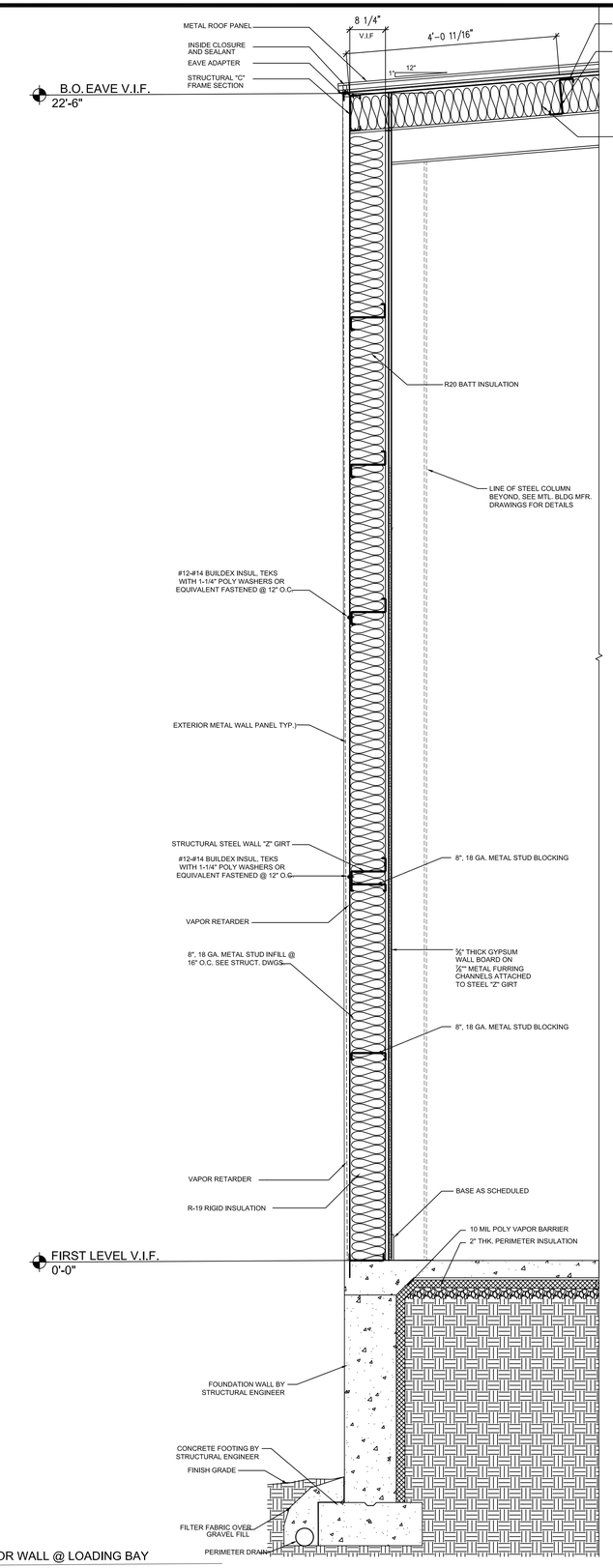
PERMIT SET. RELEASED OR ISSUED FOR CONSTRUCTION.



1 A310 SECTION DETAIL @ EXTERIOR STORAGE
3/4" = 1'-0"



2 A310 EXTERIOR WALL @ BRICK ON GRADE
3/4" = 1'-0"



3 A310 EXTERIOR WALL @ LOADING BAY
3/4" = 1'-0"

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GARFIELD PEART
CERTIFICATE NO. 12961
REGISTERED ARCHITECT
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Drawing Revisions:

1 PLAN REVIEW COMMENTS 10.07.22

Drawing Date: 09/20/2022
Project Number: 220001
Drawn By: CR
Checked By: GLP

GEORGIA MOUNTAIN FOOD BANK
1642 CALVARY INDUSTRIAL DRIVE SW
GAINESVILLE, GA 30507

Drawing Description:

WALL SECTIONS

A310

GAINESVILLE
PERMITTING & INSPECTIONS

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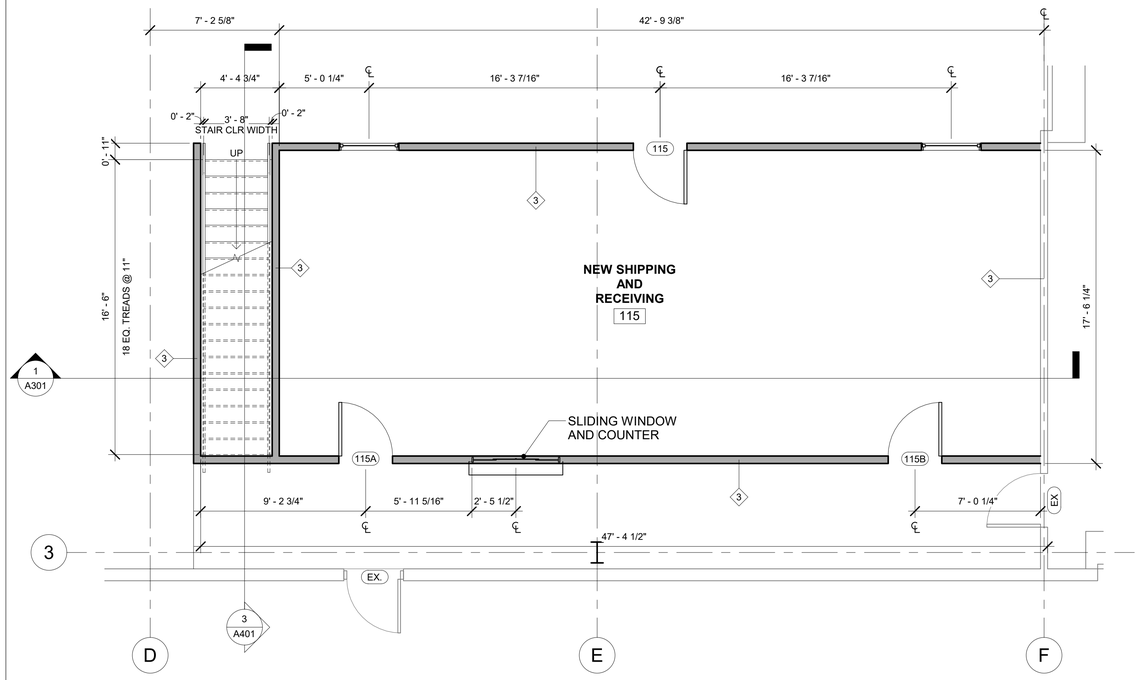
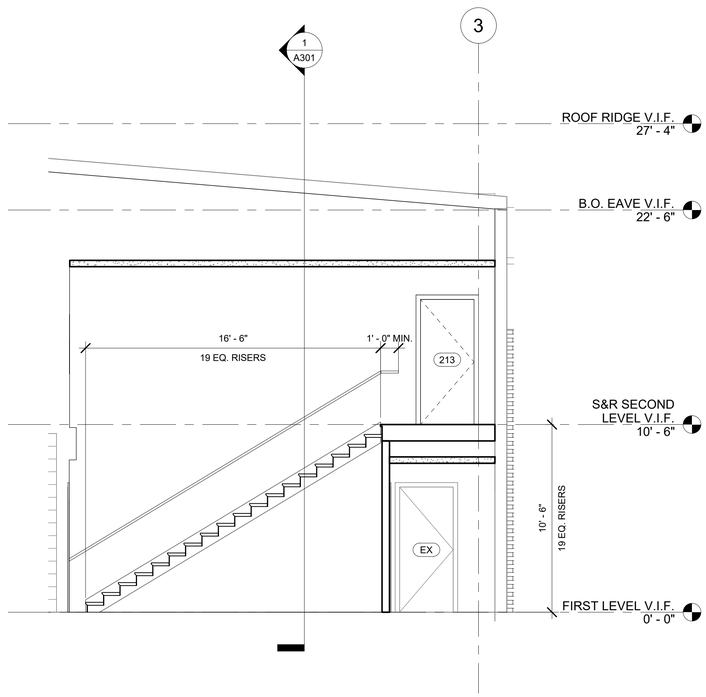


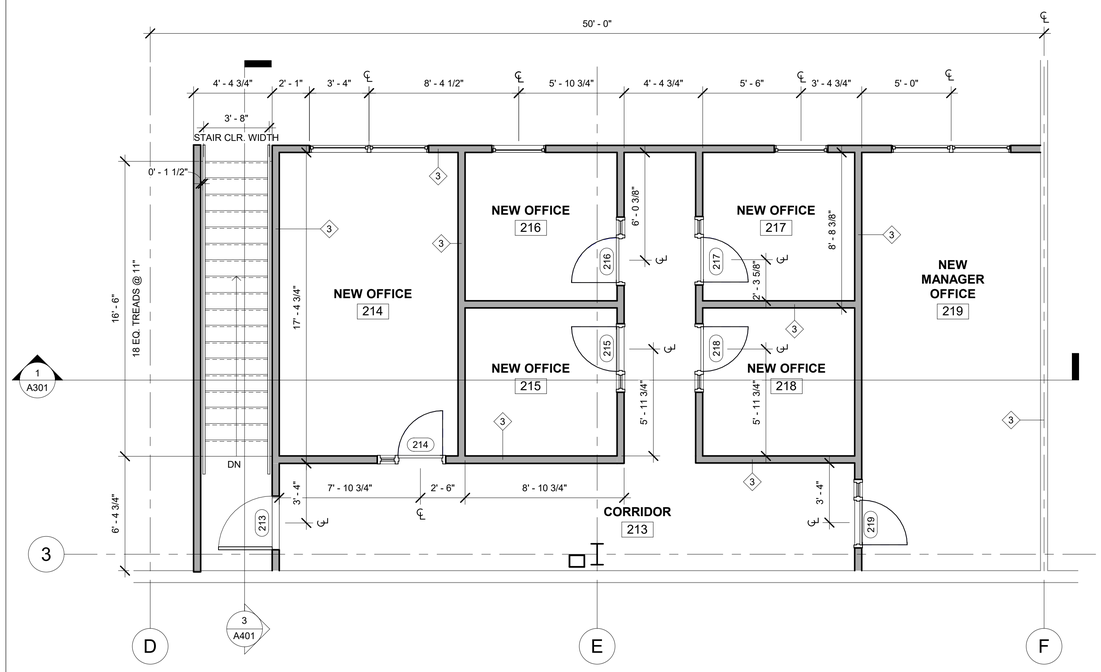
1 ENLARGED FIRST LEVEL PLAN - SHIPPING AND RECEIVING

1/4" = 1'-0"



3 STAIR SECTION - SHIPPING AND RECEIVING

1/4" = 1'-0"



2 ENLARGED SECOND LEVEL PLAN - SHIPPING AND RECEIVING

1/4" = 1'-0"

PERMIT SET. RELEASED OR ISSUED FOR CONSTRUCTION.

KEY PLAN

A	B

SHEET NOTES

1. ALL DIMENSIONS TO BE VERIFIED IN THE FIELD BY THE G.C. PRIOR TO ANY INSTALLATION OF NEW WORK
2. ALL EXPOSED GYPSUM BOARD IN LEASE AREA SHALL BE SEALED AND PRIMED ONLY
3. GENERAL CONTRACTOR SHALL BE REQUIRED TO VISIT PREMISE TO INSPECT EXISTING CONDITIONS AND VERIFY WORK TO BE PERFORMED.
4. ALL WORK PERFORMED SHALL BE IN STRICT COMPLIANCE WITH GOVERNING FEDERAL, STATE AND LOCAL BUILDING CODES REQUIREMENTS.
5. FIRE SEAL ALL PENETRATIONS THRU RATED WALLS, FLOORS, AND CEILINGS WITH APPROVED FIRE RATED CAULK AS DIRECTED BY LOCAL JURISDICTIONS.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF TRASH AND DEBRIS FROM THE JOB SITE ON A DAILY BASIS.
7. REFER TO MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS FOR EQUIPMENT AND RELATED DETAILS.
8. REFER TO STRUCTURAL DRAWINGS FOR FOUNDATION DETAILS.
9. SEE STRUCTURAL DRAWINGS FOR ALL SLAB ON GRADE DETAILS AND SPECIFICATIONS
10. FOR LOCATION OF MOP SINKS AND FLOOR DRAINS SEE PLUMBING DRAWINGS.
11. ALL FRAMING DIMENSIONS ARE ROUGH FRAMING, AND DO NOT INCLUDE ANY FINISH MATERIALS UNLESS OTHERWISE NOTED.
12. ALL WALLS SHALL BE OF 6" OR 4" METAL STUDS UNLESS OTHERWISE NOTED.
13. APPLY BORIC ACID ON TOP OF THE MUD SILL OR BOTTOM PLATE, PRIOR TO CLOSING ALL WALLS.
14. PROVIDE BLOCKING FOR RESTROOM ACCESSORIES, DOOR STOPS, EXP. JOINTS, CABINETS, ETC.
15. INSTALL OCCUPANT LOAD SIGN PER LOCAL FIRE MARSHALL. COORDINATE LOCATION WITH OWNER/FIRE MARSHALL.
16. PROVIDE MASTIC OR APPROVED SEALANT UNDER ALL EXT. PLATES
17. SEE DRAWING A601 FOR DOOR TYPES, SCHEDULE INTERIOR FINISH PLAN AND HARDWARE SCHEDULE.

WALL TYPES

1. EXTERIOR - BRICK VENEER TO 4' A.F.F. / 26 GAUGE PBR MTL. PANELS STARTING AT 4' A.F.F ON EXTERIOR SHEATHING ON WALL GIRTS W/ R-20 BATT INSULATION AND WATERPROOF COVER

2. EXTERIOR - 26 GAUGE PBR MTL. PANELS ON EXTERIOR SHEATHING ON WALL GIRTS W/ R-20 BATT INSULATION AND WATERPROOF COVER

3. INTERIOR - 3 5/8" MTL. STUD AT 16" O.C. ON 1 LAYER 1/2" GWB (BOTH SIDES) W/ SOUND ATTENTUATION INSULATION

STATE OF GEORGIA
GARFIELD PEART
CERTIFICATE NO. 13901
REGISTERED ARCHITECT
09/20/22

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Drawing Revisions:

1 PLAN REVIEW COMMENTS 10.07.22

Drawing Date: 09/20/2022
Project Number: 220001
Drawn By: AP
Checked By: GLP

GEORGIA MOUNTAIN FOOD BANK
1642 CALVARY INDUSTRIAL DRIVE SW
GAINESVILLE, GA 30507

Drawing Description:
ENLARGED PLANS

A401

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GAINESVILLE BUILDING SERVICES

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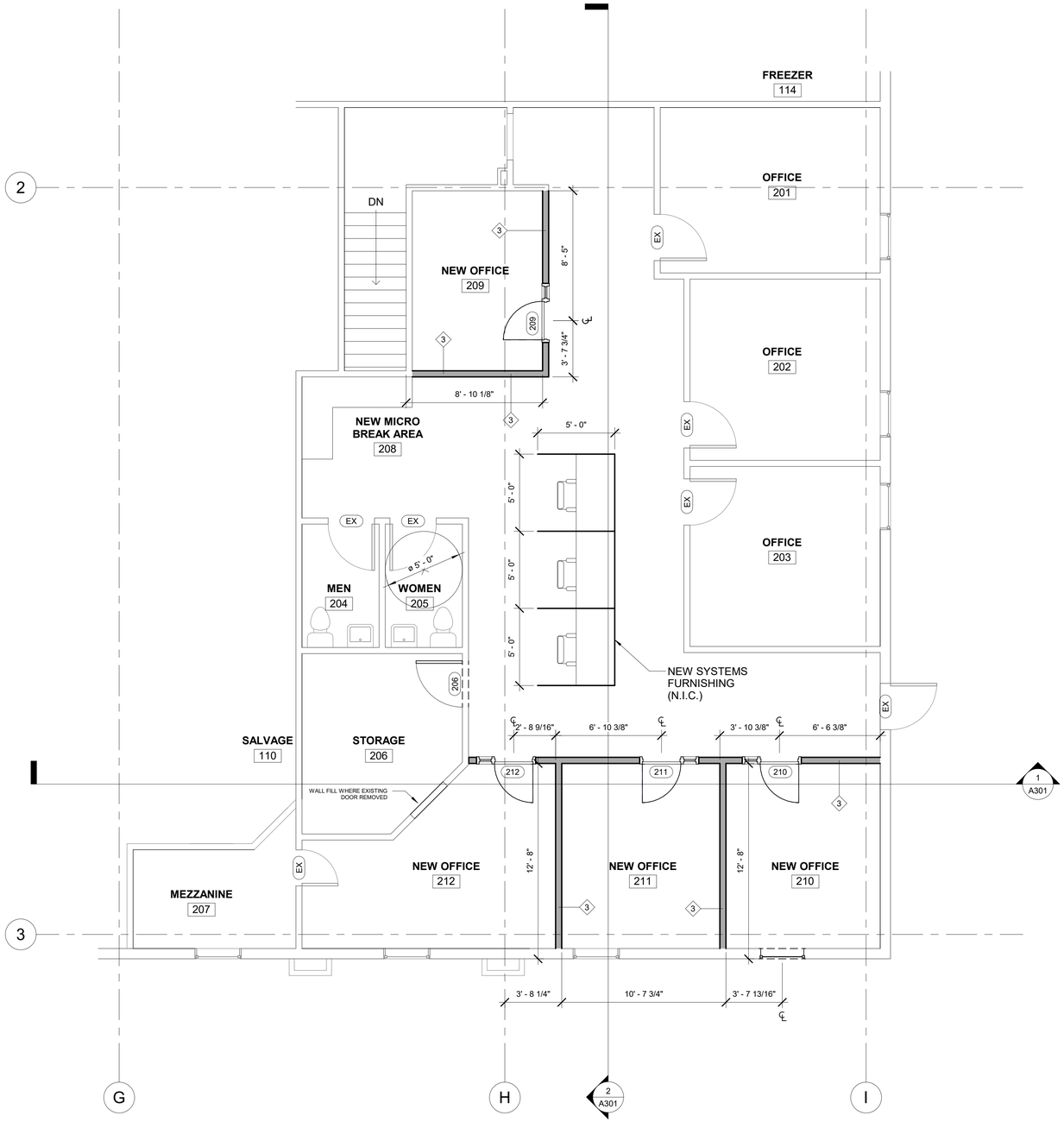

1 ENLARGED SECOND LEVEL PLAN - ADMIN OFFICES
1/4" = 1'-0"

KEY PLAN

A	B

SHEET NOTES

1. ALL DIMENSIONS TO BE VERIFIED IN THE FIELD BY THE G.C. PRIOR TO ANY INSTALLATION OF NEW WORK
2. ALL EXPOSED GYPSUM BOARD IN LEASE AREA SHALL BE SEALED AND PRIMED ONLY
3. GENERAL CONTRACTOR SHALL BE REQUIRED TO VISIT PREMISE TO INSPECT EXISTING CONDITIONS AND VERIFY WORK TO BE PERFORMED.
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6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF TRASH AND DEBRIS FROM THE JOB SITE ON A DAILY BASIS.
7. REFER TO MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS FOR EQUIPMENT AND RELATED DETAILS.
8. REFER TO STRUCTURAL DRAWINGS FOR FOUNDATION DETAILS.
9. SEE STRUCTURAL DRAWINGS FOR ALL SLAB ON GRADE DETAILS AND SPECIFICATIONS
10. FOR LOCATION OF MOP SINKS AND FLOOR DRAINS SEE PLUMBING DRAWINGS.
11. ALL FRAMING DIMENSIONS ARE ROUGH FRAMING, AND DO NOT INCLUDE ANY FINISH MATERIALS UNLESS OTHERWISE NOTED.
12. ALL WALLS SHALL BE OF 6" OR 4" METAL STUDS UNLESS OTHERWISE NOTED.
13. APPLY BORIC ACID ON TOP OF THE MUD SILL OR BOTTOM PLATE, PRIOR TO CLOSING ALL WALLS.
14. PROVIDE BLOCKING FOR RESTROOM ACCESSORIES, DOOR STOPS, EXP. JOINTS, CABINETS, ETC.
15. INSTALL OCCUPANT LOAD SIGN PER LOCAL FIRE MARSHALL. COORDINATE LOCATION WITH OWNER/FIRE MARSHALL.
16. PROVIDE MASTIC OR APPROVED SEALANT UNDER ALL EXT. PLATES
17. SEE DRAWING A601 FOR DOOR TYPES, SCHEDULE INTERIOR FINISH PLAN AND HARDWARE SCHEDULE.
18. SYSTEMS FURNISHING TO BE SELECTED BY OWNER UNDER SEPARATE CONTRACT.

WALL TYPES

1. EXTERIOR - BRICK VENEER TO 4' A.F.F. / 26 GAUGE PBR MTL. PANELS STARTING AT 4' A.F.F ON EXTERIOR SHEATHING ON WALL GIRTS W/ R-20 BATT INSULATION AND WATERPROOF COVER

2. EXTERIOR - 26 GAUGE PBR MTL. PANELS ON EXTERIOR SHEATHING ON WALL GIRTS W/ R-20 BATT INSULATION AND WATERPROOF COVER

3. INTERIOR - 3 5/8" MTL. STUD AT 16" O.C. ON 1 LAYER 1/2" GWB (BOTH SIDES) W/ SOUND ATTENTUATION INSULATION

STATE OF GEORGIA
GARFIELD PEART
CERTIFICATE NO. 13901
REGISTERED ARCHITECT
09/20/22

Syntony Design Collaborative LLC.

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Drawing Revisions:
1 PLAN REVIEW COMMENTS 10.07.22

Drawing Date: 09/20/2022
Project Number: 220001
Drawn By: AP
Checked By: GLP

GEORGIA MOUNTAIN FOOD BANK
1642 CALVARY INDUSTRIAL DRIVE SW
GAINESVILLE, GA 30507

Drawing Description:
ENLARGED PLANS

A402

GENERATOR.dwg - 10/20/2022 - By reviewing the plans/specs for Code Compliance does not relieve the owner, design professionals, contractors or their representatives from the responsibility to comply with all local, state and national codes and standards in effect at time of permit issuance. Our review is not a check of every item and does not prevent that department from requiring corrections during construction. Any changes/revisions to approved plans must be approved by the AHJ.

GAINESVILLE

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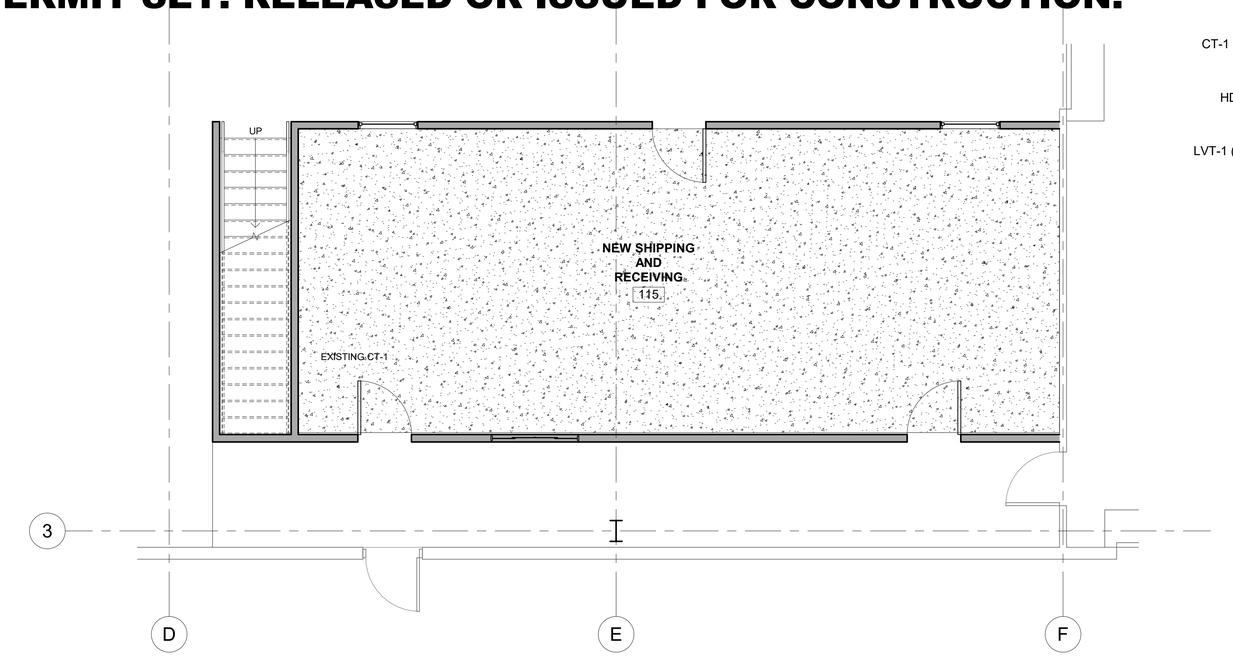


ENLARGED FIRST LEVEL FINISH PLAN - SHIPPING AND RECEIVING

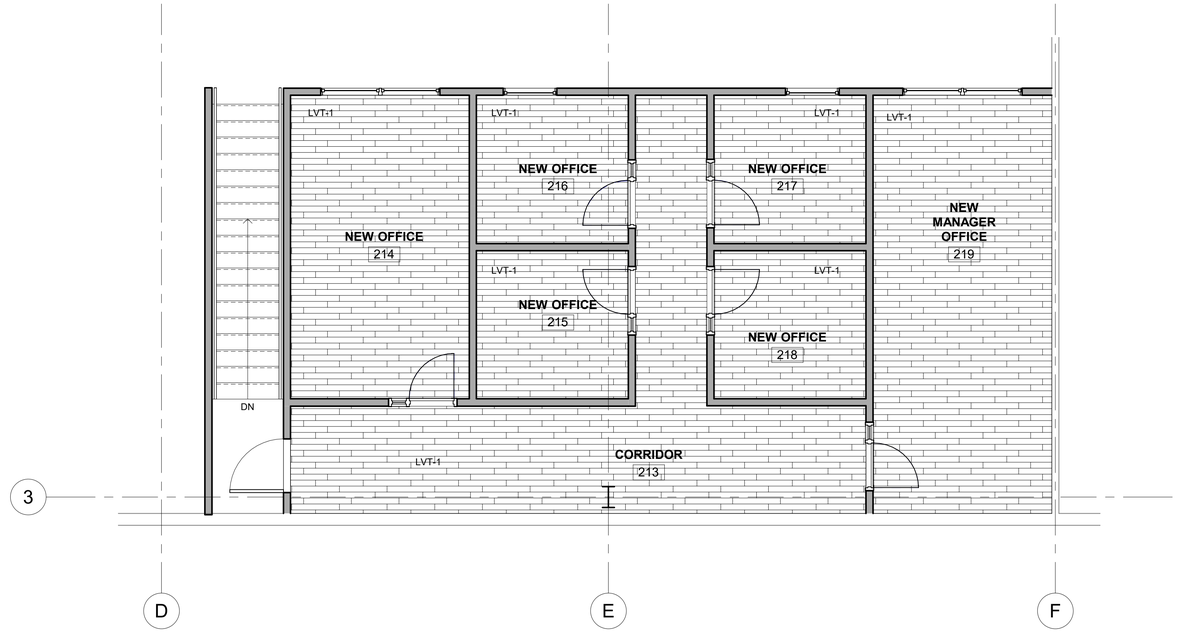
1 1/4" = 1'-0"

FINISH LEGEND

- CT-1 SEALED CONCRETE
- HDWD-1 (HARDWOOD)
- LVT-1 (LUXURY VINYL TILE)
- T-1 (STONE TILE)
- CPT-1 (CARPET)
- PWD-1 (PLYWOOD)

SHEET NOTES

1. ALL DIMENSIONS TO BE VERIFIED IN THE FIELD BY THE G.C. PRIOR TO ANY INSTALLATION OF NEW WORK
2. ALL EXPOSED GYPSUM BOARD IN LEASE AREA SHALL BE SEALED AND PRIMED ONLY
3. GENERAL CONTRACTOR SHALL BE REQUIRED TO VISIT PREMISE TO INSPECT EXISTING CONDITIONS AND VERIFY WORK TO BE PERFORMED.
4. ALL WORK PERFORMED SHALL BE IN STRICT COMPLIANCE WITH GOVERNING FEDERAL, STATE AND LOCAL BUILDING CODES REQUIREMENTS.
5. FIRE SEAL ALL PENETRATIONS THRU RATED WALLS, FLOORS, AND CEILINGS WITH APPROVED FIRE RATED CAULK AS DIRECTED BY LOCAL JURISDICTIONS.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF TRASH AND DEBRIS FROM THE JOB SITE ON A DAILY BASIS.
7. REFER TO MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS FOR EQUIPMENT AND RELATED DETAILS.
8. REFER TO STRUCTURAL DRAWINGS FOR FOUNDATION DETAILS.
9. SEE STRUCTURAL DRAWINGS FOR ALL SLAB ON GRADE DETAILS AND SPECIFICATIONS
10. FOR LOCATION OF MOP SINKS AND FLOOR DRAINS SEE PLUMBING DRAWINGS.
11. ALL FRAMING DIMENSIONS ARE ROUGH FRAMING, AND DO NOT INCLUDE ANY FINISH MATERIALS UNLESS OTHERWISE NOTED.
12. ALL WALLS SHALL BE OF 6" OR 4" METAL STUDS UNLESS OTHERWISE NOTED.
13. APPLY BORIC ACID ON TOP OF THE MUD SILL OR BOTTOM PLATE, PRIOR TO CLOSING ALL WALLS.
14. PROVIDE BLOCKING FOR RESTROOM ACCESSORIES, DOOR STOPS, EXP. JOINTS, CABINETS, ETC.
15. INSTALL OCCUPANT LOAD SIGN PER LOCAL FIRE MARSHALL. COORDINATE LOCATION WITH OWNER/FIRE MARSHALL.
16. PROVIDE MASTIC OR APPROVED SEALANT UNDER ALL EXT. PLATES
17. SEE DRAWING A601 FOR DOOR TYPES, SCHEDULE INTERIOR FINISH PLAN AND HARDWARE SCHEDULE.



ENLARGED SECOND LEVEL FINISH PLAN - SHIPPING AND RECEIVING

2 1/4" = 1'-0"

GARFIELD PEART
CERTIFICATE NO. 13901
REGISTERED ARCHITECT
STATE OF GEORGIA
09/20/22

Syntony Design Collaborative LLC.

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Drawing Revisions:

1 PLAN REVIEW COMMENTS 10.07.22

Drawing Date: 09/20/2022
Project Number: 220001
Drawn By: CR
Checked By: GLP

GEORGIA MOUNTAIN FOOD BANK
1642 CALVARY INDUSTRIAL DRIVE SW
GAINESVILLE, GA 30507

Drawing Description:
ENLARGED FINISH PLANS

A403

cr24ev22.rsak - 20200322 By reviewing the plans/specs for Code Compliance does not relieve the owner, design professionals, contractors or their representatives from the responsibility to comply with all local, state and national codes and standards in effect at time of permit issuance. Our review is not a check for every item and does not prevent the department from requiring corrections during construction. Any changes/alterations to approved plans shall be approved by the AHJ prior to construction.

PERMIT SET. RELEASED OR ISSUED FOR CONSTRUCTION.



1 ENLARGED SECOND LEVEL FINISH PLAN - ADMIN OFFICES
1/4" = 1'-0"

FINISH LEGEND

- CT-1 SEALED CONCRETE
- HDWD-1 (HARDWOOD)
- LVT-1 (LUXURY VINYL TILE) (N.I.C.)
- T-1 (STONE TILE)
- CPT-1 (CARPET)
- PWD-1 (PLYWOOD)

SHEET NOTES

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2. ALL EXPOSED GYPSUM BOARD IN LEASE AREA SHALL BE SEALED AND PRIMED ONLY
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5. FIRE SEAL ALL PENETRATIONS THRU RATED WALLS, FLOORS, AND CEILINGS WITH APPROVED FIRE RATED CAULK AS DIRECTED BY LOCAL JURISDICTIONS.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF TRASH AND DEBRIS FROM THE JOB SITE ON A DAILY BASIS.
7. REFER TO MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS FOR EQUIPMENT AND RELATED DETAILS.
8. REFER TO STRUCTURAL DRAWINGS FOR FOUNDATION DETAILS.
9. SEE STRUCTURAL DRAWINGS FOR ALL SLAB ON GRADE DETAILS AND SPECIFICATIONS
10. FOR LOCATION OF MOP SINKS AND FLOOR DRAINS SEE PLUMBING DRAWINGS.
11. ALL FRAMING DIMENSIONS ARE ROUGH FRAMING, AND DO NOT INCLUDE ANY FINISH MATERIALS UNLESS OTHERWISE NOTED.
12. ALL WALLS SHALL BE OF 6" OR 4" METAL STUDS UNLESS OTHERWISE NOTED.
13. APPLY BORIC ACID ON TOP OF THE MUD SILL OR BOTTOM PLATE, PRIOR TO CLOSING ALL WALLS.
14. PROVIDE BLOCKING FOR RESTROOM ACCESSORIES, DOOR STOPS, EXP. JOINTS, CABINETS, ETC.
15. INSTALL OCCUPANT LOAD SIGN PER LOCAL FIRE MARSHALL. COORDINATE LOCATION WITH OWNER/FIRE MARSHALL.
16. PROVIDE MASTIC OR APPROVED SEALANT UNDER ALL EXT. PLATES
17. SEE DRAWING A601 FOR DOOR TYPES, SCHEDULE INTERIOR FINISH PLAN AND HARDWARE SCHEDULE.

KEY PLAN



STATE OF GEORGIA
GARFIELD PEART
CERTIFICATE NO. 13901
REGISTERED ARCHITECT
09/20/22

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Drawing Revisions:

1 PLAN REVIEW COMMENTS 10.07.22

Drawing Date:	09/20/2022
Project Number:	220001
Drawn By:	CR
Checked By:	GLP

GEORGIA MOUNTAIN FOOD BANK
1642 CALVARY INDUSTRIAL DRIVE SW
GAINESVILLE, GA 30507

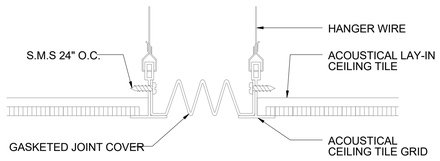
Drawing Description:
ENLARGED FINISH PLANS

A404

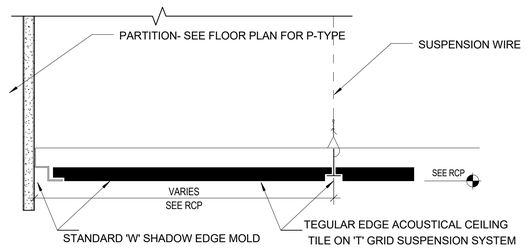
GCNEW22-0164 10/10/2022 By reviewing the plans/specs for Code Compliance does not relieve the owner, design professionals, contractors or their representatives from the responsibility to comply with all local, state and national codes and standards in effect at time of permit issuance. Our review is not a check of every item and does not prevent this department from requiring corrections during construction. Any changes/alterations to approved plans shall be approved to avoid voiding the permit.

GAINESVILLE INSPECTION SERVICES

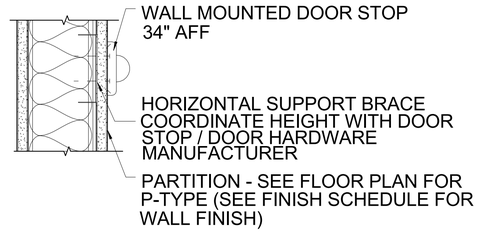
PERMIT SET. RELEASED OR ISSUED FOR CONSTRUCTION.



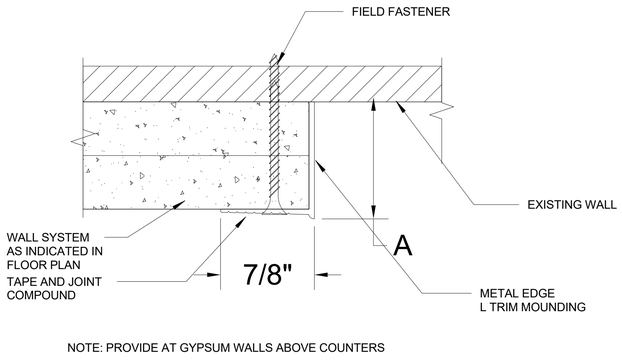
1 ACT EXPANSION DETAIL
3" = 1'-0"



2 ACT REGULAR EDGE TO WALL/SOFFIT
3" = 1'-0"

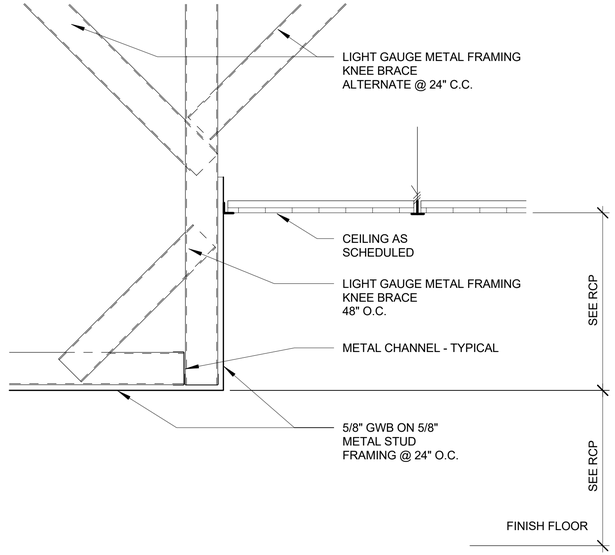


3 DOOR STOP DETAIL
3" = 1'-0"

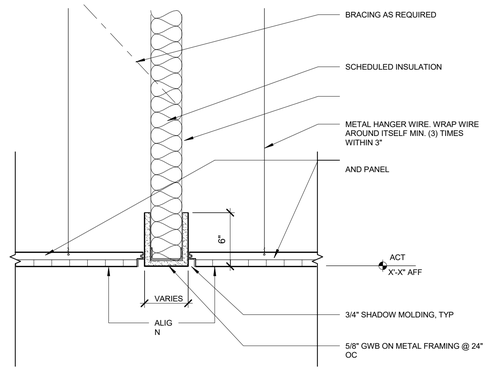


NOTE: PROVIDE AT GYPSUM WALLS ABOVE COUNTERS

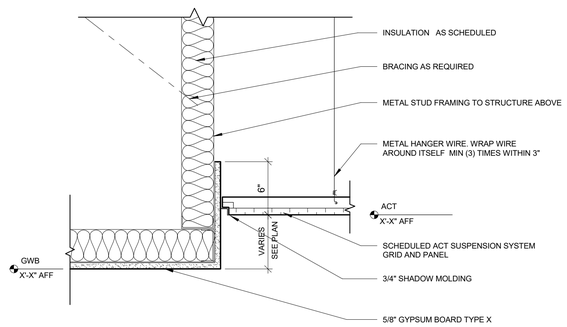
4 FURRING WALL EDGE DETAIL
1 1/2" = 1'-0"



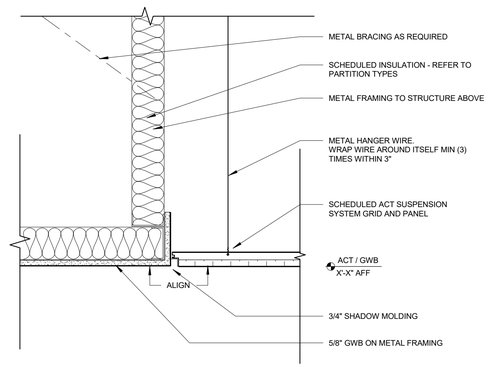
5 DETAIL AT CEILING - KNEE BRACE
1 1/2" = 1'-0"



6 CEILING DETAIL AT SHADOW MOLDING
1 1/2" = 1'-0"



7 DETAIL AT CEILING - OFFSET FINISHES
1 1/2" = 1'-0"



8 DETAIL AT CEILING - ALIGNED FINISHES
1 1/2" = 1'-0"

STATE OF GEORGIA
GARFIELD PEART
CERTIFICATE NO. 13901
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Drawing Revisions:

1 PLAN REVIEW COMMENTS 10.07.22

Drawing Date: 09/20/2022
Project Number: 220001
Drawn By: CR
Checked By: GLP

GEORGIA MOUNTAIN FOOD BANK
1642 CALVARY INDUSTRIAL DRIVE SW
GAINESVILLE, GA 30507

Drawing Description:
EXTERIOR AND INTERIOR DETAILS

A501

GCNEW22.rt.ak - 20220922 By reviewing the plans/specs for Code Compliance does not relieve the owner, design professionals, contractors or their representatives from the responsibility to comply with all local, state and national codes and standards in effect at time of permit issuance. Our review is not a check of every item and does not prevent the department from requiring corrections during construction. Any changes/revisions to approved plans shall be approved by the AHJ prior to construction.

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Door Schedule						
Mark	Type Mark	Width	Height	Family	Thickness	Comments
112A	D	8' - 0"	9' - 0"	M_Door-Overhead-Rolling	0' - 3 5/32"	
112B	D	8' - 0"	9' - 0"	M_Door-Overhead-Rolling	0' - 3 5/32"	
115	B	3' - 0"	7' - 0"	Single-Flush	0' - 2"	
115A	B	3' - 0"	7' - 0"	Single-Flush	0' - 2"	
115B	B	3' - 0"	7' - 0"	Single-Flush	0' - 2"	
116	D-1	10' - 0"	10' - 0"	M_Door-Overhead-Rolling	0' - 3 5/32"	
117	B	3' - 0"	7' - 0"	Single-Flush	0' - 2"	
117A	E	8' - 0"	10' - 0"	Door-Overhead-Sectional	0' - 1 1/2"	
117B	D	8' - 0"	9' - 0"	M_Door-Overhead-Rolling	0' - 3 5/32"	TO BE INSULATED
117C	D	8' - 0"	9' - 0"	M_Door-Overhead-Rolling	0' - 3 5/32"	TO BE INSULATED
118	E	8' - 0"	10' - 0"	Door-Overhead-Sectional	0' - 1 1/2"	
119	B	3' - 0"	7' - 0"	Single-Flush	0' - 2"	
120	A	3' - 0"	8' - 0"	Door-Passage-Single-Full_Lite	0' - 1 3/4"	
206	B	3' - 0"	7' - 0"	Single-Flush	0' - 2"	
209	C	2' - 6"	7' - 0"	HM_FRAME_SINGLE_with_Sidelight_20808	0' - 1 3/4"	
210	C	2' - 6"	7' - 0"	HM_FRAME_SINGLE_with_Sidelight_20808	0' - 1 3/4"	
211	C	2' - 6"	7' - 0"	HM_FRAME_SINGLE_with_Sidelight_20808	0' - 1 3/4"	
212	C	2' - 6"	7' - 0"	HM_FRAME_SINGLE_with_Sidelight_20808	0' - 1 3/4"	
213	B	3' - 0"	7' - 0"	Single-Flush	0' - 2"	
214	C	2' - 6"	7' - 0"	HM_FRAME_SINGLE_with_Sidelight_20808	0' - 1 3/4"	
215	C	2' - 6"	7' - 0"	HM_FRAME_SINGLE_with_Sidelight_20808	0' - 1 3/4"	
216	C	2' - 6"	7' - 0"	HM_FRAME_SINGLE_with_Sidelight_20808	0' - 1 3/4"	
217	C	2' - 6"	7' - 0"	HM_FRAME_SINGLE_with_Sidelight_20808	0' - 1 3/4"	
218	C	2' - 6"	7' - 0"	HM_FRAME_SINGLE_with_Sidelight_20808	0' - 1 3/4"	
219	C	2' - 6"	7' - 0"	HM_FRAME_SINGLE_with_Sidelight_20808	0' - 1 3/4"	
EX	B	3' - 0"	7' - 0"	Single-Flush	0' - 2"	EXISTING DOOR TO REMAIN
EX	B	3' - 0"	7' - 0"	Single-Flush	0' - 2"	EXISTING DOOR TO REMAIN
EX	B	3' - 0"	7' - 0"	Single-Flush	0' - 2"	EXISTING DOOR TO REMAIN
EX	B	3' - 0"	7' - 0"	Single-Flush	0' - 2"	EXISTING DOOR TO REMAIN
EX	B	3' - 0"	7' - 0"	Single-Flush	0' - 2"	EXISTING DOOR TO REMAIN
EX	8	2' - 4"	7' - 0"	Single-Flush	0' - 2"	EXISTING DOOR TO REMAIN
EX	B	3' - 0

STRUCTURAL GENERAL NOTES

FOUNDATIONS

1. ALL FOOTINGS SHALL BEAR ON NATURAL UNDISTURBED SOIL HAVING A MINIMUN SAFE BEARING CAPACITY OF 2,000 PSF, OR ENGINEERED CONTROLLED COMPACTED FILL AS REQUIRED HAVING ALLOWABLE BEARING CAPACITY OF 2,000 PSF. THERE WAS NO GEOTECHNICAL REPORT DURING THE DESIGN OF THIS BUILDING. IT'S ABSOLUTELY NECESSARY THAT A GEOTECHNICAL ENGINEER IS RETAINED DURING THE CONSTRUCTION PHASE TO ANALYZED THE SOIL WITHIN THE BUILDING FOOTPRINT AND PROVIDE THE STRUCTURAL ENGINEER OF THE PROJECT WITH THE SOIL PROFILE INDICATING THE TYPE OF SOIL ENCOUNTERED AT THE SITE, THE DENSITY, THE SOIL FRICTION ANGLE, THE ACTIVE, PASSIVE AND STATIC SOIL PRESSURES. ALSO A GEOTECHNICAL ENGINEER SHALL VERIFY THE SOIL COMPACTION BEFORE INSTALLATION OF ANY FOUNDATION SYSTEM.
2. ISOLATED FOOTING SHALL BE LOWERED AND PIERS SHALL BE ADDED IN HEIGHT, ALL AS APPROVED, WHERE SOIL OF THE SPECIFIED BEARING CAPACITY IS FOUND AT A LOWER ELEVATION THAN SHOWN ON THE PLANS.
3. BACKFILLING AGAINST FOUNDATION WALLS SHALL NOT BE DONE UNTIL WALL HAS BEEN CURED TO A SUFFICIENT STRENGTH (7 DAYS MINIMUM), AND WALLS ARE PROPERLY SHORED OR BRACED FOR ADDITIONAL 7 DAYS.
4. THE CONTRACTOR SHALL SAFEGUARD AND PROTECT ALL EXCAVATIONS, AND EXCAVATIONS SHALL BE KEPT FREE OF WATER.
5. EDGES OF FOOTINGS SHALL NOT BE PLACED AT A SLOPE GREATER THAN 1 (VERTICAL) TO 2 (HORIZONTAL) WITH RESPECT TO ANY ADJACENT FOOTINGS U.N.O.
6. THE FOUNDATION CONTRACTOR SHALL REFER TO THE MECHANICAL, CIVIL AND ELECTRICAL CONTRACT DRAWINGS FOR ALL LOCATIONS OF TRENCHES, PITS, CONDUITS, UNDERFLOOR AND PERIMETER DRAINAGE SYSTEMS ETC.

CONCRETE

1. ALL CONCRETE WORK SHALL CONFORM WITH THE REQUIREMENTS OF THE LATEST EDITION OF THE AMERICAN CONCRETE INSTITUTE A.C.I. 318 AND OTHER A.C.I. CONCRETE CODES.
2. ALL CONCRETE USED FOR THIS PROJECT SHALL BE AS FOLLOWS:
   a. ALL CONCRETE FOR FOOTINGS AND BUILDING SLAB ON GRADE SHALL BE STONE CONCRETE HAVING A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI AT 28 DAYS.
   b. ALL CONCRETE FOR EXTERIOR WORK LIKE THE RAMP, SIDEWALKS, ETC. SHALL BE STONE CONCRETE WITH 4,000 PSI MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS.
3. REPRESENTATIVE TEST CYLINDERS WILL BE TAKEN FROM THE CONCRETE PLACED EACH DAY IN ACCORDANCE WITH A.C.I. CODE AND SPECIFICATIONS IN THIS PROJECT.
4. REINFORCING STEEL SHALL BE DEFORMED BARS OF INTERMEDIATE GRADE NEW BILLET STEEL CONFORMING TO CURRENT REQUIREMENTS OF A.S.T.M. A–615 GRADE 60. DESIGN STRESS = 24,000 PSI. LAP BARS, 40 BAR DIAM. UNLESS OTHERWISE SHOWN.
5. WELDED WIRE FABRIC SHALL HAVE A MINIMUM ULTIMATE STRENGTH OF 70,000 PSI AND SHALL CONFORM TO A.S.T.M. A–185.
8. EXCAVATIONS SHALL BE KEPT FREE OF WATER. NO CONCRETE SHALL BE PLACED IN WATER.
9. ALL SLABS ON GRADE SHALL HAVE THICKENINGS AT DEPRESSIONS, OPENINGS, ETC. AS REQUIRED OR AS SHOWN HERIN OR ON ARCHITECTURAL DRAWINGS.
10. ALL MESH SHALL BE SPLICED SO THAT THE OVERLAP BETWEEN OUTERMOST CROSS WIRES OF EACH SHEET IS NOT LESS THAN THE SPACING OF THE CROSS WIRES PLUS TWO INCHES, UNLESS OTHERWISE SHOWN ON DRAWINGS.
11. FOR ALL SLABS ON GRADE WHERE NOT OTHERWISE SPECIFIED, USE STYLE 4 x 4 – W4 x W4 W.W.F.
12. ALL SLABS ON GRADE SHALL BE TROWELLED IN AT EVERY COLUMN LINE AND ELSEWHERE SHOWN ON FOUNDATION PLAN. SEE TYPICAL SLAB ON GRADE DETAIL FOR CONTROL JOINTS.

STRUCTURAL AND MISCELLANEOUS STEEL

1. ALL STRUCTURAL AND MISCELLANEOUS STEEL SHALL CONFORM TO THE NINTH EDITION OF THE AISC "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS" AND ALL ITS SUPPLEMENTS, AND TO THE AISC "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES".
2. ALL STRUCTURAL AND MISCELLANEOUS STEEL SHALL CONFORM TO ASTM A992 HAVING A MINIMUM YIELD STRENGTH OF 50,000 PSI.
3. STEEL PIPES SHALL CONFORM TO ASTM A53, TYPE E OR S GRADE B.
4. ALL WELDED CONNECTIONS SHALL BE DONE WITH E70XX ELECTRODES. ALL BOLTED CONNECTIONS SHALL USE 3/4" ASTM A325N HIGH STRENGTH BOLTS UNLESS NOTED OTHERWISE. ALL BEAM CONNECTIONS SHALL DEVELOP THE FULL UNIFORM LOAD CAPACITY THE MEMBER CAN CARRY WITH DUE CONSIDERATION TO CONCENTRATED LOADS AT THE ENDS OF THE MEMBER. NO CONNECTION SHALL BE MADE USING LESS THAN TWO BOLTS. ALL ANCHOR BOLTS SHALL BE ASTM A–307.
5. SHOP AND FIELD WELDS SHALL BE MADE BY APPROVED CERTIFIED WELDERS AND SHALL CONFORM TO THE AMERICAN WELDING SOCIETY CODE FOR BUILDINGS AWS D1.1. WELDS SHALL DEVELOP THE FULL STRENGTH OF MATERIALS BEING WELDED, UNLESS OTHERWISE NOTED.
6. NO OPENINGS IN BEAMS SHALL BE PERMITTED WITHOUT THE WRITTEN PERMISSION OF THE ENGINEER.
7. THE USE OF A GAS–CUTTING TORCH IN THE FIELD FOR CUTTING HOLES OR FOR CORRECTING FABRICATION ERRORS WILL NOT BE PERMITTED ON NEW STRUCTURAL FRAMING MEMBERS EXCEPT WITH THE WRITTEN APPROVAL OF THE ENGINEER FOR EACH SPECIFIC CONDITION.
8. ALL STRUCTURAL STEEL SHALL BE SHOP PAINTED WITH AN APPROVED CORROSION RESISTANT PRIMER. ALL STEEL SHALL BE PAINTED IN STRICT ACCORDANCE WITH THE AISC SPECIFICATIONS AND MANUFACTURER'S RECOMMENDATIONS. PRIOR TO PAINTING, ALL STEEL SURFACES SHALL BE PREPARED IN ACCORDANCE WITH SSPC. REFER TO SPECIFICATIONS SECTION 05120.
9. ERECTED STRUCTURAL STEEL SHALL BE INSPECTED BY QUALIFIED INSPECTORS AS STIPULATED IN THE SPECIFICATIONS. FIELD INSPECTION REPORTS TO BE FILED WITH THE STRUCTURAL ENGINEER WITHIN 5 DAYS OF TIME OF ACTUAL INSPECTION. INSPECTORS MUST BE NOTIFIED OF ALL PHASES OF CONSTRUCTION AND WELDING BY GENERAL CONTRACTOR.

METAL DECKS

1. ALL METAL DECKING SHALL BE DESIGNED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST EDITION OF THE "SPECIFICATION OF THE STEEL DECK INSTITUTE".
2. ALL METAL DECK SHALL BE GALVANIZED. ALL GALVANIZING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A525, G60.
3. METAL DECK SHALL BE AS FOLLOWS:
   A: NON–COMPOSITE FLOOR DECK SHALL BE SIMILAR TO 1" 22 GAUGE STEEL FORM DECK EQUIVALENT TO VULCRAFT 1.0C22 CSV CONFORM DECK SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES PER FOOT WIDTH:
   Ip = 0.073 IN4/FT.
   In = 0.073 IN4/FT.
   Sp = 0.130 IN3/FT.
   Sn = 0.134 IN3/FT.
   Fy = 60 Ksi
4. ALL METAL DECKS HAVE BEEN DESIGNED TO BE CONTINOUS OVER 2 SPANS MINIMUM, AND SHALL BEAR AT LEAST 2" ON STEEL SUPPORTS.
5. DECK SHALL BE WELDED TO SUPPORTING STEEL AT ENDS OF UNITS AND ALL INTERMEDIATE SUPPORTS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS (UNLESS NOTED OTHERWISE ON PLAN).
6. STANDARD CLOSURE SHALL BE PROVIDED AS REQUIRED.
7. SHOP DRAWINGS SHALL INDICATE ALL INFORMATION NECESSARY FOR A COMPLETE FABRICATION AND ERECTION OF THE METAL DECK.
8. PROVIDE STEEL HEADER FRAMES FOR SUPPORT OF METAL DECKING FOR ALL OPENINGS GREATER THAN 10" SQUARE.
9. PROVIDE 12" x 16 GAUGE CONTINUOUS GALVANIZED STEEL BUTT STRIP WHERE DECK CHANGES DIRECTION.
10. PROVIDE STEEL LEDGER ANGLE 2 1/2" x 2 1/2" x 1/4" AT STEEL COLUMNS AS REQUIRED FOR SUPPORT OF METAL DECKING.

LIGHT GAUGE METAL STUDS

1. THE ENGINEERING OF ALL STRUCTURAL LIGHT GAUGE METAL STUD WALL INCLUDING THEIR CONNECTIONS AND LINTELS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
2. ALL LIGHT GAGE METAL INFORMATION SHOWN ON THE DRAWINGS ARE BASED ON DIETRICH INDUSTRIES, INC. PRODUCTS.
3. ALL LIGHT GAGE STUDS MUST BE MANUFACTURED WITH CORROSION RESISTANT STEEL OR GALVANIZED IN ACCORDANCE WITH ASTM A525.
4. ALL MEMBERS SHALL MEET THE FOLLOWING REQUIREMENTS:
   ALL 54 mil & HEAVIER MEMBERS – ASTM A446 GRADE D (50 KSI MIN.)
   ALL 43 mil & LIGHTER MEMBERS – ASTM A446 GRADE A (33 KSI MIN.)
5. ALL LOAD BEARING STUDS MUST BE SEATED TIGHT, WITHIN 1/16" AGAINST TRACK, WEB. ALSO, STUD MUST BE SCREW ATTACHED OR WELDED TO EACH TRACK LEG.
6. ERECT FRAMING AND PANELS PLUMB, LEVEL AND SQUARE IN STRICT ACCORDANCE WITH THE APPROVED SHOP DRAWINGS.
7. HANDLING AND LIFTING OF PREFABRICATED PANELS SHALL BE DONE IN A MANNER AS TO NOT CAUSE DISTORTION IN ANY MEMBER.
8. TRACK SHALL BE SECURELY ANCHORED TO THE SUPPORTING STRUCTURE AS SHOWN ON THE ERECTION DRAWINGS. CONCRETE ANCHORS SHALL BE INSTALLED AFTER FULL COMPRESSIVE STRENGTH HAS BEEN ACHIEVED.
9. ALL TRACK BUTT JOINTS, ABUTTING PIECES OF TRACK SHALL BE SECURELY ANCHORED TO A COMMON STRUCTURAL ELEMENT, OR THEY SHALL BE BUTT–WELDED OR SPLICED TOGETHER.
10. STUDS SHALL BE PLUMBED, ALIGNED AND SECURELY ATTACHED TO THE FLANGE OR WEBS OF BOTH UPPER AND LOWER TRACKS.
11. JACK STUDS OR CRIPPLES SHALL BE INSTALLED BELOW WINDOW SILLS, ABOVE WINDOW AND DOOR HEADS, AT FREE STANDING STAIR RAILS AND ELSEWHERE TO FURNISH SUPPORT AND SHALL BE SECURELY ATTACHED TO SUPPORTING MEMBERS.
12. FRAMED OPENINGS SHALL INCLUDE HEADERS AND SUPPORTING STUDS AS SHOWN ON SHOP DRAWINGS.
13. TEMPORARY BRACING SHALL BE PROVIDED UNTIL ERECTION IS COMPLETED.
14. PROVIDE HORIZONTAL BRIDGING FOR ALL STUDS AT 48 INCH. ON CENTER, OR PER MANUFACTURER'S RECOMMENDATION.

DESIGN CODE

2018 EDITION OF THE INTERNATIONAL BUILDING CODE.

FLOOR LIVE LOAD

SLAB ON GRADE = 150 PSF
MECHANICAL ROOM = 150 PSF, SECOND FLOOR = 70 PSF.

ROOF LIVE LOAD

30 PSF

ROOF SNOW LOAD

GROUND SNOW LOAD, Pg = 25 PSF
FLAT ROOF SNOW LOAD, Pf = 18 PSF
SNOW EXPOSURE FACTOR, Ce = 1.0
SNOW LOAD IMPORTANCE FACTOR, Is = 1.0
THERMAL FACTOR, Ct = 1.0

WIND LOAD

BASIC WIND SPEED = 120 MPH
WIND LOAD IMPORTANCE FACTOR, Iw = 1.0
WIND EXPOSURE FACTOR = C
INTERNAL PRESSURE COEFFICIENTS = +0.18, –0.18
COMPONENTS AND CLADDING = 25 PSF

EARTHQUAKE DESIGN DATA

SEISMIC IMPORTANCE FACTOR, Ie = 1.0
OCCUPANCY CATEGORY = GROUP II
MAPPED SPECTRAL RESPONSE ACCELERATIONS Ss = 0.184g, S1 = 0.063g
SITE CLASS = D
SPECTRAL RESPONSE COEFFICIENTS, Sds = 0.196, Sd1 = 0.101
SEISMIC DESIGN CATEGORY = B
BASIC SEISMIC FORCE RESISTING SYSTEM = STRUCTURAL STEEL SYSTEM NOT SPECIFICALLY DETAILED FOR SEISMIC RESISTANCE
DESIGN BASE SHEAR = 30 KIPS
SEISMIC RESPONSE COEFFICIENT = 0.065
RESPONSE MODIFICATION FACTOR, R = 3.5
ANALYSIS PROCEEDURE USED = EQUIVALENT LATERAL FORCE PROCEDURE

ASSUMED SOIL BEARING CAPACITY

2,000 PSF

SUBMITALS

SHOP DRAWINGS FOR ALL STRUCTURAL ITEMS MENTIONED ABOVE ARE PART OF THE STRUCTURAL DESIGN OF THIS PROJECT AND MUST BE SUBMITTED AND REVIEWED BY OUR OFFICE. IF THE CONTRACTOR OR OWNER FAILS TO SUBMIT SHOP DRAWINGS FOR OUR REVIEW PRIOR TO BEGINNING OF CONSTRUCTION WORK, EMMANUEL ANSA, P.E. WILL NOT BE RESPONSIBLE FOR THE STRUCTURAL DESIGN OF THIS PROJECT. THE CONTRACTOR OR OWNER IS REQUIRED TO SUBMIT SHOP DRAWINGS AND CALCULATIONS (IF ANY) FOR THE FOLLOWING ITEMS TO THE STRUCTURAL ENGINEER OF THE PROJECT FOR REVIEW PRIOR TO FABRICATION OR CONSTRUCTION OF THESE ITEMS:

1. CONCRETE MIX DESIGN ACCORDING TO ACI REQUIREMENTS.
* 2. STRUCTURAL STEEL
3. METAL DECK
* 4. EXTERIOR WALL LIGHT GAGE METAL STUD WALL AND PARAPET SYSTEM.

ITEMS IDENTIFIED WITH AN ASTERISK SHALL HAVE THEIR DRAWINGS AND CALCULATIONS SIGNED AND SEALED BY A PROFESSIONAL ENGINEER IN THE LOCAL CODE JURISDICTION.

THE REVIEW OF SHOP DRAWINGS BY THE STRUCTURAL ENGINEER DOES NOT RELIEVE THE CONTRACTOR, SUBCONTRACTOR OR FABRICATOR THE RESPONSIBILITY OF MEETING THE REQUIREMENTS OF THE ENTIRE DESIGN DOCUMENTS OF THIS PROJECT INCLUDING THE ARCHITECTURAL DRAWINGS AND OTHER DISCIPLINES. A MINIMUM OF TWO WEEKS SHALL BE ALLOWED FOR THE STRUCTURAL ENGINEER TO REVIEW ANY SUBMITTAL.

STEEL STAIRS

1. SEE SPECIFICATIONS.
2. STAIR SUPPLIER SHALL DESIGN ALL STAIR FRAMING INCLUDING RAILINGS TO SUPPORT THE FOLLOWING LOADS:
   STAIRS – DEAD LOAD – AS REQUIRED BY CONSTRUCTION LIVE LOAD – 100 PSF OR 300 POUND CONCENTRATED LOAD AT CENTER OF TREND
   RAILINGS – 50 POUNDS PER LINEAR FOOT OR 200 POUNDS CONCENTRATED LOAD APPLIED IN ANY DIRECTION.
3. SUBMIT COMPLETE SHOP AND ERECTION DRAWINGS FOR REVIEW PRIOR TO FABRICATION OR ERECTION. STAIR SUPPLIER'S SHOP DRAWINGS SHALL CONTAIN A CERTIFICATION SEALED BY A REGISTERED PROFESSIONAL ENGINEER STATING THAT THE STAIR AND RAILING COMPONENTS HAVE BEEN DESIGNED TO SUPPORT THE SPECIFIED LOADS.

EXISTING CONSTRUCTION

1. EXISTING CONDITIONS INDICATED ON THE DRAWINGS ARE BASED ON INFORMATION FROM THE ARCHITECT OF THE PROJECT. CONTRACTOR SHALL VERIFY AND COORDINATE EXISTING CONDITIONS AND DIMENSIONS PRIOR TO PROCEEDING WITH WORK. SHOULD SIGNIFICANT DIFFERENCES BE FOUND BETWEEN GIVEN CONDITIONS AND ACTUAL FIELD CONDITIONS, THE ARCHITECT SHALL BE NOTIFIED BEFORE PROCEEDING WITH WORK. REMOVE EXISTING CONSTRUCTION AS REQUIRED TO INSTALL NEW WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ADJACENT EXISTING ELEMENTS AND SHALL PROVIDE ADEQUATE REPAIRS NECESSARY TO RESTORE TO ORIGINAL CONDITION AT THE CONTRACTORS EXPENSE, WITHOUT ANY COST TO THE OWNER.
2. DIMENSIONS SHOWN ON THE STRUCTURAL DRAWINGS ARE GENERALLY OBTAINED FROM THE ARCHITECT AND ARE INCLUDED AS INFORMATION COMPLIMENTARY TO THE ARCHITECTURAL DRAWINGS. GENERALLY, ARCHITECTURAL DIMENSIONS WILL GOVERN OVER STRUCTURAL DIMENSIONS. LAYOUT OF BUILDING FOUNDATIONS OR OTHER ITEMS MAY BE MADE USING THE DIMENSIONS SHOWN ON THE STRUCTURAL DRAWINGS ONLY IF THE CONTRACTOR HAS CAREFULLY STUDIED AND COMPARED THESE DRAWINGS WITH THE ARCHITECTURAL DRAWINGS AND HAS RECEIVED CLARIFICATION FROM THE ARCHITECT, REGARDING ANY ERRORS, INCONSISTENCIES OR OMISSIONS. ITEMS INSTALLED INCORRECTLY, DUE TO THE CONTRACTOR'S LACK OF SUCH VERIFICATION, SHALL BE CORRECTED AT THE CONTRACTORS

GEORGIA REGISTERED No. PE031445 PROFESSIONAL ENGINEER EMMANUEL EKENG ANSA

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Drawing Revisions:

1 PLAN REVIEW COMMENTS 10.07.22

Drawing Date:	09/20/2022
Project number:	220001
Drawn By:	TS
Checked By:	EA

GEORGIA MOUNTAIN FOOD BANK
1642 CALVARY INDUSTRIAL DRIVE SW
GAINESVILLE, GA 30507

Drawing Description:

STRUCTURAL GENERAL NOTES

S100

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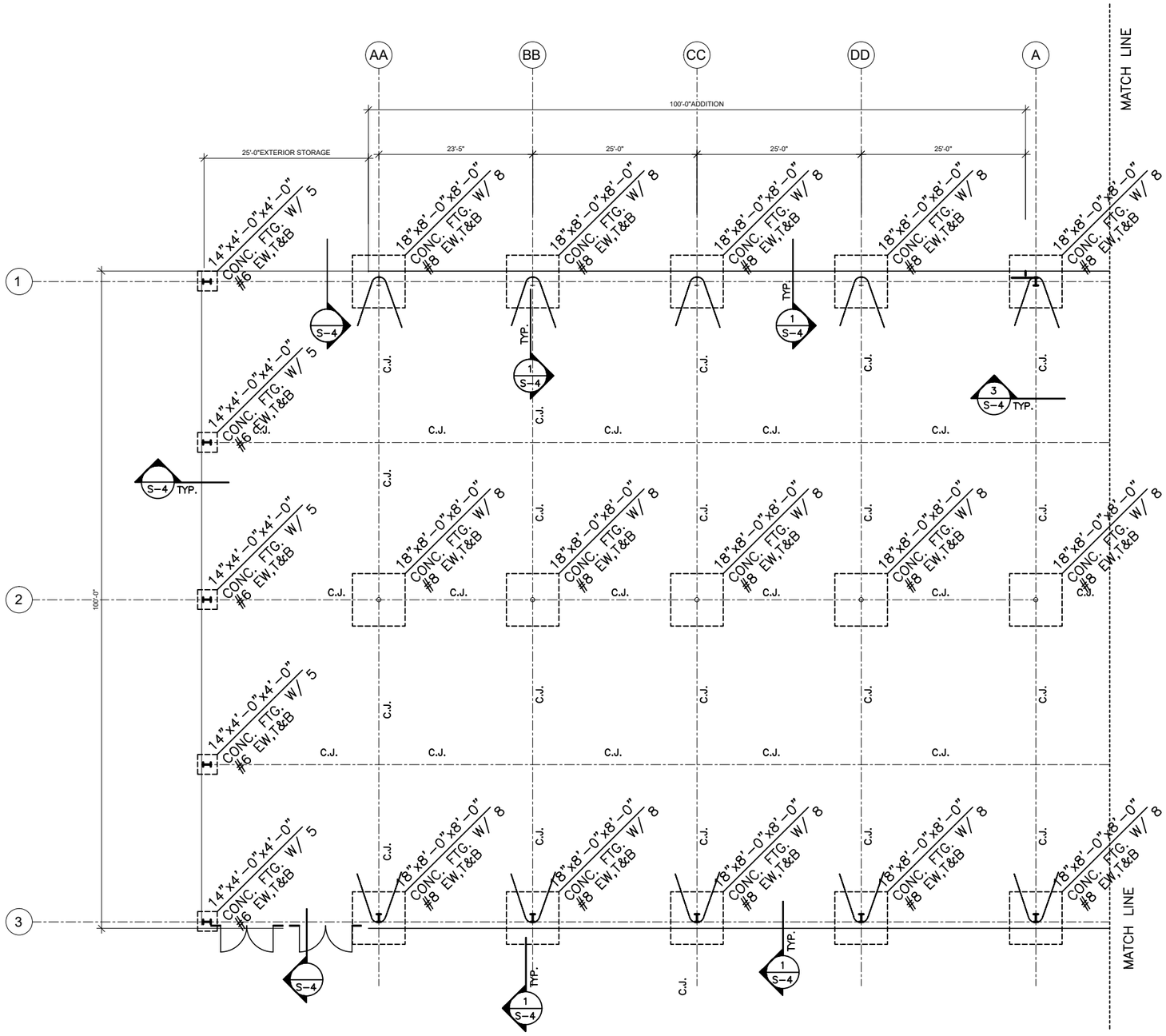

FOUNDATION / FIRST FLOOR PLAN

SCALE: 1/8" = 1'-0"

PLAN NOTES :

1. THE TOP OF THE FIRST FLOOR ELEVATION SHALL BE AS INDICATED IN THE CIVIL AND ARCHITECTURAL DRAWINGS. THIS ELEVATION SHALL EQUAL 0.00', THE REFERENCED DATUM IN THE STRUCTURAL PLANS.
2. THE CONTRACTOR SHALL RETAIN A SOIL INSPECTION AGENCY TO PERFORM SOIL INSPECTION AND VERIFY THE COMPACTION WORK AND TYPE OF SOIL USED FOR THE FOUNDATION. THE FOOTING FOR THIS BUILDING WAS DESIGNED BASED ON AN ASSUMED SOIL BEARING CAPACITY OF 2000 PSF.
3. FOR SIZE AND LOCATION OF FLOOR OPENINGS, SLOPES, RAISED AREAS, ETC. NOT SHOWN ON THIS DRAWING, SEE ARCH./MECH. AND ELECT. DRAWINGS.
4. THE SLAB ON GRADE SHALL BE 5" THICK CONC. SLAB REINFORCED WITH 4 X 4 – W4 X W4 W.W.M. PLACED ON 15 MIL VAPOR BARRIER, OVER 6" CLEANED GRAVEL OR CRUSHED STONE, UNLESS NOTED OTHERWISE ON PLAN.
5. ALL UTILITY PIPES SHOULD PENITRATE THE FOUNDATION WALL ABOVE THE TOP OF THE FOOTING. LOWER FOOTING WHEN NECESSARY TO PLACE PIPE ON TOP OF FOOTING.
6. CONTRACTOR MUST FIRST VERIFY ALL DIMENSIONS OF THE BUILDING GEOMETRY FROM THE ARCHITECTURAL DIMENSION PLAN BEFORE STARTING THE FOUNDATION CONSTRUCTION.
7. USE THIS DRAWING IN CONJUNCTION WITH:
   (a) STRUCTURAL NOTES ON DWG. S100
   (b) SECTIONS AND DETAILS ON DWGS. S200 TO S205
   (c) ENTIRE CONTRACT DOCUMENTS ON THIS PROJECT

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Project number:	220001
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1642 CALVARY INDUSTRIAL DRIVE SW
GAINESVILLE, GA 30507

Drawing Description:

FOUNDATION/FIRST FLOOR PLAN

S101

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GAINESVILLE

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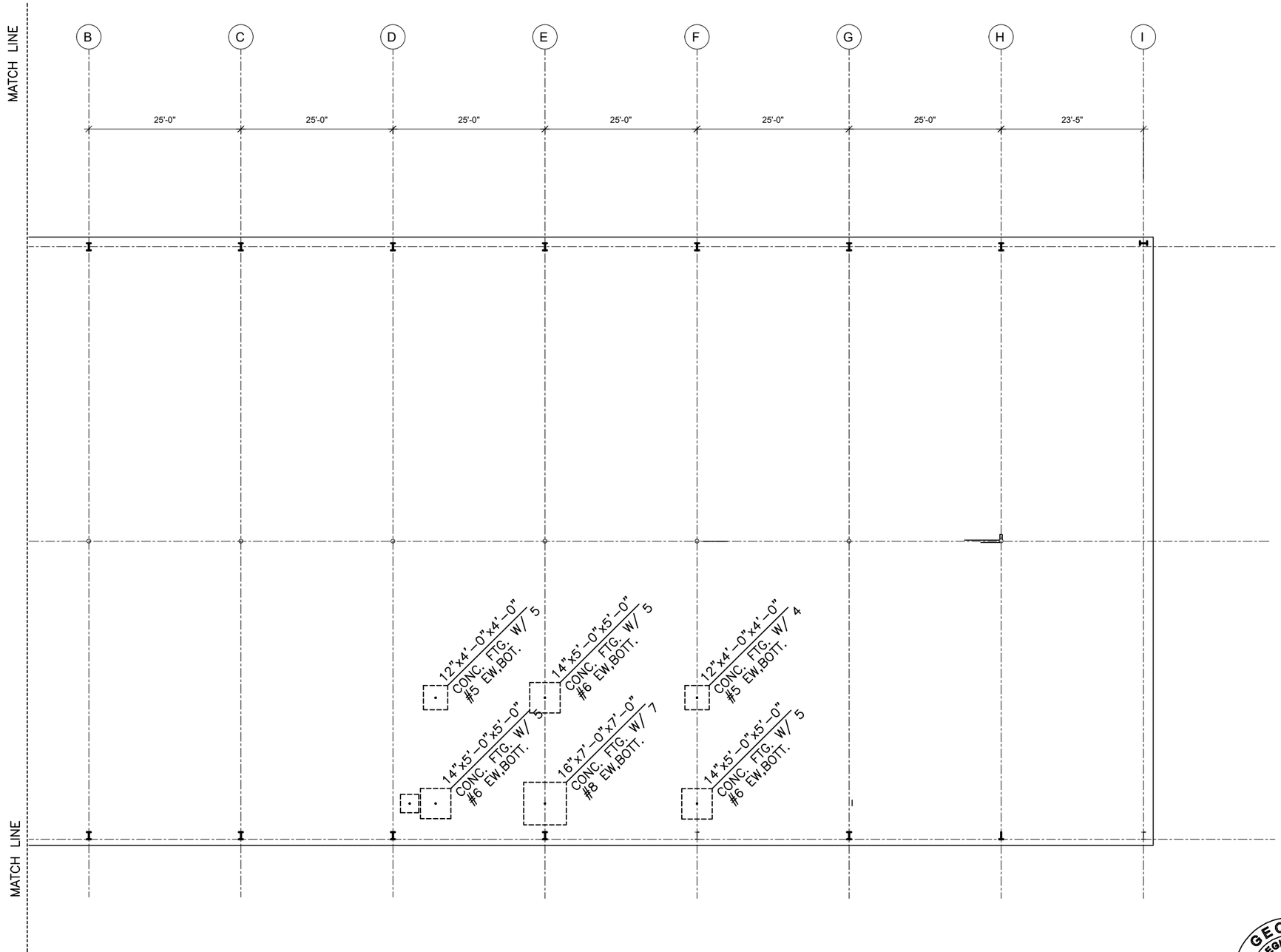

FOUNDATION / FIRST FLOOR PLAN

SCALE: 1/8" = 1'-0"

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GEORGIA MOUNTAIN FOOD BANK
1642 CALVARY INDUSTRIAL DRIVE SW
GAINESVILLE, GA 30507

Drawing Description:

FOUNDATION/FIRST FLOOR PLAN

S102

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GAINESVILLE

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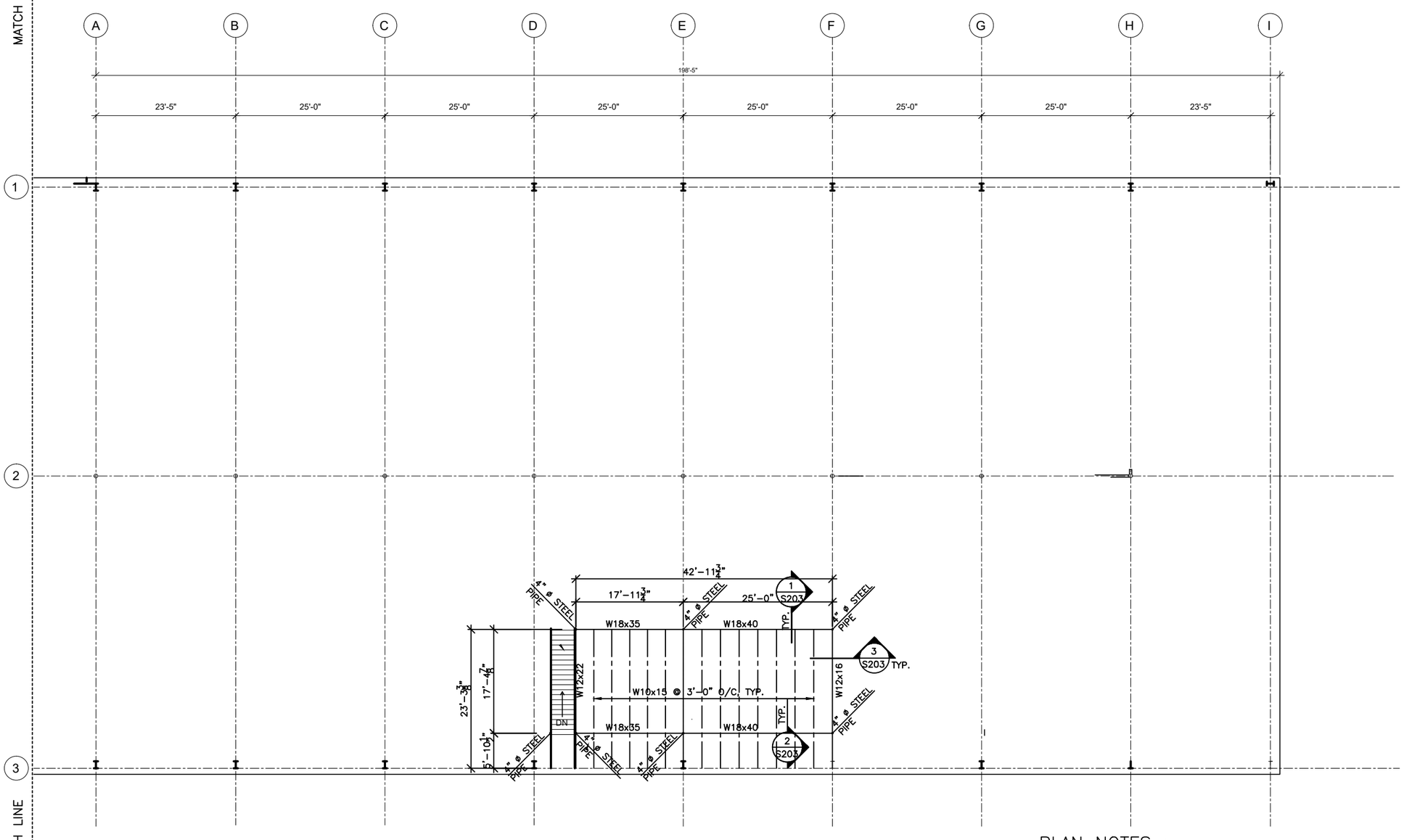

PLAN NOTES :

1. PROPOSED SECOND FLOOR CONSTRUCTION SHALL BE 3" CONCRETE TOPPING ON 1"x 22 GA. FORM DECK SIMILAR TO VULCRAFT 1.0C22 WITH 4x4–W2.9xW2.9 WWM.
2. CONTRACTOR SHALL OBTAIN THE EXACT LOCATION OF FLOOR OPENINGS FROM THE MECH. DWGS.
3. USE THIS DRAWING IN CONJUNCTION WITH:
   (a) STRUCTURAL NOTES ON DWG. S100
   (b) PLANS, SECTIONS AND DETAILS ON DWGS. S200 TO S205
   (c) ENTIRE CONTRACT DOCUMENTS ON THIS PROJECT

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SECOND FLOOR FRAMING PLAN

SCALE : 1/8" = 1'–0"

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GEORGIA MOUNTAIN FOOD BANK
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GAINESVILLE, GA 30507

Drawing Description:

SECOND FLOOR FRAMING PLAN

S103

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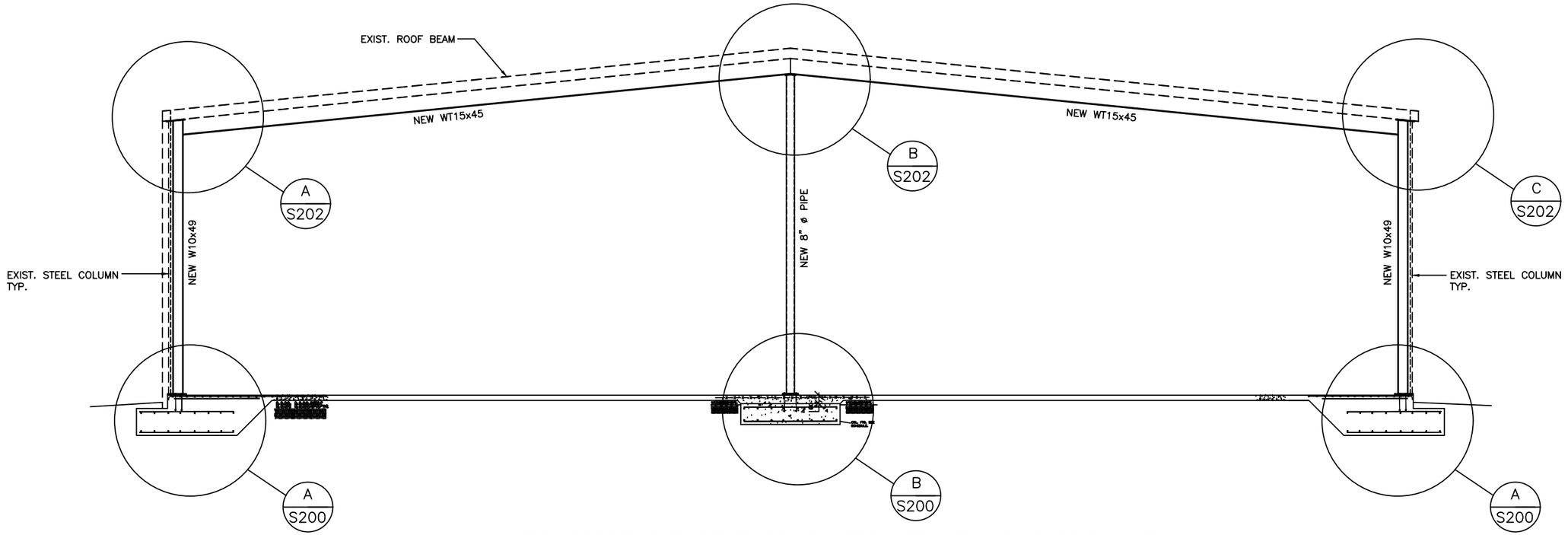
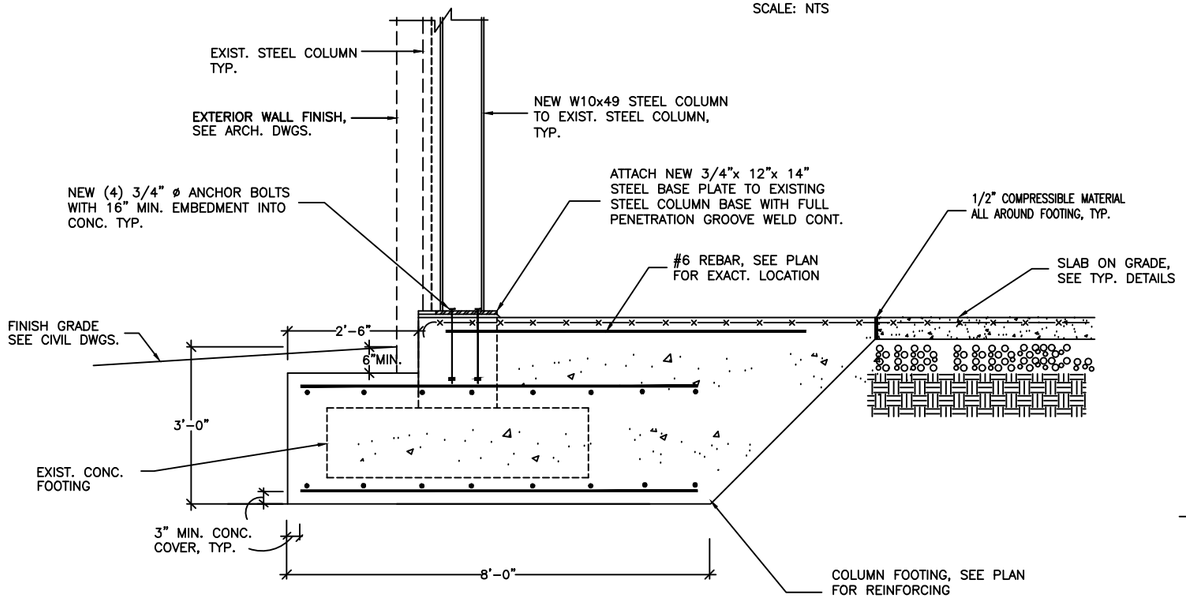


REINFORCEMENT OF EXISTING STEEL FRAME ALONG GRID LINE A

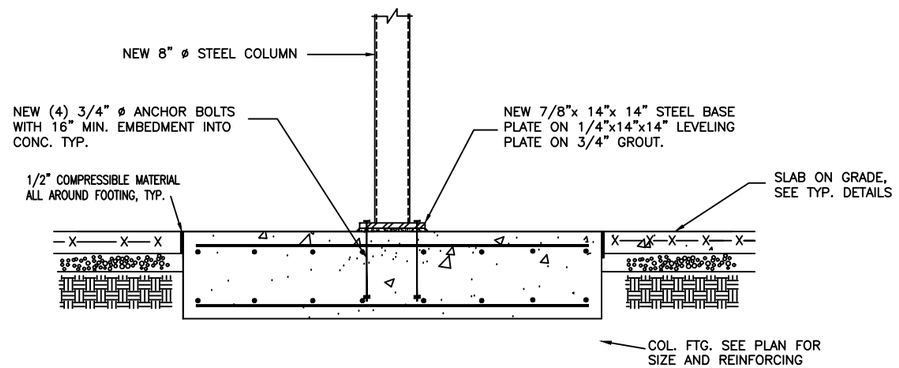
SCALE: NTS



EXTERIOR FOOTING FOR COLUMN REINFORCEMENT ALONG LINE A (A)

SCALE: 3/4"=1'-0"

NOTE: CONTRACTOR SHALL FIRST VERIFY THE SIZE OF EXISTING FOOTING AT COLUMN LINE A AND INFORM THE STRUCTURAL ENGINEER BEFORE CONSTRUCTION SO THIS DETAIL CAN BE REVISED ACCORDINGLY DEPENDING ON THE SIZE OF THE EXISTING FOOTING.



FOOTING FOR NEW INTERIOR COLUMN ALONG GRID LINE A (B)

SCALE: 3/4"=1'-0"

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Project number:	220001
Drawn By:	TS
Checked By:	EA

GEORGIA MOUNTAIN FOOD BANK
1642 CALVARY INDUSTRIAL DRIVE SW
GAINESVILLE, GA 30507

Drawing Description:

ELEVATION AND DETAILS

S200

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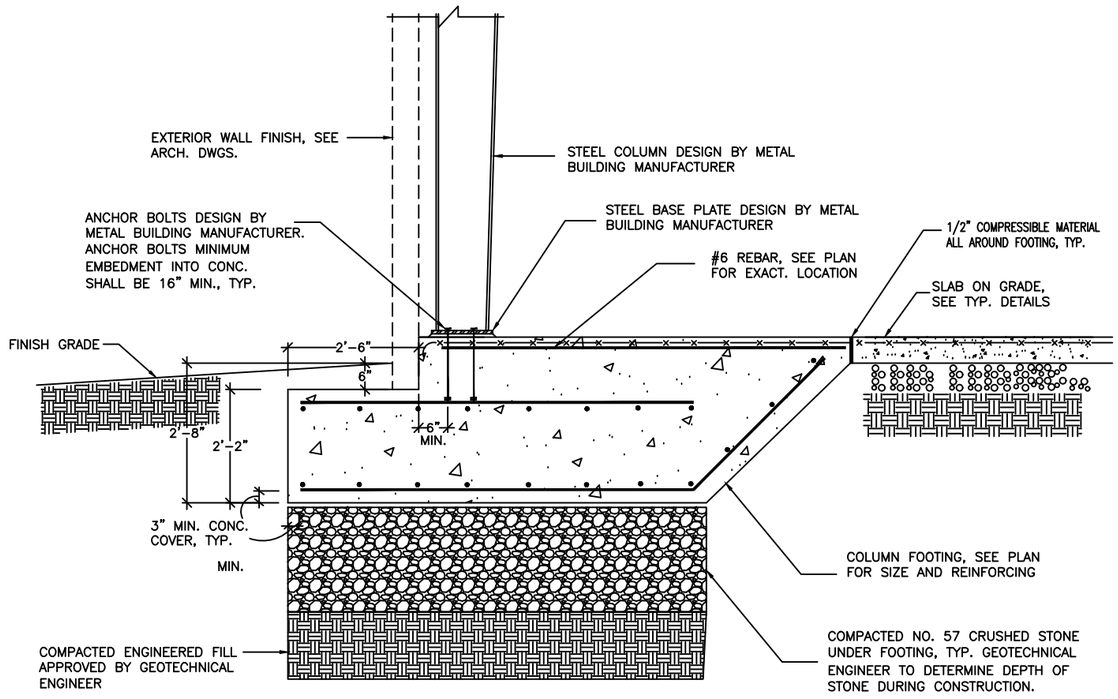
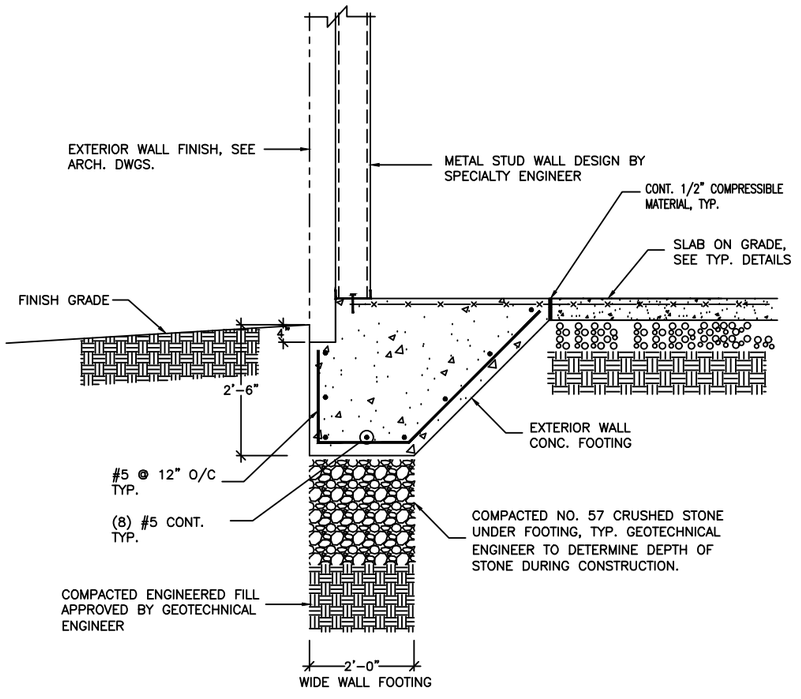


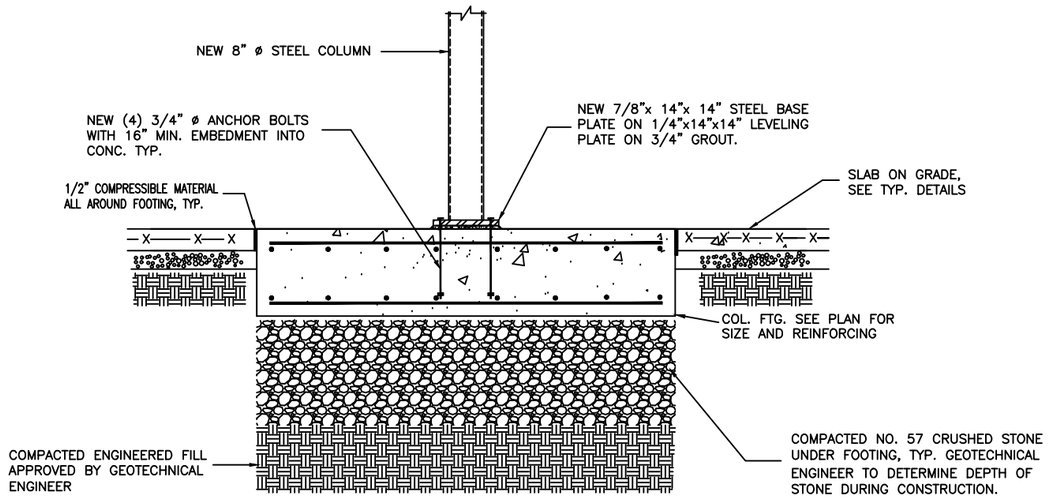
SECTION – NEW EXTERIOR COLUMN FOUNDATION (1)

SCALE: 3/4"=1'-0"



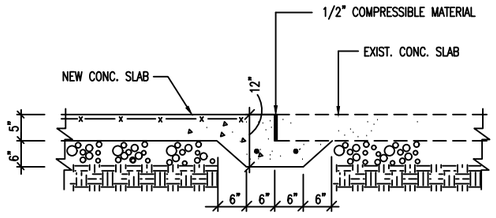
SECTION – NEW EXTERIOR WALL FOUNDATION (2)

SCALE: 3/4"=1'-0"



DETAIL – NEW INTERIOR COLUMN FOOTING (A)

SCALE: 3/4"=1'-0"



SECTION AT NEW AND EXISTING CONCRETE SLAB LINE (3)

SCALE: 3/4"=1'-0"

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Drawn By:	TS
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GEORGIA MOUNTAIN FOOD BANK
1642 CALVARY INDUSTRIAL DRIVE SW
GAINESVILLE, GA 30507

Drawing Description:

SECTIONS AND DETAILS

S201

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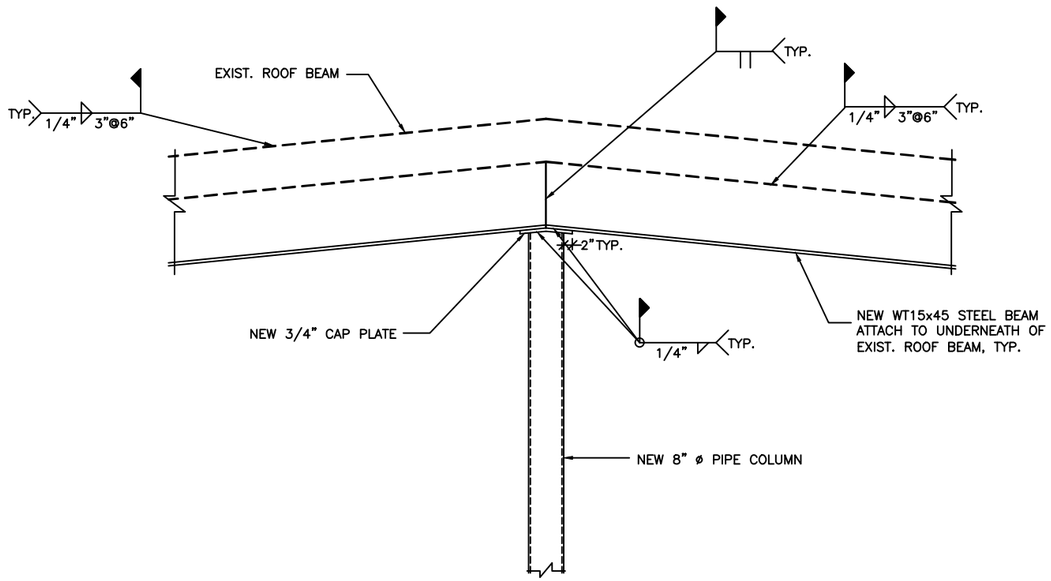
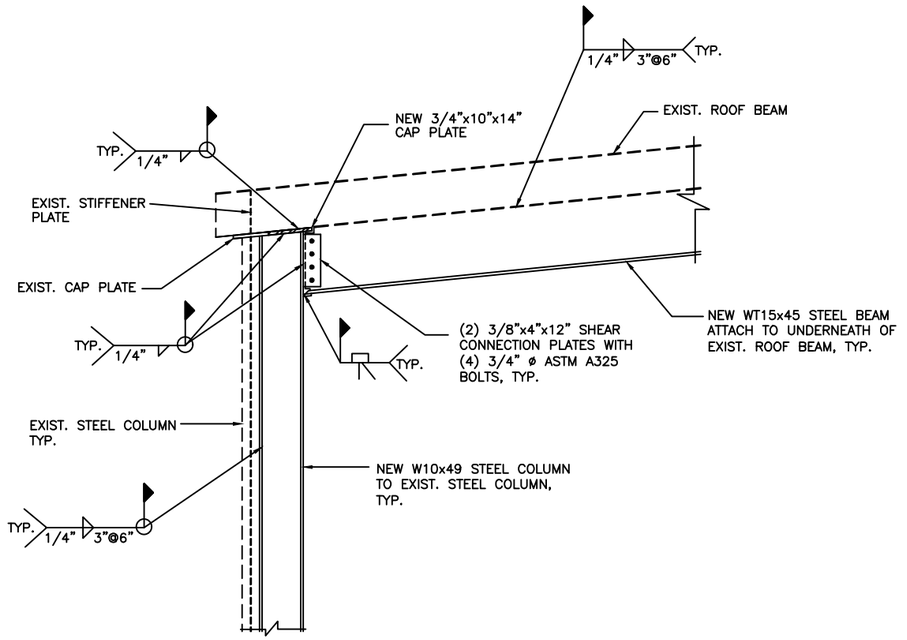
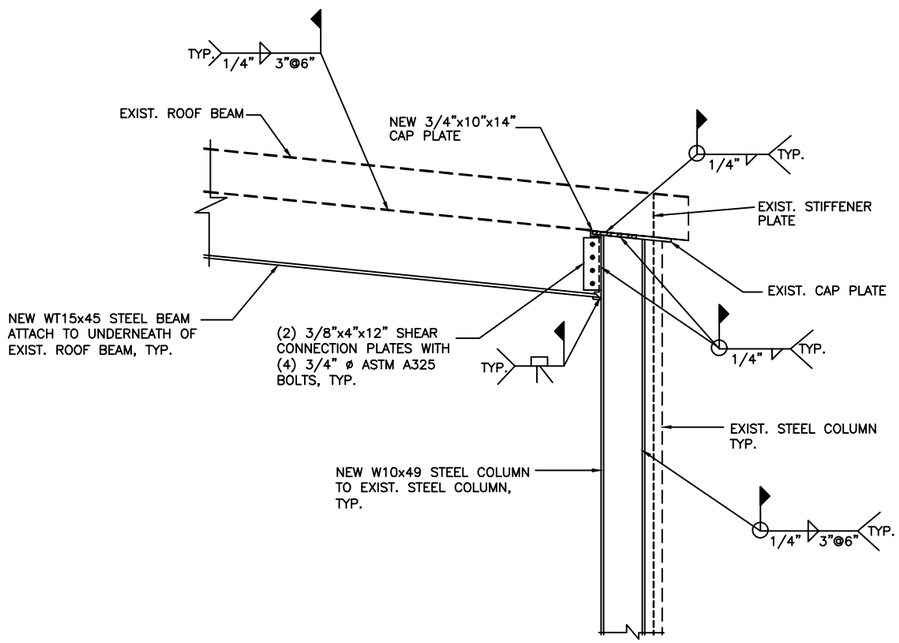


DETAIL B
SCALE: 3/4"=1'-0"



DETAIL A
SCALE: 3/4"=1'-0"



DETAIL C
SCALE: 3/4"=1'-0"

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1 PLAN REVIEW COMMENTS 10.07.22

Drawing Date:	09/20/2022
Project number:	220001
Drawn By:	TS
Checked By:	EA

GEORGIA MOUNTAIN FOOD BANK
1642 CALVARY INDUSTRIAL DRIVE SW
GAINESVILLE, GA 30507

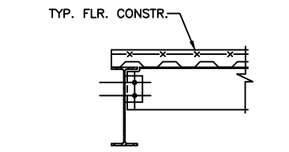
Drawing Description:

SECTION AND DETAILS

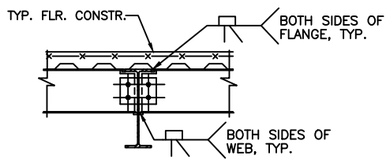
S202

GC4EW22-01.46 10/20/2022 By reviewing the plans/specs for Code Compliance does not relieve the owner, design professionals, contractors or their representatives from the responsibility to comply with all local, state and national codes and standards in effect at time of permit issuance. Our review is not a check of every item and does not prevent this department from requiring corrections during construction. Any changes/alterations to approved plans shall be approved to avoid voiding the permit.

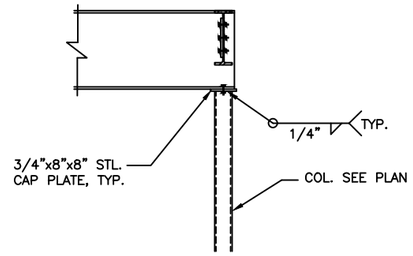
GAINESVILLE



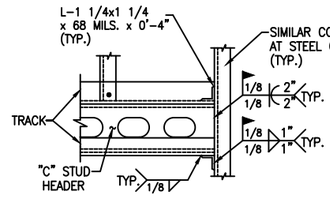
SECTION
SCALE: 3/4" = 1'-0" (1)



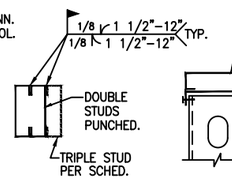
SECTION
SCALE: 3/4" = 1'-0" (2)



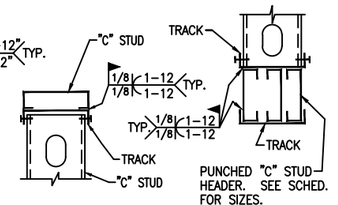
TYPICAL DETAIL : STEEL BEAM ON PIPE COLUMN
SCALE : 3/4" = 1'-0" (A)



TYP. HEADER OR SILL CONN. TO STUD (B)

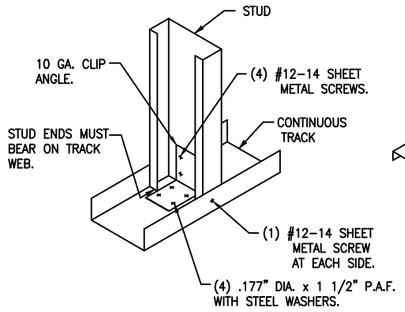


JAMB SECTION (C)

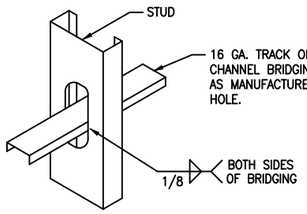


SILL SECTION (D)

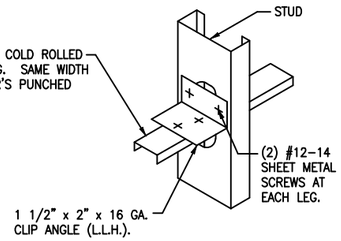
HEAD SECTION (E)



SINGLE STUD ATTACHMENT
SCREW CONNECTION (F)

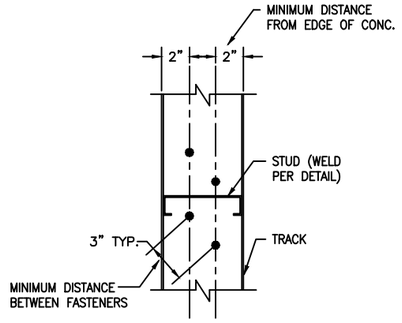


WELD ATTACHMENT

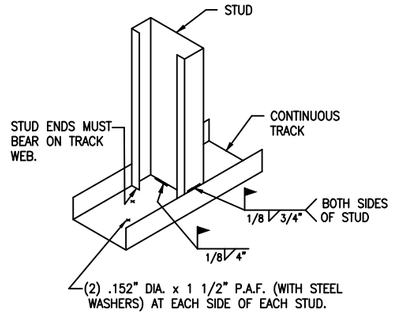


SCREW ATTACHMENT

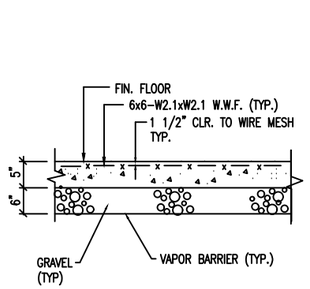
STUD BRIDGING DETAIL
(SEE ELEVATIONS FOR BRIDGING LOCATIONS)
(SEE DRAWING 242D2 FOR TYPICAL BRIDGING SPLICE) (G)



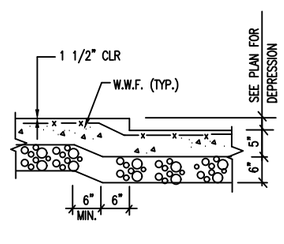
FASTENING ARRANGEMENT
TRACK TO CONCRETE (PLAN)
TYPICAL DETAIL (H)



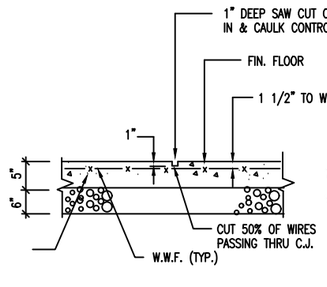
SINGLE STUD ATTACHMENT
TRACK TO CONCRETE (VIEW)
TYPICAL DETAIL (J)



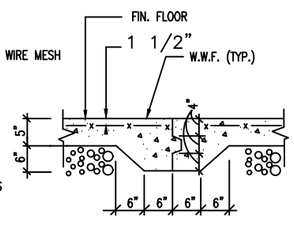
TYPICAL



AT DEPRESSION



CONTROL JOINT (C.J.)



TYP. CONSTRUCTION JOINT

TYPICAL SLAB ON GRADE DETAILS (A)
NOT TO SCALE

PERMIT SET. RELEASED OR ISSUED FOR CONSTRUCTION.

GEORGIA REGISTERED No. PE031445 PROFESSIONAL ENGINEER EMMANUEL EKENG ANSA

STRUCTURAL ENGINEER
EMMANUEL ANSA, PE, SE
P.O. BOX 142318
FAYETTEVILLE, GA. 30215
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Syntony Design Collaborative LLC.

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Drawing Revisions:
1 PLAN REVIEW COMMENTS 10.07.22

Drawing Date:	09/20/2022
Project number:	220001
Drawn By:	TS
Checked By:	EA

GEORGIA MOUNTAIN FOOD BANK
1642 CALVARY INDUSTRIAL DRIVE SW
GAINESVILLE, GA 30507

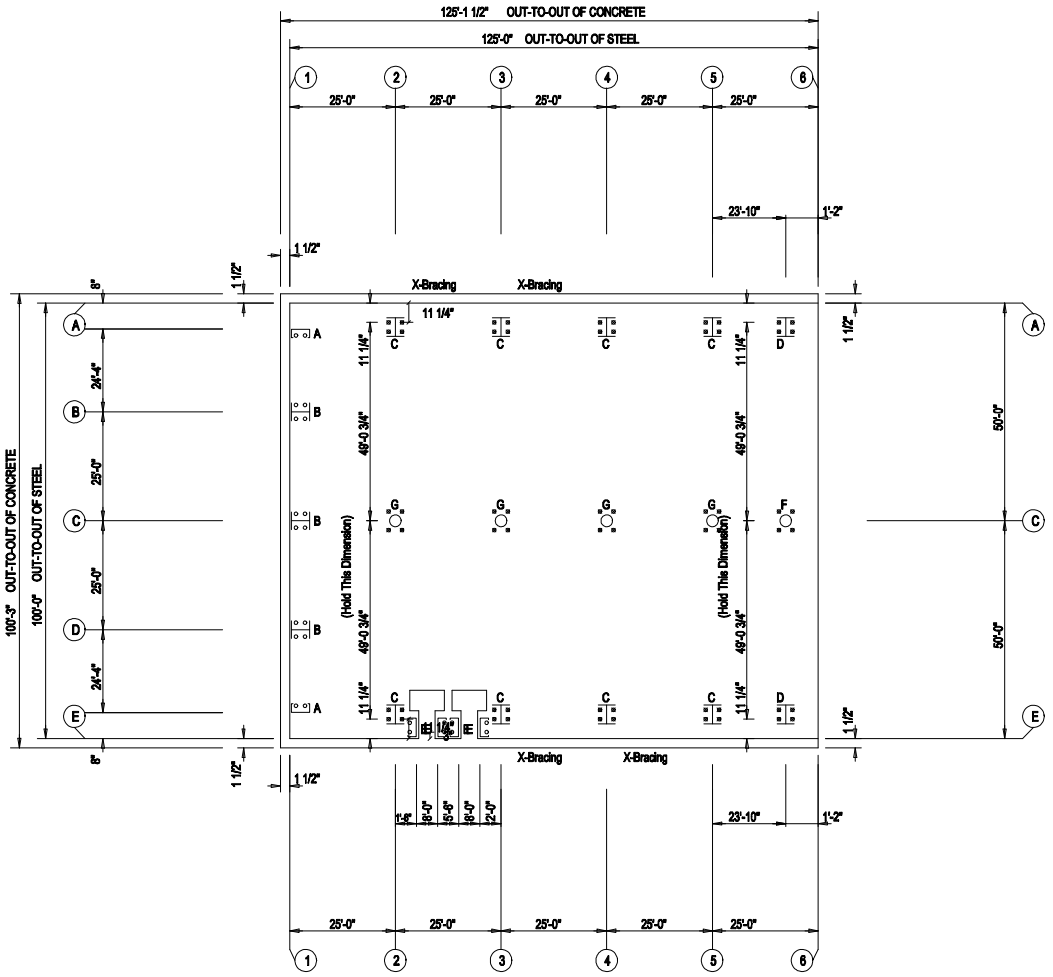
Drawing Description:
SECTIONS AND DETAILS

S203

GCMD/22-0146 - 10/20/2022 By reviewing the plans/specs for Code Compliance does not relieve the owner, design professionals, contractors or their representatives from the responsibility to comply with all local, state and national codes and standards in effect at time of permit issuance. Our review is not a check of every item and does not prevent this department from requiring corrections during construction. Any changes/additions to approved plans shall be approved to avoid voiding the permit.

○ Dia= 5/8"

⊠ Dia= 3/4"



ANCHOR BOLT PLAN

NOTE: All Base Plates @ 100'-0" (U.N.)

IMPORTANT!
Do Not Set Anchor Rods with these Preliminary Drawings.

Whirlwind Steel Buildings will not be responsible for the location of the anchor rods on the Preliminary Drawings.

PRELIMINARY DRAWINGS:
These drawings are the initial plans prepared by the sales team to provide a means of communication between the customer and Whirlwind Steel Buildings, Inc. These plans are NOT intended to be used for construction.

WHIRLWIND STEEL BUILDINGS
P.O. BOX 75280
HOUSTON, TX 77234
PH: 800-324-9992
FAX: 832-553-4600

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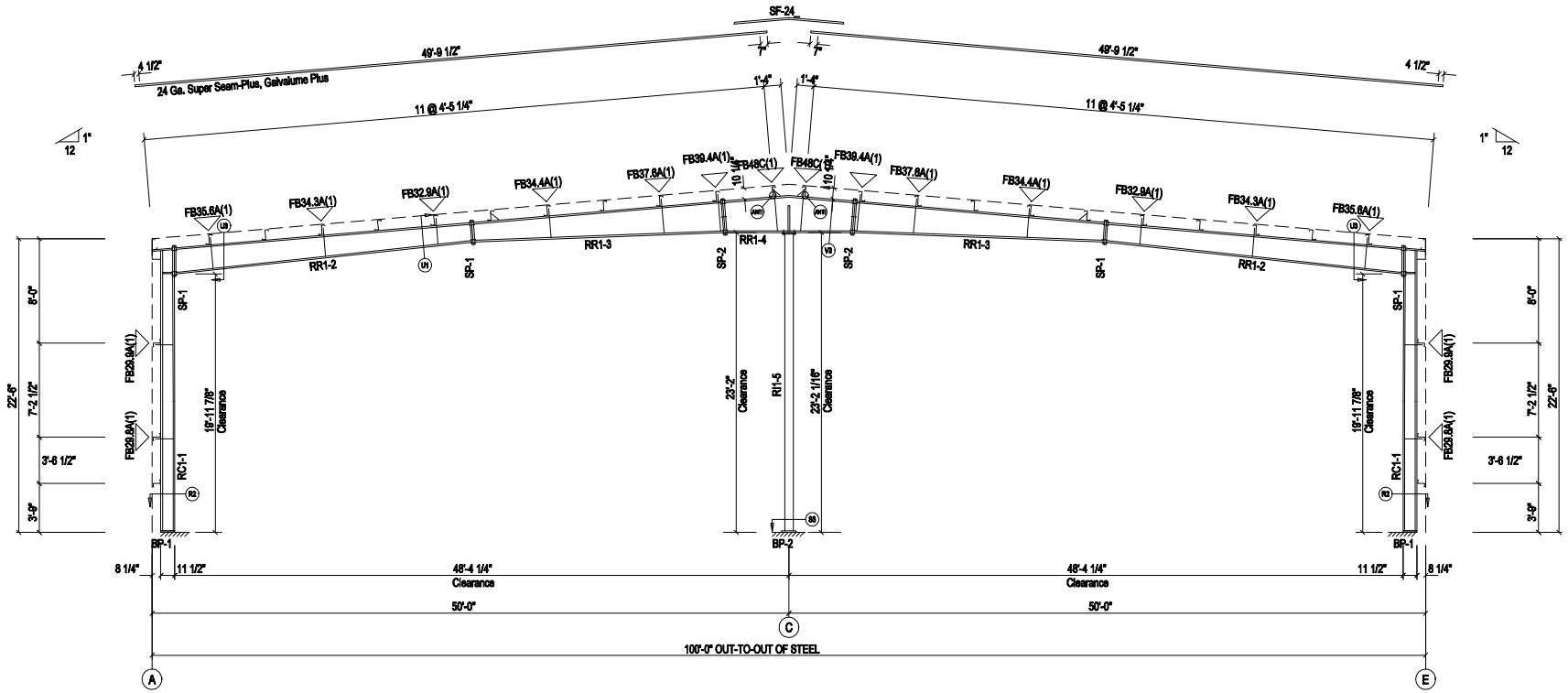
DESC: ANCHOR BOLT PLAN	BLDG. SIZE: 100'-0" x 125'-0" x 22'-6"
CUSTOMER: Sintony Design	LOCATION: City, State Zip
REFERENCE: Georgia Mountain Food Bank	
JOBSITE: Gainesville, GA 30507	COUNTY: Hall
DATE: 9/20/22	QUOTE NO: GA1078
DWG NO:	ISSUE: PRELIM

By reviewing the plans/specs for Code Compliance does not relieve the owner, design professionals, contractors or their representatives from the responsibility to comply with all local, state and national codes and standards in effect at time of permit issuance. "Or Approved Equal" is not a choice, it is a request. Non-requiring contractors during construction. Any changes/revisions to approved plans must be approved by engineer of record prior to making the change.

BOLT TIGHTENING (Snug-Tight)

All bolted joints with ASTM F3125 Grade A325 bolts are specified as Snug-Tightened Joints in accordance with the Specification of Structural Joints Using High-Strength Bolts, June 11, 2020, installation as given in Section 7.1 Washers are not required for Snug-Tightened Joints using standard standard size holes per Section 6.1 of the Specification

Pretensioning methods, including Turn-of-Nut, calibrated wrench, twist-off tension control bolts or direct tension indicator are not required. Installation inspection requirements for Snug-Tight Bolt is found in Section 9.1 of the Specification.



RIGID FRAME ELEVATION: FRAME LINE 6

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FAX: 832-553-4600

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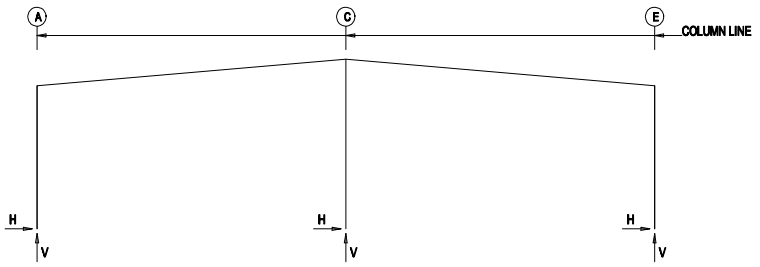
DESC: RIGID FRAME ELEVATION		BLDG. SIZE: 100'-0" x 125'-0" x 22'-6"	
CUSTOMER: Stntony Design		LOCATION: City, State Zip	
REFERENCE: Georgia Mountain Food Bank			
JOBSITE: Gainesville, GA 30507		COUNTY: Hall	
DATE: 9/20/22	QUOTE NO: GA1078	DWG NO:	ISSUE: PRELIM

By reviewing the plans/data for Code Compliance does not relieve the owner, design professionals, contractors or their representatives from the responsibility to comply with all local, state and national codes and standards in effect at time of permit issuance. Our review is strictly limited to the items we provide. Any changes/revisions to approved plans must be approved in writing prior to the point.

FRAME LINES: 2 3 4 5 6



RIGID FRAME: MAXIMUM REACTIONS, ANCHOR BOLTS, & BASE PLATES

Frm Line	Col Line	Column_Reactions(k) Load Id	Hmax H	V Vmax	Load Id	Hmin H	V Vmin	Bolt(in) Qty	Dia	Base_Plate(in) Width	Length	Thick	Elev. (in)
2*	A	3	5.0	15.1	6	-3.9	-2.2	4	0.750	8.000	10.50	0.375	0.0
		1	3.7	20.9	8	1.0	-6.4						
2*	E	7	3.9	-2.2	2	-5.0	15.1	4	0.750	8.000	10.50	0.375	0.0
		1	-3.7	20.9	9	-1.0	-6.4						
2*	C	5	0.0	-6.8	5	0.0	-6.8	4	0.750	12.00	12.00	0.500	0.0
		1	0.0	54.5									
2*	Frame lines:	2 3 4 5											

RIGID FRAME: MAXIMUM REACTIONS, ANCHOR BOLTS, & BASE PLATES

Frm Line	Col Line	Column_Reactions(k) Load Id	Hmax H	V Vmax	Load Id	Hmin H	V Vmin	Bolt(in) Qty	Dia	Base_Plate(in) Width	Length	Thick	Elev. (in)
6	A	3	2.2	7.2	6	-2.0	-1.9	4	0.750	8.000	10.50	0.375	0.0
		1	1.5	10.0	4	-1.7	-3.0						
6	E	7	2.0	-1.9	2	-2.2	7.2	4	0.750	8.000	10.50	0.375	0.0
		1	-1.5	10.0	5	1.7	-3.0						
6	C	5	0.0	-5.7	5	0.0	-5.7	4	0.750	10.00	10.00	0.500	0.0
		1	0.0	31.1									

GENERAL NOTES

1. All anchor bolts (by others) to have nuts and flat washers.

2. All anchor bolts are designed to full S.A.E. diameters with cut threads. No substitutions are allowed.

3. The Metal Building Provider is not responsible for the design, materials and workmanship of the foundation. Anchor bolt plans prepared by the Metal Building Provider are intended to show only location, diameter, and projection of anchor bolts required to attach the Metal Building System to the foundation. The Metal Building Provider is responsible for providing to the Builder the loads imposed by the Metal Building System on the foundation. It is the responsibility of the End Customer to ensure that adequate provisions are made for specifying bolt embedment, bearing angles, tie rods, and/or other associated items embedded in the concrete foundation, as well as foundation design for the loads imposed by the Metal Building System, other imposed loads, and the bearing capacity of the soil and other conditions of the building site. This is typically the responsibility of the Design Professional or Engineer of Record, which is another reason that their involvement in the Construction Project from the outset is highly recommended. (2012 MBMA Metal Building Systems Manual, Section 3.2.2)

RIGID FRAME: BASIC COLUMN REACTIONS (k)

Frame Line	Column Line	—Dead— Horiz	Vert	—Collateral— Horiz	Vert	—Live— Horiz	Vert	—Snow— Horiz	Vert	—Wind_Left1— Horiz	Vert	—Wind_Right1— Horiz	Vert
6	A	0.1	1.1	0.2	1.3	1.2	7.6	0.7	4.4	-3.0	-6.1	2.2	-2.2
6	E	-0.1	1.1	-0.2	1.3	-1.2	7.6	-0.7	4.4	-2.2	-2.2	3.0	-6.1
6	C	0.0	3.1	0.0	4.0	0.0	24.0	0.0	14.0	0.0	-12.6	0.0	-12.6

Frame Line	Column Line	—Wind_Left2— Horiz	Vert	—Wind_Right2— Horiz	Vert	—Wind_Long1— Horiz	Vert	—Wind_Long2— Horiz	Vert	—Seismic_Left Horiz	Vert	Seismic_Right Horiz	Vert
6	A	-3.5	-4.4	1.8	-0.4	0.8	-5.8	0.4	-3.1	-0.6	-0.3	0.6	0.3
6	E	-1.8	-0.4	3.5	-4.4	-0.4	-3.1	-0.8	-5.8	-0.6	0.3	0.6	-0.3
6	C	0.0	-8.3	0.0	-8.3	0.0	-12.0	0.0	-12.0	0.0	0.0	0.0	0.0

Frame Line	Column Line	—MIN_SNOW— Horiz	Vert	F1UNB_SL_L- Horiz	Vert	F1UNB_SL_R- Horiz	Vert
6	A	0.8	5.1	0.5	5.4	0.5	0.6
6	E	-0.8	5.1	-0.5	0.6	-0.5	5.4
6	C	0.0	16.0	0.0	12.2	0.0	12.2

Frame Line	Column Line	—Dead— Horiz	Vert	—Collateral— Horiz	Vert	—Live— Horiz	Vert	—Snow— Horiz	Vert	—Wind_Left1— Horiz	Vert	—Wind_Right1— Horiz	Vert
2*	A	0.3	2.0	0.5	2.7	2.9	16.2	1.7	9.5	-5.4	-9.4	4.4	-3.9
2*	E	-0.3	2.0	-0.5	2.7	-2.9	16.2	-1.7	9.5	-4.4	-3.9	5.4	-9.4
2*	C	0.0	4.9	0.0	7.1	0.0	42.5	0.0	24.8	0.0	-16.3	0.0	-16.3

Frame Line	Column Line	—Wind_Left2— Horiz	Vert	—Wind_Right2— Horiz	Vert	—Wind_Long1— Horiz	Vert	—Wind_Long2— Horiz	Vert	—Seismic_Left Horiz	Vert	Seismic_Right Horiz	Vert
2*	A	-6.8	-5.6	3.1	0.0	1.3	-12.7	0.7	-9.5	-0.9	-0.4	0.9	0.4
2*	E	-3.1	0.0	6.8	-5.6	-0.7	-9.5	-1.3	-12.7	-0.9	0.4	0.9	-0.4
2*	C	0.0	-9.0	0.0	-9.0	0.0	-15.4	0.0	-15.4	0.0	0.0	0.0	0.0

Frame Line	Column Line	-Seismic_Long Horiz	Vert	-MIN_SNOW— Horiz	Vert	F2UNB_SL_L- Horiz	Vert	F2UNB_SL_R- Horiz	Vert
2*	A	0.0	-2.0	1.9	10.8	1.2	11.1	1.2	1.9
2*	E	0.0	-2.0	-1.9	10.8	-1.2	1.9	-1.2	11.1
2*	C	0.0	0.0	0.0	28.4	0.0	21.8	0.0	21.8

2* Frame lines: 2 3 4 5

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FAX: 832-553-4600

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DESC:	ANCHOR BOLT REACTIONS
BLDG. SIZE:	100'-0" x 125'-0" x 22'-6"
CUSTOMER:	Sintony Design
LOCATION:	City, State Zip
REFERENCE:	Georgia Mountain Food Bank
JOBSITE:	Gainesville, GA 30507
COUNTY:	Hall
DATE:	9/20/22
QUOTE NO:	GA1078
DWG NO:	
ISSUE:	PRELIM

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PERMIT SET. RELEASED OR ISSUED FOR CONSTRUCTION.

ABBREVIATIONS: NOTE: NOT ALL SYMBOLS USED

AFF	ABOVE FINISHED FLOOR	FLUOR	FLUORESCENT	NFSS	NON–FUSIBLE SAFETY SWITCH
AFG	ABOVE FINISHED GRADE	FLA	FULL LOAD AMPERES	NTS	NOT TO SCALE
ACCU	AIR COOL CONDENSER UNIT	FSS	FUSIBLE SAFETY SWITCH	O.C.	ON CENTER
AHU	AIR HANDLING UNIT	GND	GROUND	PNL	PANEL
AL	ALUMINUM	GFI	GROUND FAULT INTERRUTPER	P	POLE
AMP A	AMPERE	HH	HANDHOLE	PP	POWER POLE
AWG	ANERICAN WIRE GAUGE	HID	HIGH INTENSITY DISCHARGE	PB	PULL BOX
ATS	AUTOMATIC TRANSFER SWITCH	HPF	HIGH POWER FACTOR	REC	RECEPTACLE
BKBD	BACKBOARD	HP	HORSEPOWER	REQ'D	REQUIRED
CB	CIRCUIT BREAKER	INCAND	INCANDESCENT	RGS	RIGID GALVANIZED STEEL CONDUIT
CAT CKT	CATALOG CIRCUIT	IMC	INTERMEDIATE METAL CONDUIT	RTU SN	ROOF TOP UNIT SOLID NETRAL
C	CONDUIT	IWH	INSTANT WATER HEATER	SWBD	SWITCHBOARD
DN	DOWN	HWH	HOT WATER HEATER	SWGR	SWITCHGEAR
DWG	DRAWING	JB	JUNCTION BOX	TEL	TELEPHONE
EMT	ELECTRICAL METALLIC TUBING	KAIC	THOUSAND AMPERE INTERRUPTING CAPACITY	TWU	THRU–THE–WALL UNIT
EWC	ELECTRIC WATER COOLER	KW	KILOWATT	XFMR	TRANSFORMER
EMER	EMERGENCY	KVA	KILOVOLT AMPERE	U.G.	UNDERGROUND
EMPTY	CONDUIT	LTG	LIGHTING	UON	UNLESS OTHERWISE NOTED
EQUIP	EQUIPMENT	MCB	MAIN CIRCUIT BREAKER	UH	UNIT HEATER
EF	EXHAUST FAN	N	NEUTRAL	V	VOLT(S)
EXIST	EXISTING	MH	MANHOLE	WP	WEATHERPROOF
FA	FIRE ALARM	MT	MOUNT	W	WIRE
FACP	FIRE ALARM CONTROL PANEL	MTD	MOUNTED	W/	WITH
		MTG	MOUNTING		
		NEC	NATIONAL ELECTRIC CODE		
		NIC	NOT IN CONTRACT		

LEGEND

PANELBOARD, 208/120V, 3 PHASE, 4 WIRE. FLUSH OR SURFACE MOUNTED AS NOTED ON PANEL SCHEDULE, TOP OF PANEL 6'–0" AFF.

DUPLEX RECEPTACLE, MOUNT 18" AFF, U.O.N. AND AS DETAILED ON ARCHITECTURAL ELEVATIONS. "CTR"= 4" ABOVE COUNTERTOP HEIGHT

GFI GROUND FAULT INTERRUPTER DUPLEX RECEPTACLE, MOUNT 4" ABVOVE COUNTER OR TABLE TOP U.O.N. AND AS DETAILED ON ARCHITECTURAL ELEVATIONS.

DUPLEX RECEPTACLE, MOUNTED IN CEILING OR ABOVE CEILING TO SUPPORT OR STRUCTURE

DOUBLE DUPLEX RECEPTACLE, MT. 12" AFF U.O.N. AND AS DETAILED ON ARCHITECTURAL ELEVATIONS.

SPECIAL RECEPTACLE AS NOTED, MOUNTING HEIGHT AS NOTED.

SEE SPECIFICATIONS FOR RATING AND GRADE, U.O.N.

COORDINATE INSTALLATION WITH OTHER TRADES AND THE N.E.C. ARTICLE 384

PUSHBUTTON/CONTROLLER, WALLMOUNTED.

B DOOR CHIME, COORDINATE REQUIREMENTS WITH OWNER /ARCH LOCATION WITH OWNER BEFORE ROUGH–IN.

TELEPHONE OUTLET, 4"SQ. BOX W/SINGLE GANG RISE, MOUNT 18" AFF, VARIFY EXACT LOCATION WITH OWNER. STUB 3/4" BUSHED CONDUIT INTO CEILING SPACE. "W"– DENOTES WALL PHONE, MOUNT 52" AFF "c"– DENOTES COUNTER MOUNTED, MT. 6" ABOVE COUNTER AND/OR AS DETAILED ON ARCHITECTURAL ELEVATIONS.

DATA/TEL OUTLET, 4" SQ. BOX WITH SINGLE GANG RISE. MOUNT ON ARCHITECTURAL ELEVATIONS. COORDINATE COVER–PLATE WITH OWNER.

S CEILING MOUNTED SMOKE DETECTOR.

S DUCT SMOKE DETECTOR, SPECIFIED IN DIVISION 16, FURNISHED & WIRED BY ELECTRICAL CONTRACTOR, AND INSTALLED BY MECHANICAL CONTRACTOR.

F FIRE ALARM PULL STATION, MT. 48" AFF U.O.N.

F FIRE ALARM HORN/STROBE LIGHT COMBINATION, MT. 80" AFF, U.O.N.

60CD STROBE LIGHT, CANDELA RATING IN CD, MT 80" AFF, UON

H HEAT DETECTOR, DUEL ELEMENT RATE–OF–RISE AND FIXED TEMPERATURE.

TS TAMPERSWITCH, LOCATE AT FIRE SERVICE VAULT AND AT SPRINKLER RISER WITHIN BUILDING.

FS FLOWSWITCH, LOCATE SPRINKLER RISER WITHIN BUILDING.

SEE SPECIFICATIONS AND FIXTURE SCHEDULE

A FLUORESCENT LIGHT FIXTURE, "A" DENOTES FIXTURE TYPE, VARIFY EXACT LOCATION OF FIXTURES WITH ARCHITECTURAL REFLECTED CEILING PLANS.

FLUORESCENT LIGHT FIXTURE, "A" DENOTES FIXTURE TYPE, VARIFY EXACT LOCATION OF FIXTURES WITH ARCHITECTURAL REFLECTED CEILING PLANS. 90MINUTE BATTERY BACKUP SUPPLIED

SELF–CONTAINED EMERGENCY LIGHTING BATTERY UNIT.

X X EXIT LIGHT, WALL OR CEILING MOUNTED. PROVIDE FOR DIRECTIONAL ARROWS AS SHOWN AND/OR REQUIRED. EXIT LIGHTS SHALL BE CIRCUITED TO THE NEAREST NORMAL UNSWITCHED CIRCUIT.

FLUORESCENT OR H.I.D. LIGHT FIXTURE, WALL OR RECESSED.

FLUORESCENT STRIP FIXTURE

P PHOTOELECTRIC CONTROL, MOUNT ON RGS CONDUIT 6" ABOVE ROOF, FACE NORTH COORDINATE ROOF PENETRATION WITH ARCHITECT.

SEALTITE CONNECTION TO MOTOR, HP SIZE & TYPE AS NOTED.

NON–FUSED SAFETY SWITCH, SIZE & TYPE AS NOTED.

FUSED SAFETY SWITCH, SIZE & TYPE AS NOTED.

WALL OR CEILING MOUNTED JUNCTION BOX.

CODE SIZE, COPPER, SERVICE ENTRANCE OR EQUIPMENT GROUND.

S	SINGLE POLE TOGGLE SWITCH, MT. 48" AFF U.O.N.
D	SINGLE POLE DIMMER SWITCH, MT. 48" AFF U.O.N.
S'3	THREE–WAY TOGGLE SWITCH, MT. 48" AFF U.O.N.
S'4	FOUR–WAY TOGGLE SWITCH, MT. 48" AFF U.O.N.
S'M	SWITCH WITH OCCUPANCY SENSOR, MT. 48" AFF U.O.N.
(R)	CEILING MOUNTED OCCUPANCY SENSOR

ELECTRICAL NOTES:

1. INSTALL ELECTRICAL SYSTEMS IN ACCORDANCE WITH NATIONAL ELECTRICAL, BUILDING AND OTHER APPLICABLE CODES.
2. COORDINATE TEL/DATA/LV INSTALLATION W/VENDOR. UNLESS NOTED OTHERWISE, PROVIDE CONDUIT STUBBED ABOVE CEILING, BACKBOXES, PULLSTRINGS, BACKBOARDS, GROUNDING TERMINATION BAR AND CONDUIT TO DEMARC COORDINATED W/TELECOM PROVIDER.
3. REFER TO LIGHTING PLAN FOR SWITCH LOCATIONS AND CONNECTIONS, IF NOT SHOWN REQUEST INFORMATION FROM DESIGN ENGINEER.
4. COORDINATE WORK WITH OTHER TRADES TO MINIMIZE INTERFERENCES. WHERE CONFLICTS EXIST, REQUEST INFORMATION FROM DESIGN ENGINEER.
5. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR CONNECTION OF ALL ELECTRICAL EQUIPMENT, WHETHER FURNISHED IN HIS CONTRACT, BY OWNER, OR OTHER. COORDINATE WITH ALL PARTIES INVOLVED.
6. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS, PRIOR TO BID. WHERE CONFLICTS WITH PLANS EXIST, REQUEST INSTRUCTIONS FROM DESIGN ENGINEER.

16010 – BASIC ELECTRICAL REQUIREMENTS

1.1 QUALITY ASSURANCE

A. ALL ELECTRICAL COMPONENTS AND INSTALLATION SHALL BE IN ACCORDANCE WITH THE FOLLOWING CODES:

1. THE NATIONAL ELECTRICAL CODE (NPFA–70), 2020 EDITION.
2. THE INTERNATIONAL BUILDING CODE, 2018 EDITION.
3. THE INTERNATIONAL ENERGY CODE, 2015 EDITION.
3. MUNICIPAL ORDINANCES GOVERNING ELECTRICAL WORK.

B. ALL MATERIALS SHALL BE NEW AND SHALL CONFORM TO STANDARDS WHERE SUCH HAVE BEEN ESTABLISHED FOR THE PARTICULAR MATERIAL. ALL UL LISTED EQUIPMENT SHALL BEAR THE UL LABEL. MATERIALS OF THE SAME TYPE SHALL BE THE PRODUCT OF THE SAME MANUFACTURER. WORKMANSHIP AND NEW MATERIALS SHALL BE FULLY GUARANTEED FOR A PERIOD OF ONE YEAR AFTER DATE OF ACCEPTANCE.

1.2 PERMITS

A. OBTAIN ALL PERMITS AND INSPECTIONS REQUIRED FOR THE WORK INVOLVED AND PAY ALL CHARGES INCIDENT THERETO. DELIVER TO THE OWNER ALL CERTIFICATES OF INSPECTION.

1.3 DRAWINGS

A. THE DRAWINGS INDICATE THE GENERAL ARRANGEMENT OF ELECTRICAL EQUIPMENT. COORDINATE INSTALLATION OF EQUIPMENT WITH ALL OTHER TRADES. DO NOT SCALE DRAWINGS FOR CONNECTION LOCATIONS.

1.4 MECHANICAL SYSTEM INTERFACE

A. CONNECT ALL EQUIPMENT REQUIRING ELECTRICAL SERVICE. ALL CONTROL WIRING FOR PLUMBING AND HVAC EQUIPMENT SHALL BE INSTALLED BY MECHANICAL CONTRACTOR. POWER WIRING TO ALL MOTORS AND MOTOR CONTROLLERS AND BETWEEN MOTORS AND CONTROLLERS SHALL BE PROVIDED BY ELECTRICAL CONTRACTOR.

1.6 CLEANING AND PAINTING

A. REMOVE ALL OIL, DIRT, GREASE AND FOREIGN MATERIALS FROM ALL RACEWAYS, FITTINGS, BOXES, PANELBOARD TRIMS AND CABINETS TO PROVIDE A CLEAN SURFACE FOR PAINTING. TOUCH–UP SCRATCHED OR MARRED SURFACES ON ALL EQUIPMENT.

1.8 SITE INVESTIGATION

A. PRIOR TO SUBMITTING BIDS FOR THE PROJECT, VISIT THE SITE OF THE WORK TO BECOME AWARE OF EXISTING CONDITIONS WHICH MAY EFFECT THE COST OF THE PROJECT. WHERE WORK REQUIRES EXTENSION, RELOCATION, RECONNECTIONS OR MODIFICATIONS TO EXISTING SYSTEMS, THE EXISTING EQUIPMENT OR SYSTEMS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION, WITH THE EXCEPTION OF THE WORK UNDER THIS CONTRACT, BEFORE THE COMPLETION OF THIS PROJECT.

B. VERIFY ALL SECONDARY SERVICE VOLTAGES.

1.9 RECORD DRAWINGS

A. UPON COMPLETION OF PROJECT, PROVIDE FULL SIZE PRINTS INDICATING ALL MODIFICATIONS TO THE CONTRACT DOCUMENTS.

END OF SECTION

16100 – BASIC MATERIALS

2.1 RACEWAYS

A. THE FOLLOWING SPECIFICATIONS AND STANDARDS ARE INCORPORATED INTO AND BECOME A PART OF THIS SPECIFICATION:

1. UNDERWRITER'S LABORATORY, INC. PUBLICATIONS 1, 6, 467, 651, 797, 1242.
2. AMERICAN NATIONAL STANDARDS INSTITUTE C–80.1, C–80.3.

B. RACEWAY IS REQUIRED FOR ALL WIRING, UNLESS SPECIFICALLY INDICATED OR SPECIFIED OTHERWISE. THE MINIMUM SIZE OF CONDUIT SHALL BE 1/2" FOR LIGHTING AND 3/4" FOR POWER BRANCH CIRCUITS, BUT SHALL NOT BE LESS THAN SIZE INDICATED ON THE DRAWINGS OR REQUIRED BY THE NEC.

C. METAL CLAD CABLE, TYPE MC CAN BE USED WHERE ALLOWED PER CODE. CONDUIT SHALL BE ELECTRICAL METALLIC TUBING (EMT) EXCEPT FOR THE FOLLOWING CONDITIONS:

1. USE FLEXIBLE CONDUIT FOR CONNECTIONS TO MOTORS, FLUSH MOUNTED LIGHTING FIXTURES, AND ALL VIBRATING EQUIPMENT.

A. LENGTH SHALL NOT EXCEED 18", EXCEPT LENGTHS UP TO 6'–0" MAY BE USED FOR LIGHTING FIXTURES.
B. MAINTAIN GROUND CONTINUITY THROUGH FLEXIBLE CONDUIT WITH A GREEN INSULATED EQUIPMENT GROUNDING CONDUCTOR.

2. CONDUITS SUBJECT TO PHYSICAL ABUSE SHALL BE GRS FOR HEIGHTS LESS THAN 10' ABOVE FINISHED FLOOR.

D. N/A

E. ALL CONDUIT SUPPORT PARTS AND HARDWARE SHALL BE HOT–DIPPED GALVANIZED. CONDUIT STRAPS SHALL BE SINGLE HOLE CAST METAL TYPE OR TWO HOLE GALVANIZED METAL TYPE. CONDUIT SUPPORT CHANNELS SHALL BE 1–1/2" X 1–1/2" – 14 GAUGE CHANNEL, WITH 1/4" THREADED STEEL RODS USED FOR SUSPENSION. WIRE OR CHAIN IS NOT ACCEPTABLE FOR RODS USED FOR SUSPENSION. WIRE OR CHAIN IS NOT ACCEPTABLE FOR CONDUIT HANGERS. INDIVIDUAL CONDUIT HANGERS SHALL BE GALVANIZED SPRING STEEL SPECIFICALLY DESIGNED FOR THE PURPOSE. INDIVIDUAL CONDUIT STRAPS ON METAL STUDS SHALL BE SPRING STEEL. TIE WRAPS ARE NOT ACCEPTABLE.

F. FASTEN CONDUIT SUPPORT DEVICES TO STRUCTURE WITH TOGGLE BOLTS ON HOLLOW MASONRY, EXPANSION ANCHORS ON SOLID MASONRY OR CONCRETE, AND MACHINE BOLTS OR CLAMPS ON STEEL. NAILS ARE NOT ACCEPTABLE.

G. CONDUIT SHALL BE RUN PARALLEL OR AT RIGHT ANGLES TO WALLS, CEILINGS AND STRUCTURAL MEMBERS. SUPPORT BRANCH CIRCUIT CONDUITS AT INTERVALS NOT EXCEEDING 10 FEET, AND WITHIN 3 FEET OF EACH BOX OR CHANGE OF DIRECTION. PROVIDE AN EXPANSION AND DEFLECTION COUPLING WHERE CONDUITS CROSS A BUILDING EXPANSION JOINT. SEAL AROUND ALL PENETRATIONS OF WALLS, FLOORS AND CEILINGS WITH DOW CORNING SILICONE RTV FOAM OR 3M FIRE BARRIER COMPOUNDS. MAINTAIN RACEWAY CLEARANCES OF 3" CROSSING HOT PIPING AND 12" PARALLELING. SEE ELECTRICAL DETAILS FOR ADDITIONAL INFORMATION.

H. MULTI–OUTLET ASSEMBLIES SHALL BE A TWO–PIECE RACEWAY CONSTRUCTED OF STEEL, GRAY FINISH, .040" WALL THICKNESS. REFER TO DESCRIPTION IN ELECTRICAL LEGEND.

2.2 WIRES AND CABLES

A. THE FOLLOWING SPECIFICATIONS AND STANDARDS ARE INCORPORATED INTO AND BECOME A PART OF THIS SPECIFICATION:

1. UNDERWRITER'S LABORATORIES, INC. PUBLICATIONS 44, 83, 486, 493.
2. INSULATED CABLE ENGINEERS ASSOCIATION STANDARDS S–61–402, S–66–524.
3. NATIONAL ELECTRICAL MANUFACTURER'S STANDARDS WC–5, WC–7.

B. CONDUCTORS SHALL BE ELECTRICALLY CONTINUOUS AND FREE FROM SHORT CIRCUITS OR GROUNDS. ALL OPEN, SHORTED, OR GROUNDED CONDUCTORS AND ANY WITH DAMAGED INSULATION SHALL BE REMOVED AND REPLACED WITH NEW MATERIAL FREE FROM DEFECTS.

C. CONDUCTOR SIZE SHALL BE MINIMUM OF NO. 12 AWG, UNLESS A LARGER SIZE IS REQUIRED BY THE DRAWINGS OR THE NEC. INSULATION VOLTAGE LEVEL RATING SHALL BE 600 VOLTS. ALL WIRE AND CABLE SHALL BEAR THE UL LABEL.

D. CONDUCTORS NO. 10 AND SMALLER SHALL BE SOLID COPPER, 75 DEGREES C. TYPE THWN/THHN. CONDUCTORS SIZE #10 THROUGH #2 SHALL BE STRANDED COPPER, 75 DEGREES C. TYPE THWN/THHN; >= #1 SHALL BE XHHW–2. FIXTURE WIRE SHALL BE NO. 16 AWG SILICONE RUBBER INSULATED, STRANDED FIXTURE WIRE TYPE SFF–2 OR NO. 16 THERMOPLASTIC NYLON JACKETED STRANDED FIXTURE WIRE TYPE TFFN.

E. COLOR CODE ALL CONDUCTORS. NO. 10 AND SMALLER SHALL HAVE SOLID COLOR COMPOUND OR COATING. NO. 8 AND LARGER SHALL HAVE SOLID COLOR COMPOUND OR COLORED PHASE TAPE; TAPE SHALL BE INSTALLED ON CONDUCTORS IN EVERY BOX, TERMINATION POINT, CABINET OR ENCLOSURE. CODING SHALL BE AS FOLLOWS:

1. 208Y/120 VOLT THREE PHASE FOUR WIRE WYE SYSTEM: PHASE A–BLACK, PHASE B–RED, PHASE C–BLUE, NEUTRAL–WHITE.
2. GROUNDING CONDUCTORS SHALL BE GREEN OR GREEN TRACED.

F. MAINTAIN PHASE ROTATION ESTABLISHED PER NEC AT SERVICE EQUIPMENT THROUGHOUT ENTIRE PROJECT.

G. GROUP AND LACE WITH NYLON TIE STRAPS ALL CONDUCTORS WITHIN ENCLOSURES. MAKE SPLICES IN CONDUCTORS ONLY WITHIN JUNCTION BOXES, WIRING TROUGHS, OR OTHER NEC APPROVED ENCLOSURES. DO NOT SPLICE CONDUCTORS IN PULL BOXES, SWITCHBOARDS, PANELBOARDS, SAFETY SWITCHES, OR MOTOR CONTROL ENCLOSURES. IDENTIFY EACH CONDUCTOR AS TO CIRCUIT CONNECTION IN ALL BOXES AND ENCLOSURES.

H. TERMINATE STRANDED CONDUCTORS NO. 10 AWG AND SMALLER WITH CRIMP–TYPE LUG OR STUD. CRIMP TERMINAL SHALL BE THE CONFIGURATION TYPE SUITABLE FOR THERMAL POINT.

I. TORQUE EACH TERMINAL CONNECTION TO THE MANUFACTURER'S RECOMMENDED TORQUE VALUE. A CALIBRATED TORQUING TOOL SHALL BE USED TO INSURE PROPER TORQUE APPLICATION.

2.3 WIRING DEVICES

A. PRODUCTS OF ARROW HART DIV.; COOPER INDUSTRIES; HUBBELL, INC.; LEVITON MFG. CO., INC.; WHICH COMPLY WITH THESE SPECIFICATIONS ARE ACCEPTABLE.

B. RECEPTACLES: COMPLY WITH UL STANDARD 498, "ELECTRICAL ATTACHMENT PLUGS AND RECEPTACLES", HEAVY DUTY GRADE.

C. GROUND–FAULT CIRCUIT INTERRUPTER (GFCI) RECEPTACLES: UL STANDARD 943, "GROUND FAULT CIRCUIT INTERRUPTERS", END–OF–LINE TYPE, WITH INTEGRAL NEMA 5–20R DUPLEX RECEPTACLE. DESIGN UNITS FOR INSTALLATION IN A 2–3/4 INCH DEEP BOX WITHOUT AN ADAPTER. PROVIDE GFCI RECEPTACLES WITHIN 6' OF WATER SOURCE.

D. SWITCHES: SINGLE POLE, 20 AMP 277 VOLT HUBBELL 1221, WHITE IN COLOR.

E. PROVIDE BONDING JUMPER FROM DEVICE GROUND SCREW TO SELF TAPPING SCREW SECURED TO METALLIC BOX. ALSO CONNECT TO GROUNDING CONDUCTOR. MOUNT DEVICES PLUMB AND SQUARE.

F. PROTECT DEVICES DURING PAINTING.

G. GROUP ADJACENT SWITCHES UNDER SINGLE, MULTI–GANG WALL PLATES. PROVIDE BARRIER BETWEEN 120 AND 277 VOLT CIRCUITS.

H. DEVICE PLATES SHALL BE WHITE IN COLOR.

I. INSTALL WALL SWITCHES ON THE STRIKE SIDE OF DOORS.

J. MOUNTING HEIGHTS INDICATED ON THE DRAWINGS ARE TO THE CENTER OF THE DEVICE.

2.4 BOXES

A. THE FOLLOWING SPECIFICATIONS AND STANDARDS ARE INCORPORATED INTO AND BECAME A PART OF THIS SPECIFICATION:

1. UNDERWRITER'S LABORATORIES, INC. PUBLICATIONS 50, 467, 514.

B. BOXES SHALL BE HOT–DIPPED GALVANIZED STEEL SHEET METAL, UNLESS RUSTPROOF CAST METAL IS SPECIFIED OR REQUIRED BY THE NEC.

C. DIMENSIONS OF PULL AND JUNCTION BOXES SHALL NOT BE LESS THAN THOSE REQUIRED BY THE NEC FOR THE NUMBER, SIZE, AND POSITION OF CONDUCTORS ENTERING THE BOX. WOOD SUPPORTS WITHIN PULL BOXES ARE NOT ACCEPTABLE. PROVIDE BOX COVERS FOR ALL BOXES.

D. ALL BOXES SHALL BE COMPLETELY ACCESSIBLE AS REQUIRED BY THE NEC. PROVIDE ACCESS PANELS IN ALL NON–ACCESSIBLE SPACES TO PERMIT ACCESS TO BOXES. PROVIDE AN OUTLET BOX FOR EACH LIGHTING FIXTURE OR AS INDICATED ON THE DRAWINGS AND FOR EACH DEVICE. BOX SIZES SHALL BE INCREASED FROM THOSE OUTLINED ABOVE IF REQUIRED BY ARTICLE 730 OF THE NEC.

E. SUPPORT EVERY BOX FROM STRUCTURE. SECURE TO HOLLOW MASONRY WITH TOGGLE BOLTS, METAL WITH SHEET METAL SCREWS, SOLID MASONRY OR CONCRETE WITH EXPANSION ANCHORS, METAL STUDS WITH SPRING STEEL CLAMPS AND STRUCTURE WITH THREADED STEEL RODS WHEN SUSPENDED. SET OUTLET BOXES FOR FLUSH MOUNTED DEVICES TO WITHIN 1/8" OF FINISHED WALLS; SPACERS OR SHIMS BETWEEN BOX AND DEVICE ARE NOT ACCEPTABLE. SUPPORT OUTLET BOXES OF SURFACE MOUNTED INCANDESCENT LIGHTING FIXTURES BY LIGHT WEIGHT CHANNEL SPANNING BETWEEN AND MOUNTED TO MAIN CEILING SUPPORT MEMBER, ATTACHED BY GALVANIZED TIE WIRE OR NYLON TIE STRAPS.

F. MARK JUNCTION BOX COVERS WITH PERMANENT MARKER TO SHOW PANEL NAME AND CIRCUIT NUMBER OF CONDUCTORS INSIDE BOX. PAINT OUTLET AND JUNCTION BOXES SUPPORTING THE FIRE ALARM SYSTEM RED. IDENTIFY FIRE ALARM CONDUITS WITH A 1" WIDE RED BAND, 10'–0" ON CENTER.

G. OUTLET BOXES FOR USE IN EXPOSED WIRING SYSTEMS SHALL BE CAST "FS" TYPE.

2.5 SUPPORTING DEVICES

A. PROVIDE AND INSTALL SUPPORTING DEVICES WHICH COMPLY WITH MANUFACTURER'S STANDARD MATERIALS, DESIGN, AND CONSTRUCTION IN ACCORDANCE WITH PUBLISHED STANDARDS AND AS REQUIRED FOR COMPLETE INSTALLATION.

B. COORDINATE WITH OTHER ELECTRICAL WORK, INCLUDING RACEWAY AND WIRING WORK, AS NECESSARY TO INTERFACE INSTALLATION OF SUPPORTING DEVICES. INSTALL HANGERS, SUPPORTS, CLAMPS, AND ATTACHMENTS TO SUPPORT PIPING PROPERLY FROM BUILDING STRUCTURE ONLY. TORQUE SLEEVE SEAL NUTS, COMPLYING WITH MANUFACTURER'S RECOMMENDED VALUES. ENSURE THAT SEALING GROMMETS EXPAND TO FORM WATER–TIGHT SEAL.

2.7 IDENTIFICATION

A. RELABEL MODIFIED PANELBOARD SCHEDULES WITH INFORMATION RELATED TO THIS PROJECT.

END OF SECTION

16400 – DISTRIBUTION EQUIPMENT

4.1 PANELBOARDS

A. PRODUCTS OF SQUARE D, GE, SIEMENS AND EATON COMPLYING WITH SPECIFICATIONS ARE ACCEPTABLE.

B. ALL PANELS AND CIRCUIT BREAKERS SHALL BE UL LISTED AND BEAR A UL LABEL. PANELS SHALL BE OF THE DEAD FRONT SAFETY TYPE. PROVIDE PANELS COMPLETE WITH FACTORY ASSEMBLED CIRCUIT BREAKERS CONNECTED TO THE BUS BARS. NUMBER ALL PANELBOARDS IN THE FOLLOWING SEQUENCE: CIRCUITS 1 AND 2 – PHASE A; CIRCUITS 3 AND 4 – PHASE B; CIRCUITS 5 AND 6 – PHASE C.

C. ALL PANELBOARD BUS BARS SHALL BE COPPER OR ALUMINUM.

D. CIRCUIT BREAKERS SHALL BE QUICK–MAKE, QUICK–BREAK, THERMAL MAGNETIC TYPE BOLTED TO THE BUS. MULTI–POLE BREAKERS SHALL BE COMMON TRIP AND COMMON RESET TYPE; TIE HANDLE CONNECTIONS ARE NOT ACCEPTABLE.

E. DIRECTORY SHALL BE TYPEWRITTEN AND SHALL CONTAIN COMPLETE EQUIPMENT IDENTIFICATION AND SPACE NUMBERS OF ALL SPACES CONTROLLED BY RECEPTACLE AND LIGHTING CIRCUITS. PROVIDE NAMEPLATES MOUNTED ON EXTERIOR OF PANEL CONSISTING OF WHITE CORE BLACK BAKELITE ADHERED WITH EPOXY GLUE. LETTER HEIGHT SHALL BE 1/4 INCH.

F. MOUNT PANEL WITH TOP OF PANEL AT 6' AFF.

4.5 GROUNDING SYSTEMS

A. EQUIPMENT GROUNDING SYSTEM SHALL BE ESTABLISHED WITH EQUIPMENT GROUND CONDUCTORS. THE USE OF METALLIC RACEWAYS FOR EQUIPMENT GROUNDING IS NOT ACCEPTABLE. UNLESS INDICATED OTHERWISE, PROVIDE EQUIPMENT GROUND THE SAME SIZE AS PHASE CONDUCTORS.

B. THE FOLLOWING SPECIFICATIONS AND STANDARDS ARE INCORPORATED INTO AND BECOME A PART OF THIS SPECIFICATION:

1. UNDERWRITER'S LABORATORIES, INC. PUBLICATIONS 44, 83, 467, 486, 493.
2 NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION STANDARDS WC–5, WC–7.

C. EACH RECEPTACLE AND SWITCH DEVICE SHALL BE FURNISHED WITH A GROUNDING SCREW CONNECTED TO THE METALLIC DEVICE FRAME. PROVIDE A CONDUCTOR TERMINATION GROUNDING LUG BONDED TO THE ENCLOSURE OF EACH TRANSFORMER, MOTOR CONTROLLER, AND DISCONNECT SWITCH.

D. GROUND ALL NON–CURRENT CARRYING PARTS OF THE ELECTRICAL SYSTEM, I.E., WIREWAYS, EQUIPMENT ENCLOSURES AND FRAMES, JUNCTION AND OUTLET BOXES, MACHINE FRAMES, CABLE TRAYS AND OTHER CONDUCTIVE ITEMS IN CLOSE PROXIMITY WITH ELECTRICAL CIRCUITS.

E. GROUNDING CONDUCTORS FOR BRANCH CIRCUITS ARE NOT SHOWN ON THE DRAWINGS; HOWEVER, GROUNDING CONDUCTORS SHALL BE PROVIDED IN ALL BRANCH CIRCUIT RACEWAYS AND CABLES, INCLUDING FLEXIBLE CONDUIT. GROUNDING CONDUCTORS SHALL BE THE SAME AWG SIZE AS BRANCH CIRCUIT CONDUCTORS UNLESS OTHERWISE NOTED.

F. EQUIPMENT GROUNDING CONDUCTORS SHALL TERMINATE ON PANELBOARD, SWITCHBOARD, OR MOTOR CONTROL CENTER GROUNDING BUS ONLY. DO NOT TERMINATE ON NEUTRAL BUS.

END OF SECTION

16500 – LIGHTING SYSTEM

B. LIGHTING FIXTURES SHALL NOT BE MANUFACTURED WITH LESS THAN CODE GAUGE STEEL. HINGED DOORS SHALL BE GASKETED ON ALL SIDES TO PREVENT LIGHT LEAKS. WHERE FIXTURES ARE SPECIFIED WITH A PRISMATIC PLASTIC LENS, THE LENS SHALL BE MANUFACTURED WITH UV STABILIZED VIRGIN ACRYLIC. THE LENS SHALL NOT BE LESS THAN 0.125 INCH NOMINAL THICKNESS. DRIVERS SHALL BE ELECTRONIC TYPE. ACCEPTABLE MANUFACTURERS ARE MAGNETEK, MOTOROLA, VALMONT, ADVANCE AND OSRAM.

C. LIGHTING FIXTURES SHALL BE INSTALLED PER THE MANUFACTURER'S RECOMMENDED MOUNTING METHODS AND THE PROVISIONS OF THE DRAWINGS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW THE ARCHITECTURAL PLANS AND SPECIFICATIONS TO VERIFY THE MOUNTING COMPATIBILITY OF THE LIGHTING FIXTURES WITH THE CEILING TYPE BEFORE FIXTURES ARE RELEASED FOR ORDERING. PROVIDE CEILING COMPATIBLE FIXTURES IN ALL CASES REGARDLESS OF THE CATALOG NUMBER ON THE DRAWINGS. RECESSED FIXTURES SHALL BE INSTALLED WITHOUT VISIBLE CRACKS OR LIGHT LEAKS BETWEEN CEILING AND FIXTURE TRIM.

D. SAFETY CHAINS OR CLIPS SHALL BE INSTALLED ON ALL SUSPENDED OR GRID CEILING TYPE FIXTURES. ALL FIXTURES SHALL BE CLEANED AND FREE OF FINGER PRINTS PRIOR TO FINAL ACCEPTANCE. SEE DETAILS FOR ADDITIONAL INFORMATION.

E. LIGHTING FIXTURES FLUSH MOUNTED IN EXPOSED TEE CEILINGS SHALL BE ATTACHED TO THE MAIN RUNNERS AT EACH END WITH CLIPS INTENDED FOR THAT PURPOSE. LED FIXTURES FLUSH MOUNTED IN CONCEALED SUSPENSION TYPE CEILING OR IN PLASTER, STUCCO OR SHEETROCK CEILINGS SHALL BE SUPPORTED BY ADJUSTABLE BRACKETS, INTEGRAL WITH THE FIXTURE, RESTING ON SUPPORT CHANNELS OF THE CEILING SUSPENSION SYSTEM. SURFACE MOUNTED LED FIXTURES SHALL BE SUPPORTED BY LIGHT WEIGHT CHANNEL ATTACHED TO TWO MEMBERS OF THE CEILING SUSPENSION SYSTEM. PENDANT MOUNTED LED FIXTURES SHALL BE ATTACHED TO CEILING SUSPENSION SYSTEM OR STRUCTURE BY PENDANTS, HANGAR RODS OR CONDUITS.

G. EMERGENCY LED POWER SUPPLY UNIT. CONFORM TO UL 924. UNIT SHALL BE INTERNAL TYPE, MODULAR, BATTERY INVERTER, FACTORY MOUNTED WITHIN FIXTURE BODY. PROVIDE TEST SWITCH AND LED INDICATOR LIGHT. BATTERY SHALL BE SEALED, MAINTENANCE–FREE, NICKEL CADMIUM TYPE WITH MINIMUM 10 YEAR NOMINAL LIFE. CHARGER SHALL BE FULLY AUTOMATIC, SOLID STATE, CONSTANT CURRENT TYPE. RELAY SHALL OPERATE (2)LAMPS WHEN SUPPLY CIRCUIT VOLTAGE DROPS TO 80 PERCENT OF NOMINAL VOLTAGE OR BELOW. BATTERY SHALL AUTOMATICALLY RECHARGE WHEN POWER IS RESTORED. PROVIDE UNIT CAPABLE OF SWITCHING WHERE INDICATED.

END OF SECTION

16500 – LIGHTING SYSTEM

5.1 LED

A. PRODUCTS OF NORTH AMERICAN PHILIPS, SYLVANIA, OR GE, WHICH COMPLY WITH THESE SPECIFICATIONS ARE ACCEPTABLE.

B. PROVIDE LED SOURCES AND DRIVERS FOR ALL LIGHTING FIXTURES AS SPECIFIED IN THE FIXTURE SCHEDULE.

C. ALL LED SOURCES SHALL HAVE A COLOR TEMPERATURE OF 3500 DEGREE KELVIN AND A CRI OF 90.

5.2 INTERIOR LIGHTING FIXTURES

A. ALL MATERIALS SHALL BE NEW, FREE FROM DEFECTS, AND BEAR A UL LABEL. ALL FIXTURES INSTALLED IN DAMP OR WET LOCATIONS SHALL BE UL LISTED AND LABELED FOR THAT APPLICATION. FIXTURES INSTALLED IN FIRE RATED CEILINGS SHALL PRESERVE THE FIRE RATING OF THE CEILING.

Joseph B. Rogers Jr.
No. 30595
PROFESSIONAL
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DWIGHT E. PEASLEY

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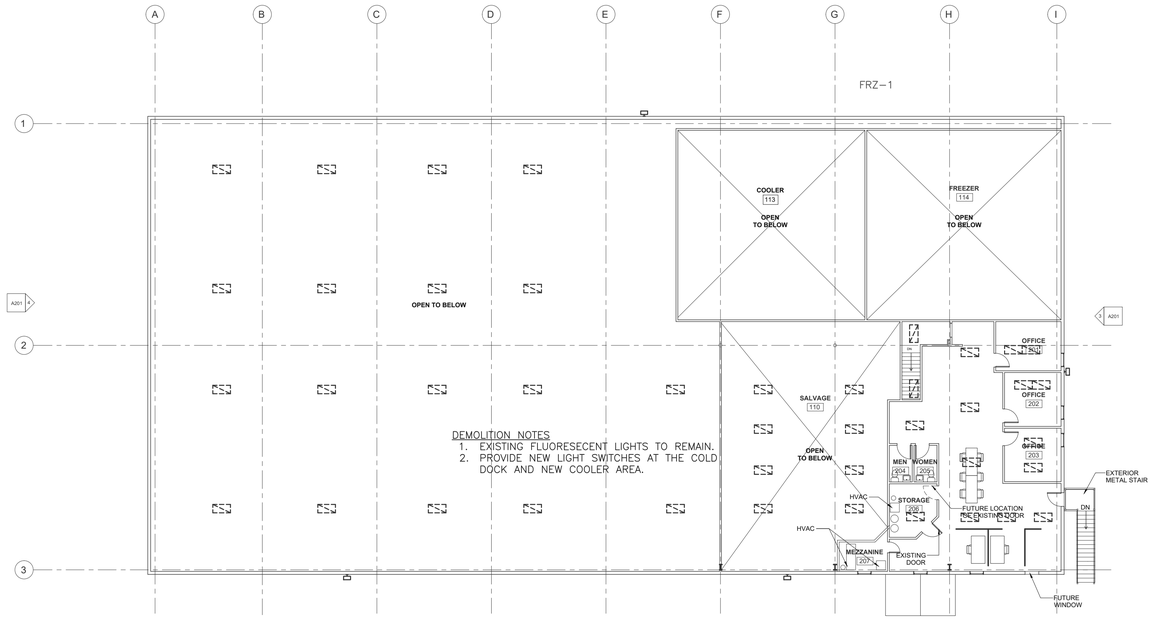
Drawing Revisions:

Drawing Date:	09/20/2022
Project number:	220001
Drawn By:	DEB
Checked By:	DEB

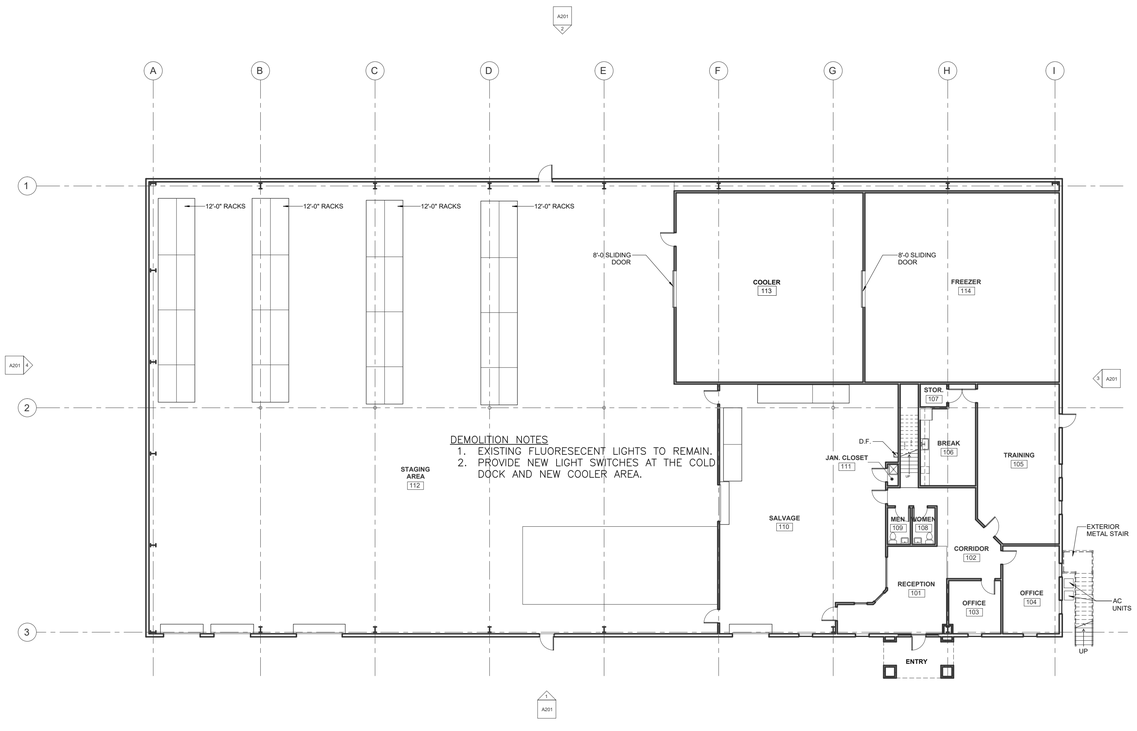
GEORGIA MOUNTAIN FOOD BANK
1642 CALVARY INDUSTRIAL DRIVE SW
GAINESVILLE, GA 30507

Drawing Description:
ELECTRICAL SPECIFICATIONS

PERMIT SET. RELEASED OR ISSUED FOR CONSTRUCTION.



2 EXISTING LIGHTING PLAN – 2ND FLOOR
SCALE:1/16"=1'-0"



1 EXISTING LIGHTING PLAN – 1ST FLOOR
SCALE:1/16"=1'-0"

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Drawing Revisions:

1 PLAN REVIEW COMMENTS
10.07.22

Drawing Date: 09/20/2022
Project number: 220001
Drawn By: DEB
Checked By: DEB

GEORGIA MOUNTAIN FOOD BANK
1642 CALVARY INDUSTRIAL DRIVE SW
GAINESVILLE, GA 30507

Drawing Description:

LIGHTING PLANS

E-1

GAINESVILLE
GREEN COMMUNITY

GENERAL NOTE - 10/20/2022 By reviewing the plans/specs for Code Compliance does not relieve the owner, design professionals, contractors or their representatives from the responsibility to comply with local, state and national codes and standards in effect at time of permit issuance. Code review is not a check of every item and does not prevent the department from requiring corrections during construction if it is discovered that the approved plans do not comply with applicable codes.

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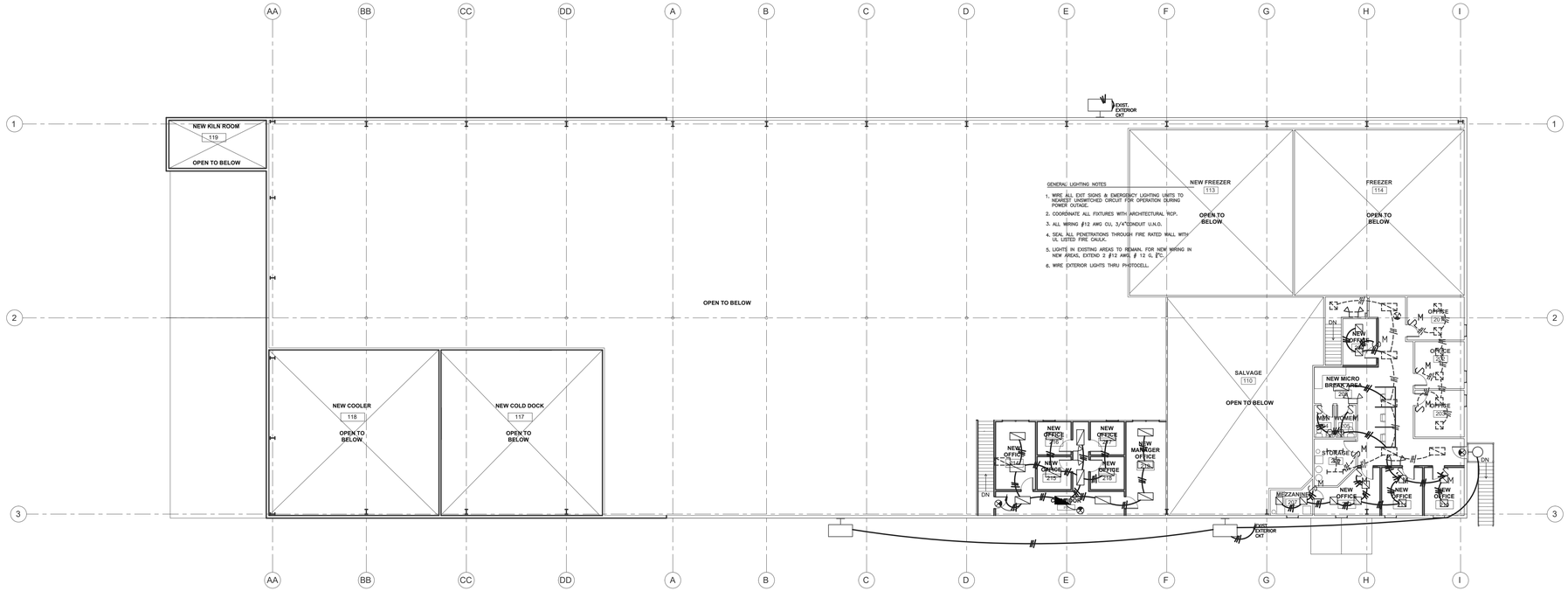
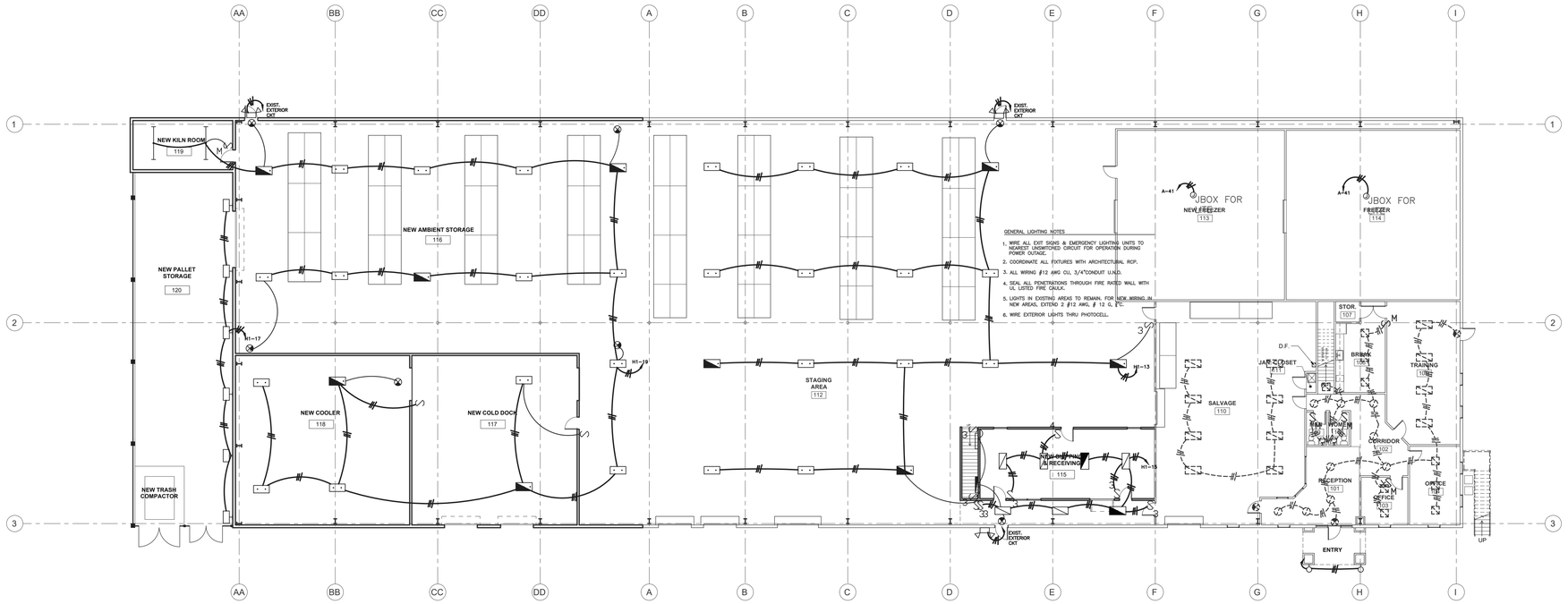


2 PROPOSED LIGHTING PLAN – 2ND FLOOR
SCALE:1/16"=1'-0"



1 PROPOSED LIGHTING PLAN – 1ST FLOOR
SCALE:1/16"=1'-0"

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Drawing Revisions:

1 PLAN REVIEW COMMENTS 10.07.22

Drawing Date: 09/20/2022
Project number: 220001
Drawn By: DEB
Checked By: DEB

GEORGIA MOUNTAIN FOOD BANK
1642 CALVARY INDUSTRIAL DRIVE SW
GAINESVILLE, GA 30507

Drawing Description:

LIGHTING PLANS

E-2

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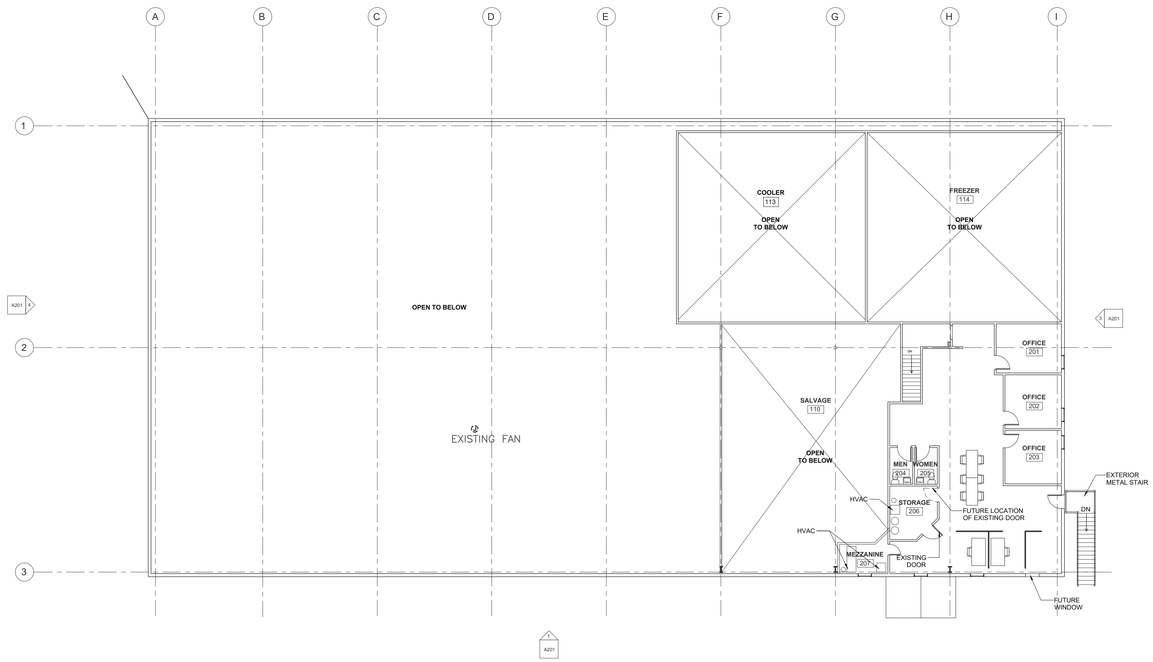
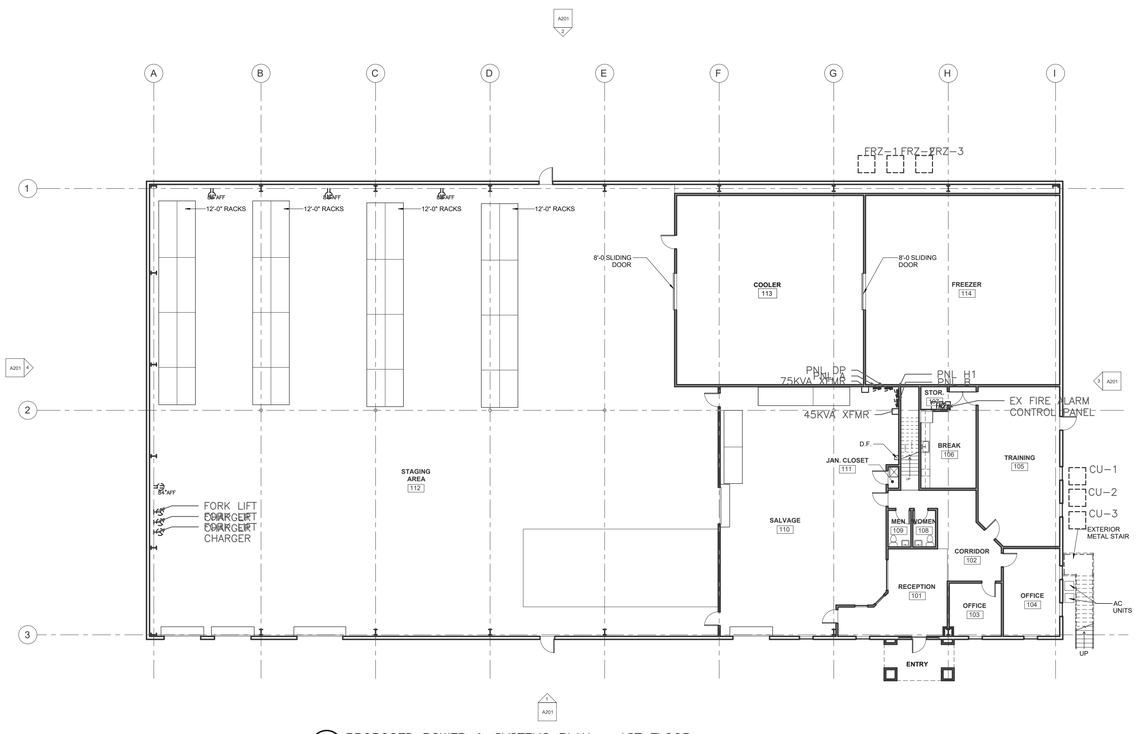


2 EXISTING POWER & SYSTEMS PLAN – 2ND FLOOR
SCALE: 1/16"=1'-0"



1 PROPOSED POWER & SYSTEMS PLAN – 1ST FLOOR
SCALE: 1/16"=1'-0"

Dwight E. Beasley
No. 30595
PROFESSIONAL
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09/20/2022
DWIGHT EARL BEASLEY

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1 PLAN REVIEW COMMENTS 10.07.22

Drawing Date: 09/20/2022
Project number: 220003
Drawn By: DEB
Checked By: DEB

GEORGIA MOUNTAIN FOOD BANK
1642 CALVARY INDUSTRIAL DRIVE SW
GAINESVILLE, GA 30507

Drawing Description:
POWER & SYSTEMS PLANS

E-3

GAINESVILLE
HALL COUNTY, GEORGIA

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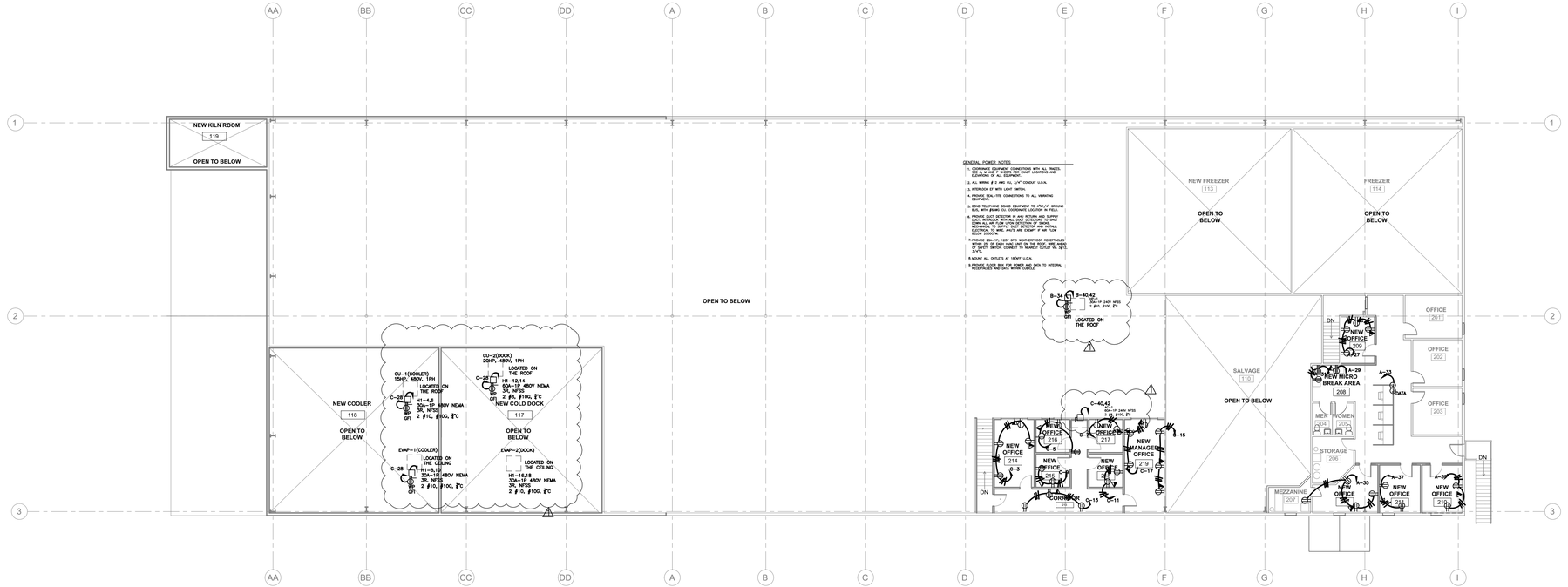
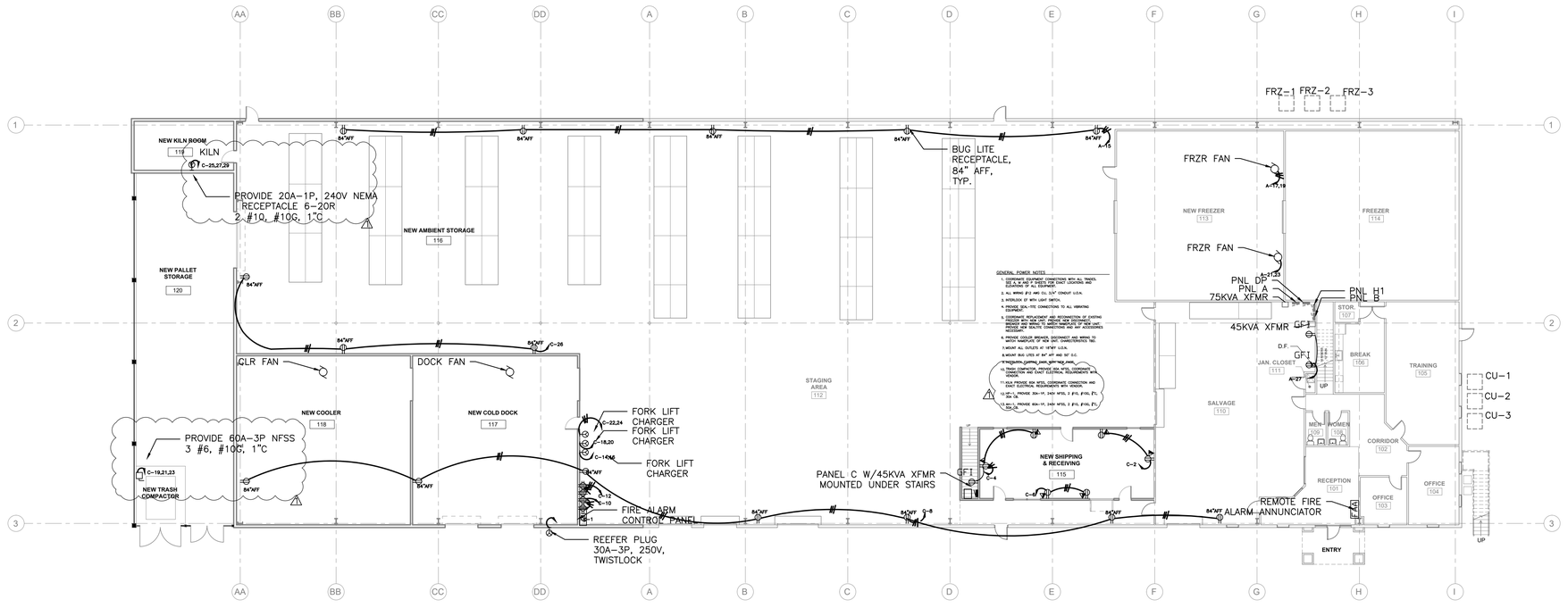


2 POWER & SYSTEMS PLAN – 2ND FLOOR
SCALE:1/16"=1'-0"



1 POWER & SYSTEMS PLAN – 1ST FLOOR
SCALE:1/16"=1'-0"

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09/20/2022

Syntony Design Collaborative LLC.

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Drawing Revisions:

1 PLAN REVIEW COMMENTS 10.07.22

Drawing Date: 09/20/2022
Project number: 220001
Drawn By: DEB
Checked By: DEB

GEORGIA MOUNTAIN FOOD BANK
1642 CALVARY INDUSTRIAL DRIVE SW
GAINESVILLE, GA 30507

Drawing Description:

POWER & SYSTEMS PLANS

E-4

GAINESVILLE
HALL COUNTY, GEORGIA

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PERMIT SET. RELEASED OR ISSUED FOR CONSTRUCTION.

EXISTING PANEL A

MAINS: 125 MCB **VOLTAGE:** 208/120 **WIRE:** 4 **MOUNTING:** SURFACE
BUS: 225 A **PHASE:** 3 **AIC:** 10 kA **ENCLOSURE:** NEMA 1

CKT #	TRIP POLE	LOAD TYPE	DESCRIPTION	CONNECTED LOAD KVA kVA	PH A	PH B	PH C	kVA	DESCRIPTION	LOAD TYPE	TRIP POLE	CKT #
1	20/1	A	LIGHTING	1.2	2.0			0.8	EXISTINGRECEPTACLES, FRONT	B	20/1	2
3	20/1	A	LIGHTING	0.3		0.9		0.6	EXISTING RECEPTACLES	B	20/1	4
5	20/1	C	AC UNIT	2.0			4.8	2.8	EXISTING FURNITURE	G	40	6
7	30	C	EXISTING AC	2.5	5.3			2.8	↓	G	2	8
9	2	C	↓	2.5		2.5			SPARE		20/1	10
11	30	C	EXISTING, CU	2.5			2.5		SPARE		20/1	12
13	2	C	↓	2.5	2.5				SPARE		20/1	14
15	**20/1**	**A**	**BUGLITE**	**0.4**		0.4			SPACE			16
17	**40**	**C**	**NEW FREEZER**	**3.0**			3.0		SPACE			18
19	**2**	**C**	↓	**3.0**	3.0				SPACE			20
21	**40**	**C**	**NEW FREEZER**	**3.0**		3.0			SPACE			22
23	**2**	**C**	↓	**3.0**			3.0		SPACE			24
25	**20/1**	**B**	**DRINKING FOUNTAIN**	**0.8**	0.8				SPACE			26
27	**20/1**	**B**	**RECEPTACLE, OFFICE**	**0.8**		0.8			SPACE			28
29	**20/1**	**B**	**RECEPTACLE, BREAK**	**0.2**			0.2		SPACE			30
31	**20/1**	**B**	**RECEPTACLE, BREAK**	**0.4**	0.4				SPACE			32
33	**20/1**	**B**	**RECEPTACLE, CUBICLE**	**0.6**		0.6			SPARE		20/1	34
35	**20/1**	**B**	**RECEPTACLE, OFFICE**	**0.6**			0.6		SPARE		20/1	36
37	**20/1**	**B**	**RECEPTACLE, OFFICE**	**0.8**	0.8				SPARE		20/1	38
39	**20/1**	**B**	**RECEPTACLE, OFFICE**	**0.4**		0.4			SPARE		20/1	40
41	**20/1**	**A**	**COOLER LIGHTS**	**1.8**			1.8		SPARE		20/1	42

Panel Load Analysis

Load Type	Description	Conn. KVA	Demand KVA	2020 NEC Reference	Load Type	Description	Conn. KVA	Demand KVA	2020 NEC Reference
A	Lighting	3.7	4.6	Per NEC Table 220.42	E	Kitchen Equipment			Per NEC Table 220.56
B	Receptacles	6.0	6.0	Per NEC Table 220.44	F	Motor			Per NEC Table 430.22
C	Air-Conditioning	24.0	25.5	Per NEC Article 440.4	G	Other	5.6	5.6	
D	Heating			Per NEC Article 220.51	H	Subpanels			

Phase A Connected Load	14.8			**LOCATION:**	
Phase B Connected Load	8.6	TOTAL CONNECTED LOAD:	**39.3 KVA**	ELECTRICAL RM	
Phase C Connected Load	15.9	TOTAL DEMAND LOAD:	**41.7 KVA**		

PANEL C

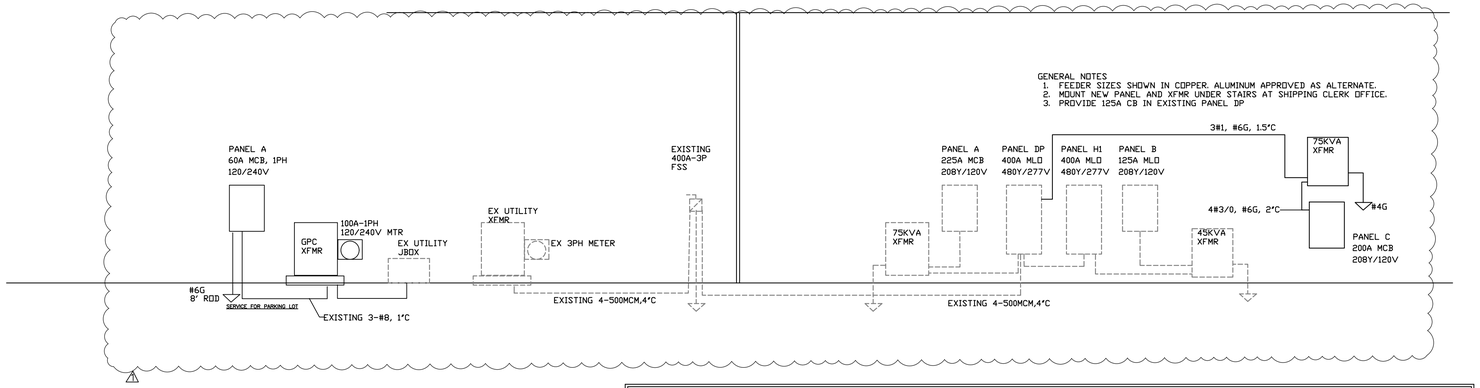
MAINS: 200 MCB **VOLTAGE:** 208/120 **WIRE:** 4 **MOUNTING:** SURFACE
BUS: 225 A **PHASE:** 3 **AIC:** 10 kA **ENCLOSURE:** NEMA 1

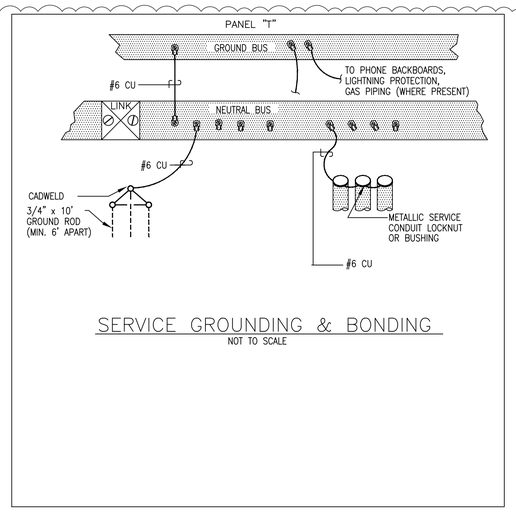
CKT #	TRIP POLE	LOAD TYPE	DESCRIPTION	CONNECTED LOAD KVA kVA	PH A	PH B	PH C	kVA	DESCRIPTION	LOAD TYPE	TRIP POLE	CKT #
1	20/1	G	FACP W/LOCK	0.5	0.9			0.4	RECEPTACLES, SHIPPING	A	20/1	2
3	20/1	B	RECEPTACLES, 2ND FLOOR	0.8		1.6		0.8	RECEPTACLES, SHIPPING		20/1	4
5	20/1	B	RECEPTACLES, 2ND FLOOR	0.8			1.2	0.4	RECEPTACLES, SHIPPING		20/1	6
7	20/1	B	RECEPTACLES, 2ND FLOOR	0.8	2.2			1.4	RECEPTACLES, STAGING		20/1	8
9	20/1	B	RECEPTACLES, 2ND FLOOR	0.8		2.4		1.6	IT	B	20/1	10
11	20/1	B	RECEPTACLES, 2ND FLOOR	0.8			2.4	1.6	IT	B	20/1	12
13	20/1	B	RECEPTACLES, 2ND FLOOR	0.8	4.3			3.5	FORK LIFT CHARGER	G	40	14
15	20/1	B	RECEPTACLES, 2ND FLOOR	0.8		4.3		3.5	↓	G	2	16
17	20/1	B	RECEPTACLES, 2ND FLOOR	0.8			4.3	3.5	FORK LIFT CHARGER	G	40	18
19	60	F	TRASH COMPACTOR	1.7	5.2			3.5	↓	G	2	20
21		F	↓	1.7		5.2		3.5	FORK LIFT CHARGER	G	40	22
23	3	F	↓	1.7			5.2	3.5	↓	G	2	24
25	60	F	KILN	1.7	2.3			0.6	RECEPTACLES, STAGIB	B	20/1	26
27		F	↓	1.7		1.7			SPARE		20/1	28
29	3	F	↓	1.7			1.7		SPARE		20/1	30
31	20/1		SPARE						SPARE		20/1	32
33	20/1		SPARE						SPARE		20/1	34
35	20/1		SPARE						SPARE		20/1	36
37	20/1		SPARE						SPARE		20/1	38
39	20/1		SPARE			4.2		4.2	AC-1	C	50	40
41	20/1		SPARE				4.2	4.2	↓	C	2	42

Panel Load Analysis

Load Type	Description	Conn. KVA	Demand KVA	2020 NEC Reference	Load Type	Description	Conn. KVA	Demand KVA	2020 NEC Reference
A	Lighting	0.4	0.5	Per NEC Table 220.42	E	Kitchen Equipment			Per NEC Table 220.56
B	Receptacles	10.2	10.1	Per NEC Table 220.44	F	Motor	10.2	11.5	Per NEC Table 430.22
C	Air-Conditioning	8.3	10.4	Per NEC Article 440.4	G	Other	21.5	21.5	
D	Heating			Per NEC Article 220.51	H	Subpanels			

Phase A Connected Load	14.9			**LOCATION:**	
Phase B Connected Load	19.4	TOTAL CONNECTED LOAD:	**50.6 KVA**	REAR WALL	
Phase C Connected Load	19.0	TOTAL DEMAND LOAD:	**54.0 KVA**		





SERVICE GROUNDING & BONDING
NOT TO SCALE

LIGHT FIXTURE SCHEDULE

TYPE		DESCRIPTION	LAMPS TYPE	MANUFAC.	CATALOG NUMBER	RECESSED	SURFACE	SUSPENDED	WALL	REMARKS
	A	2X4 RECESSED FIXTURE	LED	LITHONIA	EPANL 2X4 6000LM 80CRI 40K MIN1 MVOLT	X				
	B	2X2 RECESSED FIXTURE	LED	LITHONIA	EPANL 2X2 4000LM 80CRI 40K MIN1 MVOLT	X				
	C	2X4 CHAIN HUNG FIXTURE HIBAY	LED	LITHONIA	IBEAM IBE L48 22000 SD080 MD MVOLT GZ10 40K 80 LAOZU HC36			X		
	G	1X4 WALL MOUNTED LED	LED	LITHONIA	WL4 30L MVOLT LP835					
	GE	1X4 WALL MOUNTED LED 90MINUTE BATTERY BACKUP	LED	LITHONIA	WL4 30L MVOLT LP835 EL14L					
	P	LED SHOEBOX ON 25' STL POLE	LED	LITHONIA	RSX3 P2 40K R2 120 SPA DDBXD SSS QS 25 4G T20 DM19AS DDBXD					MOUNTED ON 25' STL POLE W/ 120V BASE RECEPTACLE, GFCI, 15A-1P
	W	LED WALLPACK	LED	LITHONIA	WL4 40L MVOLT LP840 MSD7 DIM50 EL14L		X			
	X1	SINGLE FACE EXIT LIGHT W/90 MINUTE BATTERY BACKUP	LED	LITHONIA	LQM W 3 G 120V EL N				X	PROVIDE CHEVRONS AND FACES AS SHOWN
	XL	EMERGENCY EGRESS LIGHT W/90 MINUTE BATTERY BACKUP	LED	LITHONIA	ELM4L SERIES				X	

NOTE: COORDINATE SUBMITTALS WITH LIGHTING DESIGNER/ARCHITECT/OWNER.
ALL FIXTURE SELECTIONS ARE REPRESENTATIVE OF THE SHAPE, COLOR, AND SUBJECTIVE CHOICE OF THE ENGINEER.
EQUAL SELECTIONS TO MATCH ARE ALLOWED.
PROVIDE ALL LAMPS.

EXISTING PANEL H1

MAINS: 225 MCB **VOLTAGE:** 208/120 **WIRE:** 4 **MOUNTING:** SURFACE
BUS: 225 A **PHASE:** 3 **AIC:** 10 kA **ENCLOSURE:** NEMA 1

CKT #	TRIP POLE	LOAD TYPE	DESCRIPTION	CONNECTED LOAD KVA kVA	PH A	PH B	PH C	kVA	DESCRIPTION	LOAD TYPE	TRIP POLE	CKT #
1	20/1	A	EXISTING LIGHTING	1.0	1.8			0.8	LIGHTING	A	20/1	2
3	20/1	A	EXISTING LIGHTING	1.0		8.5		**7.5**	**CU-1(COOLER)**	**C**	**30**	4
5	20/1	A	EXISTING LIGHTING	1.0			8.5	**7.5**	↓	**C**	**2**	6
7	20/1	A	EXISTING LIGHTING	1.0	3.5			**2.5**	**EVAP-1(COOLER)**	**C**	**30**	8
9	20/1	A	EXISTING LIGHTING	1.0		3.5		**2.5**	↓	**C**	**2**	10
11	20/1	A	EXISTING LIGHTING	1.0			11.0	**10.0**	**CU-2(COLD DOCK)**	**C**	**60**	12
13	20/1	**A**	**LIGHTING, WAREHOUSE**	**1.0**	11.0			**10.0**	↓	**C**	**2**	14
15	20/1	**A**	**LIGHTING, WAREHOUSE**	**1.0**		3.5		**2.5**	**EVAP-2(COLD DOCK)**	**C**	**30**	16
17	20/1	**A**	**LIGHTING, WAREHOUSE**	**1.0**			3.5	**2.5**	↓	**C**	**2**	18
19	20/1	**A**	**LIGHTING, WAREHOUSE**	**1.0**	1.0				SPARE		20/1	20
21	20/1		SPARE						SPARE		20/1	22
23	20/1		SPARE						SPARE		20/1	24
25	20/1		SPARE						SPARE		20/1	26
27	20/1		SPARE						SPARE		20/1	28
29	20/1		SPARE						SPARE		20/1	30
31	20/1		SPARE						SPARE		20/1	32
33	20/1		SPARE						SPARE		20/1	34
35	20/1		SPARE						SPARE		20/1	36
37	20/1		SPARE						SPARE		20/1	38
39	20/1		SPARE						SPARE		20/1	40
41	20/1		SPARE						SPARE		20/1	42

Panel Load Analysis

Load Type	Description	Conn. KVA	Demand KVA	2005 NEC Reference	Load Type	Description	Conn. KVA	Demand KVA	2005 NEC Reference
A	Lighting	10.8	13.5	Per NEC Table 220.42	E	Kitchen Equipment			Per NEC Table 220.56
B	Receptacles			Per NEC Table 220.44	F	Motor			Per NEC Table 430.22
C	Air-Conditioning	45.0	50.0	Per NEC Article 440.4	G	Other			
D	Heating			Per NEC Article 220.51	H	Subpanels			

Phase A Connected Load	17.3			**LOCATION:**	
Phase B Connected Load	15.5	TOTAL CONNECTED LOAD:	**55.8 KVA**	REAR WALL	
Phase C Connected Load	23.0	TOTAL DEMAND LOAD:	**63.5 KVA**		

EXISTING PANEL B

MAINS: 150 MCB **VOLTAGE:** 208/120 **WIRE:** 4 **MOUNTING:** SURFACE
BUS: 225 A **PHASE:** 3 **AIC:** 10 kA **ENCLOSURE:** NEMA 1

CKT #	TRIP POLE	LOAD TYPE	DESCRIPTION	CONNECTED LOAD KVA kVA	PH A	PH B	PH C	kVA	DESCRIPTION	LOAD TYPE	TRIP POLE	CKT #
1	40	E	EXISTING OVEN	4.5	6.5			2.0	EXISTING HP-3	C	50	2
3	2	E	↓	4.5		6.5		2.0	↓	C	2	4
5	90	C	EXISTING FCU-3	2.0			3.0	1.0	EXISTING RECEPTACLES	B	20/1	6
7	2	C	↓	2.0	2.6			0.6	EXISTING RECEPTACLES	B	20/1	8
9	20/1	B	EXISTING RECEPTACLES	0.8		1.4		0.6	EXISTING RECEPTACLES	B	20/1	10
11	20/1	B	EXISTING RECEPTACLES	0.8			1.4	0.6	EXISTING RECEPTACLES	B	20/1	12
13	20/1	B	EXISTING RECEPTACLES	0.8	1.4			0.6	EXISTING LIGHTS	A	20/1	14
15	20/1		SPARE			0.6		0.6	EXISTING RECEPTACLES	B	20/1	16
17	20/1		SPARE				0.6	0.6	EXISTING RECEPTACLES	B	20/1	18
19	20/1		SPARE		0.6			0.6	EXISTING RECEPTACLES	B	20/1	20
21	20/1		SPARE						SPARE		20/1	22
23	20/1		SPARE						SPARE		20/1	24
25	20/1		SPARE						SPARE		20/1	26
27	20/1		SPARE						SPARE		20/1	28
29	20/1		SPARE						SPARE		20/1	30
31	20/1		SPARE						SPARE		20/1	32
33	20/1		SPARE			0.2		**0.2**	**RECEPTACLE, ROOF**	**B**	**20/1**	34
35	20/1		SPARE						SPARE		20/1	36
37	20/1		SPARE						SPARE		20/1	38
39	20/1		SPARE			1.9		**1.9**	**HP-1**	**C**	**30**	40
41	20/1		SPARE				1.9	**1.9**	↓	**C**	**2**	42

Panel Load Analysis

Load Type	Description	Conn. KVA	Demand KVA	2020 NEC Reference	Load Type	Description	Conn. KVA	Demand KVA	2020 NEC Reference
A	Lighting	0.6	0.8	Per NEC Table 220.42	E	Kitchen Equipment	9.0	9.0	Per NEC Table 220.56
B	Receptacles	7.2	7.2	Per NEC Table 220.44	F	Motor			Per NEC Table 430.22
C	Air-Conditioning	11.7	12.7	Per NEC Article 440.4	G	Other			
D	Heating			Per NEC Article 220.51	H	Subpanels			

Phase A Connected Load	11.1			**LOCATION:**	
Phase B Connected Load	10.6	TOTAL CONNECTED LOAD:	**28.5 KVA**	REAR WALL	
Phase C Connected Load	6.9	TOTAL DEMAND LOAD:	**29.7 KVA**		

PANEL T

MAINS: 60 MCB **VOLTAGE:** 240/120 **WIRE:** 3 **MOUNTING:** SURFACE
BUS: 100 A **PHASE:** 1 **AIC:** 22 kA **ENCLOSURE:** NEMA 3R

CKT #	TRIP POLE	LOAD TYPE	DESCRIPTION	CONNECTED LOAD KVA kVA	PH A	PH B	kVA	DESCRIPTION	LOAD TYPE	TRIP POLE	CKT #
1	20/1	A	SITE LIGHTING	0.8	0.8			SPARE		20/1	2
3	20/1	A	SITE LIGHTING	1.2		1.2		SPARE		20/1	4
5	20/1							SPARE		20/1	6
7	20/1							SPARE		20/1	8
9	20/1							SPARE		20/1	10
11	20/1							SPARE		20/1	12

Panel Load Analysis

Load Type	Description	Conn. KVA	Demand KVA	2011 NEC Reference	Load Type	Description	Conn. KVA	Demand KVA	2011 NEC Reference
A	Lighting	2.0	2.5	Per NEC Table 220.42	E	Kitchen Equipment			Per NEC Table 220.56
B	Receptacles			Per NEC Table 220.44	F	Motor			Per NEC Table 430.22
C	Air-Conditioning			Per NEC Article 440.4	G	Other			
D	Heating			Per NEC Article 220.51	H	Subpanels			

Phase A Connected Load	0.8	TOTAL CONNECTED LOAD:	**2.0** KVA	**LOCATION:**	
Phase B Connected Load	1.2	TOTAL DEMAND LOAD:	**2.5** KVA	ADJ TO JBOX MOUNT ON UNISTRUT	

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No. 30595
PROFESSIONAL ENGINEER
STATE OF GEORGIA

Syntony Design Collaborative LLC.

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Drawing Revisions:

1 PLAN REVIEW COMMENTS 10.07.22

Drawing Date: 09/20/2022
Project number: 220001
Drawn By: DEB
Checked By: DEB

GEORGIA MOUNTAIN FOOD BANK
1642 CALVARY INDUSTRIAL DRIVE SW
GAINESVILLE, GA 30507

Drawing Description:

ELECTRICAL RISER & SCHEDULES

E-5

By reviewing the plan/specs for Code Compliance does not relieve the owner, design professionals, contractors or their representatives from the responsibility to comply with local, state and national codes and standards in effect at time of permit. Code Compliance does not assure permit. The department has adopted the 2020 NEC with local amendments.

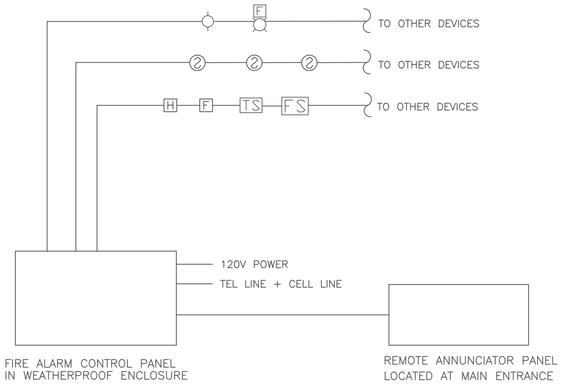
PERMIT SET. RELEASED OR ISSUED FOR CONSTRUCTION.

FIRE ALARM OPERATING SEQUENCE SCHEDULE

		DISPLAY MESSAGE ON THE AFFECTED CONTROL PANEL LCD	DISPLAY MESSAGE AT REMOTE ANNUNCIATOR LCD	TROUBLE ALARM AND LIGHT IN FACP AND CENTRAL STATION NOTIFICATION	AUDIBLE AND VISUAL ALARM, CENTRAL STATION AND FIRE DEPARTMENT NOTIFICATION	FAN SHUTDOWN	MOTOR OPERATED DAMPER ACTIVATION ON "SMOKE/FIRE FLOOR"	UNLOCK DOOR	SYSTEM ALARM PRINTER	HISTORICAL LOG
SPRINKLER WATER FLOW SWITCHES	TROUBLE	●	●	●					●	●
	ALARM	●	●		●	●	●	●	●	●
SPRINKLER TAMPER SWITCHES	TROUBLE	●	●	●					●	●
	ALARM	●	●						●	●
SPRINKLER ALARM PRESSURE SWITCHES	TROUBLE	●	●	●					●	●
	ALARM	●	●						●	●
AIR HANDLING UNIT DUCT DETECTORS (SUPPLY AIR DUCT)	TROUBLE	●	●	●					●	●
	ALARM	●	●		●	●	●	●	●	●
AIR HANDLING UNIT DUCT DETECTORS (RETURN AIR DUCT)	TROUBLE	●	●	●					●	●
	ALARM	●	●		●	●	●	●	●	●
MANUAL PULL STATIONS	TROUBLE	●	●	●					●	●
	ALARM	●	●		●	●	●	●	●	●
COMMON AREA SMOKE/HEAT DETECTORS	TROUBLE	●	●	●					●	●
	ALARM	●	●		●	●	●	●	●	●
FAULT IN MONITORING CIRCUIT OR COMPONENT CATTERY FAILURE OR LOSS OF AC		●	●	●				●	●	●

FIRE ALARM NOTES

PROVIDE A COMPLETE APPROVED MANUAL/AUTOMATIC FIRE ALARM SYSTEM FOR THIS FACILITY WITH PULL STATIONS LOCATED IN ALL PATHS OF EGRESS. THE SYSTEM SHALL BE EQUIPPED WITH HORNS AND VISUAL ALERTING DEVICES PER NFPA 72. CORRIDOR SMOKE DETECTORS ARE LOW VOLTAGE.



1 E-5 FIRE ALARM
SCALE:1/8"=1'-0"

FIRE ALARM SYSTEM SPECIFICATIONS

1. FIRE ALARM SYSTEM – GENERAL
   – THE FIRE ALARM SYSTEM SHALL SATISFY THE FUNCTIONS CURRENTLY SPECIFIED AND RECOMMENDED BY NFPA–72, NFPA–70, THE AMERICANS WITH DISABILITIES ACT GUIDELINES, NFPA–90A, AND OTHER CODE AUTHORITIES. THE SYSTEM SHALL ALSO COMPLY WITH UL STANDARDS 38, 218, AND NEMA STANDARDS 583, 589. THE SYSTEM AND ALL COMPONENTS SHALL BE LISTED, LABELED, AND APPROVED FOR ITS APPLICATION AS FIRE PROTECTIVE SIGNALING EQUIPMENT BY UNDERWRITER'S LABORATORIES, INC.

   – SMOKE DETECTORS SHALL BE PHOTOELECTRIC TYPE WITH ALARM INDICATOR LAMP AND INTERNAL ALARM WITH FLASHING LIGHT. THE DETECTORS SHALL HAVE A SENSITIVITY ADJUSTMENT AND A CIRCUIT TEST SET CHECK FEATURE. DETECTOR UNITS SHALL BE PRESET FOR SENSITIVITY AT THE FACTORY AND USED AT A FIXED SENSITIVITY DETERMINED BY THE ELEVATION OF THE SYSTEM INSTALLATION. DETECTORS SHALL HAVE A LOCKING SCREW TO PROHIBIT REMOVAL BY UNAUTHORIZED PERSONS. DETECTORS SHALL HAVE AN ALARM CONDITION LAMP, VISIBLE FROM THE BOTTOM OF THE DETECTOR AS INSTALLED. FIRE ALARM STATIONS SHALL BE THE NON–CODED, MANUAL, DUAL–ACTION PULL LEVER TYPE, OPERABLE BY NO MORE THAN EIGHT POUNDS OF PRESSURE. THE STATION SHALL BE FLUSH OR SEMI–FLUSH MOUNTED AND FINISHED RED WITH WHITE TRIM. STATION LABELING SHALL STATE "FIRE". SYSTEM SIGNAL ALARMS SHALL BE VIBRATING AUDIO–VISUAL HORNS OR VISUAL–ONLY DEVICES AS INDICATED. THE VISUAL INDICATION SHALL PROVIDE A STROBE–TYPE FLASH AND BE VISIBLE WITHIN A 180 DEGREE RANGE WHEN THE UNIT IS VERTICALLY MOUNTED. DEVICES SHALL HAVE FIELD ADJUSTABLE SOUND LEVELS SET BY THE FACTORY AT MAXIMUM. DEVICES SHALL BE SUITABLE FOR USE ON THE SUPERVISED CIRCUITS. DEVICE FINISH SHALL BE RED. ANY REQUIRED CIRCUIT LOADING COMPONENTS AND/OR REQUIRED ENCLOSURES SHALL BE PROVIDED, SIZED, AND LOCATED FOR THE SYSTEM AS INSTALLED. WIRING FOR THE SYSTEM SHALL BE CABLE OR CONDUCTORS INSTALLED IN RACEWAY, WITH TYPE, SIZE, AND NUMBER OF CONDUCTORS (EITHER BUNCH–TINNED STRANDED COPPER OR OTHER FIRE–ALARM–RATED CONDUCTORS) RECOMMENDED BY THE EQUIPMENT MANUFACTURER.

2. FIRE ALARM SYSTEM INSTALLATION:
   – THE EQUIPMENT SUPPLIER SHALL PROVIDE CUSTOM ENGINEERED INSTALLATION AND TERMINAL TO TERMINAL WIRING DIAGRAMS, AND PLAN DRAWINGS INDICATING DEVICE LOCATIONS AND CONDUIT ROUTING. GENERAL OR STANDARD TYPE DIAGRAMS SHALL NOT BE SUFFICIENT. THE SUPPLIER SHALL PROVIDE NECESSARY JOB SITE SUPERVISION AND FINAL CHECKOUT TO PROVIDE A FULLY OPERATIONAL SYSTEM. A SYSTEM DEMONSTRATION OF ALL COMPONENTS AND OPERATING CIRCUITS, DEVICES, AND OPERATING FUNCTIONS SHALL BE PERFORMED, AND INSTALLATION, OPERATION, AND MAINTENANCE MANUALS SHALL BE PROVIDED.

   – INSTALL THE EQUIPMENT AND ALL RACEWAYS AND/OR WIRING AS INDICATED AND REQUIRED. THE INSTALLATION AND WIRE SHALL MEET ALL RECOMMENDATIONS OF APPLICABLE CODES AND OF THE EQUIPMENT SUPPLIER AND/OR MANUFACTURER.

   – PROVIDE ALL EQUIPMENT, COMPONENTS, WIRING, MATERIALS, AND SERVICES TO PROVIDE THE SYSTEM COMPLETE IN ALL RESPECTS TO MEET SPECIFICATION FUNCTIONAL REQUIREMENTS.

   – SEQUENCE OF OPERATION: THE INITIATION OF ANY SMOKE/HEAT/DUCT DETECTOR, MANUAL PULL STATION OR SPRINKLER FLOW SHALL INDICATE ITS ALARM CONDITION AT THE CONTROL PANEL, ACTIVATE ALL VISUAL AND AUDIBLE DEVICES, SHUTDOWN ALL HVAC UNITS, AUTOMATICALLY UNLOCK ALL DOORS AND NOTIFY THE THIRD PARTY MONITORING SERVICE AND FIRE DEPARTMENT. UPON BATTERY MALFUNCTION OR LOSS OF AC POWER DOORS SHALL AUTOMATICALLY UNLOCK.

   –TAMPER SWITCH ACTIVATION, WIRING GROUNDS, FAULTS, DISCONNECTED DEVICES, OR OTHER SYSTEM DISARRANGEMENT SHALL INITIATE TROUBLE SIGNAL AT THE FACP AND ALERT THE THIRD PARTY MONITORING SERVICE.

   – TESTING: SYSTEMS AND COMPONENTS SHALL BE TESTED AND DEMONSTRATED TO MEET FULL FUNCTIONAL REQUIREMENTS. SPECIFIC TESTS SHALL BE PERFORMED AS SPECIFIED, INDICATED, OR REQUIRED.

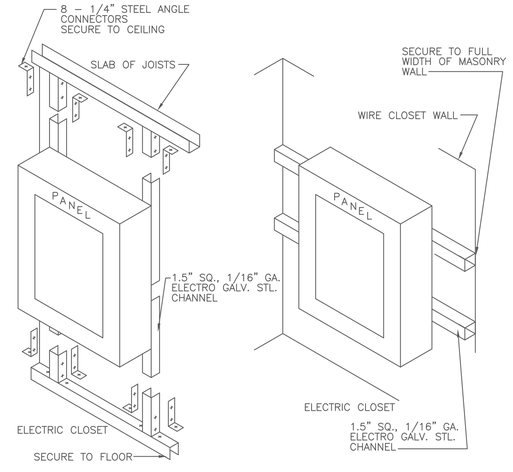
3. FOR NEW SYSTEMS: THE SYSTEM SHALL BE A NEW NON–PROPRIETARY SYSTEM, MANUFACTURED BY SILENT KNIGHT, NOTIFIER, OR EDWARDS. THE CONTROL PANEL SHALL BE OF INHERENT DEAD–FRONT METAL–ENCLOSED CONSTRUCTION WITH A GLASS FRONT PANEL AND FRONT ACCESSIBLE FOR ROUTINE OPERATION, FUNCTION TESTING, AND MONITORING. BATTERIES FOR EMERGENCY POWER SHALL BE PROVIDED FOR 48 HOUR RUNTIME. THE CONTROL PANEL SHALL BE FLUSH MOUNTED. A TROUBLE UNIT SHALL BE PROVIDED. THE TROUBLE UNITS SHALL PROVIDE AN ALARM SIGNAL AT THE MAIN CONTROL PANEL.

4. PROVIDE AND SUBMIT FIRE ALARM SHOP DRAWINGS WITHIN 90 DAYS OF PERMIT ISSUANCE.

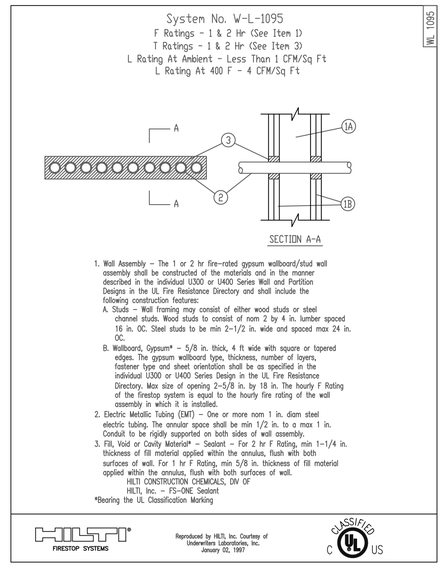
5. ALL FIRE PANEL NOTIFICATIONS SHALL MATCH TENANT PROVIDED SIGNAGE FOR ROOM NAMES. COORDINATE ROOM NAMES IN SYSTEM WITH OWNER.

6. FIRE ALARM CONTROL PANEL SHALL HAVE TYPED LABEL INDICATING BREAKER NUMBER IN ELECTRICAL PANEL.

7. ALL SMOKE DETECTORS SHALL BE LOCATED 3' MINIMUM FROM HVAC SUPPLY/RETURN.



2 E-5 PANEL DETAILS
SCALE:1/8"=1'-0"



Donald E. Bagley
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DWIGHT E. BAGLEY
07/26/2022

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Drawing Revisions:

1 PLAN REVIEW COMMENTS 10.07.22

Drawing Date: 09/20/2022
Project number: 220001
Drawn By: DEB
Checked By: DEB

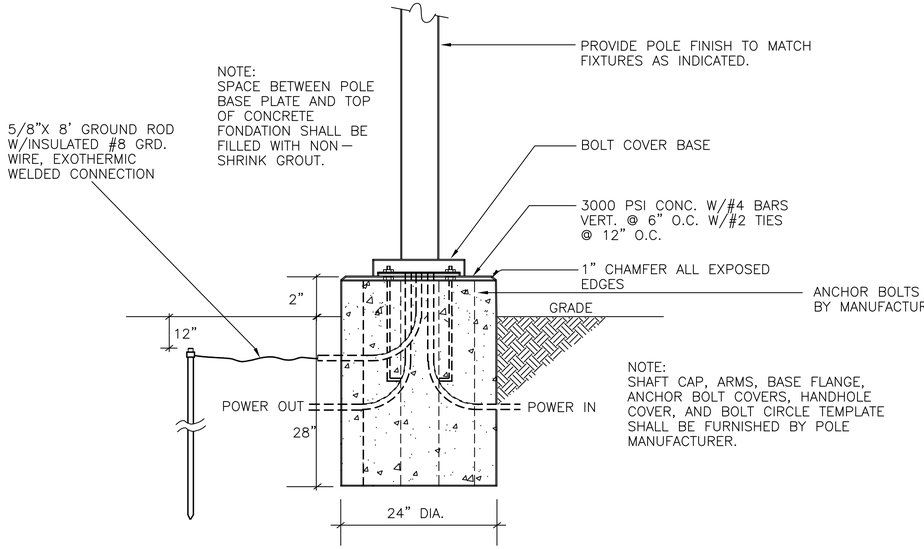
GEORGIA MOUNTAIN FOOD BANK
1642 CALVARY INDUSTRIAL DRIVE SW
GAINESVILLE, GA 30507

Drawing Description:
ELECTRICAL DETAILS

GAINESVILLE
GEORGIA

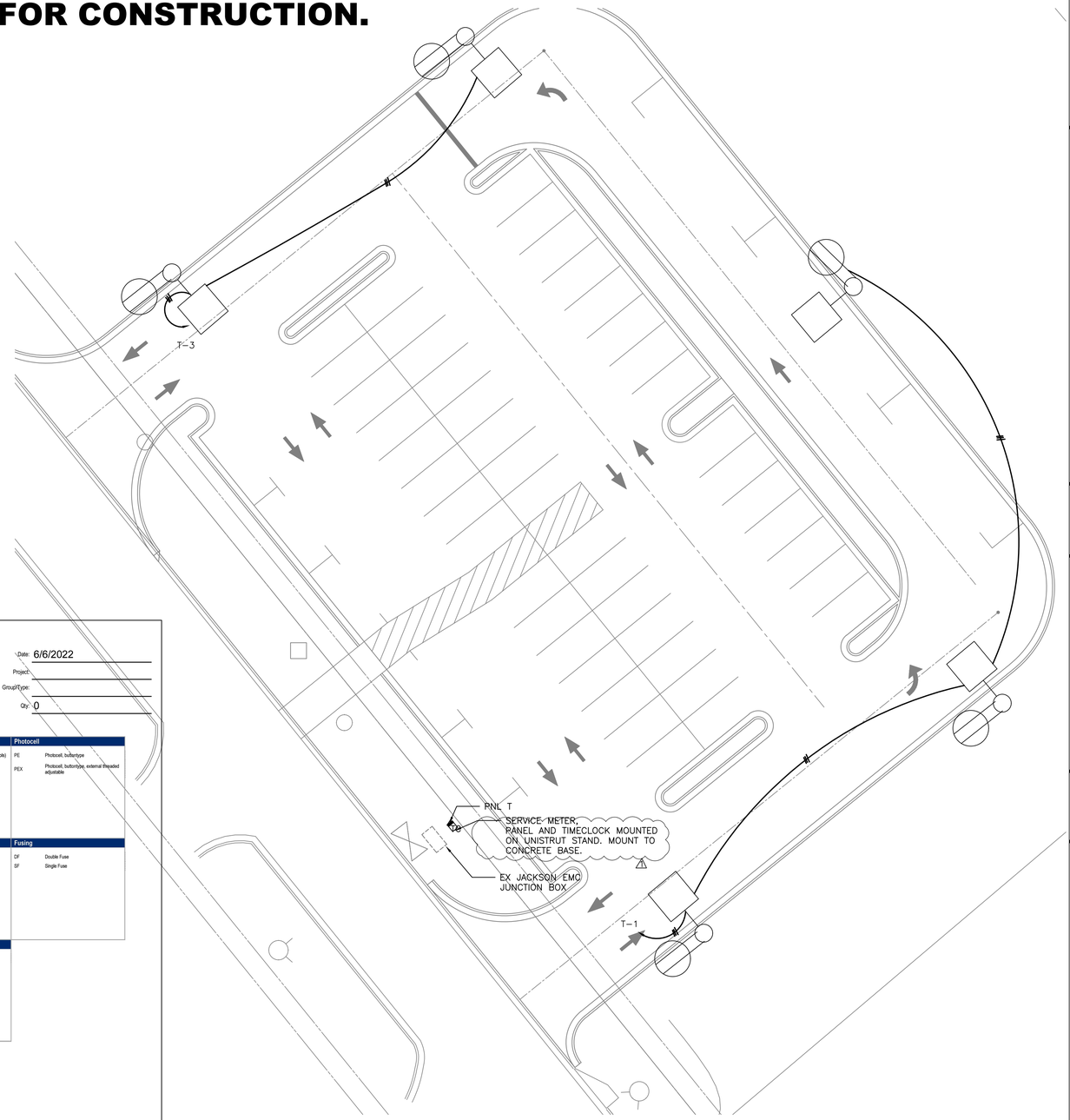
E-6

PERMIT SET. RELEASED OR ISSUED FOR CONSTRUCTION.



POLE BASE DETAIL

NO SCALE



2 POWER & SYSTEMS PLAN – 2ND FLOOR
SCALE:1/16"=1'-0"

LITHONIA LIGHTING

Submittal Spec Sheet

Dynamically Generated

Series: RSX3

Date: 6/6/2022
Project:
Group/Type:
Qty: 0

RSX3 LED Area Luminaire

Up to 41,000 lumens

cULus Listed

Product Submittal Description:
RSX Area Size 3, LED, Package 2, 4000K, IES type II, 120V, Dark bronze finish, super durable



The product images shown are for illustration purposes only and may not be an exact representation of the product.

IES Files | BIM Models | Full Spec Sheet

Product Webpage: www.acuitybrands.com/products/detail/885183
Warranty: www.acuitybrands.com/support/warranty/terms-and-conditions

Model #: RSX3 LED P2 40K R2 120 DDBXD (Incomplete)

Series*		Lamp Type*		LED Configuration*		Correlated Color Temperature*	
RSX3	RSX Area Size 3	LED	LED	P1	Package 1	30K	3000K
				P2	Package 2	40K	4000K
				P3	Package 3	50K	5000K
				P4	Package 4		

Distribution*				Voltage*		Bird Deterrent	
AFR	Auto front row distribution	RSS	Type V, square	120	120V	BS	Bird spikes
AFRL90	Auto front row left rotated optics			208	208V		
AFRR90	Auto front row right rotated optics			240	240V		
R2	IES type II			277	277V		
R3	IES type III asymmetric			347	347V		
R3S	Type III short			480	480V		
R4	IES type IV forward throw			HVOLT	347-480V		
R4S	Type IV short			NVOLT	120-277V		
R5	Type V distribution						

Shielding		Mounting				Mounting Option	
EGFV	External glare full visor shield	AARP	Adjustable tilt arm round pole	WBASC	Wall mount bracket surface conduit	IS	Integral Slipfitter
EGS	External Glare Shield	AASP	Adjustable tilt arm square pole				
HS	House-side shield	AAWB	Adjustable tilt arm wall bracket				
		AAWSC	Adjustable tilt arm wall bracket surface conduit				
		MA	Mast arm adaptor, integral				
		RPA	Round pole mounting				
		SPA	Square pole mounting				
		WBA	Wall mount bracket				

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LITHONIA LIGHTING

Submittal Spec Sheet

Dynamically Generated

Series: RSX3

Date: 6/6/2022
Project:
Group/Type:
Qty: 0

Dimming Wires		Dimmable/Controllable		Receptacle Type		Photocell	
DMG	0-10v dimming wires pulled outside fixture (for use with an external control, ordered separately)	NLTAIR2	Nlight air gen 2 controller	PER7	Seven-wire receptacle only (no controls)	PE	Photocell, button type
						PEX	Photocell, button type, external threaded adjustable

Internal Control		Surge Protection		Field Adjustable		Fusing	
PIRHN	Motion/ambient sensor 15-30FT.-Networked	SPD20KV	Additional surge protection 20KV	FAO	Field adjustable output	DF	Double Fuse
						SF	Single Fuse

Conduit Entry		Finish*		Assembled in America	
CE34	Conduit entry 3/4IN NPT	DBLBXD	Textured black, super durable	BAA	Buy American Act
		DBLXD	Black finish, super durable		
		DDBTXD	Textured dark bronze, super durable		
		DDBXD	Dark bronze finish, super durable		
		DNATXD	Textured natural aluminum, super durable		
		DNAXD	Natural aluminum finish, super durable		
		DWHGXD	Textured white, super durable		
		DWHXD	White, super durable		

This is a dynamic specification sheet that is based on certain selections made by the user. All results generated are for informational purposes only. The user should validate the results with its agency sales representative to determine whether the product has been configured correctly before ordering. Acuity Brands Lighting is not responsible for any loss resulting from product configuration errors.

Not all versions of the product are available with all options.
Specifications subject to change without notice.
Actual performance may differ as a result of end-user environment and application.
All values are design or typical values, measured under laboratory conditions at 25 °C.
See the full specification sheet at the product page link above for full product information and detailed ordering information.
Certain airborne contaminants can diminish the integrity of acrylic and/or polycarbonate.
Visit: http://www.acuitybrandslighting.com/library/ll/documents/specsheets/acrylic-polycarbonate-compatibility.pdf for Acrylic-Polycarbonate Compatibility table for suitable uses.
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Dwight E. Beasley
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PROFESSIONAL ENGINEER
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Drawing Revisions:

1 PLAN REVIEW COMMENTS 10.07.22

Drawing Date: 09/20/2022
Project number: 220001
Drawn By: DEB
Checked By: DEB

GEORGIA MOUNTAIN FOOD BANK
1642 CALVARY INDUSTRIAL DRIVE SW
GAINESVILLE, GA 30507

Drawing Description:

SITE LIGHTING PLANS

E-7

GAINESVILLE GEORGIA'S NATURAL CHOICE

By reviewing the plans/specs for Code Compliance does not relieve the owner, design professionals, contractors or their representatives from the responsibility to comply with all local, state and national codes and ordinances. Syntony Design Collaborative LLC. assumes no responsibility for any construction started from these plans/specs that is approved by code officials.

COMcheck Software Version 4.1.1.0

Interior Lighting Compliance Certificate

Project Information

Energy Code: 2015 IECC
Project Title: Georgia Mtn Food Bank
Project Type: New Construction

Construction Site:
1642 Calvary Industrial Dr SW
Gainesville, GA 30507

Owner/Agent:

Designer/Contractor:

Additional Efficiency Package(s)

Reduced interior lighting power. Requirements are implicitly enforced within interior lighting allowance calculations.

Allowed Interior Lighting Power

A Area Category	B Floor Area (ft2)	C Allowed Watts / ft2	D Allowed Watts (B X C)
1-Warehouse & office (Warehouse)	34000	0.59	20196
		Total Allowed Watts =	20196

Proposed Interior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
1-Warehouse & office (Warehouse)				
A 2X4: A/AE: 2X4 LED: LED Panel 40W:	1	39	40	1560
B 2X2: B/BE: 2X2: LED Panel 19W:	1	27	22	594
LED 3: C: hibay: LED Linear 33W:	1	34	200	6800
			Total Proposed Watts =	8954

Interior Lighting PASSES: Design 56% better than code

Interior Lighting Compliance Statement

Compliance Statement: The proposed interior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 2015 IECC requirements in COM*check* Version 4.1.1.0 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

DWIGHT BEASLEY-ENGINEER — Name - Title
Sign here — Signature
07.14.2022 — Date

COMcheck Software Version 4.1.1.0

Exterior Lighting Compliance Certificate

Project Information

Energy Code: 2015 IECC
Project Title: Georgia Mtn Food Bank
Project Type: New Construction
Exterior Lighting Zone: 2 (Light industrial area with limited nighttime use)

Construction Site:
1642 Calvary Industrial Dr SW
Gainesville, GA 30507

Owner/Agent:

Designer/Contractor:

Allowed Exterior Lighting Power

A Area/Surface Category	B Quantity	C Allowed Watts / Unit	D Tradable Wattage	E Allowed Watts (B X C)
Main door (Main entry)	1 ft of door	20	Yes	20
Side doors (Other door (not main entry))	3 ft of door	20	Yes	60
Side areas (Illuminated area of facade wall or surface)	6000 ft2	0.1	No	600
Parkin lot (Parking area)	36000 ft2	0.06	Yes	2160
			Total Tradable Watts (a) =	2240
			Total Allowed Watts =	2840
			Total Allowed Supplemental Watts (b) =	600

(a) Wattage tradeoffs are only allowed between tradable areas/surfaces.
(b) A supplemental allowance equal to 600 watts may be applied toward compliance of both non-tradable and tradable areas/surfaces.

Proposed Exterior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
Main door (Main entry 1 ft of door width): Tradable Wattage				
WE WALLPACK: WE: EXTER SCONCE: LED A Lamp 25W:	1	2	35	70
Side doors (Other door (not main entry) 3 ft of door width): Tradable Wattage				
WE WALLPACK: WE: EXTER SCONCE: LED A Lamp 25W:	1	2	35	70
Side areas (Illuminated area of facade wall or surface 6000 ft2): Non-tradable Wattage				
WE WALLPACK: WE: EXTER SCONCE: LED A Lamp 25W:	1	8	35	280
Parkin lot (Parking area 36000 ft2): Tradable Wattage				
LED 4: P: SHOEBOX: LED Roadway-Parking Unit 220W:	1	5	220	1100
			Total Tradable Proposed Watts =	1240

Exterior Lighting PASSES: Design 56% better than code

Exterior Lighting Compliance Statement

Compliance Statement: The proposed exterior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed exterior lighting systems have been designed to meet the 2015 IECC requirements in COM*check* Version 4.1.1.0 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

DWIGHT BEASLEY-ENGINEER — Name - Title
Signature
07.14.2022 — Date

COMcheck Software Version 4.1.1.0

Inspection Checklist

Energy Code: 2015 IECC

Requirements: 5.0% were addressed directly in the COM*check* software

Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

Section # & Req.ID	Plan Review	Complies?	Comments/Assumptions
C103.2 [PR4][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the interior lighting and electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include interior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C103.2 [PR8][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the exterior lighting and electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include exterior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C406 [PR9][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the additional energy efficiency package options.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.2.1 [EL15][1]	Lighting controls installed to uniformly reduce the lighting load by at least 50%.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.1 [EL18][1]	Occupancy sensors installed in required spaces.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.1, C405.2.2.3 [EL23][2]	Independent lighting controls installed per approved lighting plans and all manual controls readily accessible and visible to occupants.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.2.1 [EL22][2]	Automatic controls to shut off all building lighting installed in all buildings.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.3 [EL16][2]	Daylight zones provided with individual controls that control the lights independent of general area lighting.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.3, C405.2.3.1, C405.2.3.2 [EL20][1]	Primary sidelighted areas are equipped with required lighting controls.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.3, C405.2.3.1, C405.2.3.3 [EL21][1]	Enclosed spaces with daylight area under skylights and rooftop monitors are equipped with required lighting controls.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.4 [EL4][1]	Separate lighting control devices for specific uses installed per approved lighting plans.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.4 [EL8][1]	Additional interior lighting power allowed for special functions per the approved lighting plans and is automatically controlled and separated from general lighting.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.5 [EL25][Null]	Automatic lighting controls for exterior lighting installed. Controls will be daylight controlled, set based on business operation time-of-day, or reduce connected lighting > 30%.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.3 [EL6][1]	Exit signs do not exceed 5 watts per face.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C303.3, C408.2.5.2 [FI17][3]	Furnished O&M instructions for systems and equipment to the building owner or designated representative.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.4.1 [FI18][1]	Interior installed lamp and fixture lighting power is consistent with what is shown on the approved lighting plans, demonstrating proposed watts are less than or equal to allowed watts.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Interior Lighting fixture schedule for values.*
C405.5.1 [FI19][1]	Exterior lighting power is consistent with what is shown on the approved lighting plans, demonstrating proposed watts are less than or equal to allowed watts.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Exterior Lighting fixture schedule for values.*
C408.2.5.1 [FI16][3]	Furnished as-built drawings for electric power systems within 90 days of system acceptance.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C408.3 [FI33][1]	Lighting systems have been tested to ensure proper calibration, adjustment, programming, and operation.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

PERMIT SET. RELEASED OR ISSUED FOR CONSTRUCTION.

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Drawing Revisions:

1 PLAN REVIEW COMMENTS 10.07.22

Drawing Date: 09/20/2022
Project number: 220001
Drawn By: DEB
Checked By: DEB

GEORGIA MOUNTAIN FOOD BANK
1642 CALVARY INDUSTRIAL DRIVE SW GAINESVILLE, GA 305073

Drawing Description:
COMCHECK FORMS

E-8

GAINESVILLE
GEORGIA

By reviewing the plans/specs for Code Compliance does not relieve the owner, design professionals, contractors or their representatives from the responsibility to comply with local, state and national codes and ordinances. Any deviations from approved plans must be approved by the appropriate authority prior to construction. Any discrepancies found after permit issuance may require corrective measures.

FIRE PROTECTION GENERAL NOTES

1. THE FIRE SPRINKLER CONTRACTOR SHALL BE RESPONSIBLE FOR DESIGN/INSTALLATION DRAWINGS. THE DESIGN SHALL COMPLY WITH NFPA 13, LATEST ENFORCED EDITION, AS WELL AS ALL STATE AND LOCAL CODES THAT ARE APPLICABLE. LIGHT HAZARD DESIGN.
2. ALL DRAWINGS AND CALCULATIONS SHALL BE SIGNED AND SEALED BY THE FIRE SPRINKLER CONTRACTOR'S REGISTERED FIRE PROTECTION ENGINEER.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FEES, PERMITS, AND INSPECTIONS REQUIRED TO PERFORM THE WORK DESCRIBED IN THE CONTRACT DOCUMENTS.
4. THE FIRE SPRINKLER CONTRACTOR SHALL VISIT THE JOBSITE TO VERIFY IF ANY WORK IS REQUIRED OUTSIDE OF THIS AREA.
5. INSTALLING SPRINKLER SYSTEM CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO PLANS REVIEW OFFICE FOR REVIEW AND PERMANENT RECORD PRIOR TO INSTALLATION.
6. THE SPRINKLER SYSTEM INSTALLER SHALL PERFORM ALL REQUIRED ACCEPTANCE TESTS, COMPLETE THE CONTRACTOR'S MATERIAL AND TEST CERTIFICATE(S), AND FORWARD THE CERTIFICATES TO THE AUTHORITY HAVING JURISDICTION PRIOR TO ASKING FOR APPROVAL OF THE INSTALLATION.
7. ALL MATERIAL (SPRINKLER HEADS, PIPING, FITTINGS, ETC.) SHALL BE IN CONFORMANCE WITH ALL APPLICABLE CODES AS WELL AS THE CURRENT TYPE USED IN THE EXISTING BUILDING FIRE SPRINKLER SYSTEM.
8. CONTRACTOR SHALL VISIT SITE TO CHECK ALL EXISTING CONDITIONS PRIOR TO BIDDING AND COORDINATE FIRE SERVICES WITH EXISTING CONDITIONS.
9. THIS TRADE, AFTER EXAMINATION OF ALL PLANS AND SPECIFICATIONS, SHALL INCLUDE ALL COSTS NECESSARY FOR ALTERATION, MODIFICATIONS, AND/OR ADDITIONS TO THE FIRE SPRINKLER SYSTEMS NECESSARY TO MAKE COMPLETE AND FINISHED INSTALLATION IN ALL ASPECTS. IT IS THE INTENT THAT ALL COSTS FOR THE WORK REQUIRED BE IN THE BID OF THIS TRADE.
10. METHODS OF HANGING PIPE, HEADERS AND BRANCHES SHALL BE APPROVED BY NFPA 13.
11. MATERIAL SUBMITTALS SHALL BE SUBMITTED TO ARCHITECT/ ENGINEER FOR APPROVAL AND SHALL BE APPROVED BEFORE ANY INSTALLATION.
12. PROVIDE FIRE RATED SLEEVES AND FIRE STOP ALL PENETRATIONS OF SMOKE/ FIRE WALLS, CEILINGS, ETC., INCLUDING ROOFS. FLASH AND COUNTER FLASH ROOF PENETRATIONS.
13. INDICATE CENTER TO CENTER DIMENSIONS AND/ OR PIPE CUT LENGTHS AND NOMINAL PIPE DIAMETERS ON ALL PIPING.
14. PROVIDE DETAIL AND INDICATE TYPE OF HANGERS TO BE INSTALLED FOR SPRINKLER PIPING.
15. PIPING SHALL BE INSTALL BY A CONTRACTOR LICENSED BY THE STATE.
16. PROVIDE CONCEALED SPRINKLER HEADS IN GYPBOARD CEILINGS.
17. PROVIDE FREEZE PROTECTION FOR ALL EXPOSED SPRINKLER PIPING.

TEST AND BALANCE:

1. TOTAL SYSTEM BALANCE SHALL BE PERFORMED IN ACCORDANCE WITH THE 5TH EDITION OF THE AABC NATIONAL STANDARDS, 1989 FOR TOTAL SYSTEM BALANCE, AND IN ACCORDANCE WITH THE SCOPE OF WORK DEFINED BY THE CONTRACT DOCUMENTS.
2. TESTING AND BALANCE AGENCY AS PART OF ITS CONTRACT SHALL ACT AS AN AUTHORIZED INSPECTION AGENCY, RESPONSIBLE TO THE OWNER, AND SHALL DURING THE TEST AND BALANCE, LIST SYSTEMS THAT ARE INSTALLED INCORRECTLY, REQUIRE CORRECTION, OR HAVE NOT BEEN INSTALLED IN ACCORDANCE WITH CONTRACT DRAWINGS AND SPECIFICATIONS.
3. TESTING AND BALANCING SHALL NOT BEGIN UNTIL ALL SYSTEMS HAVE BEEN COMPLETED AND ARE IN FULL WORKING ORDER. THE MECHANICAL CONTRACTOR SHALL PUT ALL HEATING VENTILATING, AND AIR CONDITIONING EQUIPMENT INTO FULL OPERATION AND SHALL CONTINUE THE OPERATION OF SAME DURING EACH WORKING DAY OF TESTING AND BALANCING.

SHEET METAL WORK - GENERAL:

1. DUCTWORK, EXCEPT WHERE OTHERWISE SPECIFIED HEREIN, AND APPARATUS CASINGS SHALL BE CONSTRUCTED OF GALVANIZED STEEL IN ACCORDANCE WITH SMACNA HVAC DUCT.

DUCT INSULATION:

1. DUCT INSULATION SHALL BE 1" THICK, 1-1/2" LB./CUBIC FOOT DENSITY FIBER GLASS INSULATION WITH THERMOSETTING RESIN AND VAPOR BARRIER, "K" VALUE NOT TO EXCEED 0.25.
2. INSULATION AND ADHESIVE SHALL HAVE A COMPOSITE FLAME SPREAD RATING 25 AND A COMPOSITE SMOKE-DEVELOPED RATING OF NOT MORE THAN 50.
3. INSULATION SHALL COMPLY WITH ASTM C553 AND BE PROVIDED WITH FACTORY-APPLIED FSK JACKET.
4. SECURE INSULATION WITH ADHESIVE AND STICK PINS.
5. PROVIDE INSULATION ON SUPPLY AIR DUCTWORK.

REFRIGERANT PIPING INSULATION:

1. INSULATE THE SUCTION LINE WITH RIGID 1" POLYURETHANE FOAM.

DUCT LINER:

1. DUCT LINER SHALL BE 1-1/2" THICK, 1-1/2" LB./CUBIC FOOT DENSITY FIBER GLASS INSULATION WITH NEOPRENE FACING. MINIMUM INSTALLED R-VALUE = 5.
2. LINER, FACING, AND ADHESIVE SHALL HAVE A COMPOSITE FLAME SPREAD RATING OF 25 AND A COMPOSITE SMOKE-DEVELOPED RATING OF NOT MORE THAN 50.
3. LINER SHALL MEET EROSION TEST DESCRIBED IN UL 181-1981.

VOLUME DAMPERS:

1. DAMPERS SHALL BE CONSTRUCTED IN ACCORDANCE WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS, 2005 EDITION.
2. PROVIDE SINGLE-BLADE DAMPER UP TO SIX (6) INCHES IN WIDTH. PROVIDE MULTIBLADE OPPOSED BLADE DAMPER ABOVE SIX (6) INCHES IN WIDTH.
3. DAMPER AND BEARINGS SHALL BE SIMILAR TO VENTLOCK NO. 609; DIAL REGULATOR SHALL BE SIMILAR TO VENTLOCK NO. 637, 638, AND 639 WITH COLLAR TO CLEAR INSULATION THICKNESS INSTALLED ON DUCTWORK.

WARRANTY:

1. ALL SYSTEMS AND COMPONENTS SHALL BE PROVIDED WITH A ONE (1) YEAR WARRANTY FROM THE TIME OF FINAL ACCEPTANCE UNLESS OTHERWISE NOTED IN THE CONTRACT DOCUMENTS. {COORDINATE WITH THE ARCHITECT}. THE WARRANTY SHALL COVER ALL MATERIALS AND WORKMANSHIP. DURING THIS WARRANTY PERIOD, ALL DEFECTS IN MATERIALS AND WORKMANSHIP SHALL BE CORRECTED BY REPAIR OR REPLACEMENT WITHOUT INCURRING ANY ADDITIONAL COST TO THE CONTRACT.

SPLIT SYSTEM:

1. THE SPLIT SYSTEMS SHALL PROVIDE THE MINIMUM CAPACITIES SCHEDULED, SHALL MEET ALL CONSTRAINTS OF CONSTRUCTION, AND SHALL COMPLY WITH ALL SECTIONS OF THESE SPECIFICATIONS. CONDENSING UNIT SHALL BE CERTIFIED WITH ARI STANDARDS 210-81 AND 270-82. AIR HANDLING UNITS SHALL BE UL LISTED.
2. INDOOR AIR CONDITIONING UNIT SHALL BE VERTICAL TYPE AS INDICATED. INSTALLATION SHALL CONFORM TO ALL APPLICABLE CODES AND ORDINANCES AND MINIMUM CLEARANCE REQUIREMENTS TO COMBUSTIBLE MATERIALS.
3. CABINET SHALL BE CONSTRUCTED OF HEAVY GAUGE COLD ROLLED STEEL WITH A BAKE-ON ENAMEL FINISH. KNOCK-OUTS SHALL BE FURNISHED IN THE TOP AND BOTTOM PANELS FOR HANGER RODS. PROVIDE COMPLETE SERVICE ACCESS TO BLOWER COMPARTMENT.
4. UNIT SHALL BE EQUIPPED WITH QUIET DIRECT DRIVE BLOWER BLOWER SHALL BE STATICALLY AND DYNAMICALLY BALANCED.
5. FAN AND LIMIT CONTROLS SHALL BE FACTORY INSTALLED AND WIRED. FAN CONTROL SHALL ASSURE PROPER BLOWER OPERATION. CONTINUOUS BLOWER OPERATION MAY BE ACCOMPLISHED BY ADJUSTING THE FAN CONTROLS.
6. POWER SUPPLY AND THERMOSTAT WIRING CONNECTIONS SHALL BE MADE AT JUNCTION BOX LOCATED ON FRONT OF THE UNIT.
7. BLOWER COOLING RELAY SHALL BE FURNISHED AND FACTORY INSTALLED ON THE WIRING JUNCTION BOX. RELAY SHALL ACTIVATE BLOWER OPERATION DURING COOLING CYCLE.
8. A 24 VOLT CONTROL TRANSFORMER SHALL BE FURNISHED AND FACTORY INSTALLED ON THE WIRING JUNCTION BOX.
9. FILTER SHALL BE 1" THROWAWAY TYPE OF WOVEN FIBER.
10. PROVIDE MATCHING EVAPORATOR COIL COMPATIBLE WITH UNIT AIR FLOW AND CONDENSING UNIT. COIL SHALL BE COPPER TUBES WITH ALUMINUM FINS AND SHALL HAVE INSULATED CASING, DRAIN PAN AND EXPANSION VALVE. COIL SHALL BE CERTIFIED FOR COMPLIANCE WITH THE PROVISIONS OF ARI STANDARD.
11. COMPRESSOR SHALL BE INTERNALLY SPRING MOUNTED, HAVE POSITIVE CRANKCASE LUBRICATION, CRANKCASE HEATER, DISCHARGE TEMPERATURE SENSING THERMOSTAT, HIGH AND LOW PRESSURE SWITCHES, MOTOR IN-WINDING TEMPERATURES SENSING THERMOSTATS, LOW AMBIENT SENSOR AND SOLID-STATE OVERLOAD PROTECTOR.
12. CONDENSER COIL SHALL BE CONSTRUCTED OF ALUMINUM FINS MECHANICALLY FITTED TO COPPER. THE COIL SHALL BE FACTORY PRESSURE LEAK TESTED AT 450 PSI. COIL SHALL BE PROTECTED BY A STEEL GUARD.
13. THE SPLIT SYSTEM SHALL BE INSTALLED IN COMPLETE CONFORMANCE WITH THE MANUFACTURER'S INSTALLATION RECOMMENDATIONS AND THESE CONTRACT DOCUMENTS.

EQUIPMENT LABELS:

1. EACH ITEM OF EQUIPMENT SHALL BE PERMANENTLY LABELED WITH A NAMEPLATE OF SUFFICIENT SIZE TO CLEARLY INDICATE THE IDENTIFICATION DESIGNATION (I.E., EQUIPMENT NUMBER) APPEARING ON THE CONTRACT DOCUMENT. NAMEPLATES MAY BE 1/16" THICK BAKELITE LAMINATE (ENGRAVED WITH LETTERS THROUGH BLACK), OR ALUMINUM WITH BLACK ENAMELED SURFACE, WITH ENGRAVED LETTERS. HANDWRITTEN MARKER IDENTIFICATIONS ARE NOT ACCEPTABLE.

SUBMITTALS:

1. PROVIDE ELECTRONIC SET OF MANUFACTURER'S DATA, O&M MANUALS. SUBMITTALS SHALL INCLUDE ELECTRICAL DATA, DIMENSIONAL DATA AND CLEARANCES, AND CONNECTION DATA.
2. PROVIDE SUBMITTALS FOR ROOFTOP UNITS, FANS, AND AIR DISTRIBUTION DEVICES.
3. SHOP DRAWINGS SHALL BE SUBMITTED AND APPROVED PRIOR TO ORDERING OF EQUIPMENT. ENGINEER WILL REQUIRE 7 WORKING DAYS TO REVIEW DRAWINGS AND SUBMITTALS.

PLUMBING GENERAL NOTES:

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE 2018 INTERNATIONAL PLUMBING CODE WITH GEORGIA AMENDMENTS.
2. REVIEW PLANS OF ALL TRADES PRIOR TO BIDDING AND INSTALLATION TO INCLUDE ALL PLUMBING FOR COMPLETE SYSTEMS SHOWN ON THE PLANS AND AS REQUIRED.
3. COORDINATE WITH OTHER TRADES TO PREVENT INTERFERENCE WITH HVAC DUCTS, STRUCTURE, ELECTRICAL LIGHTING, AND OTHER PIPING IN THE CEILING SPACE. VENT PIPING AND WATER PIPING SHALL BE HELD EITHER ABOVE OR BELOW HVAC DUCTWORK AS COORDINATED WITH THE HVAC CONTRACTOR.
4. PROVIDE 12"x12" ACCESS PANELS FOR SHOCK ABSORBERS, TRAP PRIMERS AND ALL VALVES LOCATED ABOVE NON ACCESSIBLE CEILINGS AND INSIDE PIPE CHASES. EXACT LOCATION MUST BE COORDINATED WITH ARCHITECTURAL DRAWINGS AND APPROVED BY ARCHITECT PRIOR TO INSTALLATION. ALL ACCESS PANELS SHALL BE LOCATED SO THAT THEY ARE NOT VISIBLE TO PUBLIC VIEW. ALL VALVES AND ACCESSORIES SHALL BE LOCATED WITHIN 12" OF ACCESS THROUGH EITHER WALLS OR CEILING.
5. ALL DRAINAGE PIPING AND POTABLE WATER PIPING SHALL BE CONCEALED INSIDE WALLS AND PIPE CHASES OR ABOVE CEILINGS. HOLD ALL PIPING ABOVE CEILING AS HIGH AS POSSIBLE.
6. ALL DRAINAGE PIPING, POTABLE, AND SANITARY WATER PIPING SHALL SLOPE AT 1/8 INCH PER FOOT UNLESS OTHERWISE NOTED.
7. CONTRACTOR SHALL MAKE FINAL CONNECTION TO ALL DOMESTIC WATER, SANITARY SEWERS, STORM DRAINS AND NATURAL GAS SERVICE AT APPROXIMATELY 5'-0" FROM BUILDING STRUCTURE UNLESS OTHERWISE NOTED.
8. COORDINATE ALL UNDERGROUND PIPING WITH GRADE BEAMS, WALL FOOTINGS, COLUMN FOUNDATIONS AND OTHER STRUCTURAL CONDITIONS.
9. REFER TO ARCHITECTURAL PLANS AND ELEVATIONS FOR LOCATION OF ALL PLUMBING FIXTURES. EXACT LOCATION OF ALL PLUMBING FIXTURES MUST BE VERIFIED IN FIELD PRIOR TO INSTALLATION, FINAL LOCATION SHALL BE AS DIRECTED BY ARCHITECT.
10. FLOORS WHERE INDICATED ON ARCHITECTURAL AND/OR STRUCTURAL DRAWINGS SHALL SLOPE TO FLOOR DRAINS. MAXIMUM SLOPE IN ANY DIRECTION SHALL NOT EXCEED 1/8 INCH PER FOOT. EXACT LOCATION OF ALL FLOOR DRAINS AND HUB DRAINS FOR EQUIPMENT MUST BE VERIFIED IN FIELD PRIOR TO INSTALLATION. FINAL LOCATION SHALL BE AS DIRECTED BY ARCHITECT.
11. PLUMBING CONTRACTOR SHALL MAKE FINAL CONNECTION TO ALL EQUIPMENT INDICATED ON DRAWINGS, FINAL CONNECTION SHALL INCLUDE ANY ADAPTERS, NIPPLES, SHUTOFF VALVES, PRESSURE REGULATING VALVES, SHOCK ABSORBERS, BACKFLOW PREVENTION DEVICES, AND ALL OTHER ACCESSORIES.
12. ALL CHANGES SHALL BE APPROVED BY THE ARCHITECT AND/OR OWNER.
13. COORDINATE WITH ARCHITECTURAL DRAWINGS BEFORE ROUGHING-IN PLUMBING FIXTURES AND EQUIPMENT SUPPLIES.
14. THE PLUMBING SUBCONTRACTOR SHALL FURNISH AND INSTALL ALL PLUMBING FIXTURES, AS IDENTIFIED ON PLUMBING FIXTURE SCHEDULE.
15. VERIFY MOUNTING HEIGHT AND WATER CONNECTION SIZES TO ALL PLUMBING FIXTURES PRIOR TO ROUGH-IN. FURNISH CUT-OUT TEMPLATES, FOR PLUMBING FIXTURES TO BE INSTALLED IN MILLWORK, BY THE GENERAL CONTRACTOR.
16. VERIFY LOCATION OF EXISTING WATER SERVICE AND THE LOCATION/INVERTS OF SANITARY PIPING PRIOR TO INSTALLATION.
17. INSTALL WATER HAMMER ARRESTERS WHERE WATER PRESSURES ARE EXCESSIVE OR WHERE REQUIRED TO ELIMINATE WATER HAMMER OR WHEN DEEMED NECESSARY BY LOCAL AUTHORITIES. LOCATE AND SIZE AS RECOMMENDED BY THE AMERICAN SOCIETY OF PLUMBING ENGINEERS.
18. PIPING ABOVE SUSPENDED CEILINGS SHALL BE HELD AS HIGH AS POSSIBLE IN THE AVAILABLE SPACE AND IN ALL CASES SHALL BE ABOVE THE TOP OF THE LIGHT FIXTURES. THIS PIPING NORMALLY RUNS BELOW THE DUCTWORK.
19. ALL PIPING SHALL RUN CONCEALED ABOVE CEILING OR IN WALL CHASES UNLESS OTHERWISE INDICATED. EXPOSED PIPING SHALL BE 3/4" MINIMUM FROM ANY WALL SURFACE.
20. PROVIDE STOP VALVES AT ALL FIXTURES AND EQUIPMENT SUPPLIES. ALL EXPOSED FIXTURE CONNECTIONS SHALL BE CHROME PLATED. PROVIDE VACUUM BREAKERS WHERE REQUIRED BY CODE.
21. IT IS IN THE INTENT OF THESE DRAWINGS TO COVER ALL WORK AND MATERIAL FOR A FIRST CLASS INSTALLATION. ANY EQUIPMENT, PLUMBING FIXTURE, TRIM HARDWARE AND/OR DEVICES USUALLY UTILIZED IN THE CLASS OF WORK, THOUGH NOT SPECIFICALLY MENTIONED OR SHOWN ON THESE DRAWINGS, BUT WHICH MAY BE NECESSARY FOR THE SATISFACTORY COMPLETION OF THE WORK (AS DETERMINED BY THE ARCHITECT) SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR AS PART OF HIS TOTAL WORK.
22. ALL STRUCTURAL PENETRATIONS (SLEEVES, BLOCKOUTS, AND ANCHORS) ARE TO BE LOCATED AND COORDINATED IN THE FIELD BY THE CONTRACTOR IN RELATION TO THE REQUIREMENTS OF FINAL EQUIPMENT AND FIXTURES SELECTED.
23. PROVIDE AN EXPANSION JOINT OR FABRICATED EXPANSION LOOP ON ALL PIPING SYSTEMS THAT CROSS BUILDING EXPANSION JOINTS.
24. THE WATER SUPPLY CONNECTION TO EACH COFFEE MACHINE AND EACH NONCARBONATED BEVERAGE DISPENSER SHALL BE PROTECTED AGAINST BACKFLOW BY A BACKFLOW PREVENTER CONFORMING TO ASSE 1022 OR ASSE 1024, OR PROTECTED BY AN AIR GAP.

MECHANICAL GENERAL NOTES:

1. IN GENERAL, PLANS AND DIAGRAMS ARE SCHEMATIC ONLY AND SHOULD NOT BE SCALED.
2. INTENT OF THESE NOTES AND MECHANICAL NOTES ON DRAWINGS IS TO CLARIFY THE SCOPE OF WORK AND ALERT CONTRACTOR OF EXISTING CONDITIONS. CONTRACTOR TO VISIT SITE AND VERIFY ALL CLEARANCES BEFORE FABRICATION OF DUCTWORK AND PROVIDE ADDITIONAL OFFSET AND/OR CHANGES IN DUCT SIZES TO MEET FIELD CONDITIONS AND COORDINATE WITH ELECTRICAL, PLUMBING AND FIRE PROTECTION SUBCONTRACTOR BEFORE ANY CONSTRUCTION WORK.
3. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR ALL TRADES INSTALLATION SCHEDULES. FIXED WORK SUCH AS DUCTWORK AND PLUMBING SHALL BE INSTALLED PRIOR TO ANY TRADE WORK THAT CAN BE EASILY RELOCATED OR OFFSET SUCH AS ELECTRICAL CONDUITS, SMALL WATER LINES ETC.
4. UNLESS OTHERWISE NOTED, INSTALL DUCTWORK AS HIGH AS POSSIBLE, TIGHT TO BOTTOM OF STRUCTURE. COORDINATE DUCT ELEVATION WITH WATER PIPING, SANITARY DRAINS AND MAJOR ELECTRICAL CONDUITS.
5. CONTRACTOR SHALL PROVIDE ALL SUPPLEMENTARY STEEL REQUIRED TO SUSPEND MECHANICAL EQUIPMENT AND MATERIALS.
6. ALL MECHANICAL WORK SHALL MEET ALL THE REQUIREMENTS OF, BUT NOT LIMITED TO THE INTERNATIONAL MECHANICAL CODE WITH GEORGIA AMENDMENTS.
7. DUCT DIMENSIONS SHOWN ON DRAWINGS ARE CLEAR INSIDE DIMENSIONS. INTERNAL INSULATION (WHERE USED) HAS NOT BEEN ACCOUNTED FOR.
8. DUCTWORK, DIFFUSERS, REGISTERS, GRILLES, AND OTHER ITEMS OF THE AIR HANDLING SYSTEM SHALL NOT BE SUPPORTED BY THE CEILING OR CEILING SUSPENSION SYSTEM.
9. ALL WALL MOUNTED THERMOSTATS AND/OR TEMPERATURE SENSORS SHALL BE INSTALLED AT AN ELEVATION OF 48" ABOVE FINISHED FLOOR TO THE TOP UNLESS OTHERWISE NOTED ON DRAWINGS. LOCATION OF THE WALL MOUNTED THERMOSTAT SHALL BE COORDINATED WITH OTHER TRADES FOR A NEAT APPEARANCE. FINAL LOCATION OF THERMOSTAT SHALL BE SUBJECT TO THE APPROVAL OF THE TENANT/OWNER OR THEIR REPRESENTATIVE IN THE FIELD.
10. ALL SUPPLY AIR DIFFUSERS SHALL BE 4-WAY THROW UNLESS OTHERWISE NOTED.
11. COORDINATE AIR DEVICE LOCATIONS WITH LIGHTING FIXTURES, SPEAKERS AND FIRE SPRINKLER HEADS (WHERE APPLICABLE).
12. CONTRACTOR SHALL VERIFY THAT THE LOCATION OF CEILING MOUNTED DIFFUSERS, GRILLES, AND REGISTERS SHOWN ON THE DRAWINGS ARE ACCEPTABLE TO THE ARCHITECT PRIOR TO INSTALLATION.
13. ALL NEW DUCTWORK SHALL BE 1" W.G. CONSTRUCTION, CONSTRUCTED OF LOCK FORMING GALVANIZED STEEL IN ACCORDANCE WITH THE "DUCT MANUAL AND SHEET METAL CONSTRUCTION FOR VENTILATING AND AIR CONDITIONING SYSTEMS, "THIRD EDITION, 2005, PUBLISHED BY THE "SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION INC. (SMACNA)". VOLUME DAMPERS SHALL BE PROVIDED IN ALL BRANCH TAKE OFFS, SPIN-INS OR OTHER CONNECTIONS TO INDIVIDUAL AIR DISTRIBUTION DEVICES. ALL 90 DEGREE ELBOWS SHALL BE RADIUS, OR RECTANGULAR WITH TURNING VANES. DUCTWORK SHALL BE HUNG AS HIGH AS POSSIBLE FROM THE BUILDING STRUCTURE WITH HANGER ASSEMBLIES IN ACCORDANCE WITH "SMACNA" REQUIREMENTS. PROVIDE ADDITIONAL RISES, DROPS, AND OFFSETS IN DUCTWORK AS REQUIRED. ALL DUCTWORK SHALL BE SEALED USING IRON GRIP (NO SUBSTITUTIONS) ALL DUCT REGARDLESS OF PRESSURE CLASS SHALL BE SEALED PER SMACNA CLASS "A."
14. NEW DUCTWORK SHALL BE EXTERNALLY INSULATED WITH 1-1/2" THICK FIBERGLASS FLEXIBLE BLANKET INSULATION (RATED FIRE=25, SMOKE=50) SECURED TO THE DUCTWORK WITH BENJAMIN FOSTER NO. 8520 ADHESIVE & PUSH PINS ON 12" CENTERS. INSULATION TO HAVE AN INSTALLED MINIMUM R-VALUE OF 6.0.
15. ALL FLEXIBLE DUCTWORK SHALL BEAR THE UL 181 LABEL (CLASS 1 AIR DUCT) AND SHALL BE FACTORY INSULATED (1-1/2 INCH, 0.6 LB., FIBERGLASS, FIRE=25, SMOKE=50) ATCO UPC #050 OR EQUAL. FLEXIBLE DUCTWORK SHALL COMPLY W/ NFPA 90A, AND NFPA 90B. ALL FLEXIBLE DUCTWORK CONNECTED TO DIFFUSERS SHALL NOT BE LESS THAN THE NECK SIZE OF THE DIFFUSER UNLESS NOTED OTHERWISE ON DRAWINGS. MINIMUM FLEXIBLE DUCT BEND RADIUS OF CURVATURE SHALL BE 3 DUCT DIAMETERS, MAXIMUM LENGTH SHALL BE 6'-0", NO MORE THAN THE EQUIVALENT OF TWO (2) 90 DEGREE BENDS WILL BE ACCEPTABLE. TAKE OFF FITTINGS TO BE EQUAL TO FLEXMASTER TYPE 8M-R6. USE 45° THROAT AT PLENUM TAKE OFFS.
16. FLEXIBLE AND RIGID ROUND DUCT TAKE-OFFS FOR DIFFUSERS SHALL BE THE SAME SIZE AS DIFFUSER NECK. MAXIMUM FLEXIBLE DUCT LENGTH SHALL BE 6'-0". INSULATE RIGID ROUND DUCTS WITH 1-1/2" FOIL FACED FIBERGLASS DUCT WRAP, DUCT WRAP TO HAVE AN INSTALLED MINIMUM THERMAL RESISTANCE (R) VALUE OF 6.0.
17. ALL EXHAUST AIR DUCTWORK SHALL BE GALVANIZED SHEETMETAL CONSTRUCTION IN ACCORDANCE WITH LATEST SMACNA STANDARDS.
18. DUCT SHALL BE SECURELY SUPPORTED, HUNG OR SUSPENDED IN ACCORDANCE WITH THE INTERNATIONAL MECHANICAL CODE. PROVIDE MINIMUM 1-1/2" WIDE 22 GA. STRAPS, 10 FT. SPACING FOR MAXIMUM HALF DUCT PERIMETER UP TO 30" AND ALL ROUND FLEX DUCT. PROVIDE 1" WIDE 22 GA. STRAPS, 5 FT. SPACING FOR MAXIMUM HALF DUCT PERIMETER FROM 31" TO 72" AND 1" WIDE 20 GA. STRAPS, 5 FT. SPACING FOR MAXIMUM HALF DUCT PERIMETER UP TO 96".
19. PROVIDE ALL ROOF TOP UNITS WITH MANUFACTURER'S RECOMMENDED SERVICE AREA CLEARANCES.
20. PROVIDE A TRAP IN ALL CONDENSATE PIPING LOCATED AT THE ROOF TOP UNIT. CONDENSATE PIPING TO BE TYPE "L" COPPER.
21. VERIFY VOLTAGE WITH ELECTRICAL BEFORE ORDERING EQUIPMENT.
22. ALL MECHANICAL EQUIPMENT CONTROL WIRING TO BE ROUTED IN CONDUIT.
23. GUARANTEE, FOR ONE YEAR AFTER DATE OF ACCEPTANCE BY THE OWNER, ALL EQUIPMENT, MATERIALS AND WORKMANSHIP TO BE FREE FROM DEFECT.
24. IT SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR TO INSTALL THE HEATING, VENTILATION AND AIR CONDITIONING SYSTEM SO AS TO INSURE QUIET OPERATION. NO VIBRATION OR SOUND SHALL BE TRANSMITTED TO THE BUILDING, STRUCTURE OR OCCUPIED AREAS. THE DECISION OF THE ENGINEER AS TO THE QUIETNESS OF THE SYSTEM AND EQUIPMENT SHALL BE FINAL. IT SHALL BE THIS CONTRACTOR'S RESPONSIBILITY TO CORRECT OR REPLACE ANY NOISY SYSTEM OR EQUIPMENT AS REQUIRED.
25. ALL MATERIAL SHALL BE OF APPROVED QUALITY AND THE WORK SHALL BE DONE IN A THOROUGH AND WORKMANLIKE MANNER. THE WORK, MATERIALS AND TESTS SHALL BE IN ACCORDANCE WITH ALL LOCAL AND STATE MECHANICAL CODES.
26. LOCATIONS OF DUCT MOUNTED SMOKE DETECTORS SHOWN ON THE DRAWINGS ARE REFERENCE LOCATIONS ONLY. THE FINAL PLACEMENT OF THE DETECTOR IN THE DUCTWORK SHALL MEET THE REQUIREMENTS OF THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. PROVIDE A PRESSURE DIFFERENTIAL TEST AND THE MANUFACTURER'S TEST KIT. A COPY OF ALL TEST DATA WILL BE MADE AVAILABLE AT THE FINAL INSPECTION. PROVIDE READILY ACCESSIBLE DUCT ACCESS DOOR FOR INSPECTING AND SERVICING THE DETECTOR. THE ACTUATION OF A SMOKE DETECTOR SHALL ACTIVATE A VISIBLE AND AUDIBLE SUPERVISORY SIGNAL AT AN APPROVED LOCATION AND SHALL BE IDENTIFIED AS AIR DUCT DETECTOR TROUBLE. DUCT SMOKE DETECTORS ARE FURNISHED AND WIRED TO SHUT DOWN UNIT BY DIVISION 16, BUT SHALL BE INSTALLED IN DUCTWORK BY THE MECHANICAL CONTRACTOR.

DEMOLITION NOTES:

1. FURNISH ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS REQUIRED TO REMOVE ALL EXISTING EQUIPMENT AND ALL PIPE, FITTINGS, VALVES, SUPPORTS AND APPURTENANCES AS INDICATED NOT REQUIRED FOR THE PROPER OPERATION OF THE RENOVATED FACILITY. DEMOLITION WILL BE CONSISTENT WITH THE FINAL CONFIGURATION OF THE NEW SYSTEMS AS INDICATED, AS SPECIFIED HEREIN, OR AS REQUIRED BY THE ARCHITECT. THE EQUIPMENT AND PIPING INDICATED SHALL BE REMOVED FROM THEIR PRESENT LOCATIONS AND BECOME THE PROPERTY OF THE CONTRACTOR (UNLESS OTHERWISE NOTED) AND SHALL BE REMOVED FROM THE SITE AS SPECIFIED HEREINAFTER.
2. BEFORE REMOVAL OF ANY ELECTRICALLY OPERATED EQUIPMENT, COORDINATE CAREFULLY TO ASSURE THAT POWER AND CONTROL WIRING HAS BEEN DISCONNECTED AND TERMINATED PER CODE REQUIREMENTS OR REMOVED AS REQUIRED.
3. IF, DURING THE PROGRESS OF CONSTRUCTION OR DEMOLITION, ANY INSULATION SUSPECTED OF CONTAINING ASBESTOS IS DISCOVERED, IT SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ARCHITECT. REMOVAL OF SUCH INSULATION WILL BE PERFORMED BY OTHERS. UNTIL THE REMOVAL PROCESS IS COMPLETE, WORK IN THE AREA SHALL BE SUSPENDED.
4. DO NOT PROCEED WITH THE REMOVAL OF ANY EQUIPMENT, PIPING OR APPURTENANCES WITHOUT SPECIFIC APPROVAL OF THE OWNER'S REPRESENTATIVE. ANY EQUIPMENT, PIPING OR APPURTENANCES REMOVED WITHOUT PROPER AUTHORIZATION, WHICH ARE NECESSARY FOR THE RE-USE IN THE RENOVATED FACILITY SHALL BE REPLACED TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE WITHOUT INCURRING ANY ADDITIONAL COST TO THE CONTRACT

FIRE PROTECTION SPECIFICATIONS

FIRE PROTECTION GENERAL
PROVIDE ALL LABOR AND MATERIAL, NECESSARY EQUIPMENT AND SERVICES TO INSTALL AUTOMATIC WET-PIPE SPRINKLER SYSTEM TO ACCOMMODATE THE REFLECTED CEILING LAYOUT.

QUALITY ASSURANCE
DESIGN AND INSTALLATION TO CONFORM TO LOCAL BUILDING CODES AND NFPA No. 13. EQUIPMENT AND COMPONENTS: BEAR UL LABEL OR MARKING.

REGULATORY REQUIREMENTS
PRODUCT DATA, AND SHOP DRAWINGS: BEAR STAMP OF APPROVAL OF AUTHORITY HAVING JURISDICTION, FIRE MARSHAL, AND OWNER'S FIRE INSURANCE UNDERWRITER.

SUBMITTALS
INDICATE DETAILED PIPE LAYOUT, HANGER AND SUPPORTS, COMPONENTS AND ACCESSORIES. SUBMIT SHOP DRAWINGS, PRODUCT DATA TO AUTHORITY HAVING JURISDICTION, FIRE MARSHAL, AND OWNER'S INSURANCE UNDERWRITER FOR APPROVAL %%uPRIOR%%u TO SUBMISSION TO ARCHITECT.

PRODUCTS
PIPING FOR CROSSMAINS: STANDARD WEIGHT SCHEDULE 10 BLACK STEEL PIPE, ASTM A53/A795. BRANCH PIPING: STANDARD WEIGHT SCHEDULE 40 BLACK STEEL PIPE, ASTM A53/A795. FITTINGS: CAST IRON FITTINGS, ANSI/ASME B16, FLANGES AND FITTINGS OR B16.4, SCREWED FITTINGS. SPRINKLER HEADS: SEMI-RECESSED IN ACCESSIBLE CEILINGS AND CONCEALED IN NON ACCESSIBLE CEILINGS.

EXECUTION
COORDINATE WORK OF THIS SECTION WITH OTHER AFFECTED WORK. SPRINKLER HEADS SHALL BE LOCATED AS REQUIRED TO PROVIDE PROPER COVERAGE AND TO AVOID INTERFERENCE WITH LIGHTS, DIFFUSERS, GRILLES, OR OTHER CEILING MOUNTED EQUIPMENT. HEADS LOCATED IN CEILING TILE SHALL BE CENTERED IN THE TILE. SPRINKLER SYSTEM COMPATIBLE WITH ARCHITECTURAL LAYOUTS AND AVOID INTERFERENCE WITH STRUCTURAL, ELECTRICAL, MECHANICAL AND PLUMBING WORK. DUCTWORK HAS RIGHT OF WAY.

MECHANICAL CODE COMPLIANCE

THESE PLANS WERE PREPARED AND SHALL COMPLY WITH THE FOLLOWING APPLICABLE CODES:
2018 INTERNATIONAL BUILDING CODE WITH GEORGIA AMENDMENTS
2018 INTERNATIONAL MECHANICAL CODE WITH GEORGIA AMENDMENTS
2018 INTERNATIONAL PLUMBING CODE WITH GEORGIA AMENDMENTS
2015 INTERNATIONAL ENERGY CONSERVATION CODE WITH GEORGIA AMENDMENTS

DESIGN CONDITIONS

SITE LOCATION:
GAINESVILLE, GA 30507
34.27' LAT., 83.83' LONG.
1276 FEET ELEVATION
ASHRAE

PERMIT SET. RELEASED OR ISSUED FOR CONSTRUCTION.

COMcheck Software Version 4.1.5.5

Mechanical Compliance Certificate

Project Information

Energy Code:	2015 IECC
Project Title:	Georgia Mountain Food Bank
Location:	Gainesville, Georgia
Climate Zone:	4a
Project Type:	New Construction

Construction Site:
1642 Calvary Industrial Dr. SW
Gainesville, GA 30507

Owner/Agent:

Designer/Contractor:

Additional Efficiency Package(s)

Credits: 1.0 Required 0.0 Proposed

Mechanical Systems List

Quantity System Type & Description

1 AC/HP-1 (Single Zone):
Heating: 1 each - Central Furnace, Electric, Capacity = 8 kBtu/h
No minimum efficiency requirement applies
Cooling: 1 each - Split System, Capacity = 30 kBtu/h, Air-Cooled Condenser, Unknown Economizer
Proposed Efficiency = 14.00 SEER, Required Efficiency: 13.00 SEER
Fan System: FAN SYSTEM 1 – Compliance (Motor nameplate HP method) : Passes

Fans:
FAN 1 Supply, Constant Volume, 1000 CFM, 1.3 motor nameplate hp, 0.0 fan efficiency grade

Mechanical Compliance Statement

Compliance Statement: The proposed mechanical design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 2015 IECC requirements in COM*check* Version 4.1.5.5 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Darryl Bibbs — Name - Title

Darryl Bibbs — Signature

07/14/2022 — Date

REFRIGERATION SPLIT SYSTEM SCHEDULE

SYSTEM	CAPACITY (MBH)	CFM	NUMBER OF EVAPORATORS	NUMBER OF CONDENSERS	BASIS OF DESIGN EVAPORATOR	BASIS OF DESIGN CONDENSER	NOTES
WALK-IN COOLER			2	1	HEAT CRAFT – CEM1115MS8AMB	HEAT CRAFT – CCV0150MDACD	1,2,3,5,6
WALK-IN FREEZER			2	1	HEAT CRAFT – CEM0850DS6MAB0403	HEAT CRAFT – CCH0150LDACD	1,2,3,5,6
COLD DECK			2	1	HEAT CRAFT – CEH1053DS6AYAB0450	HEAT CRAFT – CCV0200MDACD	1,2,3,5,6

NOTES:
1. COORDINATE ELECTRICAL REQUIREMENTS WITH ELECTRICAL CONTRACTOR PRIOR TO PLACING ORDER FOR EQUIPMENT.
2. PROVIDE AIR DEFROST TIMER OPTION.
3. PROVIDE CRANKCASE HEATER.
4. CONDENSERS SHALL OPERATE AS LEAD LAG SYSTEM.
5. PROVIDE STAGGERED CONNECTIONS BETWEEN CONDENSERS.
6. REFER TO MANUFACTURER'S REQUIREMENTS FOR INSTALLATION.

SPLIT SYSTEM AIR CONDITIONING SCHEDULE

MARK	CFM	MIN OA CFM	ESP IN WC	HP	COOLING NOMINAL TONNAGE	HEATING KW	OUTDOOR BASIS OF DESIGN	INDOOR BASIS OF DESIGN	MIN SEER	INDOOR WEIGHT	NOTES
AC/HP-1	1000	–	0.5	1/3	2.5	8.0	GOODMAN ARUF31B14	GOODMAN GSZ14030	14.0	110	ALL

NOTES:
1. REFER TO ELECTRICAL DRAWINGS FOR SERVICE VOLTAGE CHARACTERISTICS.
2. HEAT PUMP SHALL BE RATED FOR 95 DEGREES F.
3. PROVIDE FACTORY INSTALLED ELECTRIC HEATER WITH SINGLE POINT CONNECTION.
4. PROVIDE LONG LINE KIT AND ALL MANUFACTURER'S RECOMMENDED ACCESSORIES FOR REFRIGERANT LINE LENGTHS OVER THE STANDARD THE MANUFACTURER'S STANDARD LENGTH.
5. PROVIDE TXV KIT MATCHED TO COIL.
6. PROVIDE DRAIN PAN WITH AUTO SHUT OFF SWITCH.
7. INCLUDE 1" FLAT PLEATED FILTER AND 1 SPARE SIZED FOR UNIT.

FAN SCHEDULE

MARK	CFM	S.P. WG	MOTOR HP	TYPE	BASIS OF DESIGN	LOCATION/SERVICE	NOTES
VEF-1	300	0.20	1/4	SIDEWALL	GREENHECK – SBE-1H20-4	KILN ROOM	ALL

NOTES:
1. REFER TO ELECTRICAL DRAWINGS FOR SERVICE VOLTAGE CHARACTERISTICS.
2. PROVIDE BACKDRAFT DAMPER, SPEED CONTROLLER MOUNTED AT FAN, AND DISCONNECT SWITCH.

AIR DISTRIBUTION SCHEDULE

MARK	TYPE	SIZE IN INCHES NECK	SIZE IN INCHES FACE	FINISH	O.B.D.	BASIS OF DESIGN	NOTES
(A)	SUPPLY	1	24X24 OR 12X12	WHITE	YES	TITUS TMSA-A	2
(B)	RETURN	--	24X24	WHITE	NO	TITUS 50F	2,3
(E)	EXHAUST	1	1	WHITE	NO	TITUS 350ZFL	2

NOTES:
1. NECK SIZE AS INDICATED ON FLOOR PLAN.
2. DIFFUSER FRAME STYLE SHALL MATCH CEILING IN WHICH IT IS INSTALLED. SEE ARCHITECTURAL DRAWINGS.
3. ALL VISIBLE PORTIONS ABOVE GRILLE SHALL BE PAINTED BLACK.

GEORGIA REGISTERED No. 30595 PROFESSIONAL ENGINEER Bright E. Bailey
Bright & Bailey
9/20/2022

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Drawing Revisions:

1 PLAN REVIEW COMMENTS 10.07.22

Drawing Date: 09/20/2022
Project number: 220001
Drawn By: DMB
Checked By: DEB

GEORGIA MOUNTAIN FOOD BANK
1642 CALVARY INDUSTRIAL DRIVE SW
GAINESVILLE, GA 30507

Drawing Description:
MECHANICAL SCHEDULES

M0.2

GA220222-mse 10/22/2022 By reviewing the plans/specs for Code Compliance does not relieve the owner, design professionals, contractors or their representatives from the responsibility to comply with all local, state and national codes and standards in effect at time of permit issuance. Our review is not a check of every item and does not prevent this department from requiring corrections during construction. Any misinterpretations to approved plans sold to be approved and issued by permit.

GAINESVILLE PLANNING & ZONING

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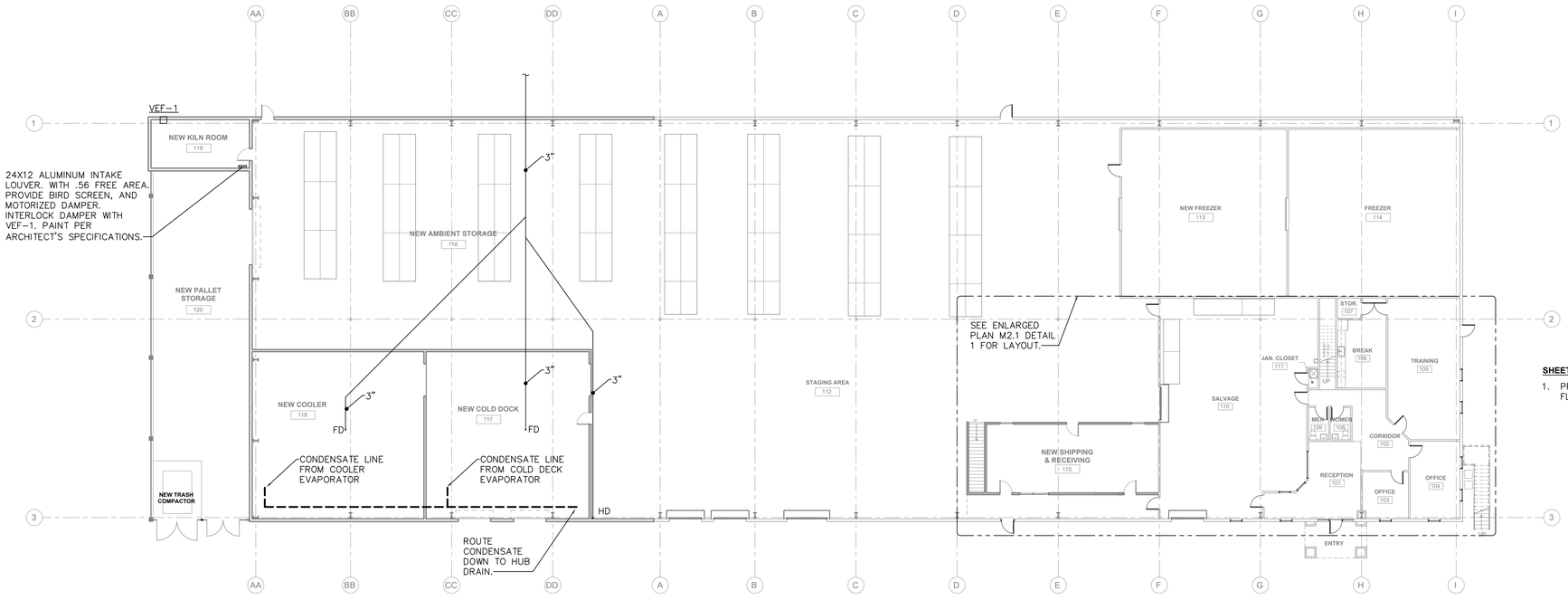

SHEET NOTES:

1. PROVIDE TRAP GUARDS ON ALL FLOOR AND HUB DRAINS.

NORTH

1 OVERALL 1ST FLOOR PLAN - MECHANICAL

1/16" = 1'-0"

GEORGIA REGISTERED No. 30595 PROFESSIONAL ENGINEER Dwight E. Beasley DWIGHT E. BEASLEY

9/20/2022

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Drawing Revisions:

1 PLAN REVIEW COMMENTS 10.07.22

Drawing Date:	09/20/2022
Project number:	220001
Drawn By:	DMB
Checked By:	DEB

GEORGIA MOUNTAIN FOOD BANK
1642 CALVARY INDUSTRIAL DRIVE SW
GAINESVILLE, GA 30507

Drawing Description:
OVERALL 1ST FLOOR PLAN - MECHANICAL

M1.1

GAINESVILLE INSPECTION SERVICES

GC#2022-0146 10/10/2022 By reviewing the plans/specs for Code Compliance does not relieve the owner, design professionals, contractors or their representatives from the responsibility to comply with all local, state and national codes and standards in effect at time of permit issuance. Our review is not a check of every item and does not prevent this department from requiring corrections during construction. Any changes/alterations to approved plans shall be approved to avoid voiding the permit.

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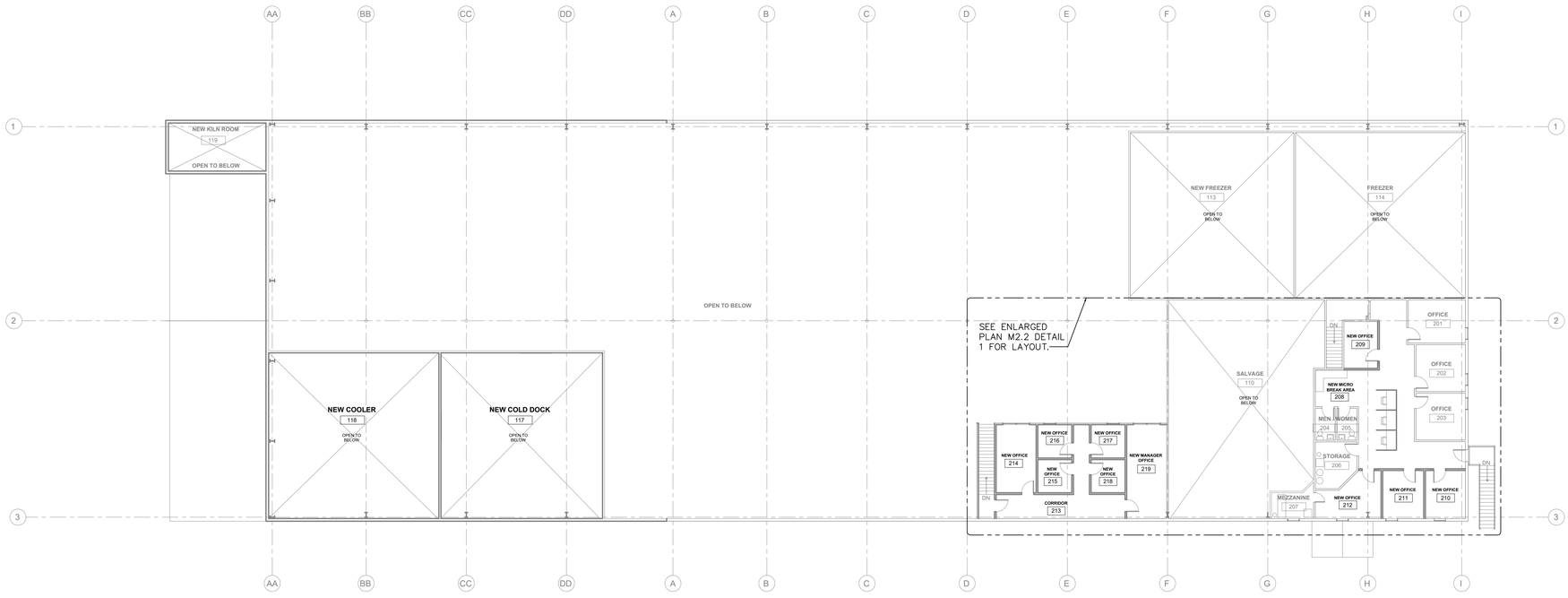

NORTH

1 OVERALL 2ND FLOOR PLAN - MECHANICAL

1/16" = 1'-0"

GEORGIA REGISTERED No. 30595 PROFESSIONAL ENGINEER BRIGHT E. BEASLEY

Bright E. Beasley

9/20/2022

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Project number: 220001
Drawn By: DMB
Checked By: DEB

GEORGIA MOUNTAIN FOOD BANK
1642 CALVARY INDUSTRIAL DRIVE SW
GAINESVILLE, GA 30507

Drawing Description:
OVERALL 2ND FLOOR PLAN - MECHANICAL

M1.2

GAINESVILLE GEORGIA

GAcodecircuit.com - 11/01/2021 - By reviewing the plans/specs for Code Compliance does not relieve the owner, design professionals, contractors or their representatives from the responsibility to comply with all local, state and national codes and standards in effect at time of permit issuance. Our review is not a check of every item and doesn't not prevent this department from requiring corrections during construction. Any changes/deviations to approved plans shall be approved and noted on plans prior to work occuring on the permit.

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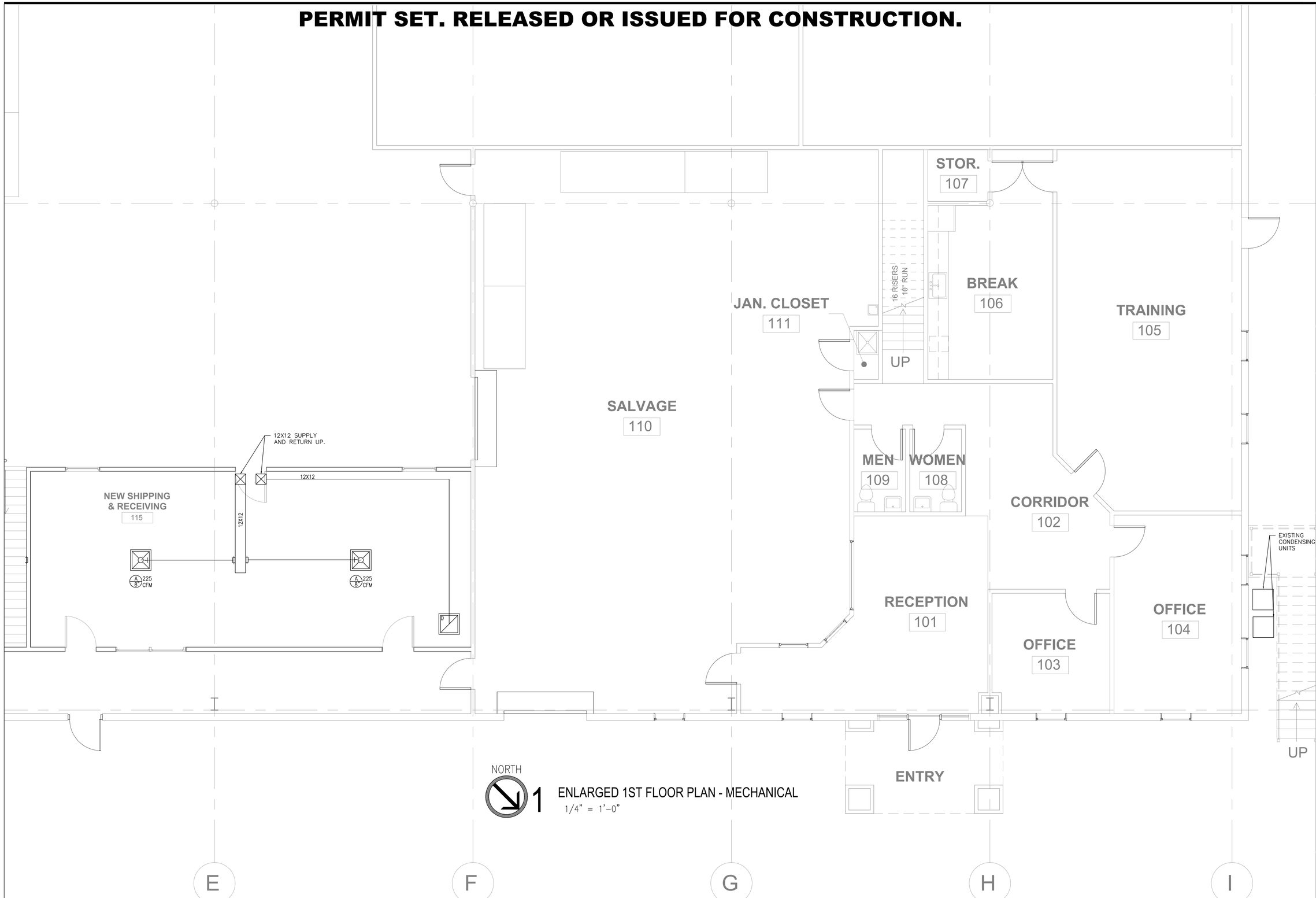

NORTH

1 ENLARGED 1ST FLOOR PLAN - MECHANICAL

1/4" = 1'-0"

GEORGIA REGISTERED No. 30595 PROFESSIONAL ENGINEER
BRIGHT E. BEASLEY
Bright E Beasley
9/20/2022

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Drawing Revisions:

1 PLAN REVIEW COMMENTS
10.07.22

Drawing Date:	09/20/2022
Project number:	220001
Drawn By:	DMB
Checked By:	DEB

GEORGIA MOUNTAIN FOOD BANK
1642 CALVARY INDUSTRIAL DRIVE SW
GAINESVILLE, GA 30507

Drawing Description:
ENLARGED 1ST FLOOR PLAN - MECHANICAL

M2.1

GAINESVILLE

orDev#22-044 - 20220922 By reviewing the plans/specs for Code Compliance does not relieve the owner, design professionals, contractors or their representatives from the responsibility to comply with all local, state and national codes and standards in effect at time of permit issuance. Our review is not a check for every item and does not prevent the department from requiring corrections during construction. Any changes/alterations to approved plans shall be approved by the AHJ prior to installation.

PERMIT SET. RELEASED OR ISSUED FOR CONSTRUCTION.

LOCATE CONDENSING UNIT ON ROOF. PROVIDE EQUIPMENT PAD THAT IS ADAPTED FOR A SLOPE ROOF.

18X12 SUPPLY AND RETURN UP TO AC-1 ABOVE SECOND LEVEL CEILING AND 12X12 SUPPLY AND RETURN DOWN TO LEVEL ONE.

NEW OFFICE 214
NEW OFFICE 216
NEW OFFICE 217
NEW MANAGER OFFICE 219
NEW OFFICE 215
NEW OFFICE 218
CORRIDOR 213
SALVAGE 110
OPEN TO BELOW
DN
NEW OFFICE 209
NEW MICRO BREAK AREA 208
MEN 204
WOMEN 205
STORAGE 206
MEZZANINE 207
NEW OFFICE 212
NEW OFFICE 211
NEW OFFICE 210
OFFICE 201
OFFICE 202
OFFICE 203
CONNECT NEW DIFFUSERS TO EXIST DUCTS.
EXISTING AC UNITS

14X10 | 6X6 | 8X8 | A/6 75 CFM | A/6 100 CFM | A/6 150 CFM

N

NORTH

1 ENLARGED 2ND FLOOR PLAN - MECHANICAL
1/4" = 1'-0"

E F G H I

GEORGIA REGISTERED No. 30595 PROFESSIONAL ENGINEER BRIGHT E. BEASLEY
Bright E. Beasley
9/20/2022

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Drawing Revisions:

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Project number:	220001
Drawn By:	DMB
Checked By:	DEB

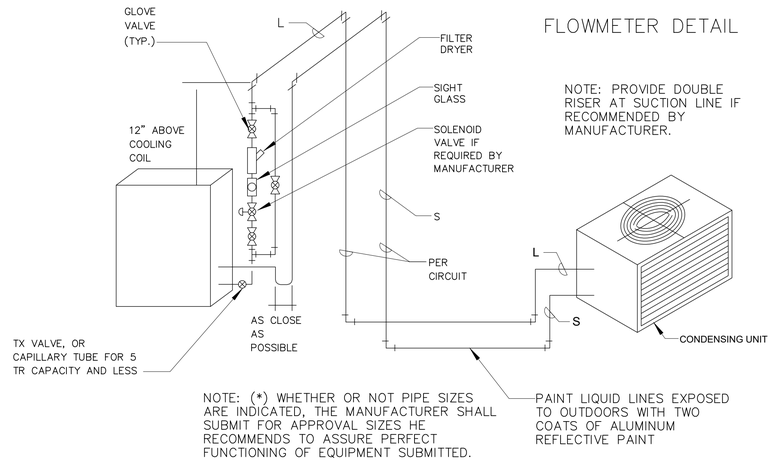
GEORGIA MOUNTAIN FOOD BANK
1642 CALVARY INDUSTRIAL DRIVE SW
GAINESVILLE, GA 30507

Drawing Description:
ENLARGED 2ND FLOOR PLAN - MECHANICAL

M2.2

CHOW220dat - 20220922 By reviewing the plans/specs for Code Compliance does not relieve the owner, design professionals, contractors or their representatives from the responsibility to comply with all local, state and national codes effect at time of permit issuance. Our review is not a check of every item and does not prevent this department from requiring corrections during construction. Any changes/additions to approved plans shall be approved by owner's design professional and GAINESVILLE BUILDING SERVICES

PERMIT SET. RLEASED OR ISSUED FOR CONSTRUCTION.

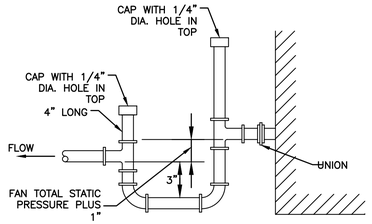


FLOWMETER DETAIL

NOTE: PROVIDE DOUBLE RISER AT SUCTION LINE IF RECOMMENDED BY MANUFACTURER.

NOTE: (*) WHETHER OR NOT PIPE SIZES ARE INDICATED, THE MANUFACTURER SHALL SUBMIT FOR APPROVAL SIZES HE RECOMMENDS TO ASSURE PERFECT FUNCTIONING OF EQUIPMENT SUBMITTED.

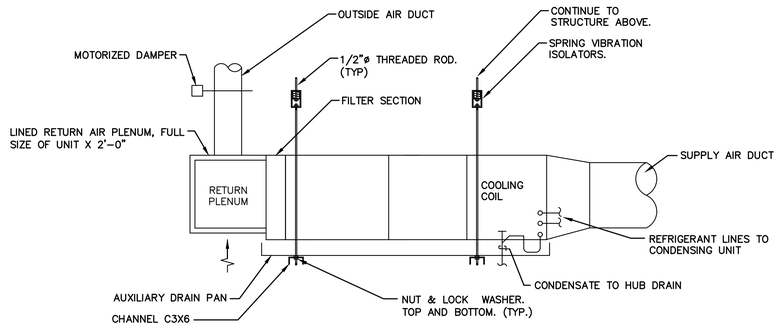
3 REFRIGERANT LINES SCHEMATIC
SCALE: NTS



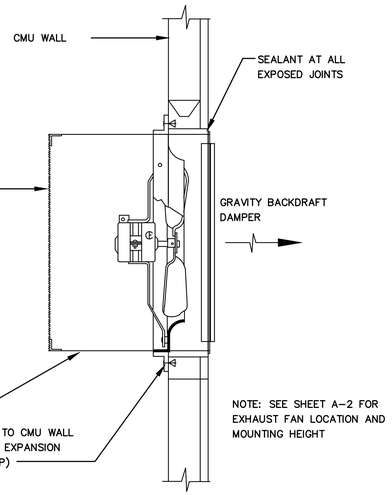
NOTES:

1. PIPING SHALL BE FULL SIZE OF DRAIN PAN CONNECTION, OR 1" MINIMUM.
2. PIPE TO NEAREST FLOOR DRAIN.
3. LOCATE TRAPS SO AS TO BE ACCESSIBLE FOR CLEANING.
4. INSULATE DRAIN PIPING PER SPECIFICATIONS.
5. PVC PIPE LOCATED IN PLENUM SPACE SHALL BE WRAPPED IN FIRE RATED INSULATION.
6. SLOPE PIPING DOWN 1/3" PER FOOT IN DIRECTION OF FLOW.
7. PIPING SHOULD REPRESENT SCREWED FITTINGS. REFER TO SPECIFICATIONS FOR PIPING MATERIAL, FITTINGS AND INSTALLATION REQUIREMENTS.

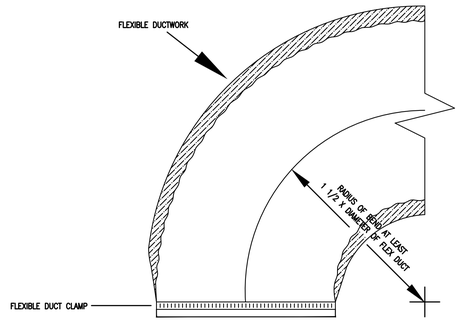
2 CONDENSATE DRAIN TRAP DETAIL
SCALE: NTS



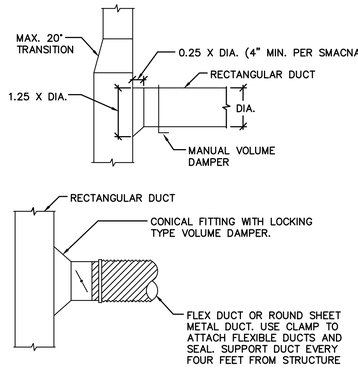
1 HORIZONTAL AC MOUNTING DETAIL
SCALE: NTS



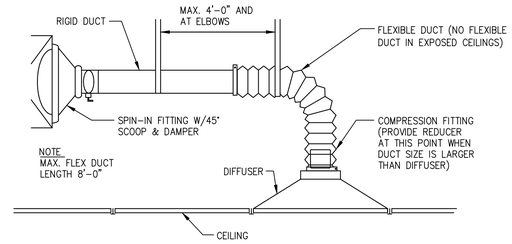
7 WALL MOUNTED EXHAUST FAN
SCALE: NTS



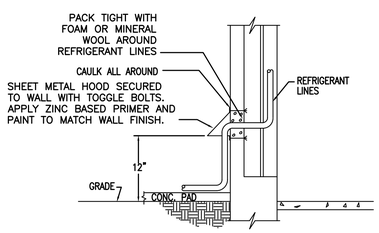
6 FLEXIBLE DUCT WITH CLAMP DETAIL
SCALE: NTS



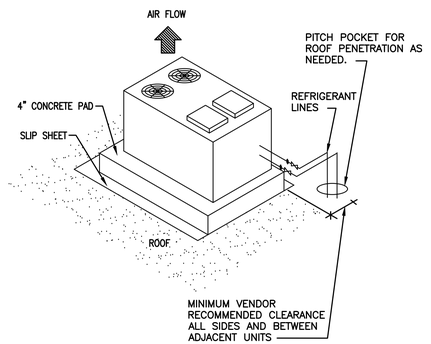
5 BRANCH DUCT DETAIL
SCALE: NTS



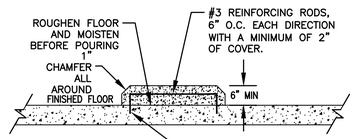
4 CEILING DIFFUSER DETAIL
SCALE: NTS



11 REFRIG. PIPE EXTERIOR WALL PENETRATION
SCALE: NTS



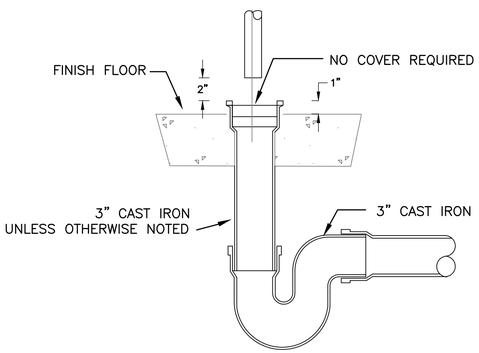
10 ROOF MOUNTED CONDENSING UNIT DETAIL
SCALE: NTS



NOTES:

1. CONCRETE BASE SHALL BE 6" LARGER ALL AROUND THAN THE BASE OF THE EQUIPMENT BEING SUPPORTED.
2. BASE CONCRETE SHALL BE MINIMUM 3000 PSI.
3. REINFORCING MAT TO BE SECURED WITH MINIMUM 16 GAUGE STEEL TIE WIRE.

9 EQUIPMENT CONCRETE BASE DETAIL
SCALE: NTS



8 HUB DRAIN DETAIL
SCALE: NTS

GEORGIA REGISTERED No. 30595 PROFESSIONAL ENGINEER BRIGHT E. BEASLEY
Bright & Bailey
9/20/2022

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Drawing Revisions:

1 PLAN REVIEW COMMENTS 10.07.22

Drawing Date: 09/20/2022
Project number: 220001
Drawn By: DMB
Checked By: DEB

GEORGIA MOUNTAIN FOOD BANK
1642 CALVARY INDUSTRIAL DRIVE SW
GAINESVILLE, GA 30507

Drawing Description:
MECHANICAL DETAILS

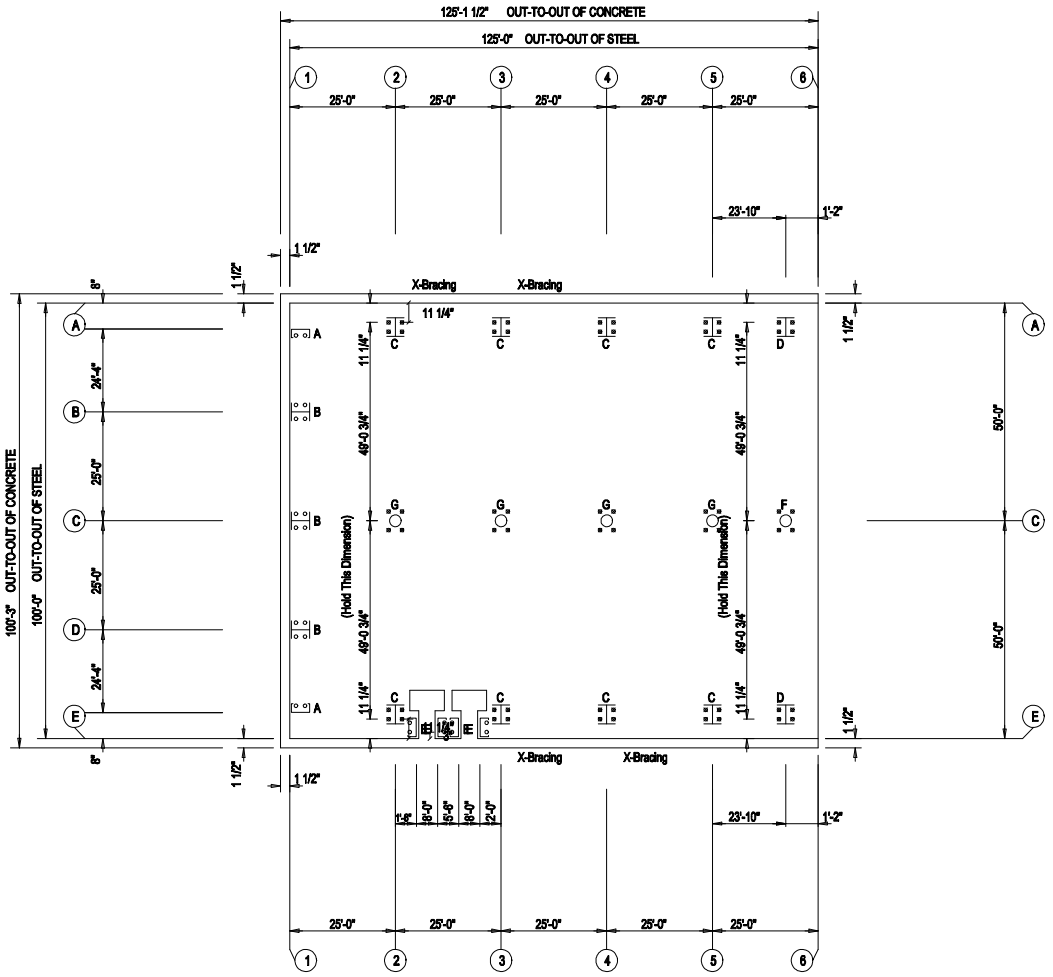
M3.1

construction - synonym - By reviewing the plans/specs for Code Compliance does not relieve the owner, design professionals, contractors or their representatives from the responsibility to comply with all local, state and national codes and standards in effect at time of permit issuance. Our review is not a check of every item and does not prevent this department from requiring corrections during construction. Any change/deviation to approved plans shall be approved as noted above.

GAINESVILLE BUILDING & PLANNING

○ Dia= 5/8"

⊠ Dia= 3/4"



ANCHOR BOLT PLAN

NOTE: All Base Plates @ 100'-0" (U.N.)

IMPORTANT!
Do Not Set Anchor Rods with these Preliminary Drawings.

Whirlwind Steel Buildings will not be responsible for the location of the anchor rods on the Preliminary Drawings.

PRELIMINARY DRAWINGS:
These drawings are the initial plans prepared by the sales team to provide a means of communication between the customer and Whirlwind Steel Buildings, Inc. These plans are NOT intended to be used for construction.

WHIRLWIND STEEL BUILDINGS
P.O. BOX 75280
HOUSTON, TX 77234
PH: 800-324-9992
FAX: 832-553-4600

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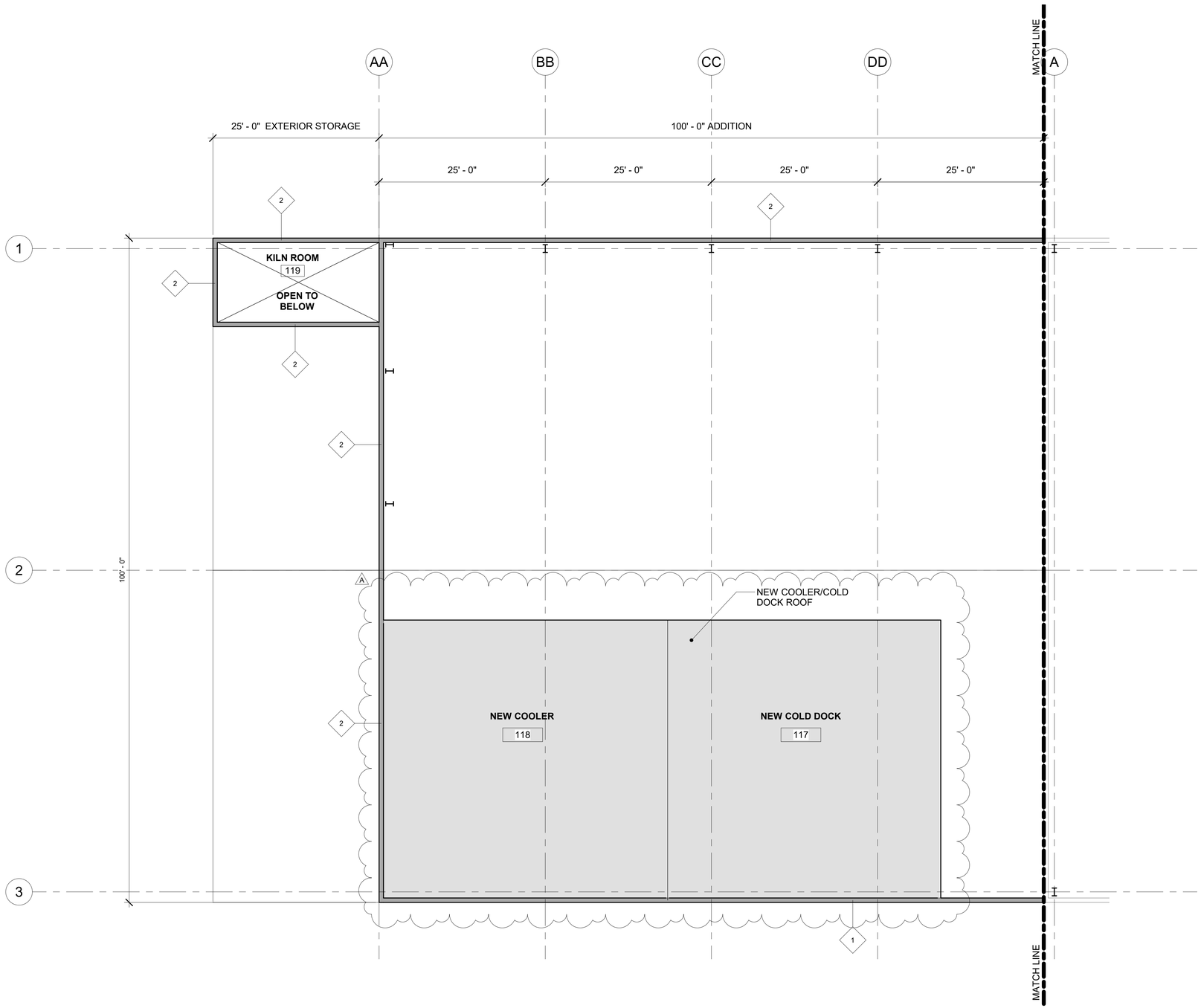
DESC: ANCHOR BOLT PLAN		BLDG. SIZE: 100'-0" x 125'-0" x 22'-6"	
CUSTOMER: Sintony Design		LOCATION: City, State Zip	
REFERENCE: Georgia Mountain Food Bank			
JOBSITE: Gainesville, GA 30507		COUNTY: Hall	
DATE: 9/20/22	QUOTE NO: GA1078	DWG NO:	ISSUE: PRELIM

GCN1997(2) 11/12/2022 By reviewing the plans/specs for Code Compliance does not relieve the owner, design professionals, contractors or their representatives from the responsibility to comply with all local, state and national codes and standards in effect at time of permit issuance. "Cut sheets" or every item are not provided as an "approval" from requiring corrections during construction. Any changes/revisions to approved plans must be approved by shop drawing this point.



PROPOSED SECOND LEVEL FLOOR PLAN - SECTION A

1 1/8" = 1'-0"

NORTH

KEY PLAN

A	B

SHEET NOTES

1. ALL DIMENSIONS TO BE VERIFIED IN THE FIELD BY THE G.C. PRIOR TO ANY INSTALLATION OF NEW WORK
2. ALL EXPOSED GYPSUM BOARD IN LEASE AREA SHALL BE SEALED AND PRIMED ONLY
3. GENERAL CONTRACTOR SHALL BE REQUIRED TO VISIT PREMISE TO INSPECT EXISTING CONDITIONS AND VERIFY WORK TO BE PERFORMED.
4. ALL WORK PERFORMED SHALL BE IN STRICT COMPLIANCE WITH GOVERNING FEDERAL, STATE AND LOCAL BUILDING CODES REQUIREMENTS.
5. FIRE SEAL ALL PENETRATIONS THRU RATED WALLS, FLOORS, AND CEILINGS WITH APPROVED FIRE RATED CAULK AS DIRECTED BY LOCAL JURISDICTIONS.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF TRASH AND DEBRIS FROM THE JOB SITE ON A DAILY BASIS.
7. REFER TO MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS FOR EQUIPMENT AND RELATED DETAILS.
8. REFER TO STRUCTURAL DRAWINGS FOR FOUNDATION DETAILS.
9. SEE STRUCTURAL DRAWINGS FOR ALL SLAB ON GRADE DETAILS AND SPECIFICATIONS
10. FOR LOCATION OF MOP SINKS AND FLOOR DRAINS SEE PLUMBING DRAWINGS.
11. ALL FRAMING DIMENSIONS ARE ROUGH FRAMING, AND DO NOT INCLUDE ANY FINISH MATERIALS UNLESS OTHERWISE NOTED.
12. ALL WALLS SHALL BE OF 6" OR 4" METAL STUDS UNLESS OTHERWISE NOTED.
13. APPLY BORIC ACID ON TOP OF THE MUD SILL OR BOTTOM PLATE, PRIOR TO CLOSING ALL WALLS.
14. PROVIDE BLOCKING FOR RESTROOM ACCESSORIES, DOOR STOPS, EXP. JOINTS, CABINETS, ETC.
15. INSTALL OCCUPANT LOAD SIGN PER LOCAL FIRE MARSHALL. COORDINATE LOCATION WITH OWNER/FIRE MARSHALL.
16. PROVIDE MASTIC OR APPROVED SEALANT UNDER ALL EXT. PLATES
17. SEE DRAWING A601 FOR DOOR TYPES, SCHEDULE AND HARDWARE SCHEDULE.
18. SEE MECHANICAL DRAWING FOR NEW COOLER AND COLD DOCK SPECIFICATIONS.

WALL TYPES

1. EXTERIOR - BRICK VENEER TO 4' A.F.F. / 26 GAUGE PBR MTL. PANELS STARTING AT 4' A.F.F ON EXTERIOR SHEATHING ON WALL GIRTS W/ R-20 BATT INSULATION AND WATERPROOF COVER
2. EXTERIOR - 26 GAUGE PBR MTL. PANELS ON EXTERIOR SHEATHING ON WALL GIRTS W/ R-20 BATT INSULATION AND WATERPROOF COVER
3. INTERIOR - 3 5/8" MTL. STUD AT 16" O.C. ON 1 LAYER 1/2" GWB (BOTH SIDES) W/ SOUND ATTENTUATION INSULATION
4. INTERIOR - 25 GAUGE 6" MTL STUD AT 24" O.C. ON 1 LAYER 5/8" GWB (BOTH SIDES) W/ SOUND ATTENTUATION INSULATION

STATE OF GEORGIA
GARFIELD PEART
CERTIFICATE NO. 13901
REGISTERED ARCHITECT
09/20/22

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Drawing Revisions:

A ADDENDUM #3 12.13.22

Drawing Date: 09/20/2022
Project Number: 220001
Drawn By: AP
Checked By: GLP

GEORGIA MOUNTAIN FOOD BANK
1642 CALVARY INDUSTRIAL DRIVE SW
GAINESVILLE, GA 30507

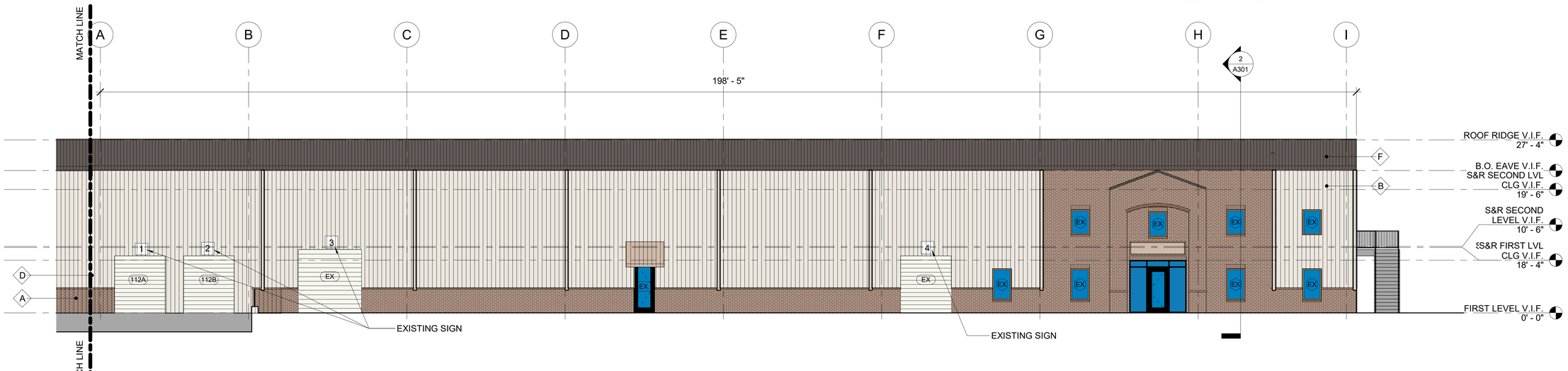
Drawing Description:
PROPOSED SECOND LEVEL FLOOR PLAN

A105-A

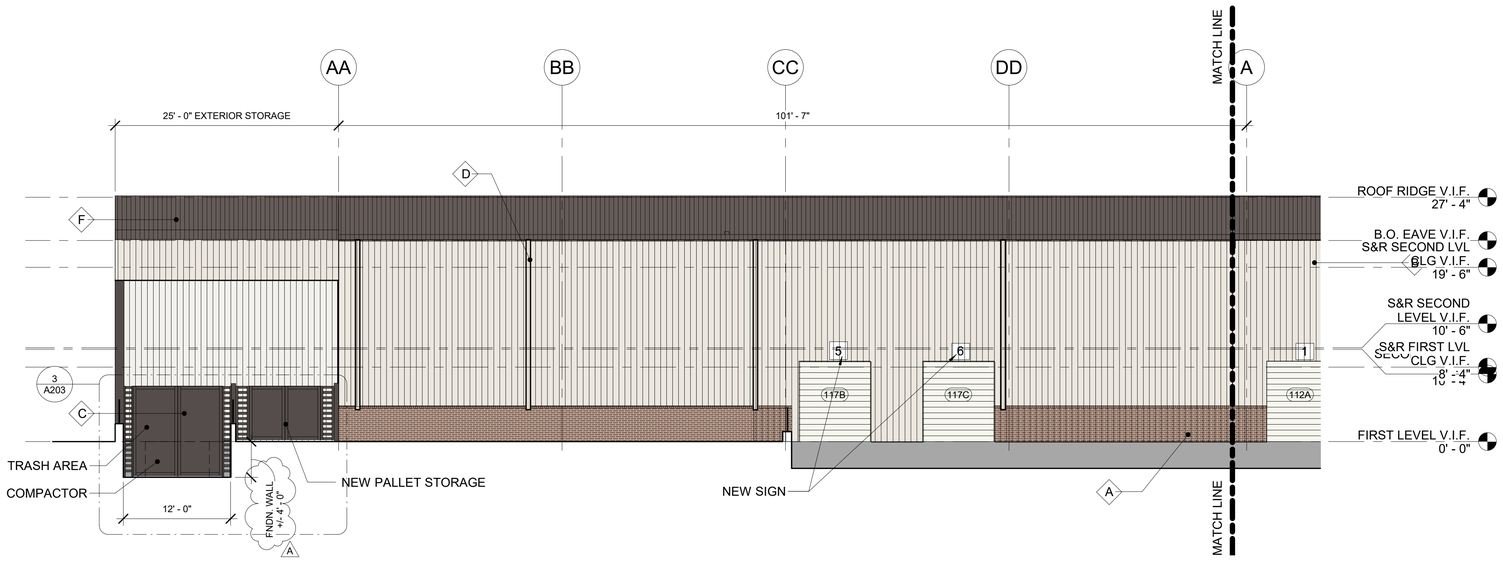
EXTERIOR FINISHES SCHEDULE		
SYMBOL	MATERIAL	DESCRIPTION
A	BRICK	MFR/TYPE: CHEROKEE BRICK, SHELMAN'S BLUFF
B	METAL PANELING	26 GAUGE PBR PANELS, COLOR TO MATCH EXISTING
C	METAL GATE	20 GAUGE CORRUGATED METAL DECK WELDED TO FRAME
D	SEAMLESS GUTTER AND DOWNSPOUT	6" SEAMLESS GUTTER & DOWNSPOUT SYSTEM, COLOR TO MATCH EXISTING
E	METAL FENCE	
F	ROOF METAL PANELING	24 GAUGE PBR PANELS, COLOR TO MATCH EXISTING

NOTES:

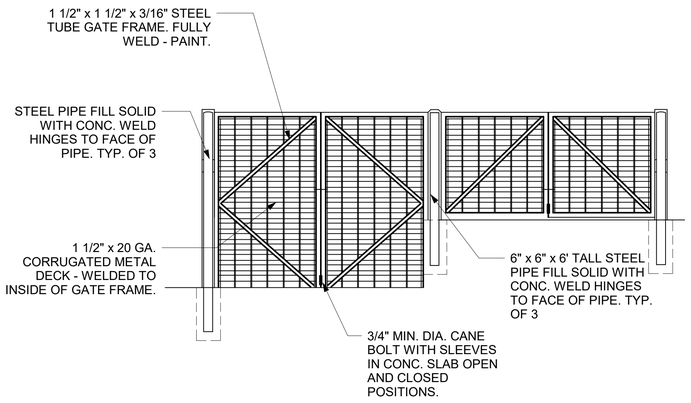
1. PREPARE ALL SURFACES TO BE PAINTED AS PER MANUFACTURERS RECOMMENDATIONS
2. TEST. S.W. COLORS TO COLORS ON SITE - ADJUST SW COLORS AS REQ'D TO MATCH
3. ALL COLORS AND FINISHES SHALL BE PRESENTED TO OWNER FOR APPROVAL PRIOR TO INSTALLATION
4. BUILDING DOOR NUMBER SIGNAGE TO MATCH EXISTING.



1 PROPOSED EAST ELEVATION - SECTION B
1/8" = 1'-0"



2 PROPOSED EAST ELEVATION - SECTION A
1/8" = 1'-0"



3 EXTERIOR STORAGE GATE ELEVATION
1/4" = 1'-0"

STATE OF GEORGIA
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Drawing Revisions:

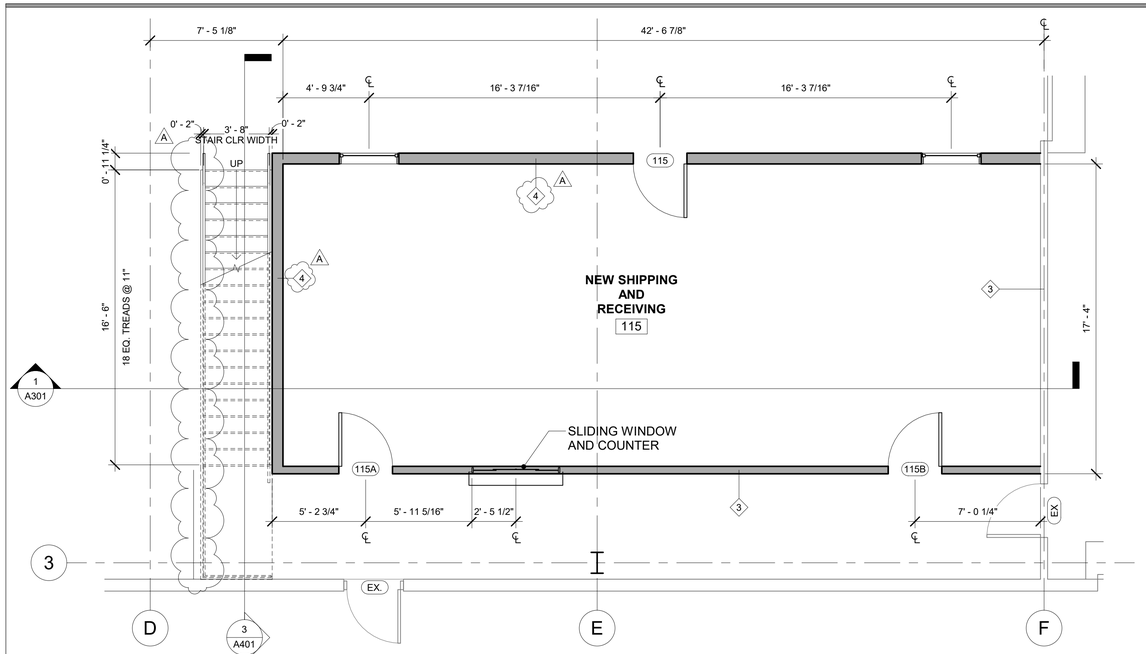
A	ADDENDUM #3	12.13.22

Drawing Date:	09/20/2022
Project Number:	220001
Drawn By:	AP
Checked By:	GLP

GEORGIA MOUNTAIN FOOD BANK
1642 CALVARY INDUSTRIAL DRIVE SW
GAINESVILLE, GA 30507

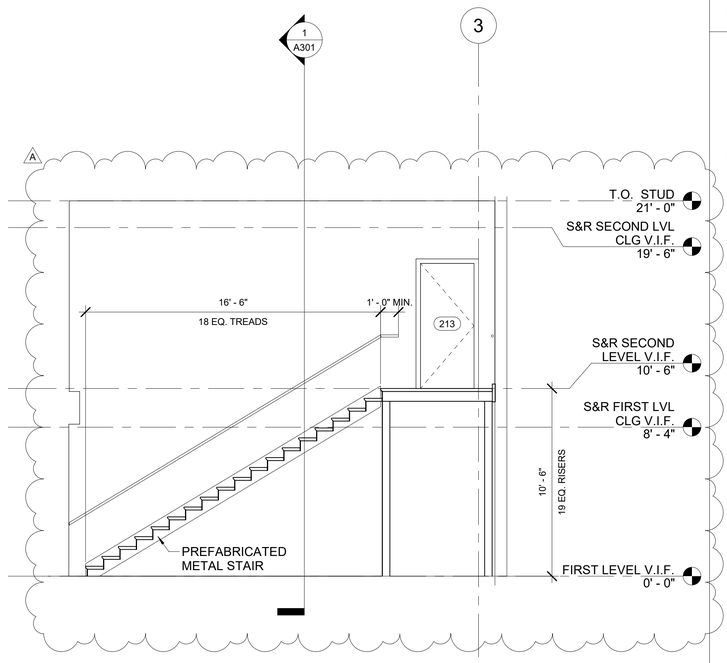
Drawing Description:
PROPOSED ELEVATIONS

A203-A



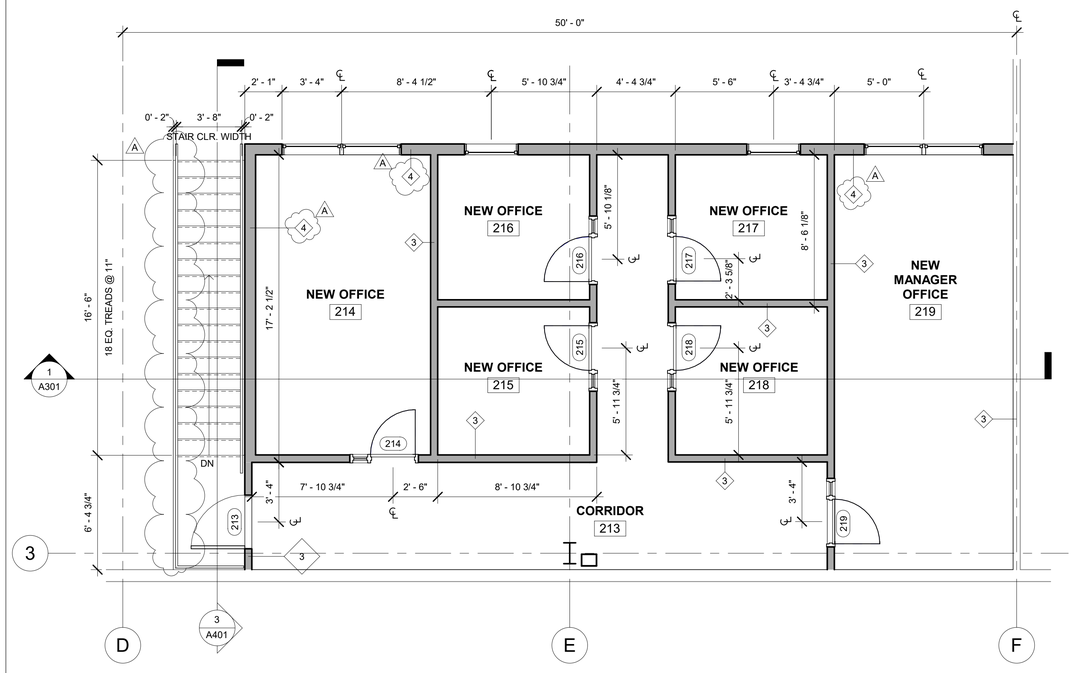
1 ENLARGED FIRST LEVEL PLAN - SHIPPING AND RECEIVING

1/4" = 1'-0"



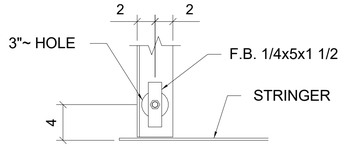
3 STAIR SECTION - SHIPPING AND RECEIVING

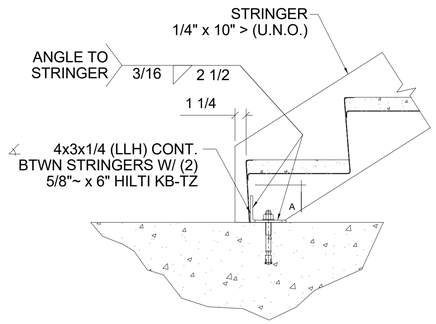
1/4" = 1'-0"



2 ENLARGED SECOND LEVEL PLAN - SHIPPING AND RECEIVING

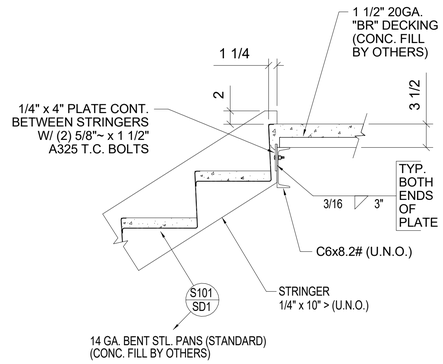
1/4" = 1'-0"





5 STAIR DETAIL - CONNECTION TO SLAB

1 1/2" = 1'-0"



6 STAIR DETAIL - CONNECTION TO STEEL LANDING

N.T.S.

KEY PLAN

A	B

SHEET NOTES

1. ALL DIMENSIONS TO BE VERIFIED IN THE FIELD BY THE G.C. PRIOR TO ANY INSTALLATION OF NEW WORK
2. ALL EXPOSED GYPSUM BOARD IN LEASE AREA SHALL BE SEALED AND PRIMED ONLY
3. GENERAL CONTRACTOR SHALL BE REQUIRED TO VISIT PREMISE TO INSPECT EXISTING CONDITIONS AND VERIFY WORK TO BE PERFORMED.
4. ALL WORK PERFORMED SHALL BE IN STRICT COMPLIANCE WITH GOVERNING FEDERAL, STATE AND LOCAL BUILDING CODES REQUIREMENTS.
5. FIRE SEAL ALL PENETRATIONS THRU RATED WALLS, FLOORS, AND CEILINGS WITH APPROVED FIRE RATED CAULK AS DIRECTED BY LOCAL JURISDICTIONS.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF TRASH AND DEBRIS FROM THE JOB SITE ON A DAILY BASIS.
7. REFER TO MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS FOR EQUIPMENT AND RELATED DETAILS.
8. REFER TO STRUCTURAL DRAWINGS FOR FOUNDATION DETAILS.
9. SEE STRUCTURAL DRAWINGS FOR ALL SLAB ON GRADE DETAILS AND SPECIFICATIONS
10. FOR LOCATION OF MOP SINKS AND FLOOR DRAINS SEE PLUMBING DRAWINGS.
11. ALL FRAMING DIMENSIONS ARE ROUGH FRAMING, AND DO NOT INCLUDE ANY FINISH MATERIALS UNLESS OTHERWISE NOTED.
12. ALL WALLS SHALL BE OF 6" OR 4" METAL STUDS UNLESS OTHERWISE NOTED.
13. APPLY BORIC ACID ON TOP OF THE MUD SILL OR BOTTOM PLATE, PRIOR TO CLOSING ALL WALLS.
14. PROVIDE BLOCKING FOR RESTROOM ACCESSORIES, DOOR STOPS, EXP. JOINTS, CABINETS, ETC.
15. INSTALL OCCUPANT LOAD SIGN PER LOCAL FIRE MARSHALL. COORDINATE LOCATION WITH OWNER/FIRE MARSHALL.
16. PROVIDE MASTIC OR APPROVED SEALANT UNDER ALL EXT. PLATES
17. SEE DRAWING A601 FOR DOOR TYPES, SCHEDULE INTERIOR FINISH PLAN AND HARDWARE SCHEDULE.

WALL TYPES

1. EXTERIOR - BRICK VENEER TO 4' A.F.F. / 26 GAUGE PBR MTL. PANELS STARTING AT 4' A.F.F ON EXTERIOR SHEATHING ON WALL GIRTS W/ R-20 BATT INSULATION AND WATERPROOF COVER
2. EXTERIOR - 26 GAUGE PBR MTL. PANELS ON EXTERIOR SHEATHING ON WALL GIRTS W/ R-20 BATT INSULATION AND WATERPROOF COVER
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Drawing Revisions:

A	ADDENDUM #3	12.13.22

Drawing Date:	09/20/2022
Project Number:	220001
Drawn By:	AP
Checked By:	GLP

GEORGIA MOUNTAIN FOOD BANK
1642 CALVARY INDUSTRIAL DRIVE SW
GAINESVILLE, GA 30507

Drawing Description:
ENLARGED PLANS

A401-A

STRUCTURAL GENERAL NOTES

FOUNDATIONS

1. ALL FOOTINGS SHALL BEAR ON NATURAL UNDISTURBED SOIL HAVING A MINIMUN SAFE BEARING CAPACITY OF 2,000 PSF, OR ENGINEERED CONTROLLED COMPACTED FILL AS REQUIRED HAVING ALLOWABLE BEARING CAPACITY OF 2,000 PSF. THERE WAS NO GEOTECHNICAL REPORT DURING THE DESIGN OF THIS BUILDING. IT'S ABSOLUTELY NECESSARY THAT A GEOTECHNICAL ENGINEER IS RETAINED DURING THE CONSTRUCTION PHASE TO ANALYZED THE SOIL WITHIN THE BUILDING FOOTPRINT AND PROVIDE THE STRUCTURAL ENGINEER OF THE PROJECT WITH THE SOIL PROFILE INDICATING THE TYPE OF SOIL ENCOUNTERED AT THE SITE, THE DENSITY, THE SOIL FRICTION ANGLE, THE ACTIVE, PASSIVE AND STATIC SOIL PRESSURES. ALSO A GEOTECHNICAL ENGINEER SHALL VERIFY THE SOIL COMPACTION BEFORE INSTALLATION OF ANY FOUNDATION SYSTEM.
2. ISOLATED FOOTING SHALL BE LOWERED AND PIERS SHALL BE ADDED IN HEIGHT, ALL AS APPROVED, WHERE SOIL OF THE SPECIFIED BEARING CAPACITY IS FOUND AT A LOWER ELEVATION THAN SHOWN ON THE PLANS.
3. BACKFILLING AGAINST FOUNDATION WALLS SHALL NOT BE DONE UNTIL WALL HAS BEEN CURED TO A SUFFICIENT STRENGTH (7 DAYS MINIMUM), AND WALLS ARE PROPERLY SHORED OR BRACED FOR ADDITIONAL 7 DAYS.
4. THE CONTRACTOR SHALL SAFEGUARD AND PROTECT ALL EXCAVATIONS, AND EXCAVATIONS SHALL BE KEPT FREE OF WATER.
5. EDGES OF FOOTINGS SHALL NOT BE PLACED AT A SLOPE GREATER THAN 1 (VERTICAL) TO 2 (HORIZONTAL) WITH RESPECT TO ANY ADJACENT FOOTINGS U.N.O.
6. THE FOUNDATION CONTRACTOR SHALL REFER TO THE MECHANICAL, CIVIL AND ELECTRICAL CONTRACT DRAWINGS FOR ALL LOCATIONS OF TRENCHES, PITS, CONDUITS, UNDERFLOOR AND PERIMETER DRAINAGE SYSTEMS ETC.

CONCRETE

1. ALL CONCRETE WORK SHALL CONFORM WITH THE REQUIREMENTS OF THE LATEST EDITION OF THE AMERICAN CONCRETE INSTITUTE A.C.I. 318 AND OTHER A.C.I. CONCRETE CODES.
2. ALL CONCRETE USED FOR THIS PROJECT SHALL BE AS FOLLOWS:
   a. ALL CONCRETE FOR FOOTINGS AND BUILDING SLAB ON GRADE SHALL BE STONE CONCRETE HAVING A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI AT 28 DAYS.
   b. ALL CONCRETE FOR EXTERIOR WORK LIKE THE RAMP, SIDEWALKS, ETC. SHALL BE STONE CONCRETE WITH 4,000 PSI MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS.
3. REPRESENTATIVE TEST CYLINDERS WILL BE TAKEN FROM THE CONCRETE PLACED EACH DAY IN ACCORDANCE WITH A.C.I. CODE AND SPECIFICATIONS IN THIS PROJECT.
4. REINFORCING STEEL SHALL BE DEFORMED BARS OF INTERMEDIATE GRADE NEW BILLET STEEL CONFORMING TO CURRENT REQUIREMENTS OF A.S.T.M. A–615 GRADE 60. DESIGN STRESS = 24,000 PSI. LAP BARS, 40 BAR DIAM. UNLESS OTHERWISE SHOWN.
5. WELDED WIRE FABRIC SHALL HAVE A MINIMUM ULTIMATE STRENGTH OF 70,000 PSI AND SHALL CONFORM TO A.S.T.M. A–185.
8. EXCAVATIONS SHALL BE KEPT FREE OF WATER. NO CONCRETE SHALL BE PLACED IN WATER.
9. ALL SLABS ON GRADE SHALL HAVE THICKENINGS AT DEPRESSIONS, OPENINGS, ETC. AS REQUIRED OR AS SHOWN HERIN OR ON ARCHITECTURAL DRAWINGS.
10. ALL MESH SHALL BE SPLICED SO THAT THE OVERLAP BETWEEN OUTERMOST CROSS WIRES OF EACH SHEET IS NOT LESS THAN THE SPACING OF THE CROSS WIRES PLUS TWO INCHES, UNLESS OTHERWISE SHOWN ON DRAWINGS.
11. FOR ALL SLABS ON GRADE WHERE NOT OTHERWISE SPECIFIED, USE STYLE 4 x 4 – W4 x W4 W.W.F.
12. ALL SLABS ON GRADE SHALL BE TROWELLED IN AT EVERY COLUMN LINE AND ELSEWHERE SHOWN ON FOUNDATION PLAN. SEE TYPICAL SLAB ON GRADE DETAIL FOR CONTROL JOINTS.

STRUCTURAL AND MISCELLANEOUS STEEL

1. ALL STRUCTURAL AND MISCELLANEOUS STEEL SHALL CONFORM TO THE NINTH EDITION OF THE AISC "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS" AND ALL ITS SUPPLEMENTS, AND TO THE AISC "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES".
2. ALL STRUCTURAL AND MISCELLANEOUS STEEL SHALL CONFORM TO ASTM A992 HAVING A MINIMUM YIELD STRENGTH OF 50,000 PSI.
3. STEEL PIPES SHALL CONFORM TO ASTM A53, TYPE E OR S GRADE B.
4. ALL WELDED CONNECTIONS SHALL BE DONE WITH E70XX ELECTRODES. ALL BOLTED CONNECTIONS SHALL USE 3/4" ASTM A325N HIGH STRENGTH BOLTS UNLESS NOTED OTHERWISE. ALL BEAM CONNECTIONS SHALL DEVELOP THE FULL UNIFORM LOAD CAPACITY THE MEMBER CAN CARRY WITH DUE CONSIDERATION TO CONCENTRATED LOADS AT THE ENDS OF THE MEMBER. NO CONNECTION SHALL BE MADE USING LESS THAN TWO BOLTS. ALL ANCHOR BOLTS SHALL BE ASTM A–307.
5. SHOP AND FIELD WELDS SHALL BE MADE BY APPROVED CERTIFIED WELDERS AND SHALL CONFORM TO THE AMERICAN WELDING SOCIETY CODE FOR BUILDINGS AWS D1.1. WELDS SHALL DEVELOP THE FULL STRENGTH OF MATERIALS BEING WELDED, UNLESS OTHERWISE NOTED.
6. NO OPENINGS IN BEAMS SHALL BE PERMITTED WITHOUT THE WRITTEN PERMISSION OF THE ENGINEER.
7. THE USE OF A GAS–CUTTING TORCH IN THE FIELD FOR CUTTING HOLES OR FOR CORRECTING FABRICATION ERRORS WILL NOT BE PERMITTED ON NEW STRUCTURAL FRAMING MEMBERS EXCEPT WITH THE WRITTEN APPROVAL OF THE ENGINEER FOR EACH SPECIFIC CONDITION.
8. ALL STRUCTURAL STEEL SHALL BE SHOP PAINTED WITH AN APPROVED CORROSION RESISTANT PRIMER. ALL STEEL SHALL BE PAINTED IN STRICT ACCORDANCE WITH THE AISC SPECIFICATIONS AND MANUFACTURER'S RECOMMENDATIONS. PRIOR TO PAINTING, ALL STEEL SURFACES SHALL BE PREPARED IN ACCORDANCE WITH SSPC. REFER TO SPECIFICATIONS SECTION 05120.
9. ERECTED STRUCTURAL STEEL SHALL BE INSPECTED BY QUALIFIED INSPECTORS AS STIPULATED IN THE SPECIFICATIONS. FIELD INSPECTION REPORTS TO BE FILED WITH THE STRUCTURAL ENGINEER WITHIN 5 DAYS OF TIME OF ACTUAL INSPECTION. INSPECTORS MUST BE NOTIFIED OF ALL PHASES OF CONSTRUCTION AND WELDING BY GENERAL CONTRACTOR.

METAL DECKS

1. ALL METAL DECKING SHALL BE DESIGNED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST EDITION OF THE "SPECIFICATION OF THE STEEL DECK INSTITUTE".
2. ALL METAL DECK SHALL BE GALVANIZED. ALL GALVANIZING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A525, G60.
3. METAL DECK SHALL BE AS FOLLOWS:
   A: NON–COMPOSITE FLOOR DECK SHALL BE SIMILAR TO 1" 22 GAUGE STEEL FORM DECK EQUIVALENT TO VULCRAFT 1.0C22 CSV CONFORM DECK SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES PER FOOT WIDTH:

   Ip = 0.073 IN4/FT.
   In = 0.073 IN4/FT.
   Sp = 0.130 IN3/FT.
   Sn = 0.134 IN3/FT.
   Fy = 60 Ksi
4. ALL METAL DECKS HAVE BEEN DESIGNED TO BE CONTINOUS OVER 2 SPANS MINIMUM, AND SHALL BEAR AT LEAST 2" ON STEEL SUPPORTS.
5. DECK SHALL BE WELDED TO SUPPORTING STEEL AT ENDS OF UNITS AND ALL INTERMEDIATE SUPPORTS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS (UNLESS NOTED OTHERWISE ON PLAN).
6. STANDARD CLOSURE SHALL BE PROVIDED AS REQUIRED.
7. SHOP DRAWINGS SHALL INDICATE ALL INFORMATION NECESSARY FOR A COMPLETE FABRICATION AND ERECTION OF THE METAL DECK.
8. PROVIDE STEEL HEADER FRAMES FOR SUPPORT OF METAL DECKING FOR ALL OPENINGS GREATER THAN 10" SQUARE.
9. PROVIDE 12" x 16 GAUGE CONTINUOUS GALVANIZED STEEL BUTT STRIP WHERE DECK CHANGES DIRECTION.
10. PROVIDE STEEL LEDGER ANGLE 2 1/2" x 2 1/2" x 1/4" AT STEEL COLUMNS AS REQUIRED FOR SUPPORT OF METAL DECKING.

LIGHT GAUGE METAL STUDS

1. THE ENGINEERING OF ALL STRUCTURAL LIGHT GAUGE METAL STUD WALL INCLUDING THEIR CONNECTIONS AND LINTELS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
2. ALL LIGHT GAGE METAL INFORMATION SHOWN ON THE DRAWINGS ARE BASED ON DIETRICH INDUSTRIES, INC. PRODUCTS.
3. ALL LIGHT GAGE STUDS MUST BE MANUFACTURED WITH CORROSION RESISTANT STEEL OR GALVANIZED IN ACCORDANCE WITH ASTM A525.
4. ALL MEMBERS SHALL MEET THE FOLLOWING REQUIREMENTS:

   ALL 54 mil & HEAVIER MEMBERS – ASTM A446 GRADE D (50 KSI MIN.)
   ALL 43 mil & LIGHTER MEMBERS – ASTM A446 GRADE A (33 KSI MIN.)
5. ALL LOAD BEARING STUDS MUST BE SEATED TIGHT, WITHIN 1/16" AGAINST TRACK, WEB. ALSO, STUD MUST BE SCREW ATTACHED OR WELDED TO EACH TRACK LEG.
6. ERECT FRAMING AND PANELS PLUMB, LEVEL AND SQUARE IN STRICT ACCORDANCE WITH THE APPROVED SHOP DRAWINGS.
7. HANDLING AND LIFTING OF PREFABRICATED PANELS SHALL BE DONE IN A MANNER AS TO NOT CAUSE DISTORTION IN ANY MEMBER.
8. TRACK SHALL BE SECURELY ANCHORED TO THE SUPPORTING STRUCTURE AS SHOWN ON THE ERECTION DRAWINGS. CONCRETE ANCHORS SHALL BE INSTALLED AFTER FULL COMPRESSIVE STRENGTH HAS BEEN ACHIEVED.
9. ALL TRACK BUTT JOINTS, ABUTTING PIECES OF TRACK SHALL BE SECURELY ANCHORED TO A COMMON STRUCTURAL ELEMENT, OR THEY SHALL BE BUTT–WELDED OR SPLICED TOGETHER.
10. STUDS SHALL BE PLUMBED, ALIGNED AND SECURELY ATTACHED TO THE FLANGE OR WEBS OF BOTH UPPER AND LOWER TRACKS.
11. JACK STUDS OR CRIPPLES SHALL BE INSTALLED BELOW WINDOW SILLS, ABOVE WINDOW AND DOOR HEADS, AT FREE STANDING STAIR RAILS AND ELSEWHERE TO FURNISH SUPPORT AND SHALL BE SECURELY ATTACHED TO SUPPORTING MEMBERS.
12. FRAMED OPENINGS SHALL INCLUDE HEADERS AND SUPPORTING STUDS AS SHOWN ON SHOP DRAWINGS.
13. TEMPORARY BRACING SHALL BE PROVIDED UNTIL ERECTION IS COMPLETED.
14. PROVIDE HORIZONTAL BRIDGING FOR ALL STUDS AT 48 INCH. ON CENTER, OR PER MANUFACTURER'S RECOMMENDATION.

DESIGN CODE

2018 EDITION OF THE INTERNATIONAL BUILDING CODE.

FLOOR LIVE LOAD

SLAB ON GRADE = 150 PSF
MECHANICAL ROOM = 150 PSF, SECOND FLOOR = 70 PSF.

ROOF LIVE LOAD

30 PSF

ROOF SNOW LOAD

GROUND SNOW LOAD, Pg = 25 PSF
FLAT ROOF SNOW LOAD, Pf = 18 PSF
SNOW EXPOSURE FACTOR, Ce = 1.0
SNOW LOAD IMPORTANCE FACTOR, Is = 1.0
THERMAL FACTOR, Ct = 1.0

WIND LOAD

BASIC WIND SPEED = 120 MPH
WIND LOAD IMPORTANCE FACTOR, Iw = 1.0
WIND EXPOSURE FACTOR = C
INTERNAL PRESSURE COEFFICIENTS = +0.18, –0.18
COMPONENTS AND CLADDING = 25 PSF

EARTHQUAKE DESIGN DATA

SEISMIC IMPORTANCE FACTOR, Ie = 1.0
OCCUPANCY CATEGORY = GROUP II
MAPPED SPECTRAL RESPONSE ACCELERATIONS Ss = 0.184g, S1 = 0.063g
SITE CLASS = D
SPECTRAL RESPONSE COEFFICIENTS, Sds = 0.196, Sd1 = 0.101
SEISMIC DESIGN CATEGORY = B
BASIC SEISMIC FORCE RESISTING SYSTEM = STRUCTURAL STEEL SYSTEM NOT SPECIFICALLY DETAILED FOR SEISMIC RESISTANCE
DESIGN BASE SHEAR = 30 KIPS
SEISMIC RESPONSE COEFFICIENT = 0.065
RESPONSE MODIFICATION FACTOR, R = 3.5
ANALYSIS PROCEEDURE USED = EQUIVALENT LATERAL FORCE PROCEDURE

ASSUMED SOIL BEARING CAPACITY

2,000 PSF

SUBMITALS

SHOP DRAWINGS FOR ALL STRUCTURAL ITEMS MENTIONED ABOVE ARE PART OF THE STRUCTURAL DESIGN OF THIS PROJECT AND MUST BE SUBMITTED AND REVIEWED BY OUR OFFICE. IF THE CONTRACTOR OR OWNER FAILS TO SUBMIT SHOP DRAWINGS FOR OUR REVIEW PRIOR TO BEGINNING OF CONSTRUCTION WORK, EMMANUEL ANSA, P.E. WILL NOT BE RESPONSIBLE FOR THE STRUCTURAL DESIGN OF THIS PROJECT. THE CONTRACTOR OR OWNER IS REQUIRED TO SUBMIT SHOP DRAWINGS AND CALCULATIONS (IF ANY) FOR THE FOLLOWING ITEMS TO THE STRUCTURAL ENGINEER OF THE PROJECT FOR REVIEW PRIOR TO FABRICATION OR CONSTRUCTION OF THESE ITEMS:

1. CONCRETE MIX DESIGN ACCORDING TO ACI REQUIREMENTS.
* 2. STRUCTURAL STEEL
3. METAL DECK
* 4. EXTERIOR WALL LIGHT GAGE METAL STUD WALL AND PARAPET SYSTEM.

ITEMS IDENTIFIED WITH AN ASTERISK SHALL HAVE THEIR DRAWINGS AND CALCULATIONS SIGNED AND SEALED BY A PROFESSIONAL ENGINEER IN THE LOCAL CODE JURISDICTION.

THE REVIEW OF SHOP DRAWINGS BY THE STRUCTURAL ENGINEER DOES NOT RELIEVE THE CONTRACTOR, SUBCONTRACTOR OR FABRICATOR THE RESPONSIBILITY OF MEETING THE REQUIREMENTS OF THE ENTIRE DESIGN DOCUMENTS OF THIS PROJECT INCLUDING THE ARCHITECTURAL DRAWINGS AND OTHER DISCIPLINES. A MINIMUM OF TWO WEEKS SHALL BE ALLOWED FOR THE STRUCTURAL ENGINEER TO REVIEW ANY SUBMITTAL.

STEEL STAIRS

1. SEE SPECIFICATIONS.
2. STAIR SUPPLIER SHALL DESIGN ALL STAIR FRAMING INCLUDING RAILINGS TO SUPPORT THE FOLLOWING LOADS:
   STAIRS – DEAD LOAD – AS REQUIRED BY CONSTRUCTION LIVE LOAD – 100 PSF OR 300 POUND CONCENTRATED LOAD AT CENTER OF TREND
   RAILINGS – 50 POUNDS PER LINEAR FOOT OR 200 POUNDS CONCENTRATED LOAD APPLIED IN ANY DIRECTION.
3. SUBMIT COMPLETE SHOP AND ERECTION DRAWINGS FOR REVIEW PRIOR TO FABRICATION OR ERECTION. STAIR SUPPLIER'S SHOP DRAWINGS SHALL CONTAIN A CERTIFICATION SEALED BY A REGISTERED PROFESSIONAL ENGINEER STATING THAT THE STAIR AND RAILING COMPONENTS HAVE BEEN DESIGNED TO SUPPORT THE SPECIFIED LOADS.

EXISTING CONSTRUCTION

1. EXISTING CONDITIONS INDICATED ON THE DRAWINGS ARE BASED ON INFORMATION FROM THE ARCHITECT OF THE PROJECT. CONTRACTOR SHALL VERIFY AND COORDINATE EXISTING CONDITIONS AND DIMENSIONS PRIOR TO PROCEEDING WITH WORK. SHOULD SIGNIFICANT DIFFERENCES BE FOUND BETWEEN GIVEN CONDITIONS AND ACTUAL FIELD CONDITIONS, THE ARCHITECT SHALL BE NOTIFIED BEFORE PROCEEDING WITH WORK. REMOVE EXISTING CONSTRUCTION AS REQUIRED TO INSTALL NEW WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ADJACENT EXISTING ELEMENTS AND SHALL PROVIDE ADEQUATE REPAIRS NECESSARY TO RESTORE TO ORIGINAL CONDITION AT THE CONTRACTORS EXPENSE, WITHOUT ANY COST TO THE OWNER.
2. DIMENSIONS SHOWN ON THE STRUCTURAL DRAWINGS ARE GENERALLY OBTAINED FROM THE ARCHITECT AND ARE INCLUDED AS INFORMATION COMPLIMENTARY TO THE ARCHITECTURAL DRAWINGS. GENERALLY, ARCHITECTURAL DIMENSIONS WILL GOVERN OVER STRUCTURAL DIMENSIONS. LAYOUT OF BUILDING FOUNDATIONS OR OTHER ITEMS MAY BE MADE USING THE DIMENSIONS SHOWN ON THE STRUCTURAL DRAWINGS ONLY IF THE CONTRACTOR HAS CAREFULLY STUDIED AND COMPARED THESE DRAWINGS WITH THE ARCHITECTURAL DRAWINGS AND HAS RECEIVED CLARIFICATION FROM THE ARCHITECT, REGARDING ANY ERRORS, INCONSISTENCIES OR OMISSIONS. ITEMS INSTALLED INCORRECTLY, DUE TO THE CONTRACTOR'S LACK OF SUCH VERIFICATION, SHALL BE CORRECTED AT THE CONTRACTORS

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Drawing Revisions:

Drawing Date:	12/12/2022
Project number:	220001
Drawn By:	TS
Checked By:	EA

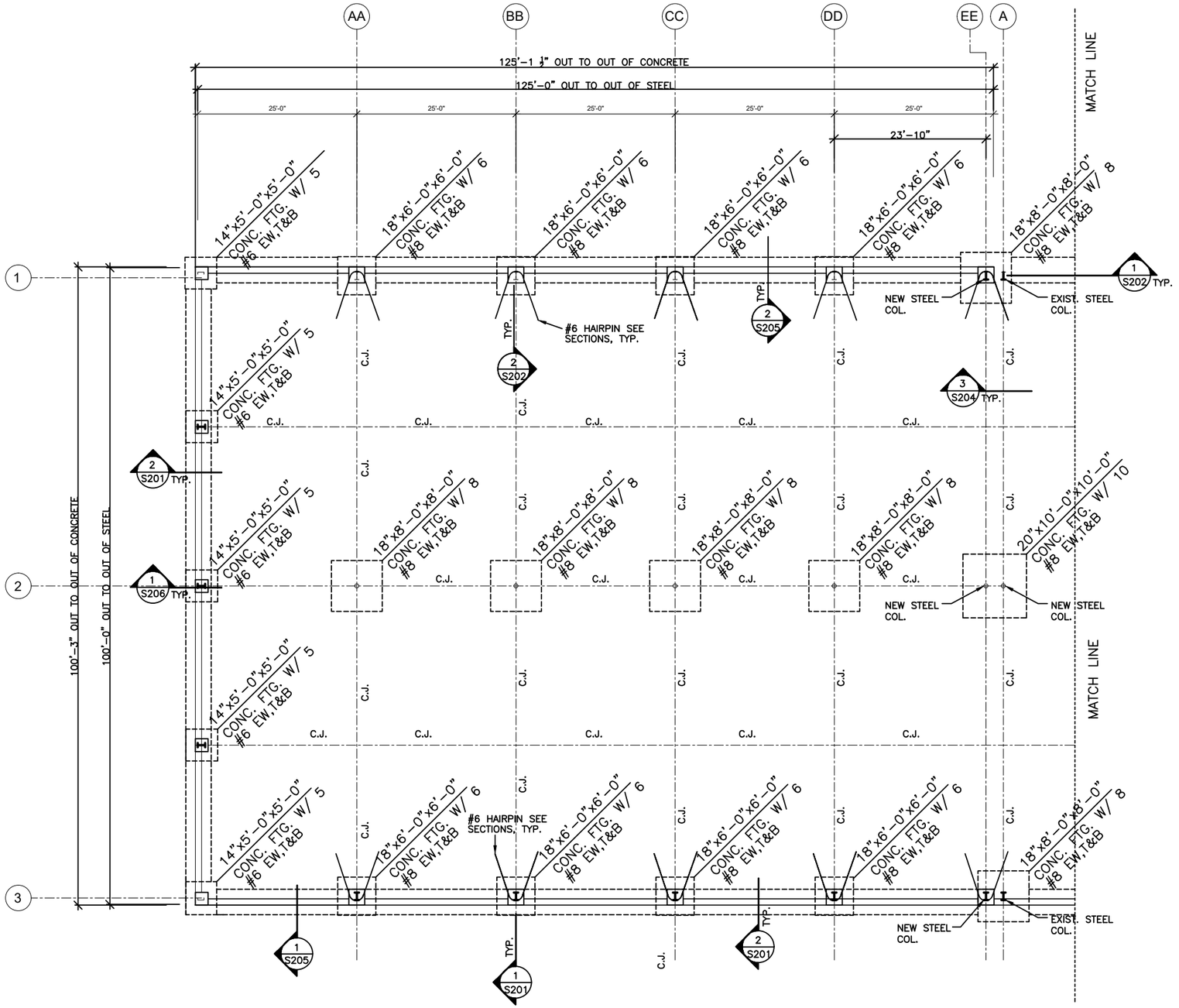
GEORGIA MOUNTAIN FOOD BANK
1642 CALVARY INDUSTRIAL DRIVE SW
GAINESVILLE, GA 30507

HALL COUNTY
P.O. BOX DRAWER 1435
GAINESVILLE, GA 30503

Drawing Description:

STRUCTURAL GENERAL NOTES

S100

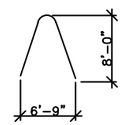


FOUNDATION / FIRST FLOOR PLAN

SCALE: 1/8" = 1'-0"

PLAN NOTES :

1. THE TOP OF THE FIRST FLOOR ELEVATION SHALL BE AS INDICATED IN THE CIVIL AND ARCHITECTURAL DRAWINGS. THIS ELEVATION SHALL EQUAL 0.00', THE REFERENCED DATUM IN THE STRUCTURAL PLANS.
2. THE CONTRACTOR SHALL RETAIN A SOIL INSPECTION AGENCY TO PERFORM SOIL INSPECTION AND VERIFY THE COMPACTION WORK AND TYPE OF SOIL USED FOR THE FOUNDATION. THE FOOTING FOR THIS BUILDING WAS DESIGNED BASED ON AN ASSUMED SOIL BEARING CAPACITY OF 2000 PSF.
3. FOR SIZE AND LOCATION OF FLOOR OPENINGS, SLOPES, RAISED AREAS, ETC. NOT SHOWN ON THIS DRAWING, SEE ARCH./MECH. AND ELECT. DRAWINGS.
4. THE SLAB ON GRADE SHALL BE 5" THICK CONC. SLAB REINFORCED WITH 4 X 4 – W4 X W4 W.W.M. PLACED ON 15 MIL VAPOR BARRIER, OVER 6" CLEANED GRAVEL OR CRUSHED STONE, UNLESS NOTED OTHERWISE ON PLAN.
5. ALL UTILITY PIPES SHOULD PENITRATE THE FOUNDATION WALL ABOVE THE TOP OF THE FOOTING. LOWER FOOTING WHEN NECESSARY TO PLACE PIPE ON TOP OF FOOTING.
6. CONTRACTOR MUST FIRST VERIFY ALL DIMENSIONS OF THE BUILDING GEOMETRY FROM THE ARCHITECTURAL DIMENSION PLAN BEFORE STARTING THE FOUNDATION CONSTRUCTION.
7. THE CONTRACTOR MUST OBTAIN THE EXACT LOCATION OF ALL COLUMN ANCHOR BOLTS FROM THE STRUCTURAL STEEL MANUFACTURER'S PLAN.
8. USE THIS DRAWING IN CONJUNCTION WITH:
   (a) STRUCTURAL NOTES ON DWG. S100
   (b) SECTIONS AND DETAILS ON DWGS. S200 TO S206
   (c) ENTIRE CONTRACT DOCUMENTS ON THIS PROJECT



TYPICAL HAIRPIN

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HALL COUNTY
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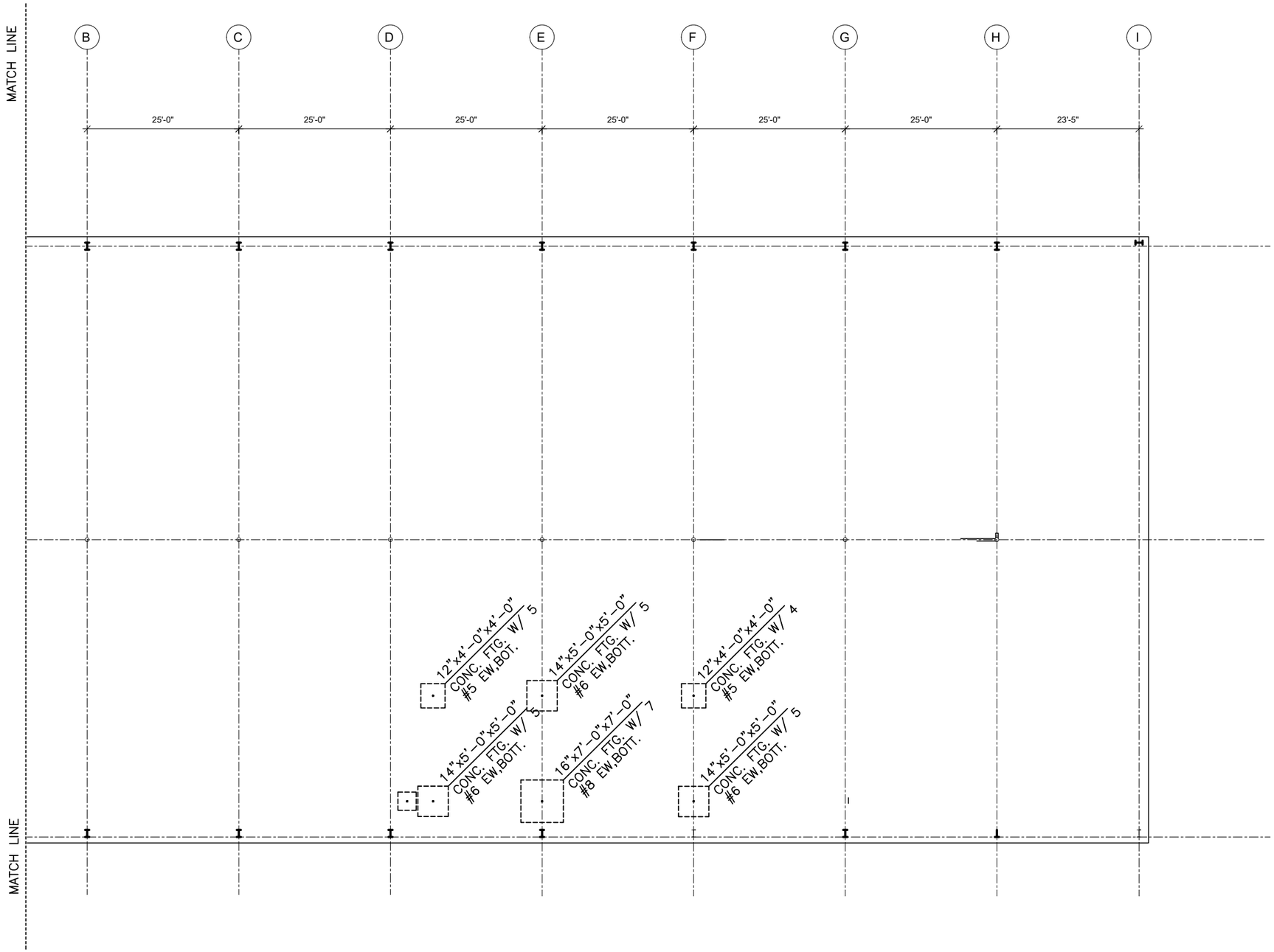
Drawing Description:

FOUNDATION/FIRST FLOOR PLAN

S101



FOUNDATION / FIRST FLOOR PLAN

SCALE: 1/8" = 1'-0"

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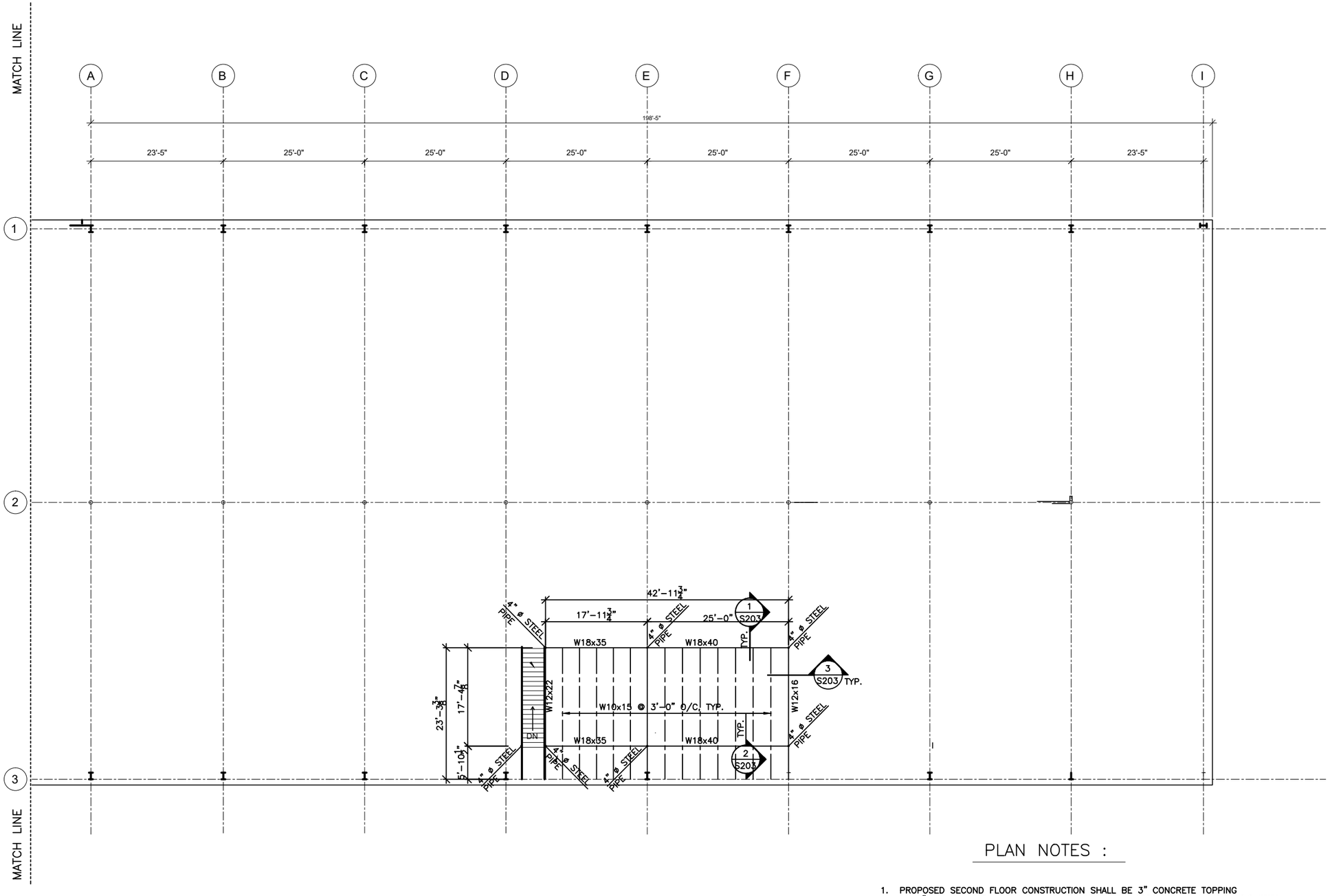
Drawing Description:

FOUNDATION/FIRST FLOOR PLAN

S102



SECOND FLOOR FRAMING PLAN

SCALE : 1/8" = 1'-0"

PLAN NOTES :

1. PROPOSED SECOND FLOOR CONSTRUCTION SHALL BE 3" CONCRETE TOPPING ON 1"x 22 GA. FORM DECK SIMILAR TO VULCRAFT 1.0C22 WITH 4x4–W2.9xW2.9 WWM.
2. CONTRACTOR SHALL OBTAIN THE EXACT LOCATION OF FLOOR OPENINGS FROM THE MECH. DWGS.
3. USE THIS DRAWING IN CONJUNCTION WITH:
   (a) STRUCTURAL NOTES ON DWG. S100
   (b) PLANS, SECTIONS AND DETAILS ON DWGS. S200 TO S205
   (c) ENTIRE CONTRACT DOCUMENTS ON THIS PROJECT

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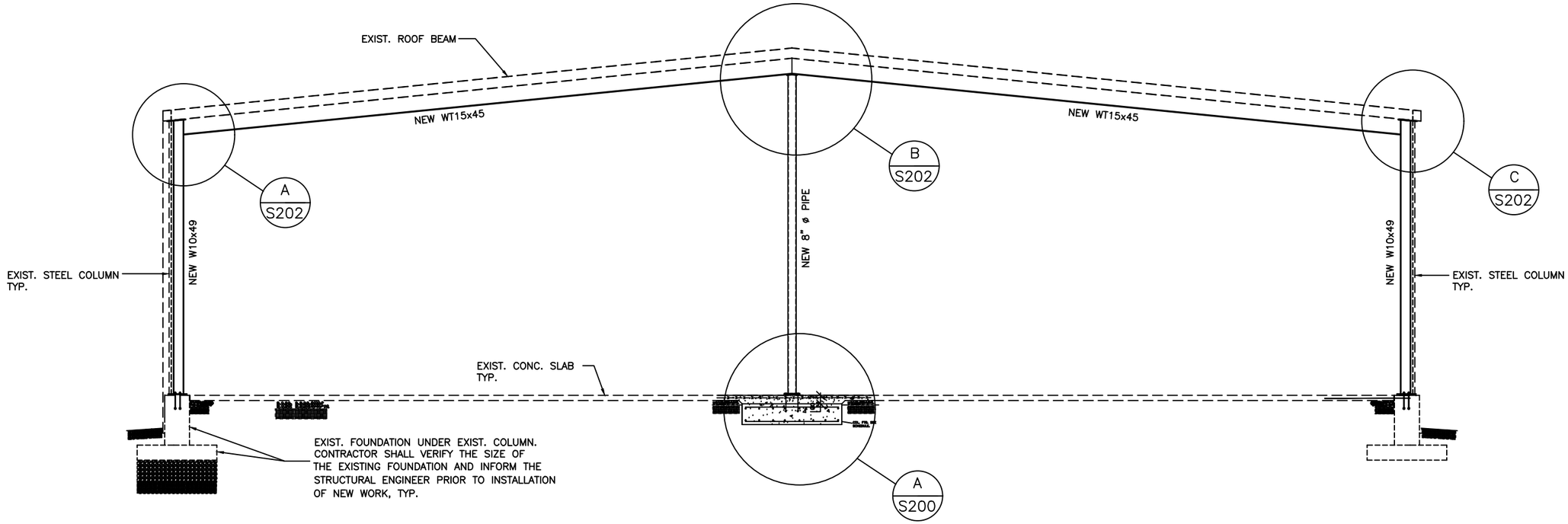
Drawing Description:

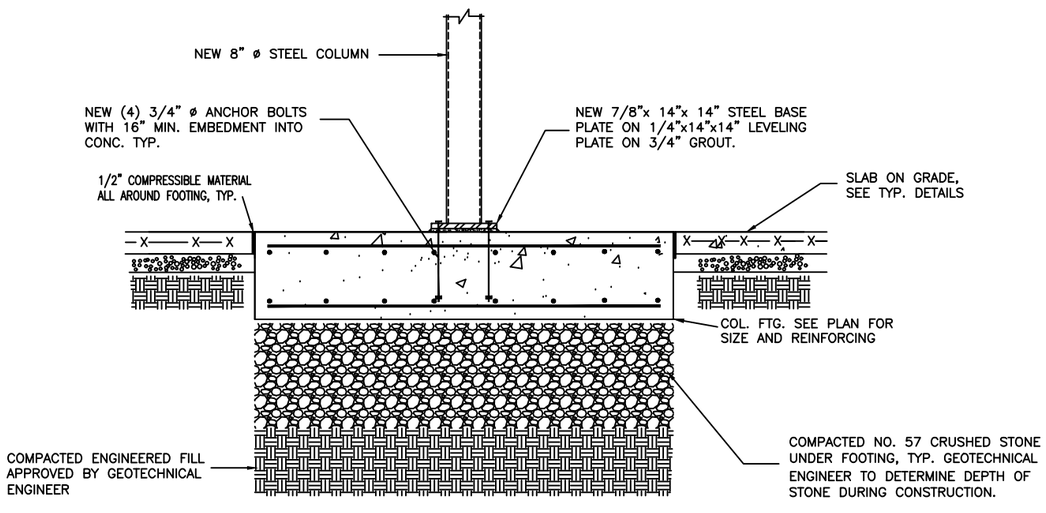
SECOND FLOOR FRAMING PLAN

S103



REINFORCEMENT OF EXISTING STEEL FRAME ALONG GRID LINE A

SCALE: NTS



FOOTING FOR NEW INTERIOR COLUMN ALONG GRID LINE A

SCALE: 3/4"=1'-0"

A
S200

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Drawing Date:	09/30/2022
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HALL COUNTY
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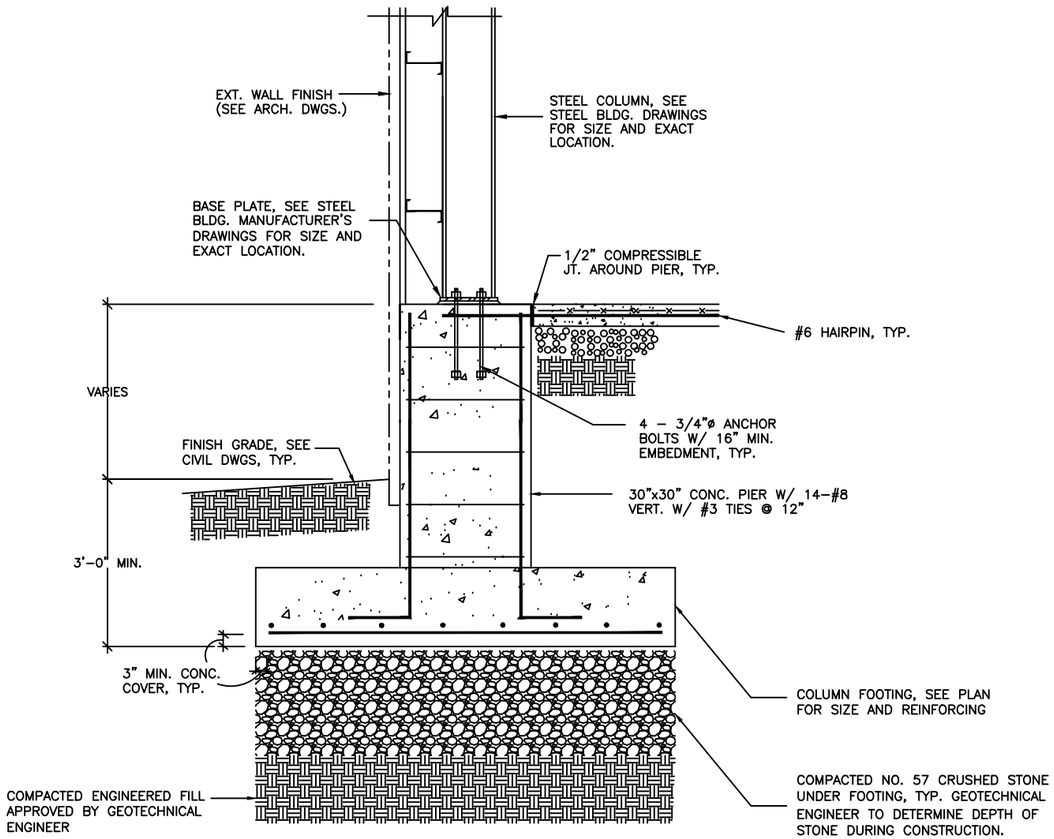
Drawing Description:

ELEVATION AND DETAILS

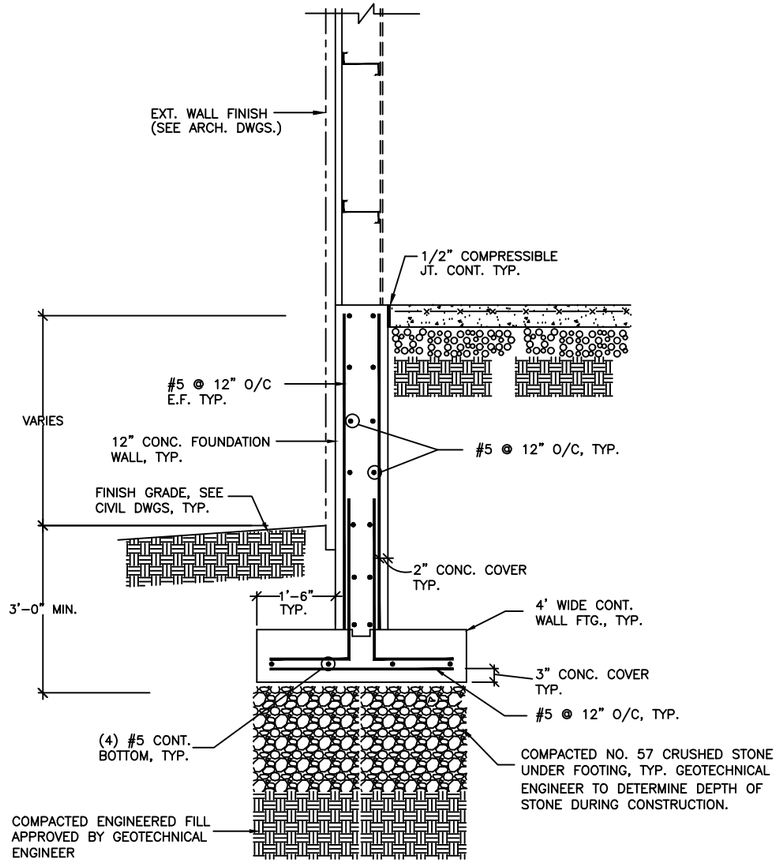
S200



SECTION – EXTERIOR COLUMN ON CONCRETE PIER

1 / S201

SCALE: 3/4" = 1'–0"



SECTION – EXTERIOR FOUNDATION WALL

2 / S201

SCALE: 3/4" = 1'–0"

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HALL COUNTY
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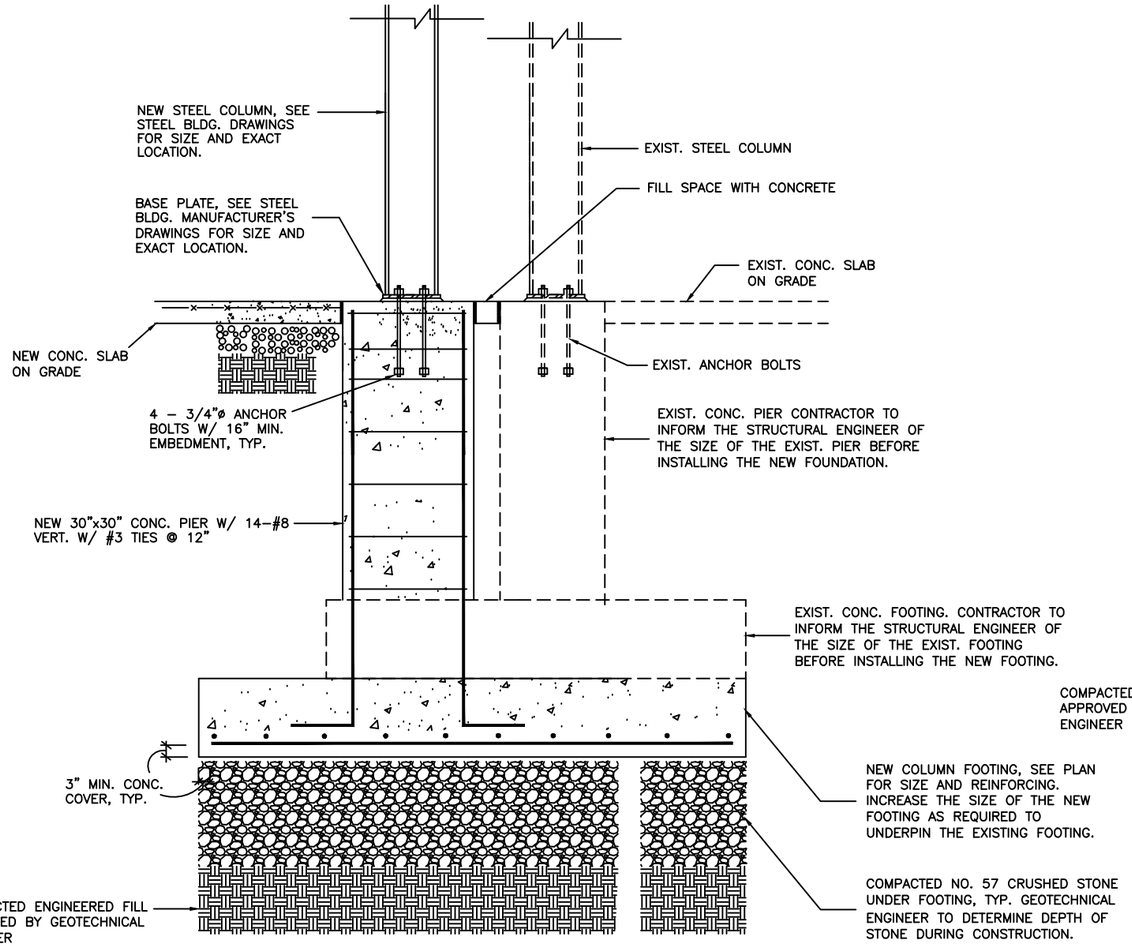
GAINESVILLE, GA 30503

Drawing Description:

SECTIONS AND DETAILS

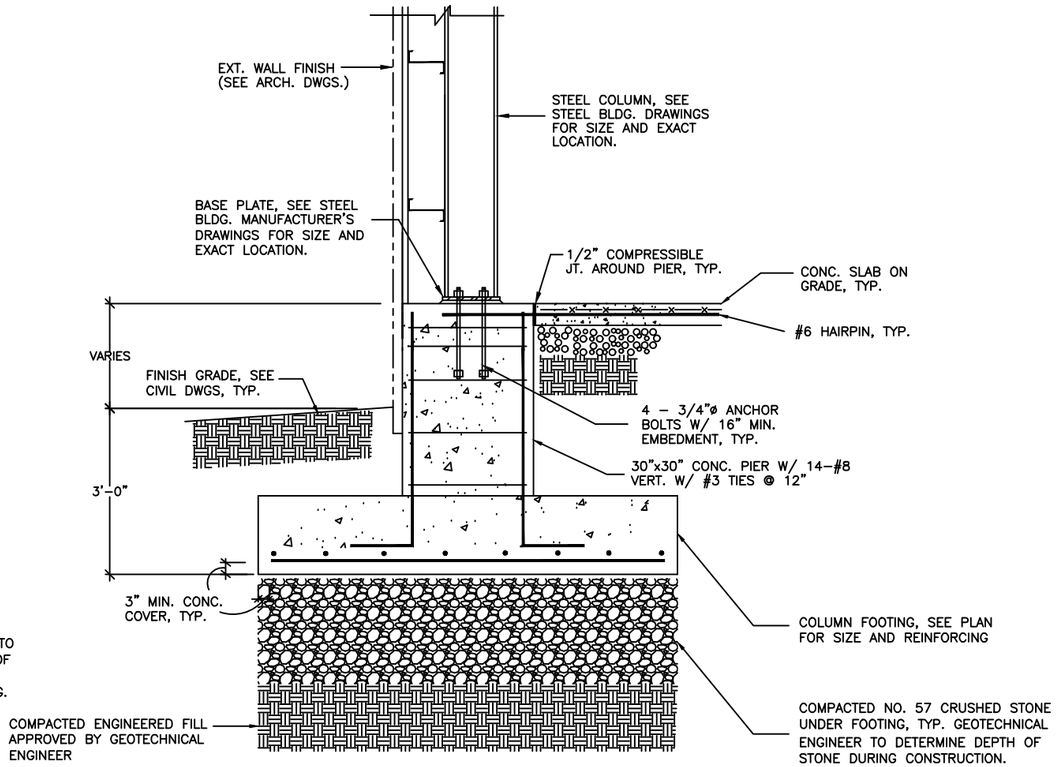
S201



SECTION – FOUNDATION OF NEW COLUMN ADJACENT TO EXISTING COLUMN

1 / S202

SCALE: 3/4" = 1'–0"



SECTION – EXTERIOR COLUMN ON CONCRETE PIER

2 / S202

SCALE: 3/4" = 1'–0"

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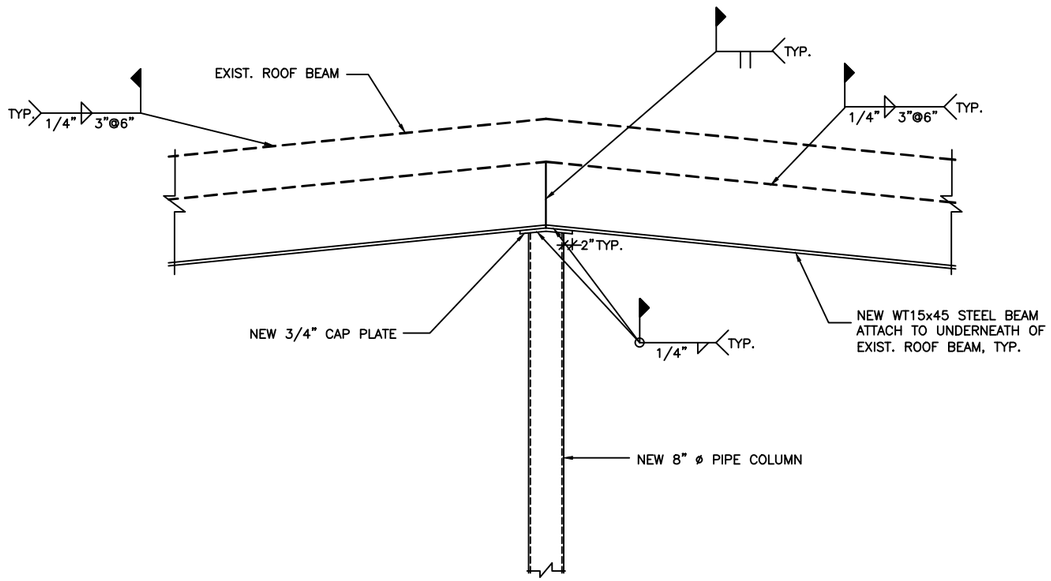
GAINESVILLE, GA 30507

HALL COUNTY
P.O. BOX DRAWER 1435
GAINESVILLE, GA 30503

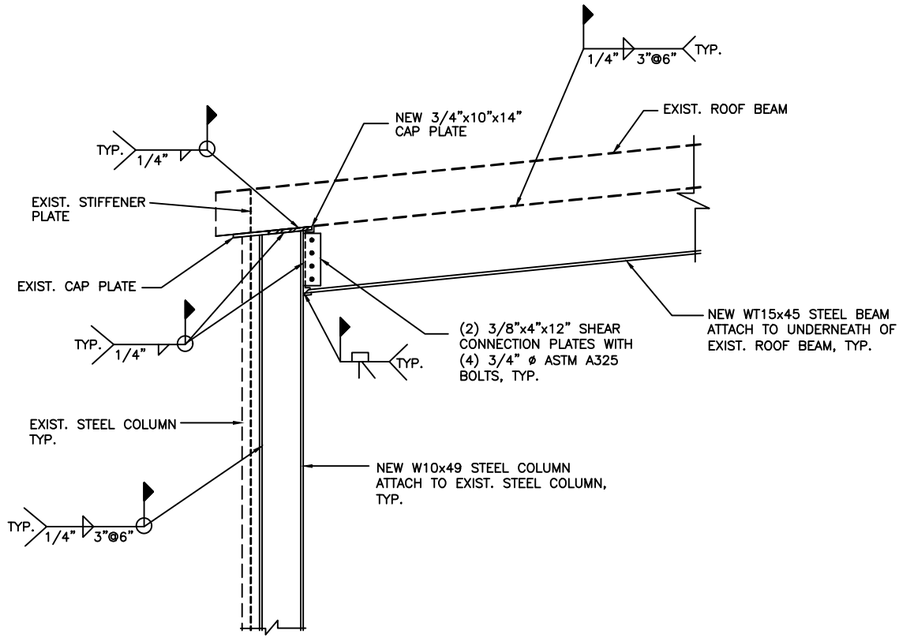
Drawing Description:

SECTIONS AND DETAILS

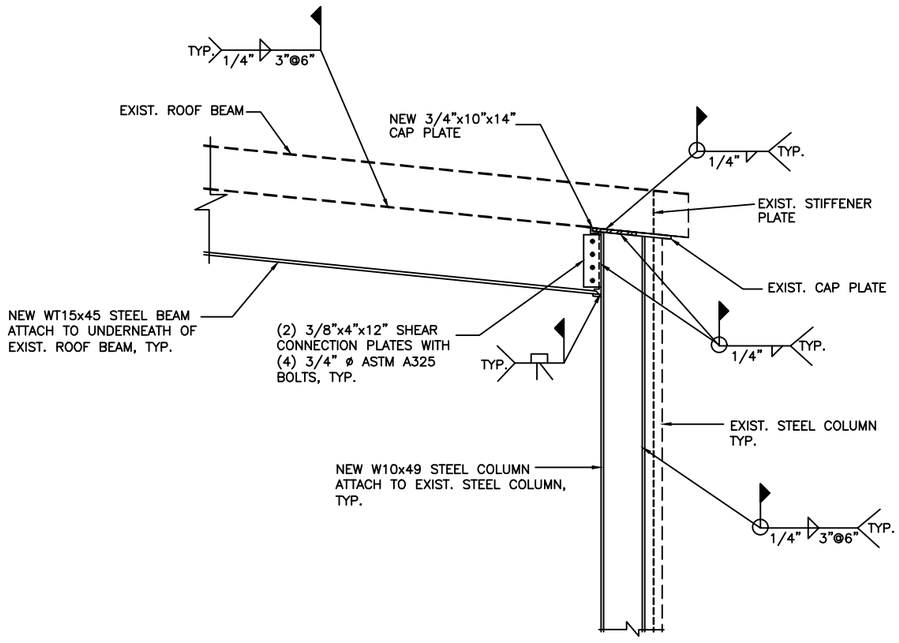
S202



DETAIL B
SCALE: 3/4"=1'-0"



DETAIL A
SCALE: 3/4"=1'-0"



DETAIL C
SCALE: 3/4"=1'-0"

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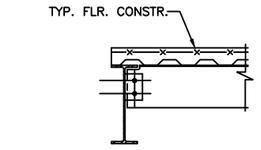
GAINESVILLE, GA 30507

HALL COUNTY
P.O. BOX DRAWER 1435
GAINESVILLE, GA 30503

Drawing Description:

SECTION AND DETAILS

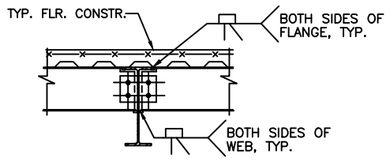
S203



SECTION

SCALE: 3/4" = 1'-0"

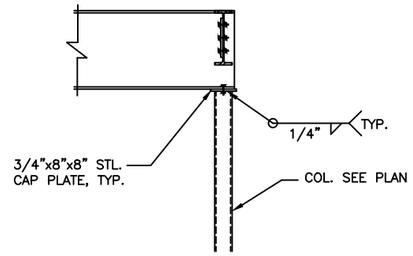
1



SECTION

SCALE: 3/4" = 1'-0"

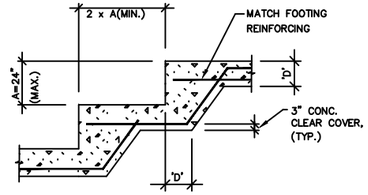
2



TYPICAL DETAIL : STEEL BEAM ON PIPE COLUMN

SCALE : 3/4" = 1'-0"

A

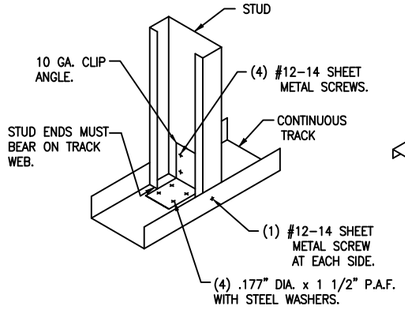


SEE WALL AND FOOTING DETAILS FOR REINFORCING

TYPICAL STEP FOOTING DETAIL

NOT TO SCALE

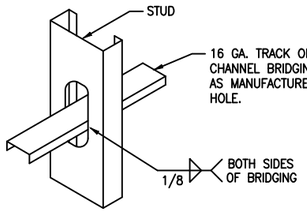
B



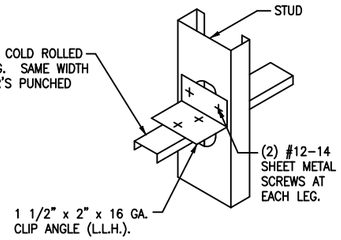
SINGLE STUD ATTACHMENT

SCREW CONNECTION

C



WELD ATTACHMENT



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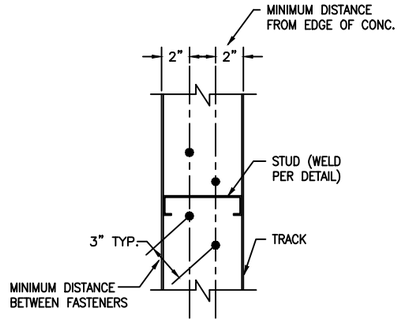
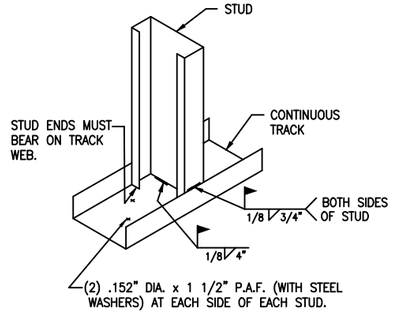


FASTENING ARRANGEMENT

TRACK TO CONCRETE (PLAN)

D



SINGLE STUD ATTACHMENT

TRACK TO CONCRETE (VIEW)

E

STUD BRIDGING DETAIL

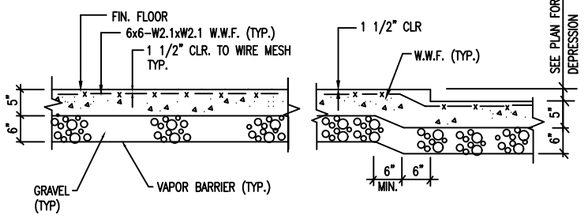
(SEE ELEVATIONS FOR BRIDGING LOCATIONS)

(SEE DRAWING 242D2 FOR TYPICAL BRIDGING SPLICE)

D

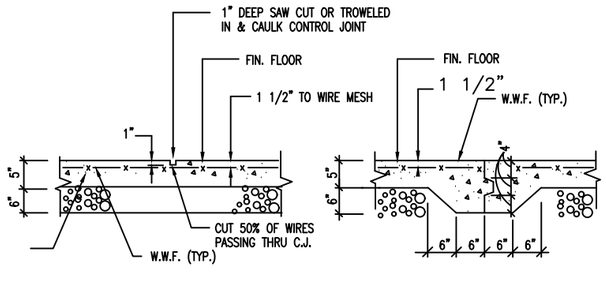
TYPICAL DETAIL

F



TYPICAL

AT DEPRESSION



CONTROL JOINT (C.J.)

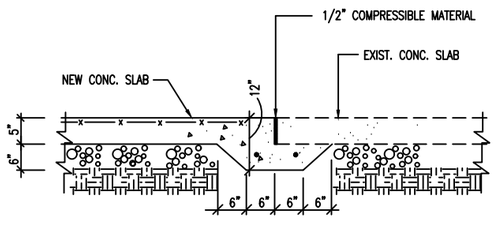
TYP. CONSTRUCTION JOINT

TYPICAL SLAB ON GRADE DETAILS

NOT TO SCALE

J

–



SECTION AT NEW AND EXISTING CONCRETE SLAB LINE

SCALE: 3/4"=1'-0"

3

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Drawing Revisions:

Drawing Date: 12/12/2022
Project number: 220001
Drawn By: TS
Checked By: EA

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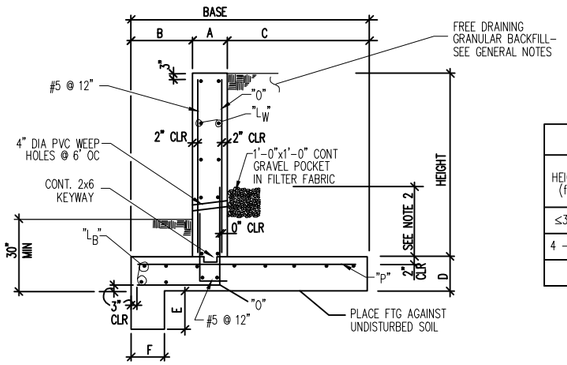
Drawing Description:

SECTIONS AND DETAILS

S204

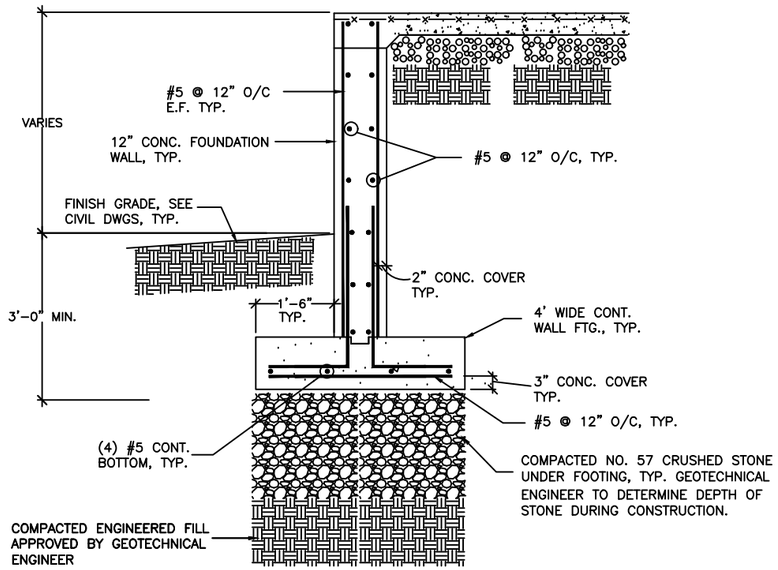


CONCRETE RETAINING WALL NOTES:

1) PROVIDE WEAKENED PLANE CONTROL JOINTS OR CONSTRUCTION JOINTS AT 25'–0"± ON CENTER AS PER DETAIL 3/SA602 AND 4/SA602 .
2) PROVIDE KEYED EXPANSION JOINTS AT 100'–0"± ON CENTER AS PER DETAIL 6/SA602.
3) ALL LAP SPLICES OF TENSION FACE REINFORCING AND HORIZONTAL REINFORCING SHALL BE TENSION LAP SPLICES. SEE 1/SA601 FOR SCHEDULE.
4) TOP OF FOOTING SURFACE AT WALL SHALL BE INTENTIONALLY ROUGHENED TO A FULL AMPLITUDE OF APPROXIMATELY 1/4".
5) CHAMFER ALL EXPOSED WALL CORNERS.
6) ALL BACKFILL SHALL BE ACCOMPLISHED USING MATERIAL CONSISTING OF BANK RUN GRAVEL, CRUSHED STONE AND/OR MATERIAL APPROVED BY THE GEOTECHNICAL ENGINEER, WITH OPTIMUM MOISTURE CONTENT FOR COMPACTING AND SHALL BE FREE OF ANY DEBRIS.

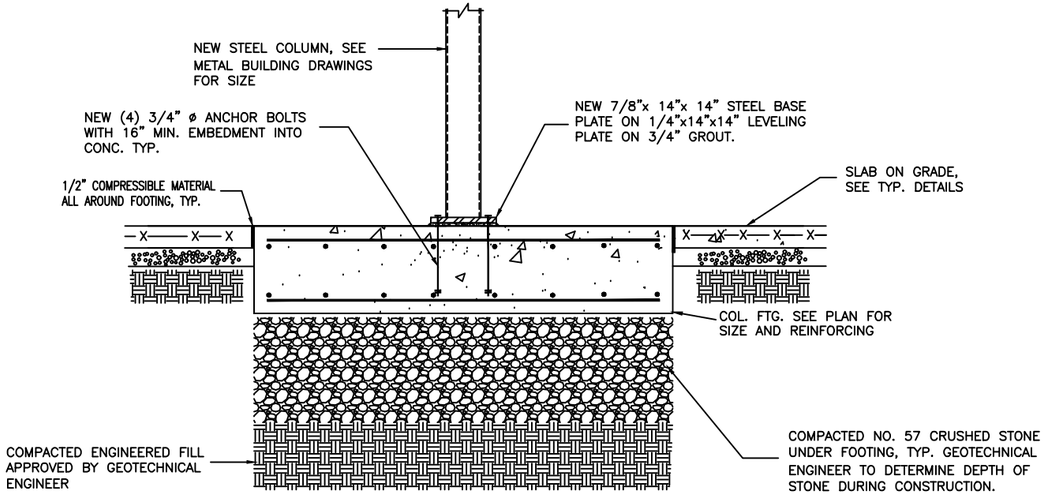
CONCRETE RETAINING WALL SCHEDULE

HEIGHT (ft.)	BASE	B	A	C	D	E	F	REINFORCEMENT			
								"O" BARS	"L_B" BARS	"P" BARS	"L_W" BARS
≤3	3'–6"	1'–0"	10"	2'–8"	1'–1"			#5 @ 8"	#5 @ 12"	#5 @ 12"	#5 @ 12"
4 – 6	5'–6"	1'–6"	1'–0"	4'–6"	1'–2"			#5 @ 8"	#5 @ 12"	#5 @ 12"	#5 @ 12"



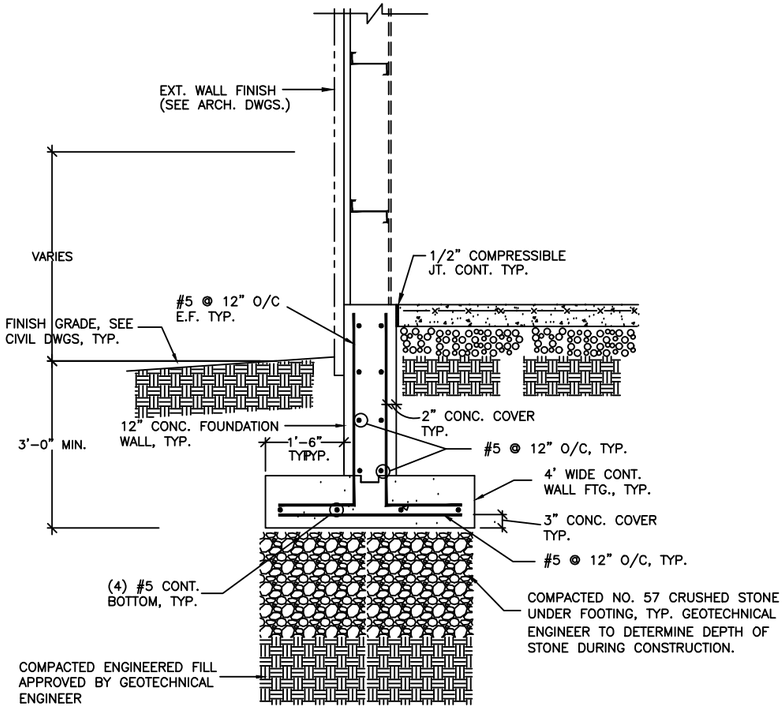
SECTION 1 S205

SCALE: 3/4" = 1'–0"



DETAIL – NEW INTERIOR COLUMN FOOTING A

SCALE: 3/4"=1'–0"



SECTION 2 S205

SCALE: 3/4" = 1'–0"

STRUCTURAL ENGINEER
EMMANUEL ANSA, PE, SE
P.O. BOX 142318
FAYETTEVILLE, GA. 30215
Email: eansa@comcast.net

Syntony Design Collaborative LLC.

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Drawing Revisions:

Drawing Date:	12/12/2022
Project number:	220001
Drawn By:	TS
Checked By:	EA

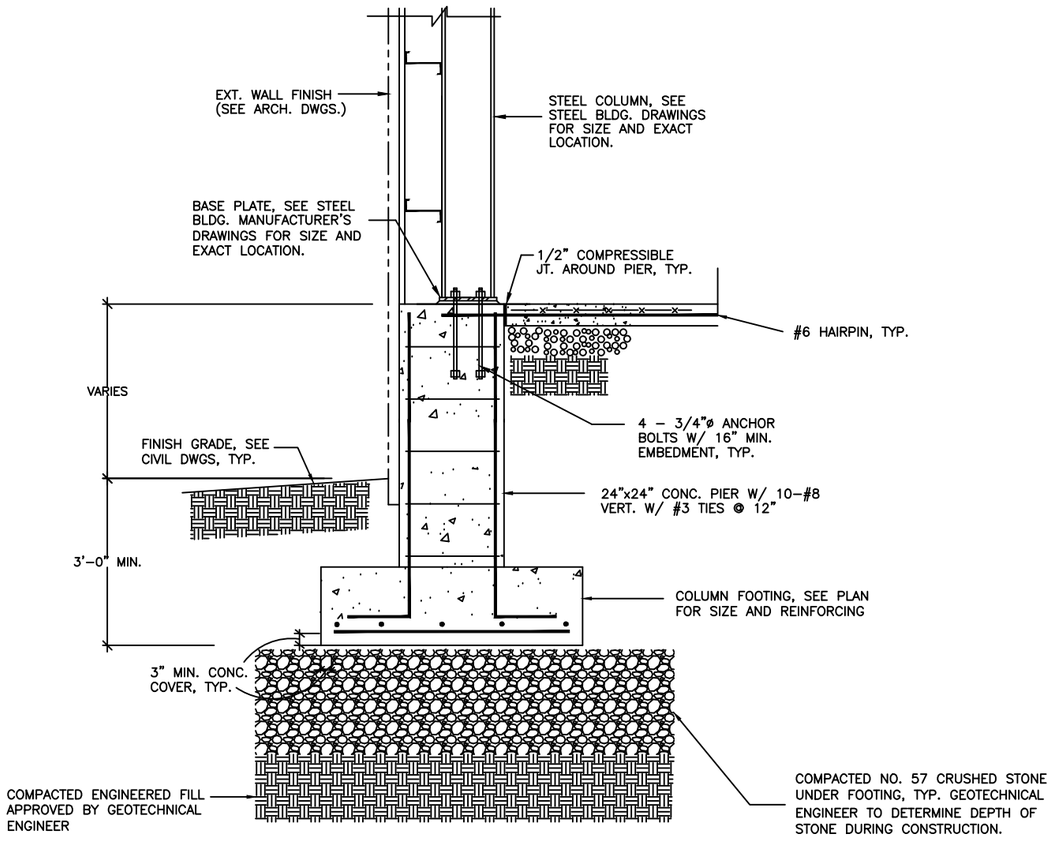
GEORGIA MOUNTAIN FOOD BANK
1642 CALVARY INDUSTRIAL DRIVE SW
GAINESVILLE, GA 30507

HALL COUNTY
P.O. BOX DRAWER 1435
GAINESVILLE, GA 30503

Drawing Description:

SECTIONS AND DETAILS

S205



SECTION – EXTERIOR COLUMN ON CONCRETE PIER

1
S206

SCALE: 3/4" = 1'–0"

STRUCTURAL ENGINEER
EMMANUEL ANSA, PE, SE
P.O. BOX 142318
FAYETTEVILLE, GA. 30215
Email: eansa@comcast.net

Syntony Design Collaborative LLC.

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Drawing Revisions:

Drawing Date:	12/12/2022
Project number:	220001
Drawn By:	TS
Checked By:	EA

GEORGIA MOUNTAIN FOOD BANK
1642 CALVARY INDUSTRIAL DRIVE SW
GAINESVILLE, GA 30507

HALL COUNTY
P.O. BOX DRAWER 1435
GAINESVILLE, GA 30503

Drawing Description:

SECTIONS AND DETAILS

S206

EXHIBIT #1

SHENANGO STEEL BUILDINGS, INC.

Pre-Engineered Metal Building Systems

Steel Building Products

Shenango Steel Buildings are available in a wide variety of shapes, colors and sizes custom made to your specifications.

- Color Selector (PDF)

Standard Building Shapes - Customized Design & Shapes Available



Single Slope



Standard



Added Lean-To



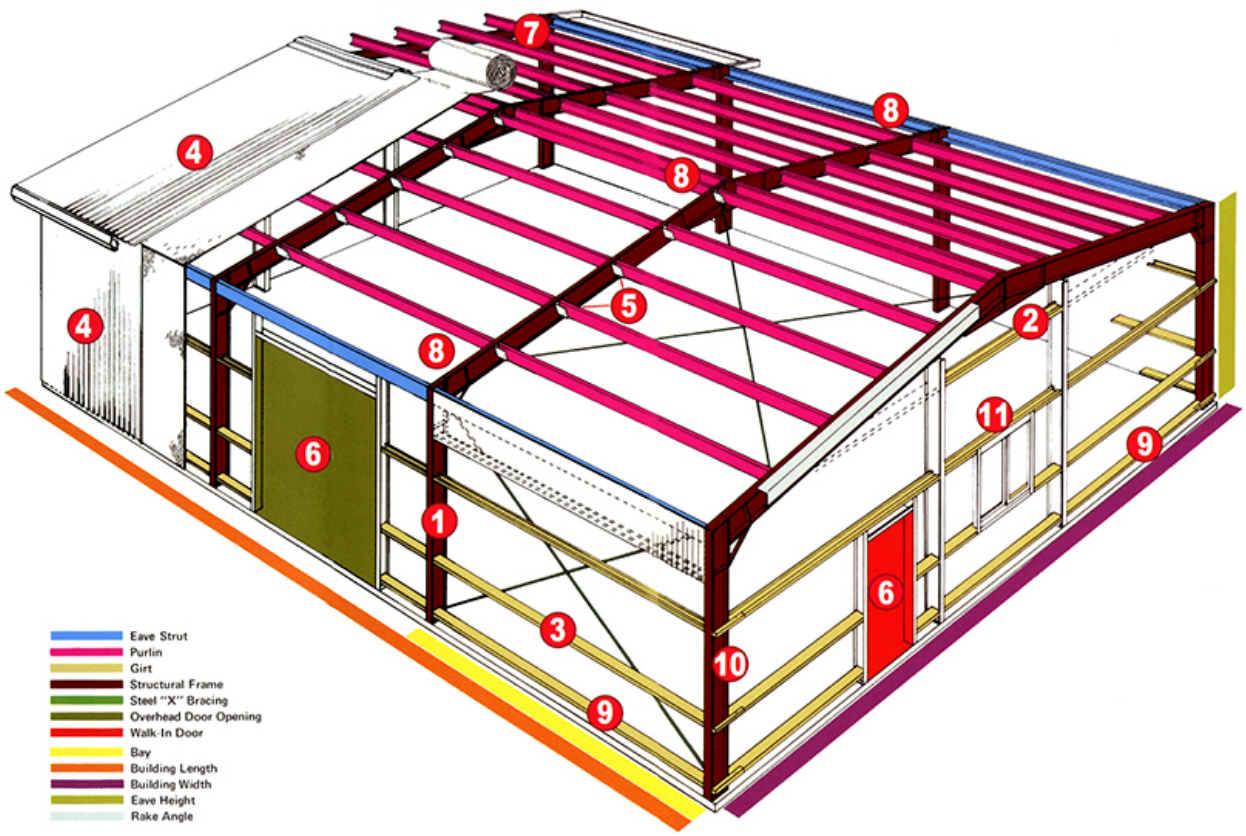
Side Canopy



Multi-Span

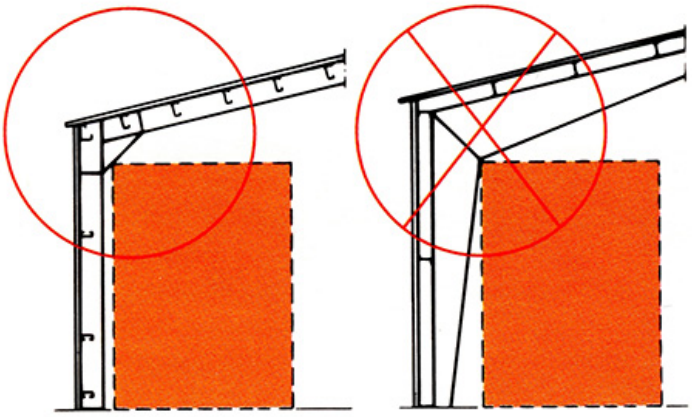
Steel Specifications:

- Structural steel sections designed in accordance with American Iron and Steel Institute (AISI) specifications
- Cold-formed structural members designed in accordance with AISI specifications
- Rigid frame designed in accordance with American Institute of Steel Construction (AISC) manual entitled Plastic Design in Steel
- All connecting bolts are high tensile steel (A325 Class)



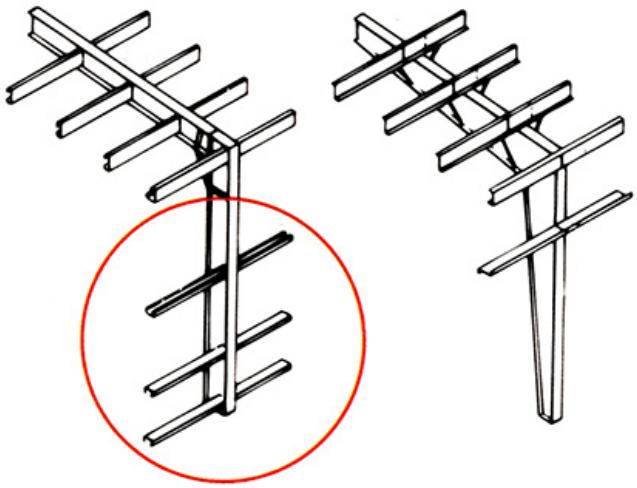
1. Rafters and columns are not tapered

- Maximizes interior space usage compared to tapered rafters & columns



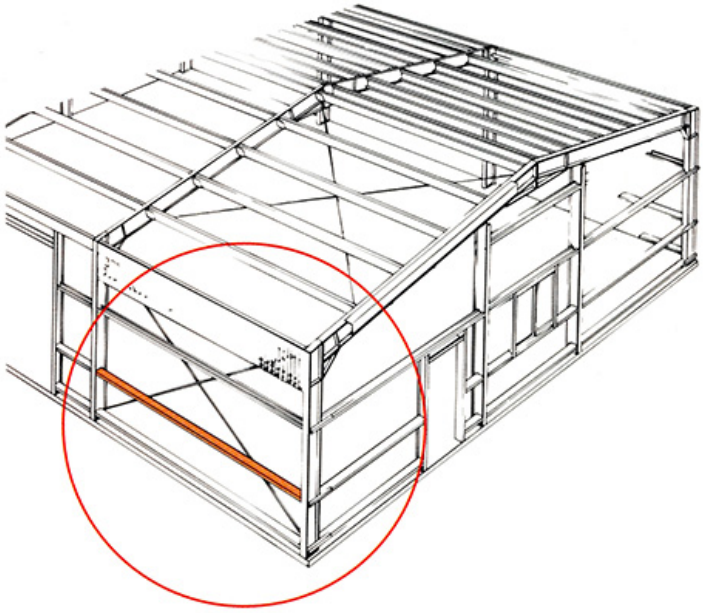
2. Girts fitted inside the column instead of outside the column

- Saves interior space & simplifies construction
- Requires less steel, bolts & concrete
- Requires less construction time



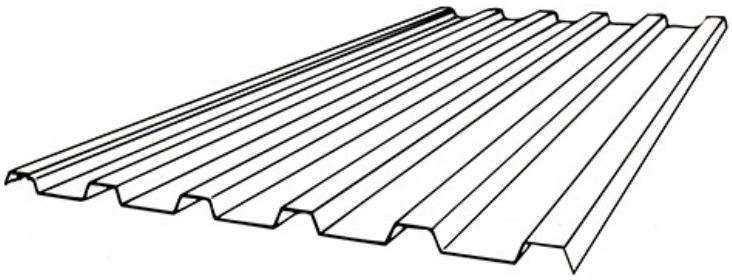
3. Sidewall girt at waist level is standard

- Allows for easier installation of windows, ventilators, fans, air conditioners, louvers & other accessories



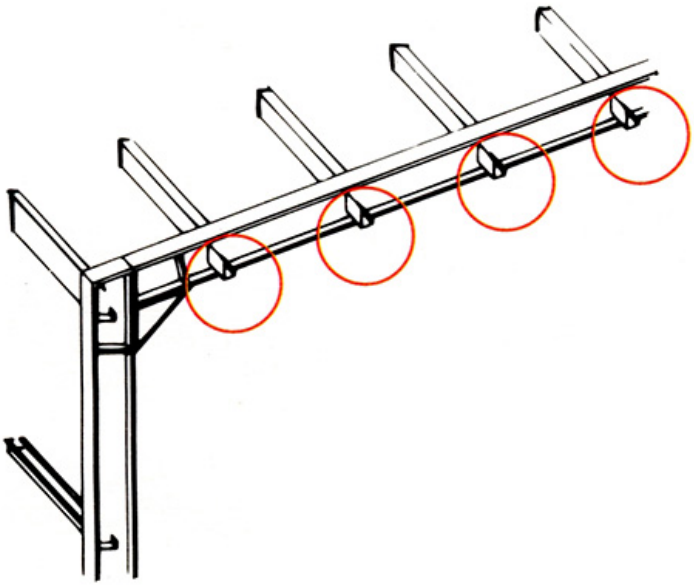
4. Wall and roof steel panels are roll formed and cut to exact specifications

- Available in a variety of panel profiles & color finishes
- Enhances building appearance
- Complements the project's facing material (concrete, brick, stone, stucco, etc.)



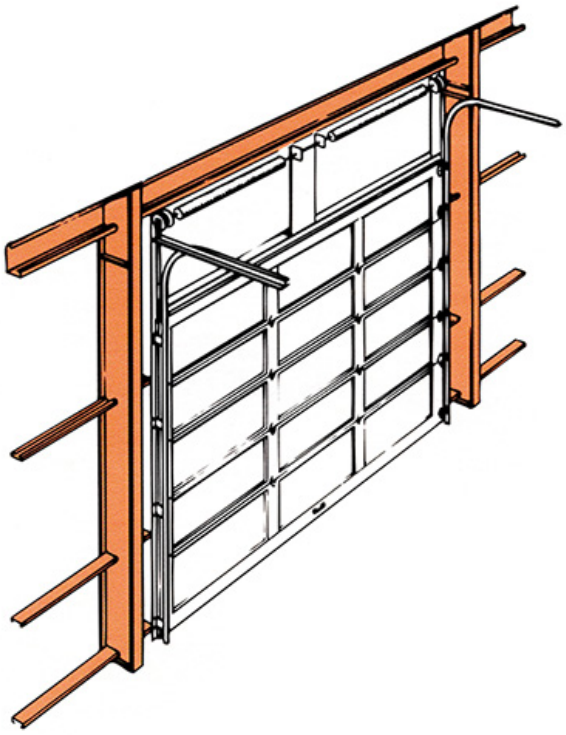
5. Roof purlin and sidewall girt clips are welded into position at our factory

- Accelerates construction time
- No loose brackets and fewer bolts to inventory, attach or misplace
- No on-site welding needed



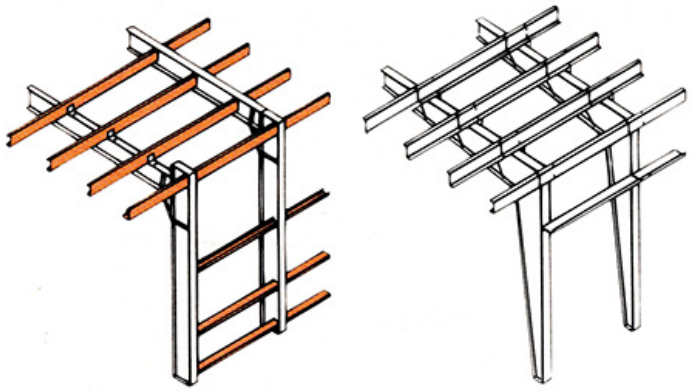
6. Doors and overhead doors can be located anywhere the customer desires them

- Parallel mounting surface permits easy attachment of support & torsion spring assemblies
- Eaves struts are designed to provide maximum space for overhead clearances



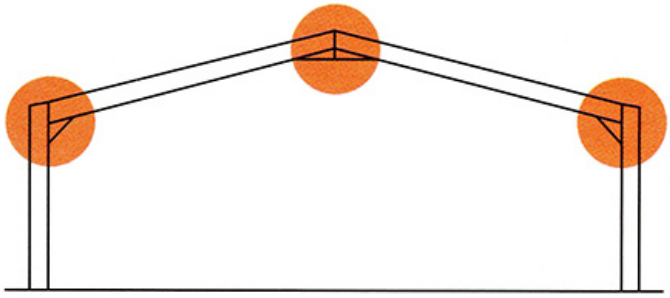
7. Overhangs are built in, not hung on

- Strengthens the steel roof as a whole
- Eliminates roof sagging & problem leaks



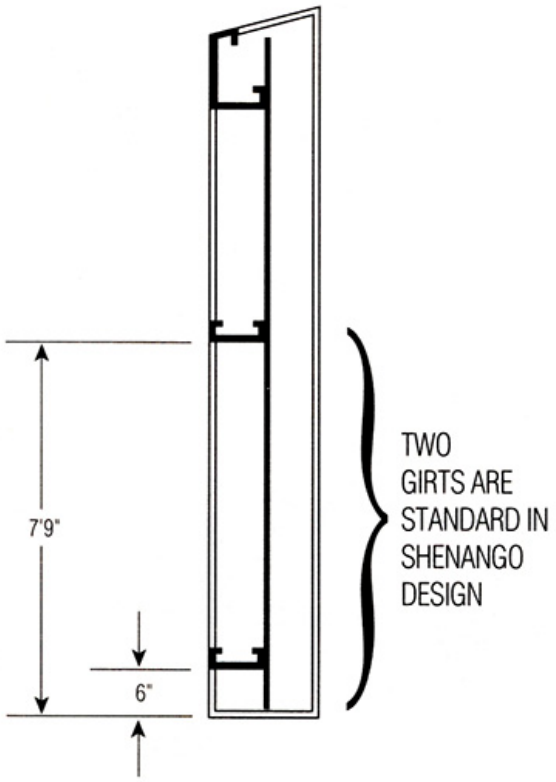
8. Only three connecting points per clear span frame (Industry standard is five)

- Increases frame strength & rigidity
- Increases assembly speed



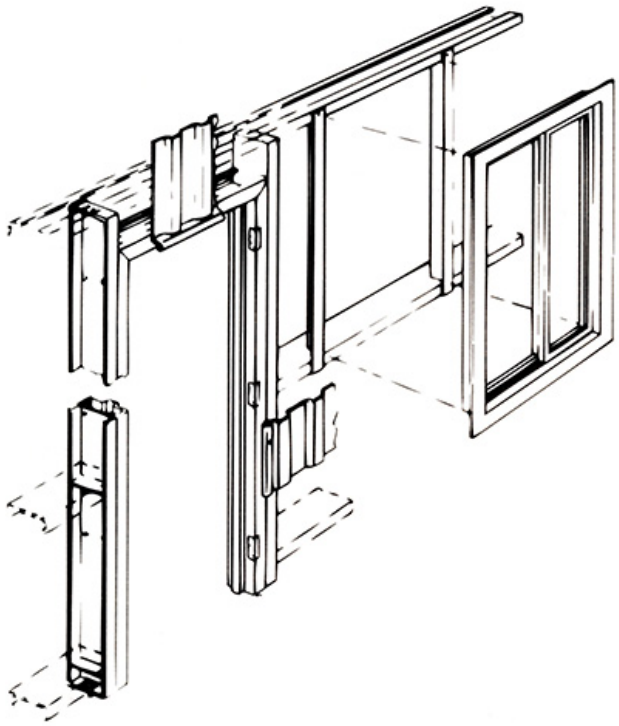
9. First girt installed 6 inches above the floor (Industry standard is 7 to 8 feet)

- Adds strength & rigidity to metal walls
- Protects individuals & equipment inside the metal building from a lift-truck or vehicle accidentally hitting the wall



10. Endwall frames identical to intermediate frames
- Facilitates steel building expansion
- Makes door relocation possible

11. Door and window openings are framed and reinforced
- Steel subframing is used around all doors & windows
- The added support provides maximum rigidity, safety & security



Features of Shenango Steel Buildings:

- Anchor bolts included
- Comes standard with galvanized steel purlins, girts, subframing for doors, windows & overhead doors
- Self-drilling & self-tapping sheet metals screws included
- Flange of purlins, girts & frames conceal unsightly wiring & plumbing
- Accessory items such as doors, windows, light transmission panels, ventilators & more are available

Other Products

Roofing

- Provide a flat or pitched metal roof for your new project

Siding

- Provide metal siding for your new project

Retro-Roofing

- Convert a flat steel roof into a pitched steel roof
- Cover your problem roof

Retro-Siding

- Restore unsightly exteriors
- Create vertical or mansard metal facades

Universal Building Frames

- Widths from 24 to 100 feet
- Eave heights from 8 to 24 feet
- Save the cost of using galvanized purlins & girts
- Integrate traditional building materials & styles

Shen-O-Deck [Brochure (PDF)]

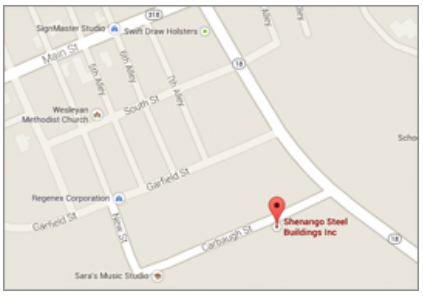
- Custom-made mezzanines
- Maximize the use of your overhead space with a retro-fit mezzanine
- We can design & fabricate steel mezzanines into your new Shenango Steel Building

---

Metal Buildings
Steel Building Products
Our Customers
Portfolio
Resources
- Frequently Asked Questions
- Dealer Information
- Literature
Contact

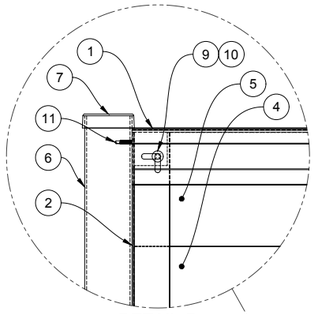
Shenango Steel Buildings, Inc.
33 Carbaugh Street
West Middlesex, PA
16159-4103 USA

P: (724) 528-9925
Toll Free: (800) 548-0625
F: (724) 528-2452
E: info@shenangosteelbuildings.com

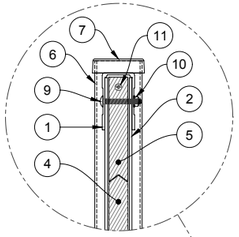


Developed by Cassidy Advertising & Consulting LLC

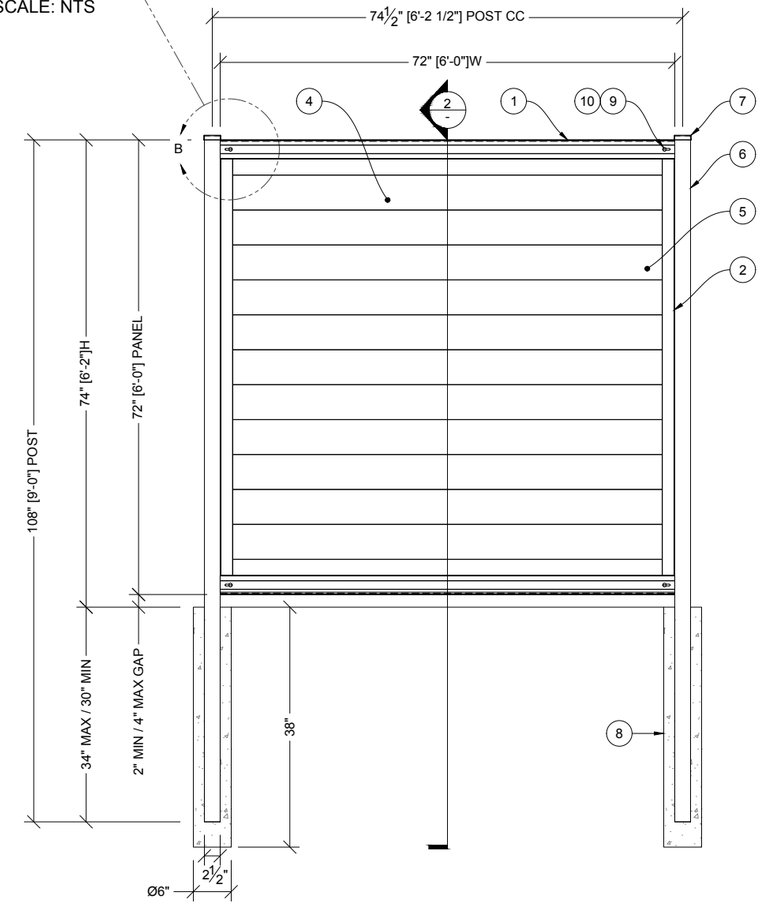
EXHIBIT #2



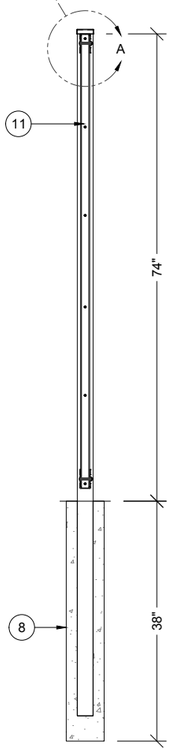
DETAIL-B
SCALE: NTS



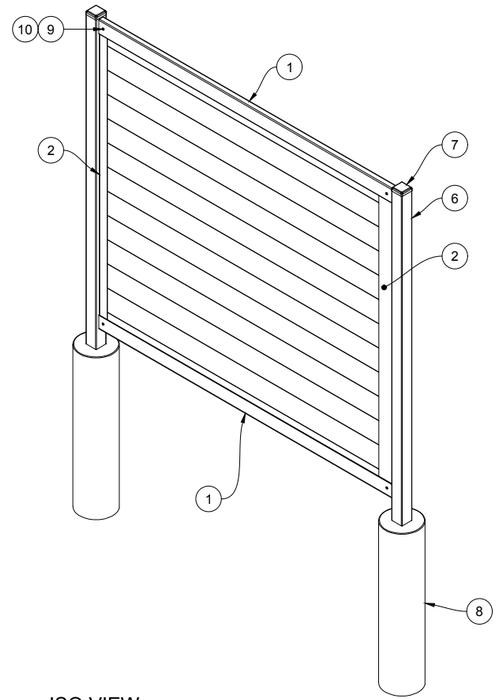
DETAIL-A
SCALE: NTS



1 FRONT VIEW
SCALE: 1/2" = 1'-0"



2 SECTION
SCALE: 1/2" = 1'-0"



3 ISO VIEW
SCALE: 1/2" = 1'-0"

BILL OF MATERIALS

ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	3" X 6'-0" CHANNEL	HORIZONTAL (TOP/BTM) GALVANIZED STEEL CHANNEL RAIL
2	2	2" X 6'-0" CHANNEL	VERTICAL GALVANIZED STEEL CHANNEL RAIL
3	N/A	CHANNELS ALLOW FOR UP TO 1" THK INFILL MATERIAL	INFILL QUANTITY MAY VARY DEPENDING ON TYPE SELECTED
4	11	1" X 6" X 6'-0" BOARDS	INFILL EXAMPLE ILLUSTRATED: HORIZONTAL BOARDS
5	2	1" X 6" X 6'-0" NOTCHED INFILL/BOARDS	TWO BOARDS TO BE NOTCHED FOR BOLT CLEARANCE AT TOP AND BTM CHANNEL
6	2	2-1/2" X 2-1/2" X 16GA, 9'-0" POST	STANDARD FENCE POST
7	2	2-1/2" X 2-1/2" CAP	2-1/2" SQ POST CAP STANDARD
8	2	6" DIAMETER CONCRETE PIER	POST PIER SIZE AND DEPTH TO BE SPECIFIED BY THE PROJECT'S EOR
9	4	ANSI B18.5 - 1/4-20 X 1-1/2" UNC CARRIAGE BOLT	ROUND HEAD SQUARE NECK CARRIAGE BOLT
10	4	IFI 100/107 1/4-20 HEX-HEAD FLANGE NUT	PREVAILING TORQUE TYPE HEX-HEAD FLANGE NUT
11	12	ANSI B18.6.4 - NO.10 X 5/8" SELF-TAPPING SCREW	VERTICAL CHANNEL, RECESSED HEAD SELF-TAPPING SCREW_TYPE-BT_TYPE-I

ABBREVIATIONS

ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
CC	CENTER TO CENTER
EOR	ENGINEER OF RECORD
GA	GAUGE
H	HEIGHT
IFI	INDUSTRIAL FASTENER INSTITUTE
L	LENGTH
MAX	MAXIMUM
MIN	MINIMUM
NTS	NOT TO SCALE / DO NOT SCALE
SQ	SQUARE
THK	THICK / THICKNESS
TYP	TYPICAL
UNC	UNIFIED COURSE THREAD
W	WIDTH

DIMENSIONS ARE IN INCHES
UNLESS OTHERWISE SPECIFIED:
TOLERANCES:
FRACTIONAL ±1/32"
ANGULAR: MACH±1/2° BEND ±1/2°
TWO PLACE DECIMAL ± .03
THREE PLACE DECIMAL ± .005

FENCE TRAC

TITLE:
HORIZONTAL 6'X6' PANEL

PROPRIETARY AND CONFIDENTIAL
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	NAME	DATE
DRAWN	NLI	05/30/2022
REVISED		
MFG APPR		

MATERIAL: GALVANIZED STEEL

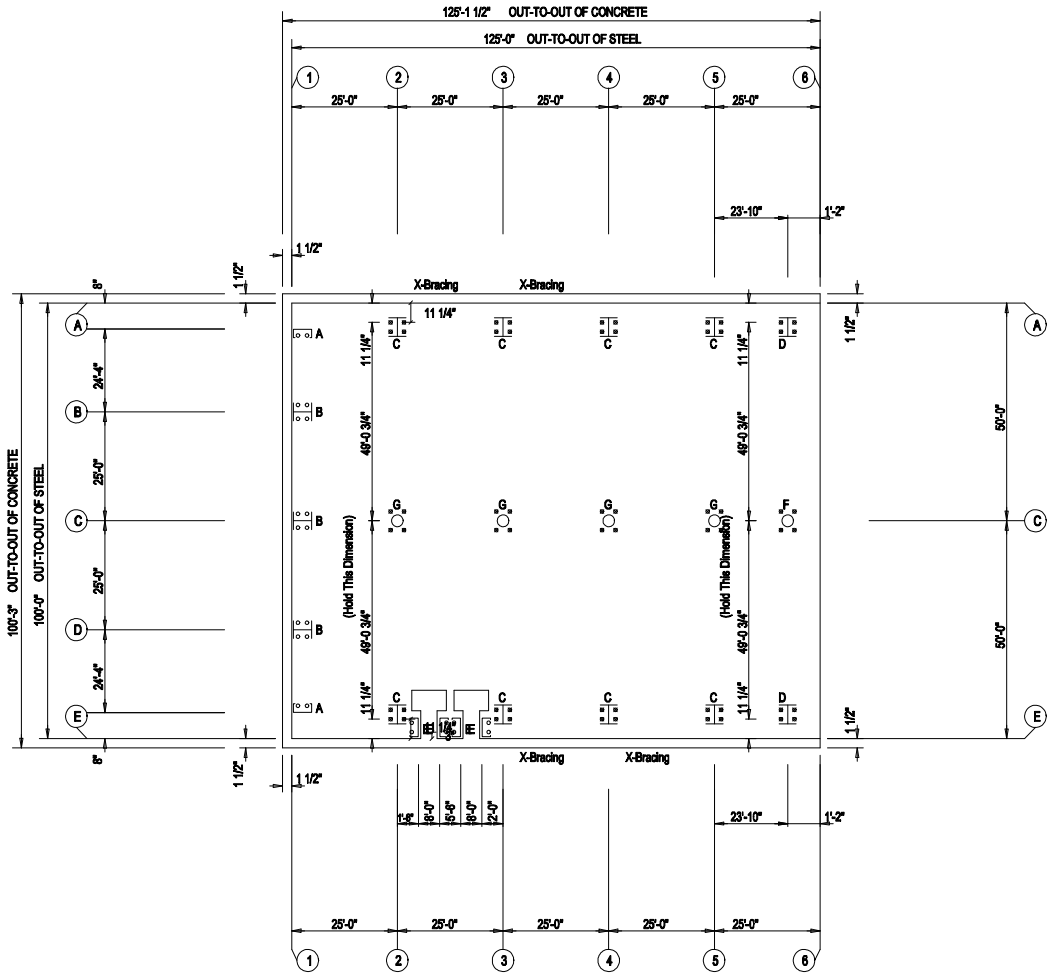
SIZE	DWG. NO.	REV
B	22-0530-002	A

SCALE: SEE DRAWING | SHEET 1 OF 1

EXHIBIT #3

○ Dia= 5/8"

⊠ Dia= 3/4"



ANCHOR BOLT PLAN

NOTE: All Base Plates @ 100'-0" (U.N.)

IMPORTANT!
Do Not Set Anchor Rods with these Preliminary Drawings.

Whirlwind Steel Buildings will not be responsible for the location of the anchor rods on the Preliminary Drawings.

PRELIMINARY DRAWINGS:
These drawings are the initial plans prepared by the sales team to provide a means of communication between the customer and Whirlwind Steel Buildings, Inc. These plans are NOT intended to be used for construction.

WHIRLWIND STEEL BUILDINGS

P.O. BOX 75280
HOUSTON, TX 77234

PH: 800-324-9992
FAX: 832-553-4600

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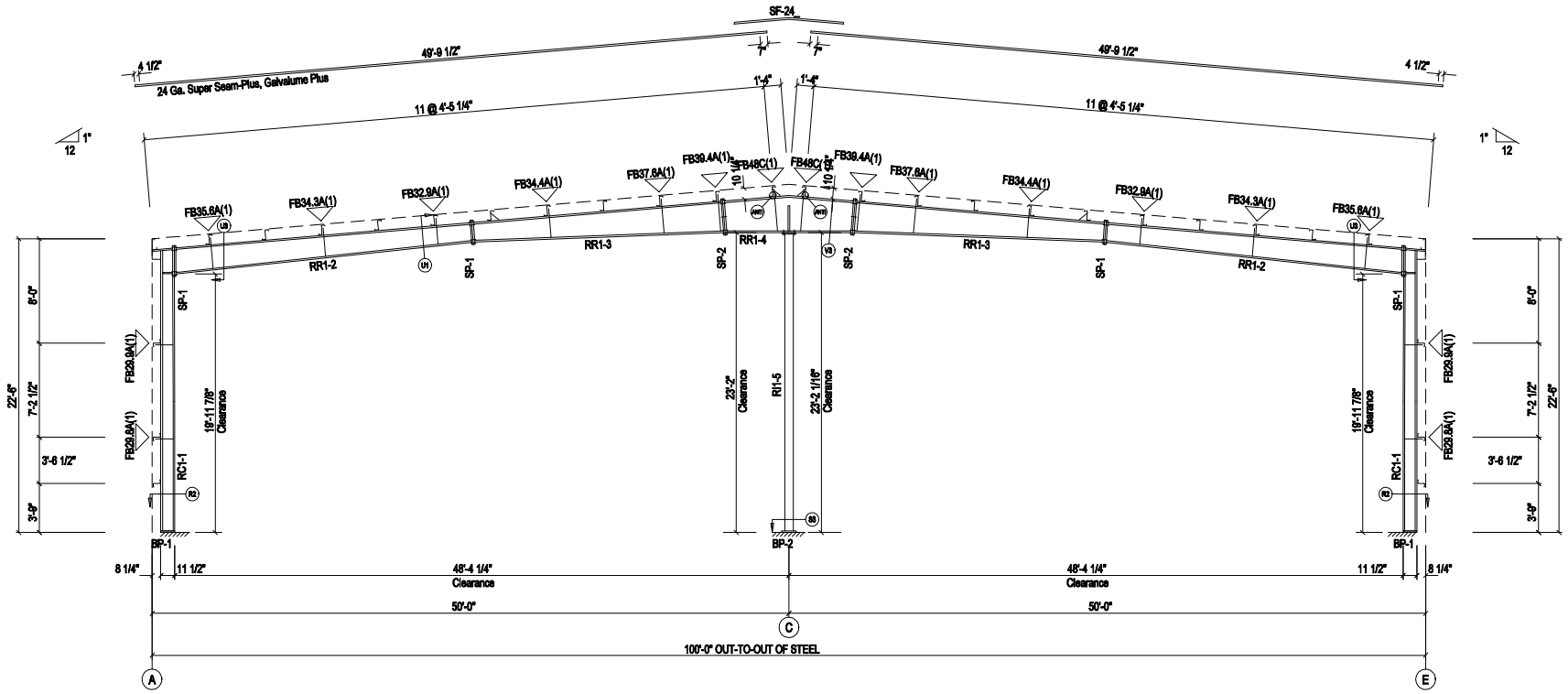
DESC: ANCHOR BOLT PLAN		BLDG. SIZE: 100'-0" x 125'-0" x 22'-6"	
CUSTOMER: Sintony Design		LOCATION: City, State Zip	
REFERENCE: Georgia Mountain Food Bank			
JOBSITE: Gainesville, GA 30507		COUNTY: Hall	
DATE: 9/20/22	QUOTE NO: GA1078	DWG NO:	ISSUE: PRELIM

BOLT TIGHTENING (Snug-Tight)

All bolted joints with ASTM F3125 Grade A325 bolts are specified as Snug-Tightened Joints in accordance with the Specification of Structural Joints Using High-Strength Bolts, June 11, 2020, installation as given in Section 7.1 Washers are not required for Snug-Tightened Joints using standard standard size holes per Section 6.1 of the Specification

Pretensioning methods, including Turn-of-Nut, calibrated wrench, twist-off tension control bolts or direct tension indicator are not required. Installation inspection requirements for Snug-Tight Bolt is found in Section 9.1 of the Specification.



RIGID FRAME ELEVATION: FRAME LINE 6

PRELIMINARY DRAWINGS:
These drawings are the initial plans prepared by the sales team to provide a means of communication between the customer and Whirlwind Steel Buildings, Inc. These plans are NOT intended to be used for construction.

WHIRLWIND STEEL BUILDINGS
P.O. BOX 75280
HOUSTON, TX 77234
PH: 800-324-9992
FAX: 832-553-4600

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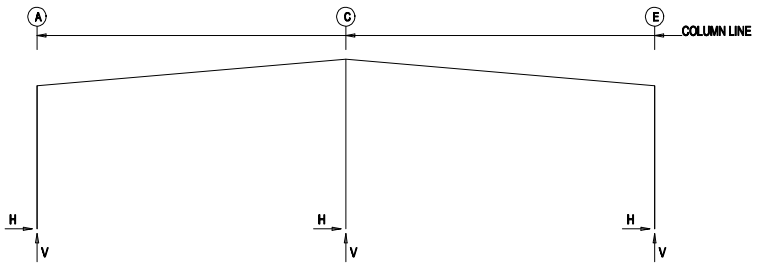
DESC: RIGID FRAME ELEVATION		BLDG. SIZE: 100'-0" x 125'-0" x 22'-6"	
CUSTOMER: Stntony Design		LOCATION: City, State Zip	
REFERENCE: Georgia Mountain Food Bank			
JOBSITE: Gainesville, GA 30507		COUNTY: Hall	
DATE: 9/20/22	QUOTE NO: GA1078	DWG NO:	ISSUE: PRELIM

FRAME LINES: 2 3 4 5 6



RIGID FRAME: MAXIMUM REACTIONS, ANCHOR BOLTS, & BASE PLATES

Frm Line	Col Line	Column_Reactions(k) Load Id	Hmax H	V Vmax	Load Id	Hmin H	V Vmin	Bolt(in) Qty	Dia	Base_Plate(in) Width	Length	Thick	Elev. (in)
2*	A	3	5.0	15.1	6	-3.9	-2.2	4	0.750	8.000	10.50	0.375	0.0
		1	3.7	20.9	8	1.0	-6.4						
2*	E	7	3.9	-2.2	2	-5.0	15.1	4	0.750	8.000	10.50	0.375	0.0
		1	-3.7	20.9	9	-1.0	-6.4						
2*	C	5	0.0	-6.8	5	0.0	-6.8	4	0.750	12.00	12.00	0.500	0.0
		1	0.0	54.5									
2*	Frame lines:	2 3 4 5											

RIGID FRAME: MAXIMUM REACTIONS, ANCHOR BOLTS, & BASE PLATES

Frm Line	Col Line	Column_Reactions(k) Load Id	Hmax H	V Vmax	Load Id	Hmin H	V Vmin	Bolt(in) Qty	Dia	Base_Plate(in) Width	Length	Thick	Elev. (in)
6	A	3	2.2	7.2	6	-2.0	-1.9	4	0.750	8.000	10.50	0.375	0.0
		1	1.5	10.0	4	-1.7	-3.0						
6	E	7	2.0	-1.9	2	-2.2	7.2	4	0.750	8.000	10.50	0.375	0.0
		1	-1.5	10.0	5	1.7	-3.0						
6	C	5	0.0	-5.7	5	0.0	-5.7	4	0.750	10.00	10.00	0.500	0.0
		1	0.0	31.1									

GENERAL NOTES

1. All anchor bolts (by others) to have nuts and flat washers.

2. All anchor bolts are designed to full S.A.E. diameters with cut threads. No substitutions are allowed.

3. The Metal Building Provider is not responsible for the design, materials and workmanship of the foundation. Anchor bolt plans prepared by the Metal Building Provider are intended to show only location, diameter, and projection of anchor bolts required to attach the Metal Building System to the foundation. The Metal Building Provider is responsible for providing to the Builder the loads imposed by the Metal Building System on the foundation. It is the responsibility of the End Customer to ensure that adequate provisions are made for specifying bolt embedment, bearing angles, tie rods, and/or other associated items embedded in the concrete foundation, as well as foundation design for the loads imposed by the Metal Building System, other imposed loads, and the bearing capacity of the soil and other conditions of the building site. This is typically the responsibility of the Design Professional or Engineer of Record, which is another reason that their involvement in the Construction Project from the outset is highly recommended. (2012 MBMA Metal Building Systems Manual, Section 3.2.2)

RIGID FRAME: BASIC COLUMN REACTIONS (k)

Frame Line	Column Line	—Dead— Horiz	Vert	--Collateral- Horiz	Vert	—Live— Horiz	Vert	—Snow— Horiz	Vert	--Wind_Left1- Horiz	Vert	-Wind_Right1- Horiz	Vert
6	A	0.1	1.1	0.2	1.3	1.2	7.6	0.7	4.4	-3.0	-6.1	2.2	-2.2
6	E	-0.1	1.1	-0.2	1.3	-1.2	7.6	-0.7	4.4	-2.2	-2.2	3.0	-6.1
6	C	0.0	3.1	0.0	4.0	0.0	24.0	0.0	14.0	0.0	-12.6	0.0	-12.6

Frame Line	Column Line	--Wind_Left2- Horiz	Vert	-Wind_Right2- Horiz	Vert	--Wind_Long1- Horiz	Vert	--Wind_Long2- Horiz	Vert	-Seismic_Left Horiz	Vert	Seismic_Right Horiz	Vert
6	A	-3.5	-4.4	1.8	-0.4	0.8	-5.8	0.4	-3.1	-0.6	-0.3	0.6	0.3
6	E	-1.8	-0.4	3.5	-4.4	-0.4	-3.1	-0.8	-5.8	-0.6	0.3	0.6	-0.3
6	C	0.0	-8.3	0.0	-8.3	0.0	-12.0	0.0	-12.0	0.0	0.0	0.0	0.0

Frame Line	Column Line	-MIN_SNOW-- Horiz	Vert	F1UNB_SL_L- Horiz	Vert	F1UNB_SL_R- Horiz	Vert
6	A	0.8	5.1	0.5	5.4	0.5	0.6
6	E	-0.8	5.1	-0.5	0.6	-0.5	5.4
6	C	0.0	16.0	0.0	12.2	0.0	12.2

Frame Line	Column Line	—Dead— Horiz	Vert	--Collateral- Horiz	Vert	—Live— Horiz	Vert	—Snow— Horiz	Vert	--Wind_Left1- Horiz	Vert	-Wind_Right1- Horiz	Vert
2*	A	0.3	2.0	0.5	2.7	2.9	16.2	1.7	9.5	-5.4	-9.4	4.4	-3.9
2*	E	-0.3	2.0	-0.5	2.7	-2.9	16.2	-1.7	9.5	-4.4	-3.9	5.4	-9.4
2*	C	0.0	4.9	0.0	7.1	0.0	42.5	0.0	24.8	0.0	-16.3	0.0	-16.3

Frame Line	Column Line	--Wind_Left2- Horiz	Vert	-Wind_Right2- Horiz	Vert	--Wind_Long1- Horiz	Vert	--Wind_Long2- Horiz	Vert	-Seismic_Left Horiz	Vert	Seismic_Right Horiz	Vert
2*	A	-6.8	-5.6	3.1	0.0	1.3	-12.7	0.7	-9.5	-0.9	-0.4	0.9	0.4
2*	E	-3.1	0.0	6.8	-5.6	-0.7	-9.5	-1.3	-12.7	-0.9	0.4	0.9	-0.4
2*	C	0.0	-9.0	0.0	-9.0	0.0	-15.4	0.0	-15.4	0.0	0.0	0.0	0.0

Frame Line	Column Line	-Seismic_Long Horiz	Vert	-MIN_SNOW-- Horiz	Vert	F2UNB_SL_L- Horiz	Vert	F2UNB_SL_R- Horiz	Vert
2*	A	0.0	-2.0	1.9	10.8	1.2	11.1	1.2	1.9
2*	E	0.0	-2.0	-1.9	10.8	-1.2	1.9	-1.2	11.1
2*	C	0.0	0.0	0.0	28.4	0.0	21.8	0.0	21.8

2* Frame lines: 2 3 4 5

PRELIMINARY DRAWINGS:
These drawings are the initial plans prepared by the sales team to provide a means of communication between the customer and Whirlwind Steel Buildings, Inc. These plans are NOT intended to be used for construction.

WHIRLWIND STEEL BUILDINGS
P.O. BOX 75280
HOUSTON, TX 77234
PH: 800-324-9992
FAX: 832-553-4600

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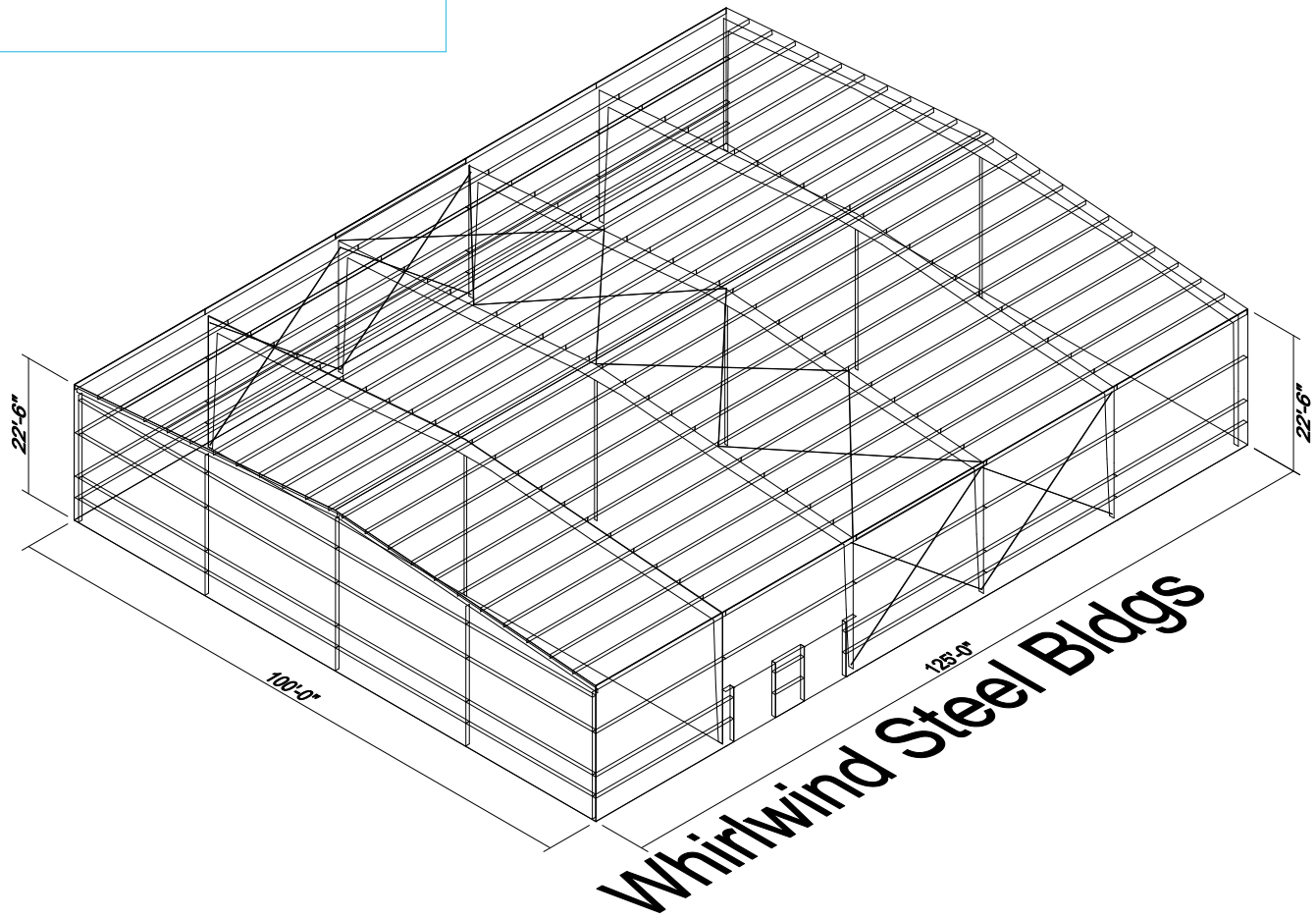
DESC:	ANCHOR BOLT REACTIONS
BLDG. SIZE:	100'-0" x 125'-0" x 22'-6"
CUSTOMER:	Sintony Design
LOCATION:	City, State Zip
REFERENCE:	Georgia Mountain Food Bank
JOBSITE:	Gainesville, GA 30507
COUNTY:	Hall
DATE:	9/20/22
QUOTE NO:	GA1078
DWG NO:	
ISSUE:	PRELIM

Building addition. 100’x125’ (line AA thru A)
24 ga Standing Seam Roof Galvalume
26 ga Smp walls
Design per S100
Partition Wall line AA by WW
$165,000.00 DELIVERED EXCLUDING TAX



MEMORANDUM OF UNDERSTANDING
BETWEEN
THE GEORIGA MOUNTAIN FOOD BANK
AND HALL COUNTY, GEORGIA

1. Parties. This Memorandum of Understanding (hereinafter referred to as "MOU") is made and entered into by and between THE GEORGIA MOUNTAIN FOOD BANK OF LANIER, INC., whose address is 1642 Calvary Industrial Dr. SW, Gainesville, Georgia and HALL COUNTY, GEORGIA, whose address is P. O. Drawer 1435, Gainesville, Georgia 30503.

2. Purpose. The purpose of this MOU is to define the preliminary terms and conditions as reached between the Parties in regards the construction and maintenance of a cold docking area, expanded warehouse and additional parking be located at the Georgia Mountain Food Bank facility located at 1642 Calvary Industrial Dr. SW, Gainesville, Georgia. The proposed expansion will assist the food bank in serving more than 70 partner agencies serve thousands of food insecure people across the five counties service area of Dawson, Forsyth, Hall, Lumpkin and Union counties. The facility will assist in the prevention, preparation and response to the COVID-19 pandemic needs.

3. Term of MOU. This MOU shall be effective upon the day and date last signed and executed by the duly authorized representatives of the Parties hereto, and shall remain in full force and effect for not longer than December 31, 2024, or until the construction of the proposed facility is completed. This MOU may be terminated without cause, by either Party upon thirty (30) days written notice, which notice shall be delivered by hand or by certified mail to the address of the opposite Party.

4. Responsibilities of Parties.

A. The Georgia Mountain Food Bank shall have the responsibility of planning, designing, and supervising the construction of the facility and shall cooperate with Hall County and the Georgia Mountain Regional Commission in applying for a Community Development Block Grant (CDBG) COVID-19 which, if awarded, shall be used in the design and construction of the gym. The estimated cost of the proposed facility is a maximum of $2,578,000.00. The Georgia Mountain Food Bank shall be responsible for all costs associated with planning, designing, and supervising the construction of the facility. The minimum matching funds of $644,500.00 shall be paid by the Georgia Mountain Food Bank, and Hall County shall have no responsibility for payment of any costs associated with the facility or the grant including the costs described in the separate agreement between the Georgia Mountain Regional Commission and Hall County which is attached hereto as "Exhibit A". Upon completion, the Georgia Mountain Food Bank,

Inc. shall manage and maintain the facility. The parties shall enter into a separate construction and maintenance agreement following Hall County's receipt of the award of the grant funds referenced herein. In addition, if the grant funds referenced herein are awarded to Hall County, The Georgia Mountain Food Bank agrees to comply with all terms and conditions of the Department of Community Affairs' Grant Agreement.

B. Hall County shall assist in seeking the needed funding of the project by means of applying for a Community Development Block Grant in the amount of $2,578,000.00, which if awarded, shall be managed by Hall County in accordance to the terms and provisions of an agreement between Hall County and the Georgia Mountain Regional Commission, a copy of which is attached as Exhibit "A" hereto. Hall County shall serve as the primary grantee and the Georgia Mountain Food Bank shall be the subgrantee. Accordingly, Hall County shall serve as a pass through agency of the grant funds. Hall County shall have no monetary obligation for any aspect of this MOU and shall have no liability for funding of the project.

C. If the CDBG is awarded, the Parties will enter into a supplemental agreement which will establish their responsibilities with detail and specificity.

5. General Provisions

A. Amendments. Either Party may request changes to this MOU. Any changes, modifications, revisions, or amendments to this MOU which are mutually agreed upon by and between the Parties to this MOU shall be incorporated by written instrument, and effective when executed and signed by all Parties to this MOU.

B. Applicable Law. The construction, interpretation and enforcement of this MOU shall be governed by the laws of the State of Georgia. The state and federal courts of the State of Georgia shall have jurisdiction over any action arising out of this MOU and over the Parties, and the venue shall be the Superior Court of Hall County or the U. S. District Court for the Northern Judicial Circuit of Georgia, Gainesville Division.

C. Entirety of Agreement. This MOU, consisting of six (6) sections, represents the entire and integrated agreement between the Parties and supersedes all prior negotiations, representations and agreements, whether written or oral.

D. Severability. Should any portion of this MOU be judicially determined to be illegal or unenforceable, the remainder of the MOU shall continue in full force and effect, and either Party may renegotiate the terms affected by the severance.

E. Third Party Beneficiary Rights. The Parties do not intend to create in any other individual or entity the status of a third party beneficiary, and this MOU shall not

be construed so as to create such status. The rights, duties and obligations contained in this MOU shall operate only between the Parties to this MOU, and shall inure solely to the benefit of the Parties to this MOU. The provisions of this MOU are intended only to assist the Parties in determining and performing their obligations under this MOU. The Parties to this MOU intend and expressly agree that only Parties signatory to this MOU shall have any legal or equitable right to seek to enforce this MOU, to seek any remedy arising out of a Party's performance or failure to perform any term or condition of this MOU, or to bring an action for the breach of this MOU.

6. Signatures. In witness whereof, the Parties to this MOU through their duly authorized representatives have executed this MOU on the days and dates set out below, and certify that they have read, understood, and agreed to the terms and conditions of this MOU as set forth herein.

The effective date of this MOU is the date of the signature last affixed to this page.

THE GEORGIA MOUNTAIN FOOD BANK

By: _____ 9/30/2021
Cheryl Jones, Chair Date

Attest: _____ 9/30/2021
Executive Director Date

HALL COUNTY, GEORGIA

By: _____
Richard Higgins, Chairman Date 8.26.2021

Attest: _____
Lisa A. Ritchie, Clerk Date 8.26.2021

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1/20/21

AGENDA ITEM

Fire Rescue

REPORT TO: **Work Session (01/09/23)**

REPORT TO: **Voting Meeting (01/12/23)**

ITEM NO: 664/2022

SUBJECT: Approve the contract for RFQ/P #43-015 EMS Billing and Collection Services for Fire Rescue to Digitech Computer, LLC, of Chappaqua, NY.

Meetings:

Work Session Date: 01/09/23 **Voting Meeting Date:** 01/12/23

Executive Summary:

Presenter: DCCG

Recommendation:
Approve the Revenue Generating contract of competitively bid RFQ/P #43-015 EMS Billing and Collection Services for Fire Rescue EMS Division to Digitech Computer, LLC of Chappaqua, New York for 3.59% of net revenue generated.

Purpose of Request:
To lower the cost of collecting ambulance and other EMS services rendered with a new contractor that offers improved services and professionalism.

History:
Fire Recovery EMS, is the current Billing and Collection contractor, and charges 4.95% of net revenue.

Facts and Issues:
$5,194,949 outstanding charges were collected in 2021. This is on 16,647 ambulance trips with an average of $312.06 cost per trip.

Options:

Funding Requested	$ 320,000.00
Are funds within current budget?	Yes
Source of Funds	Emergency Services
Does the action involve a Resolution, Ordinance, Contract, Agreement, etc.?	Yes
Has it been reviewed by the County Attorney?	Yes
Is there a deadline for this item?	2022-12-27

Approvals:

Buyer	submit	approve	Purchasing
AP	CA	CA	AP
Budget	**Finance**	**Attorney**	**Administration**
TS	WG	WLI	CR
Clerk			
JR			

Attachments:
Financial Supplement
BID TAB
Contract #43-015 EMS Billing and Collection Services

HALL COUNTY BOARD OF COMMISSIONERS
FINANCIAL SUPPLEMENT REPORT

AGENDA ITEM 664/2022

Funds Requested: $ 320,000.00

Request Budgeted: Yes

Proposed Source of Funding:

Emergency Services

Budget Transfer Requested:

No

Funding Source Items:

Fiscal Year	Fund	Division	Account	Amount
2023	009 - EMERGENCY SERVICES	1124 - E.M.S. - SVS DIST	4419 - TECHNICAL & PROFESSIONAL	$160,000.00
2024	009 - EMERGENCY SERVICES	1124 - E.M.S. - SVS DIST	4419 - TECHNICAL & PROFESSIONAL	$160,000.00
2023	009 - EMERGENCY SERVICES	1124 - E.M.S. - SVS DIST	3526 - EMS FEES	$-5,500,000.00

Budget Transfer Items:

Additional Information/Comments:

The requested funds above represent the estimated annual administration fee for Ambulance Services for the new contract. We've also noted the estimated amount of annual revenue from fee collections for Ambulance Transport Services.

Contact for Questions:

Phone:

Scoring Methodology	
Maximum Available Technical Score Points	800
Maximum Available Score Points	200
Total Maximum Available Score Points	1000

SCORES	Change Healthcare	EMS Management & Consultants	PPS, Inc.	Colleton Billing	Coronis Health RCM, LLC	Digitech Computer LLC
Average Technical Scores	515.544	564.422	568.780	497.755	457.773	639.989
Add Average Cost Scores	0.000	50.010	50.010	100.020	0.000	150.030
Total Scores	515.544	614.432	618.790	597.775	457.773	**790.019**

Digitech Computer LLC is the award winner having the largest score points of 790.019 out of a possible 1,000 points

Technical Scores	Evaluator 2	Evaluator 3	Evaluator 1	Total	Average
Bidder 1	466.65	706.66	373.3225	1546.6325	515.5441667
Bidder 2	559.965	653.33	479.97	1693.265	564.4216667
Bidder 3	599.6925	546.67	559.9775	1706.34	568.78
Bidder 4	466.65	666.625	359.99	1493.265	497.755
Bidder 5	479.9825	400.01	493.3275	1373.32	457.7733333
Bidder 6	586.63	600	733.3375	1919.9675	639.9891667

Cost Scores	Total Scores
Bidder 1	0
Bidder 2	50.01
Bidder 3	50.01
Bidder 4	100.02
Bidder 5	0
Bidder 6	150.03

Total Bid Packet Request	26
Number from Hall Co	1
Total Cost of Net Revenue	3.59%

HALL COUNTY
GEORGIA
We have it all in Hall

Hall County Government

FINANCIAL SERVICES

REVENUE GENERATING CONTRACT #43-015
EMS BILLING AND COLLECTION SERVICES

ARTICLE #101 - INTRODUCTION

This Contract for EMS Billing And Collection Services (hereinafter referred to as "Services") is made and entered into as of _____ (hereinafter referred to as "Effective Date" or "Date of Execution") by and between Hall County, Georgia (hereinafter referred to as "The County"), located at 2875 Browns Bridge Rd., Gainesville, Georgia 30504, and a Digitech Computer LLC, located at 480 Bedford Road, Building 600, Second Floor, Chappaqua, New Your 10514, an entity that is legally registered and qualified, holding any such licenses and certifications as may be required to render Services, to do business in the State of Georgia (hereinafter referred to as the "Contractor"). The County and the Contractor are sometimes referred to herein individually as a "Party" and collectively as the "Parties".

WHEREAS, The parties mutually desire to enter into this Contract to document the provision of Services or other valuable consideration by the Contractor to The County in exchange for payment as compensation as a result of the competitively bid RFQ/P # 43-015 and the Bidder's response thereof, the Scope of Work, Exhibits, Attachments and references, to The County, in consideration of the terms and conditions contained herein and the receipt and sufficiency of which are hereby acknowledged by both parties, the parties hereto agree as follows.

ARTICLE #102 – CONTRACT

A. Contractor agrees to provide the following Services to The County as outlined below.

EMS Billing and Collection Services

B. County hereby agrees to provide the following payments as compensation to Contractor.
The amount of 3.59% of net revenue generated.

ARTICLE #103 - NOTICES:

To the extent that either party to this Contract is required to provide notice to the other party in compliance herewith, Notice shall be provided to the following persons:

COUNTY PROJECT MANAGER
Attn: Chief Christie Grice
Department: Fire Rescue EMS Division Chief
Email: cgrice@hallcounty.org
Phone: 770-531-6838

COUNTY ISSUING OFFICER
Attn: Andy Penick
Department: Purchasing
Email: apenick@hallcounty.org
Phone: (770) 531-4939

CONTRACTOR'S CONTACT INFO

Company Legal Name: Digitech Computer LLC
Attn: Digitech Computer LLC
Physical Address: 480 Bedford Rd.
Address: Bldg. 600 2nd Floor
City State Zip: Chappaqua, NY 10514
Phone: (407) 242-8120
E-mail: smetcalf@digitechcomputer.com

REMIT-TO ADDRESS

Company's FEIN #: 11-2693136
Digitech Computer LLC
Mailing Address: 480 Bedford Rd.
Bldg. 600 2nd Floord
City State Zip: Chappaqua, NY 10514
Phone: _____
accountsreceivable@digitechcomputer.com

ARTICLE #104 – EXCLUSIVE RIGHTS:

The Contract is exclusive. The County may not select other Contractors to provide Services similar to those described in this Contract unless either party terminates the Contract as outlined under Article # 108 Termination, during the term of the Contract.

ARTICLE #105 – CONTRACT TERM:

A. **Initial Contract Term.** This Contract is effective on the date of signature shown in *ARTICLE #101* by all parties unless a future effective date is so designated on this contract, and will last for twelve (12) months from the date of execution, unless terminated by the parties pursuant to *ARTICLE #107 – REMEDIES AND CONTRACT PERFORMANCE.*

B. **Contract Renewal.** The County shall have the option, in its sole discretion, to renew the Contract for up to Four (4), One (1) Year Renewal(s). The price, terms, and conditions in effect at the time of each renewal(s) shall remain the same unless the Contract is amended by mutual agreement. Renewal(s) will depend upon the best interests of the County, available funding, and Contractor's performance. Renewal(s) will be accomplished through the issuance of a Contract Renewal Document that must be evidenced in writing by both Parties. The County does not accept nor acknowledge automatic renewals and shall have no obligations, payment or otherwise, associated therewith.

C. **Contract Extension.** In the event that this Contract shall terminate or be likely to terminate prior to the making of an award for a new Contract for the identified Services, the County may, with the written consent of Contractor, extend this Contract for such period as may be necessary to afford the County a continuous supply of the identified Services for up to one (1) year.

ARTICLE #106 - CONTRACT AMENDMENTS AND MODIFICATION:

This Contract may not be modified, amended, or added to, except in writing fully executed by both parties hereto. This Contract document constitutes the sole and entire Contract and understanding between the parties as to the subject matter hereof, and no verbal promises have been made by either party in relation hereto.

ARTICLE # 107 – REMEDIES AND CONTRACT PERFORMANCE:

In the event that either party to this Contract breaches this Contract, including by failure to meet the timetables set forth herein, the non-breaching party shall provide written notice to the breaching party which describes the breach of this Contract. The party whose breach is alleged shall have thirty (30) days from the date of receipt of the written notice to cure the breach or to otherwise negotiate a resolution of the breach.

If the breach has not been cured and the parties hereto have not resolved the issue described in the notice letter by thirty (30) days after receipt of the notice letter, the party authoring the letter shall be entitled to seek any and all remedies allowed by Georgia law, including damages, equitable relief, declaratory relief, specific performance, and/or seeking relief as to any bonds issued hereon. Additional provisions are;

A. **Delay or Impossibility of Performance.** Any failure or delay must be beyond the control of and without the fault or negligence of the Contractor. If the Services to be provided to the County are interrupted by a Force Majeure Event, the County will be entitled to an equitable adjustment to the fees and other payments due to the Contractor under this Contract. If delay results from a subcontractor's conduct, negligence or failure to perform, the Contractor shall not be excused from compliance with the terms and obligations of the Contract. Epidemics and pandemics are not Force Majeure events.

B. **Obligations beyond Contract Term.** The Contract shall remain in full force and effect to the end of the specified term or until terminated or canceled pursuant to the Contract.

C. **Transition Cooperation with the County and Cooperation with other Contractors.** Contractor agrees that upon termination of this Contract for any reason, it shall provide sufficient efforts and reasonable cooperation and assistance to the County to ensure an orderly and efficient transition to the County or an alternative contractor. Further, in the event that the County has entered into or enters into contracts with other Contractors related to the Services, Contractor agrees to cooperate fully with such other Contractors. Contractor shall not engage in any act that will interfere with the performance of work by any other Contractor.

ARTICLE # 108 - TERMINATION:

Either party may terminate this Contract by providing thirty (30) days written notice to the other party at any time. Should either party terminate this Contract prior to the date of automatic termination pursuant to section 4 above, Contractor shall provide the County with all deliverables up to the date of termination (30 days after the notice is provided), and the County shall pay the Contractor for all work properly performed in compliance with the terms of the Contract up to the date of termination.

A. **Termination for Convenience.** Following thirty (30) days written notice, the County may terminate the Contract in whole or in part for any reason without the payment of any penalty or incurring any further obligation to the Contractor.

B. **Termination for Cause.** The occurrence of any one or more of the following events shall constitute cause for the County to declare the Contractor in default of its obligations under the Contract:

1. The Contractor fails to deliver or has delivered nonconforming Services or fails to perform, to the County's satisfaction, any material requirement of the Contract or is in violation of a material provision of the Contract, including, but without limitation, the express warranties made by the Contractor.
2. The County determines that satisfactory performance of the Contract is substantially endangered or that a default is likely to occur.
3. The Contractor fails to make substantial and timely progress toward performance of the Contract.
4. The Contractor becomes subject to any bankruptcy or insolvency proceeding under federal or state law to the extent allowed by applicable federal or state law including bankruptcy laws; the Contractor terminates or suspends its business; or the County reasonably believes that the Contractor has become insolvent or unable to pay its obligations as they accrue consistent with applicable federal or state law.

5. The Contractor has failed to comply with applicable federal, state and local laws, rules, County ordinances, regulations and orders when performing within the scope of the Contract.
6. The Contractor has engaged in conduct that has or may expose the County or the State to liability, as determined in the County's sole discretion; or

C. **Notice of Default.** If Contractor causes one or more of the default events set out in ARTICLE #108.B. of the Contract, the County shall issue a written Notice of Default to the Contractor requesting that the breach or noncompliance be remedied within the period of time specified in the County's Notice of Default to the Contractor. If the breach or noncompliance is not remedied within the period of time specified in the written notice, the County may:

1. Immediately terminate the Contract for default without additional written notice;
2. Procure substitute Services from another source and charge the difference between the Contract and the substitute Contract to the defaulting Contractor; and/or,
3. Enforce the terms and conditions of the Contract and seek any legal or equitable remedies.

D. **Termination Due to Non-Availability of Funds.**
This Contract will terminate immediately and absolutely if the County determines that adequate funds are de-appropriated such that the County cannot fulfill its obligations under the Contract, such determination being at the County's sole discretion and conclusive.

E. **Termination due to Failure of Contractor to Act.**
The County may terminate the Contract for any one or more of the following reasons effective immediately without advance notice:

1. In the event the Contractor is required to be certified or licensed as a condition precedent to providing the Services, the revocation or loss of such license or certification may result in immediate termination of the Contract effective as of the date on which the license or certification is no longer in effect.
2. The County determines that the actions, or failure to act, of the Contractor, its agents, employees or subcontractors have caused, or reasonably could cause, life, health or safety to be jeopardized.
3. The Contractor furnished any statement, representation, or certification in connection with the Contract or the bidding process, which is materially false, deceptive, criminal activity, incorrect or incomplete.
4. Failure of the Contractor to obtain, provide, maintain, and deliver the Performance and Payment Bonds (if required) as and when required under this Contract, or failure to comply with any requirement pertaining to the appropriate amounts thereof as set forth in *ARTICLE #123 - PERFORMANCE AND PAYMENT BOND REQUIREMENT.*

F. **Payment Limitation in Event of Termination.** In the event of termination of the Contract for any reason by the County, the County shall pay only those amounts, if any, due and owing to the Contractor for Services actually received and accepted by the County up to and including the date of termination of the Contract and for which the County is obligated to pay pursuant to the Contract.

G. **The Contractor's Termination Duties**. Upon receipt of notice of termination or upon request of the County, the Contractor shall:

1. Cease work under the Contract and take all necessary or appropriate steps to limit disbursements and minimize costs and furnish a report within thirty (30) days of the date of notice of termination, describing the status of all work under the Contract, including, without limitation, results accomplished, conclusions resulting therefrom, and any other matters the County may require.
2. Immediately cease using and return to the County, any personal property or materials, whether tangible or intangible, provided by the County to the Contractor.
3. Comply with the County's instructions for the timely transfer of any active files and work product produced by the Contractor under the Contract.
4. Cooperate in good faith with the County, its employees, agents, and Contractors during the transition period between the notification of termination and the substitution of any replacement Contractor; and
5. Immediately return to the County any payments made by the County for goods and services that were not delivered by the Contractor.

ARTICLE # 109 – NO DEFENSE OR INDEMNIFICATION BY COUNTY:

The parties agree that the County shall not be responsible for defending or indemnifying any Contractor from any claim brought by any third party against the Contractor.

ARTICLE #110 - ASSIGNMENT AND DELEGATION BY CONTRACTOR:

The Contractor shall not assign or delegate this Contract, or any performance required by it, in whole or in part, without the prior express written consent of the County.

ARTICLE #111 – USE OF THIRD-PARTIES (Sub-Contractors):

This Contract is for the benefit of the parties hereto only and is not intended to benefit any third-party or give rise to any duty or causes of action for any third party. All restrictions, obligations and responsibilities of the Contractor under the Contract shall also apply to third parties such as subcontractors, if allowed in writing by the County. Any Contract with a subcontractor must also preserve the rights of the County.

ARTICLE #112 – SUPERSEDES FORMER CONTRACTS

Unless otherwise specified in the Contract, this Contract supersedes all prior Contracts or Agreements between the County and the Contractor for the Services provided in connection with the Contract.

ARTICLE #113 - SEVERABILITY:

If any paragraph, sub-paragraph, sentence, clause, phrase, or portion of this Contract is declared invalid or unconstitutional by any Court of competent jurisdiction or if the provisions of any part of this Contract as applied to any particular situation or set of circumstances shall be declared invalid or unconstitutional, such invalidity shall not be construed to affect the remaining portions of this Contract not so held to be invalid or the application of this Contract to other circumstances not so held to be invalid.

ARTICLE # 114 - RECORDS:

A. **Public Records Request**. The laws of the State of Georgia, including the Georgia Open Records Act, as provided in O.C.G.A. § 50-18-70 et seq., require procurement records and all other records received by or prepared or maintained on behalf of the County, including, but not limited to; electronic documents, papers, letters, emails, maps, books, tapes, photographs, policies, procedures, notes, computer based or generated information, or similar material, be made open to public inspection, unless otherwise provided by law

B. **Record Retention and Access**. The Contractor shall maintain books, records, and documents in accordance with generally accepted accounting principles and procedures and which sufficiently and properly document and calculate all charges billed to the County throughout the term of the Contract for a period of at least five (5) years following the date of final payment or completion of any required audit, whichever is later. Records to be maintained include both financial records and service records.

ARTICLE # 115 - ADDITIONAL TERMS:

A. The County shall not be bound by any terms and conditions included in any Contractor's literature, packaging, invoice, catalog, brochure, technical data sheet, on-line representation, warranties or service level agreement or other document which attempts to impose any condition in variance with or in addition to the terms and conditions contained herein.

B. The County shall not be bound to any Terms and Conditions of the Contractor that are only accessible by hyper-link. All Terms and Conditions must be printed and approved by the County.

ARTICLE # 116 - WAIVER:

The failure of any party hereto to seek a remedy for any alleged breach of this Contract shall not constitute a waiver of any claim, cause of action, or remedy allowed by Georgia law for breach thereof.

ARTICLE # 117 - CONTRACTOR AND COUNTY RIGHTS AND OBLIGATIONS:

A. The County has the right at any time to require the Contractor to put an immediate stop to any procedure, or the use of any equipment (chemical, material, etc., if applicable) considered by the County to be hazardous (or toxic) to persons, buildings, or surfaces. The Contractor will utilize acceptable substitutes as quickly as possible.

B. The County has the right to require the Contractor to reassign or remove any employee or subcontractor's employee from the premises temporarily or permanently when, in the County's sole opinion, the employee is not suitable. The County's decision on this matter shall be final, and Contractor will remove this employee immediately and replace with a person of at least equivalent training, experience and requisite qualifications as quickly as possible, subject to the County's prior approval.

C. Contractor agrees to obtain prior written approval from the County for the use of subcontractors to provide the Services described in *ARTICLE #103 - DESCRIPTION OF SERVICES* prior to subcontractor's performance of work.

ARTICLE # 118– INSURANCE REQUIREMENTS:

A. **Insurance Requirements.** The Contractor must procure and maintain insurance policies at the Contractor's own expense and must furnish the County with a Certificate of Insurance (COI) providing evidence of proof of coverage at least in the amounts indicated in this subsection. The insurance certificate must list County as the certificate holder and as an additional insured under the commercial general, automobile and umbrella liability policies as follows: "Hall County Government, its Board of Commissioners, its officers, employees and agents, 2875 Browns Bridge Rd, Gainesville, GA 30504" The policy must protect the Contractor and the County (as an Certificate Holder and Additional Insured) from any claims for bodily injury, property damage, or personal injury covered by the indemnification obligations set forth herein throughout the duration of the Contract.

The Contractor must maintain the following insurance coverage during the term of the Contract, in at least the minimum amounts set forth below, to cover all loss and liability for damages on account of bodily injury, including death therefrom, and injury to or destruction of property caused by or arising from any and all services carried on and any and all work performed by the Contractor pursuant to this Contract:

1. Workers Compensation Insurance (Occurrence) in the amounts of the statutory limits established by the General Assembly of the State of Georgia (A self-insurer must submit a certificate from the Georgia Board of Workers Compensation stating that the Contractor qualifies to pay its own workers compensation claims.). In addition, the Contractor must require all subcontractors occupying the premises or performing work under the Contract to obtain an insurance certificate showing proof of Workers Compensation Coverage with the following minimum coverage:

a.	Bodily injury by accident - per employee	$ 100,000
b.	Bodily injury by disease - per employee	$ 100,000
c.	Bodily injury by disease – policy limit	$ 500,000

2. Commercial General Liability Policy with at least the following minimum coverage:

a.	Each Occurrence Limit	$1,000,000
b.	Personal & Advertising Injury Limit	$1,000,000
c.	General Aggregate Limit	$ 3,000,000
d.	Products/Completed Ops. Aggregate Limit	$2,000,000

3. Automobile Liability with at least the minimum coverage: $1,000,000

   Combined Single Limit to cover Any Vehicle, leased or rented by the Contractor

4. Umbrella Liability, Excess Liability per Occurrence $10,000,000
   Aggregate $10,000,000

It shall be the responsibility of the Contractor to require all of its subcontractors to maintain Commercial General Liability insurance with business automobile liability coverage with companies and limits as stated above, and to provide a certificate evidencing that such insurance is in effect upon request. The County shall be named as an additional insured and a copy of the policy. Endorsement must be provided with the insurance certificate.

B. **Insurance Certificates and General Requirements.** No Contract performance shall occur unless and until the required insurance certificates are provided. The insurance certificate must reference the Contract number assigned by the County and document that the liability coverage purchased by the Contractor includes contractual liability coverage to insure the indemnity agreement as stated herein.

C. The Contractor understands and agrees that the foregoing policies will not be canceled, or not renewed or allowed to lapse for any reason until at least thirty (30) days prior written notice has been given to the County, or until such time as other valid and effective insurance coverage acceptable in every respect to the County and providing protection equal to protection called for in the policies referenced in this *ARTICLE #118* shall have been received, accepted, and acknowledged by the County. Certificates of insurance showing such coverage to be in force shall be filed with the County prior to commencement of any work under the Contract. The foregoing policies shall be obtained from insurance companies licensed to do business in Georgia and, unless waived or modified in writing by the County, shall be an insurer with a minimum A.M. Best Rating of "A-". All such coverage shall remain in full force and effect during the term and any renewal or extension thereof. The insurance certificate must be submitted with this Contract.

D. **Waiver of Subrogation.** There is no waiver of subrogation rights by either Party with respect to insurance.

ARTICLE # 119 – NO WAIVER:

A. **Authority to Enter into Contract.** The Contractor represents and warrants that it has full authority to enter into and perform its obligations under the Contract and that the Contract constitutes a legal, valid, and binding obligation upon the Contractor in accordance with its terms. The representatives of the parties hereto also represent and warrant that they are authorized to sign this Contract on behalf of each party hereto."

B. **Solicitation**. The Contractor warrants that no person or selling agency (except bona fide employees or selling agents maintained for the purpose of securing business) has been employed or retained to solicit and secure the Contract upon an agreement or understanding for commission, percentage, brokerage or contingency.

C. **Vehicles and Equipment.** Contractor warrants that no County owned vehicles or equipment will be used in the performance of this Contract. Contractor shall be responsible for providing all transportation necessary to deliver Services under the Contract.

ARTICLE # 120 – INTELLECTUAL PROPERTY RIGHTS AND OWNERSHIP:

Contractor agrees it will not use the name or any intellectual property, including but not limited to, County trademarks or logos in any manner, including commercial advertising or as a business reference, without the expressed prior written consent of the County.

ARTICLE # 121 - COMPENSATION:

A. The Contractor's compensation of 3.59% of net revenue for the Services provided pursuant to this Contract and in accordance with the prices quoted and conditions set forth in the Bidder's response which is attached hereto and incorporated into this Contract as if

fully set forth herein. Payments will be made to the Contractor after acceptance of the Contractor's delivered Services by the County, and after receipt of undisputed invoice to the County.

B. Prices quoted shall be firm and fixed throughout the term of this Contract, unless otherwise Amended or Modified by mutual agreement.

C. Cost may be prorated for Services added or removed under this Contract to align cost with the remaining term of Contract.

D. It is understood that this bid or proposal is made without collusion or fraud. Contractor understands and acknowledges that collusive bidding is a violation of state and federal law and may result in the cancellation of the Contract.

ARTICLE # 122 - COUNTY PAYMENT TO CONTRACTOR:

A. The County will issue a Notice to Proceed to the Contractor, and Purchase Order(s) (herein after 'PO'). The terms of this Contract shall be incorporated by reference into any and all PO(s) issued prior to the expiration or termination of this Contract. The PO will be issued by electronic mail (e-mail) to the Contractor's representative in *ARTICLE #102*. A PO is considered "issued" when the e-mail containing the PO is sent by the County to the Contractor. **POs may not be required for Revenue Generating Contracts.**

The Contractor shall not deliver any Services, equipment, devices, or components thereof until authorized in writing by the County through issuance of a PO or Notice to Proceed, which shall provide a commencement date. Any work, including but not limited to travel, preliminary meetings, planning, etc., performed outside of the terms and conditions of and before the issuance of the PO will not be considered for payment. Contractors are not to begin work or ship any product on any verbal communication from within the County. The County will not be liable for payment for any work or product with the issuance of a verbal communication.

The Scope of Work shall remain in effect from the Notice to Proceed to completion of the project. The Parties agree that the County will not pay or otherwise compensate the Contractor for any Services, materials, equipment, devices or components thereof outside of the Scope of Work and/or beyond the term of this Contract, unless specifically authorized in writing as evidenced by an amendment (see *ARTICLE #106 - CONTRACT AMENDMENTS &, MODIFICATION*), a time extension letter, or as otherwise authorized by the County.

B. **Invoice/Payment.**

1. Contractor shall invoice the County via email solely to accountspayable@hallcounty.org and only after the Services provided have been inspected and accepted by the County. Receipt of the Services does not constitute acceptance. Invoice amounts shall not exceed the Contractor's pricing set forth in *ARTICLE #102.*
2. Each invoice shall include the Contractor's current "Remit to" address; a description of the Services provided; the invoice amount; the Contract number; and the associated PO number issued. Each properly prepared invoice must be sent in accordance with the instructions listed on the PO. Standard payment terms are net 30 days (N30) in arrears from the date the invoice is accepted, following delivery of the Services.

3. The County does not pay for services not yet received.
4. The Contractor shall be solely responsible for paying all costs, expenses and charges it incurs in connection with its performance under the Contract.

C. **Unsatisfactory Performance; Delay of Payment.**

1. If the County determines that the quality of the Services provided are deficient, unacceptable, or unsatisfactory, the County's Project Manager identified in *ARTICLE #103* shall issue a written notice to Contractor. Contractor agrees that upon receipt of the written notice, it shall make every effort to correct the deficiency (ies) within the timeframe prescribed therein. If the Contractor fails to timely correct the deficiencies, the County reserves the right to delay payment pursuant to this *ARTICLE #122* or terminate the Contract (*ARTICLE #108 – TERMINATION PROVISIONS*).
2. **Delay of Payment Due to Contractor's Failure.** If the County determines that the Contractor has failed to perform or deliver any Services as required by the Contract, the Contractor shall not be entitled to any compensation under the Contract until such Services are delivered and accepted. In this event, the County may withhold that portion of the Contractor's compensation, which represents payment for Services that were not delivered. To the extent that the Contractor's failure to perform or deliver in a timely manner causes the County to incur costs, the County may deduct the amount of such incurred costs from any amounts payable to Contractor. The County's authority to deduct such incurred costs shall not in any way affect the County's authority to terminate the Contract.

D. **Set-Off Against Sums Owed by the Contractor**. In the event that the Contractor owes the County any sum under the terms of the Contract, pursuant to any judgment, or pursuant to any law, the County may set off the sum owed by the Contractor against any sum owed to the Contractor, in the County's sole discretion.

E. **Final Payment.** Contractor shall issue an invoice for final payment to the County no later than thirty (30) days following the expiration or termination date of the Contract.

F. The Contractor must not "Factor or Assign Payments" to another or a financial institution. The County will only pay the party to whom it is contracted with. The County will not in any circumstances pay a third-party.

ARTICLE #123 – PERFORMANCE AND PAYMENT BONDS, RETAINAGE

A. Bonds are not required on this contract.

B. Retainage is not required on this contract

ARTICLE # 124 - TAXES:

The County is exempt from Federal Excise Taxes, and the County is exempt from State and Local Sales and Use Taxes on the Services and the County's Sales and Use Tax Exemption Certificate is hereto attached to this contract.

ARTICLE #125 – VENUE AND GOVERNING LAW

The parties agree that this Contract shall be interpreted, construed, and enforced in accordance with the laws of the State of Georgia. To the extent that either party brings suit to enforce the terms of this Contract, including suit in equity, the parties agree and consent to file any such suit in the Superior Court of Hall County, Georgia.

ARTICLE # 126 - NOTICE OF INTENT TO LITIGATE

No civil action with respect to any dispute or claim arising out of or relating to this Contract may be commenced without first giving thirty (30) calendar day's written notice to the other party of the claim and the intent to initiate a civil action.

ARTICLE # 127- GEORGIA SECURITY AND IMMIGRATION COMPLIANCE ACT:

A. By signing this Contract, the Contractor certifies that prior to and throughout the performance of all applicable work under this Contract it will remain in full compliance with all federal and state immigration laws, including but not limited to 8 U.S.C. § 1324a and the Georgia Security and Immigration Compliance Act (O.C.G.A. §13-10-90 et seq.), as amended by the Illegal Immigration Reform and Enforcement Act of 2011, regarding the verification of employment eligibility of employees under the Immigration Reform and Control Act of 1986. Contractor will ensure that only persons who are citizens or nationals of the United States or non-citizens authorized under federal immigration laws are employed to perform services under this Contract or any subcontract or sub-subcontract hereunder.

B. Contractor further certifies its compliance with the aforementioned federal and state immigration laws set forth by signing a sworn affidavit, the Georgia Security and Immigration Compliance Act Affidavit, notarized by an Official Notary Public, and obtaining the same affidavits from any subcontractor providing services pursuant to this Contract.

ARTICLE # 128 – ORDER OF PRECEDENCE:

In the event of any inconsistency, ambiguity, or conflict among the specific provisions of the Contract and the Contractor's Response, the order of precedence shall be as follows:

A. First, any amendments to the Contract, including all Exhibits thereto.
B. Second, the Contract itself, including all Exhibits thereto.
C. Third, Attachments appended to the Contract.

ARTICLE # 129– CONTRACT EXHIBITS AND ATTACHMENTS:

The Parties acknowledge that the following listed Exhibits and Attachments are hereby incorporated into and made a part of this Contract as though expressly written herein.

129.1 List of EXHIBITS:

EXHIBIT A: Scope of Work
EXHIBIT B: Bidders Response
EXHIBIT C: Rate and Fee Schedule

129.2 List of Attachments:

Attachment 1: Contractor's W-9 Form
Attachment 2: Contractor's Business License
Attachment 3: e-Verify & S.A.V.E. Affidavit(s)
Attachment 4: Certificate of Insurance
Attachment 5: Performance and Payment Bonds (if applicable)
Attachment 6: GIS/Locations Maps (if applicable)
Attachment 7: Cone-of-Silence Affidavit
Attachment 8: Mandatory Bid Response Sheet

ARTICLE # 130 - ENTIRE CONTRACT:

This Contract, as executed and approved, shall constitute the entire agreement between the Parties and supersedes all other prior and contemporaneous statements, agreements, and understandings between the Parties. No written or oral statements, agreements, or understandings that are not set out, referenced, or specifically incorporated in this Contract shall in any way be binding or of effect between the Parties.

ARTICLE # 131– VALIDITY

If any paragraph, sub-paragraph, sentence, clause, phrase or any portion of this agreement shall be declared invalid or unconstitutional by any Court of competent jurisdiction or if the provisions of any part of this agreement as applied to any particular situation or set of circumstances shall be declared invalid or unconstitutional, such invalidity shall not be constructed to affect the portions of this agreement not so held to be invalid or the application of this agreement to other circumstances not so held to be invalid. It is hereby declared to be the intent of the parties to this agreement to provide for separate and divisible parts, and to hereby adopt any and all parts hereof as may not be held invalid for any reason.

ARTICLE # 132 – CONTRACT TERMS AND CONDITIONS

1. All purchases must comply with The Official Code of Hall County Sections 3.10.010 – 3.10.190.
2. If any conflict or ambiguity arise between these Terms and Conditions herein and The Official Code of Hall County, the latter will govern.
3. The Terms and Conditions set herein shall supersede and govern over all Supplier's Terms and Conditions or Service Level Agreements.
4. Hall County, Georgia, herein referred to as 'The County', retains the right to 'red-line' sections of the Supplier's Terms and Conditions if such are in conflict with the best interest of the County.
5. Acceptance of a Purchase Order (PO) and delivery of Goods or Services shall be deem as the Supplier's full and complete acceptance of The County's Terms and Conditions.
6. The terms; supplier, vendor, bidder, offeror, contractor, consultant, designer, distributor, dealer or manufacturer or otherwise purveyor or source of supply or performance of service shall mean one-and-the-same, herein denoted as 'Supplier' for goods and 'Contractor' for services.
7. Furthermore, the terms; goods, materials, commodities, components, drawings, drafts, renderings, plans, physical or digital, software, SaaS, Engineering, Architectural, capital asset equipment, vehicles, heavy earth-moving or other equipment, purchased or leased, or other such deliverables are herein denoted as 'Goods' and shall mean one-and-the-same.
8. 'Services' shall mean all services, either financial, advisory, consultative, labor, staff augmentation, construction, rehabilitation, restoration, repair, support or maintenance, communication, telephony, internet, TV or streaming, pest control, grounds maintenance, custodial and janitorial, street or paved surfaces cleaning, drain cleaning or otherwise where services are offered for consideration.
9. The County's payment terms are Net 30 days. The County may consider Prompt Pay Terms if offered at least five percent (5%) of the total and not less than fifteen (15) days terms. A supplier simply

offering such a discount does not constitute the County's acceptance of such, and the County shall not be bound to the offer.

10. The Supplier shall transfer and deliver all goods or services described on the attached PO for the consideration set forth herein.
11. The Supplier shall only deliver goods and services as described on the PO and within the Scope of Work and the Supplier's Bid Response.
12. The County holds no obligation to goods delivered or services rendered that were not ordered and specified in writing.
13. The Supplier shall not construe any verbal consent to purchase goods or services as valid.
14. The County does not accept substitutions of services or goods that do not comply with the Scope of Work or Specifications set forth in the Purchase Order, Contract or Agreement, unless mutually agreed in writing by both parties.
15. The County does not accept automatic renewals with the exception of monthly subscription services.
16. The County only pays for services rendered in arrears. The County does not pay for services not yet rendered.
17. The County does not pay deposits towards goods ordered. Exception may be given to custom cut (such as window coverings and blinds, or carpet, tile etc.), fabrication, decoration, or otherwise custom designed specifically for the County.
18. The County will accept backorders only if goods are out of stock and with prior written notice. Supplier's shall ship all quantities that it has in stock and hold orders for backorders.
19. The County participates in Cooperative Purchasing Agreements, State of Georgia Statewide Contracts, and other state, local, Intergovernmental Agreements, Memorandums-of-Understanding and other such Agreements.
20. In all cases, the jurisdiction shall be the State of Georgia, County of Hall, for arbitration or other legalities
21. Delivery shall be made to the ship-to address(s) listed on the PO and within the time specified. The Supplier must note if multiple ship-to address are used and deliver goods to the appropriate ship-to address.
22. Risk of loss of the goods shall pass to The County upon inspection and acceptance only.
23. Receipt of goods or services does not constitute acceptance.
24. Title to the goods shall remain with the Supplier until acceptance by The County.
25. The Supplier warrants that the goods are merchantable and that the Supplier has a legal right to deliver the goods and services and as described herein.
26. The County shall have the right to inspect all goods or services at the time and place of delivery.
27. No right or interest in the contract shall be assigned by the Supplier without written permission of The County, and no delegation of any obligation owed or of the performance of any obligation by the Supplier shall be made without the written permission of the County. Any attempted assignment or delegation shall be wholly void and totally ineffective for all purposes unless made in conformity with this paragraph.
28. The County is exempt from Federal Excise Tax and Georgia Sales and Use Tax.
29. This issuance of this PO shall not violate the Code of Ethics and Conflicts of Interest for Public Officers and Employees for Government Service set forth in the 2020 Section 45-1020 *et seq.* of the Official Code of Georgia Annotated and the Official Code of Hall County Section 3.10.070 governing Ethics.
30. All goods and services supplied pursuant to this PO shall, unless otherwise noted, conform exactly to all of the descriptions, specifications, and attachments contained in the Bid Solicitation, Request for Proposals, Invitation for Bid, or other advertisements, upon which this order is based; and the terms, conditions, and specifications of the Bid Solicitation are incorporated herein by reference and made a part hereof.
31. Any and all media production, recordings, videos, photo negatives, positives, artwork, plates, engravings, and other printed media materials owned by The County shall become and remain County property and shall be delivered to The County upon request.
32. Invoices should be submitted to The County as described on the PO, and each PO Number and/or Contract Number must be shown on each invoice submitted.
33. In the event that this PO is issued with an attached Contract or Agreement, the terms and conditions of the latter shall govern in the event of any conflict with these terms and conditions.

34. The Supplier may be suspended, terminated, or debarred if it is determined that the Supplier has made false certification(s) or has violated such certification(s) by failure to carry out the requirements herein.
35. The Supplier certifies that the Supplier and/or any of its subcontractors have not been debarred, suspended, or declared ineligible by any agency of the County, or State of Georgia or as defined in the Federal Acquisition Regulation (FAR) 48 C.F.R. Ch. 1 Subpart 9.4.
36. The Supplier certifies that the Supplier is not currently engaged in an active or pending lawsuit or other grievance, injunction, or levy against the County.
37. Goods are Free-On-Board (F.O.B.) destination unless otherwise denoted, freight, shipping and delivery shall be pre-paid and added to the invoice as a separate line item.
38. The County does not pay late fees nor interest charges.
39. The Supplier shall charge the County the exact amount of freight, delivery, handling and insurance charges.
40. The County is not bound to any minimum or maximum quantity or dollar amount set by the Supplier
41. In the event there is a discrepancy between the unit price and extended price, the unit price shall govern.

IN WITNESS WHEREOF, said Parties have hereunto affixed their signature and seal on the day, month, and year first above written:

Digitech Computer LLC

By: _____ COO

Title: Chief Operating Officer

Print Name: Walter C. Pickett II

Sworn to and subscribed before me this

9th Day of December, 2022

Notary Public: _____

Notary commission expires: 10/3/2026

[Locus Sigilli]

JOHN TSANTAKIS
Notary Public, State of New York
No. 01TS5034050
Qualified in Putnam County
Commission Expires October 3, 2026

HALL COUNTY, GEORGIA

By: _____
Richard Higgins, Chairman
Hall County Board of Commissioners

Attestment: _____
County Clerk, Deputy County Clerk

Sworn to and subscribed before me this

_____ Day of _____, 2022

Notary Public: _____

Notary commission expires: _____

[Locus Sigilli]

APPROVED AS TO FORM:

_____
Van Stephens, County Attorney
William Linkous, Deputy County Attorney

AGENDA ITEM

Fire Rescue

REPORT TO: **Work Session (01/09/23)**

REPORT TO: **Voting Meeting (01/12/23)**

ITEM NO: 677/2022

SUBJECT: Approve the sole source purchase of one (1) underwater remotely operated vehicle (ROV) for Fire Rescue to RJE Oceanbotics, LLC, of Irvine, CA, in the amount of $101,870.00.

Meetings:

Work Session Date: 01/09/23 **Voting Meeting Date:** 01/12/23

Executive Summary:

Presenter: CA

Recommendation:

Purpose of Request:
Approve the sole source purchase of one (1) underwater remotely operated vehicle (ROV) for Hall County Fire Rescue to RJE Oceanbotics, LLC, of Irvine, CA to assist with the rescue and recovery of drowning victims.

History:
After demonstrating two (2) ROV's and reviewing spec sheets of a third unit, Fire Rescue determined the model SRV-8 will best suit the needs of the County in the rescue and recovery of drowning victims.

Facts and Issues:
This underwater remotely operated vehicle (ROV) was chosen as it is the easiest to operate and user friendly. It provides two (2) additional thrusters for more precise underwater navigation versus six (6) thrusters on a similar ROV. Due to exclusive distributions rights, there are no other items or products that are similar for purchase.

Options:

Funding Requested	$ 101,870.00
Are funds within current budget?	Yes
Source of Funds	Capital
Does the action involve a Resolution, Ordinance, Contract, Agreement, etc.?	Yes
Has it been reviewed by the County Attorney?	Yes
Is there a deadline for this item?	

Approvals:

Buyer	submit	approve	Purchasing
DH	RS	JS	AP
Budget	**Finance**	**Attorney**	**Administration**
TS	WG	WLI	CR
Clerk			
JR			

Attachments:

Financial Supplement
Robotics Quote
Oceanbotics_Sole_Source_Justification.pdf
Oceanbotics_Sole_Source_Product_letter.pdf

HALL COUNTY BOARD OF COMMISSIONERS
FINANCIAL SUPPLEMENT REPORT

AGENDA ITEM 677/2022

Funds Requested: $ 101,870.00

Request Budgeted: Yes

Proposed Source of Funding:

Capital

Budget Transfer Requested:

Yes

Funding Source Items:

Fiscal Year	Fund	Division	Account	Amount
FY23	005 - CAPITAL PROJECTS	527 - FIRE DIST CAPITAL PROJECT	6007 - OTHER EQUIPMENT	$101,870.00

Budget Transfer Items:

Fiscal Year	Fund	Division	Account	Amount
2023	003 - FIRE	127 - FIRE DEPARTMENT	4711A - CONTINGENCY-GENERAL	$-102,000.00
2023	003 - FIRE	127 - FIRE DEPARTMENT	4843C - OPERATING TRANSFERS CIP	$102,000.00
2023	005 - CAPITAL PROJECTS	527 - FIRE DIST CAPITAL PROJECT	6007 - OTHER EQUIPMENT	$102,000.00
2023	005 - CAPITAL PROJECTS		3943 - OPERATING TRANSFERS IN	$102,000.00

Additional Information/Comments:

This budget adjustment will move the necessary funds from Fire Contingency and into the Fire Capital Projects Fund.

Contact for Questions: CA

Phone: 470-623-7127

RJE OCEANBOTICS, LLC.

15375 Barranca Pkwy, Bldg I-112 Irvine, CA 92618 USA Tel: (949) 656-8038, Cell: (559) 273-5455,
email:wprice@oceanbotics.com

QUOTATION

Quote No : RJE-58049
From : Waylon Price
Date : 12/21/2022
To : Hall County Fire Rescue
Attn : Kris Boggs

Payment Method : Check
Pricing : Standard
Terms : Net-30
Leadtime : 3-4 Weeks
F.O.B. : CPT

Qty	Model No	Description	Price	Subtotal
1	SRV-8 DSS	Includes: SRV-8 ROV with two hot swappable Lithium batteries, analog/digital camera, two underwater lights. Ruggedized Notebook PC with daylight readable screen with SubNav Software, Xbox controller. Tether reel with slip-ring assembly and 100m of tether. SubNav Software, Two Battery Chargers, Spares Kit, Tool Kit. System is package in two shipping cases with wheels.	$39,995.00	$39,995.00
50	S8-XX	Additional 50 Meters of Tether (150 Meters (495ft) total)	$12.00	$600.00
1	S8-RG-2J	Robotic Grabber with Two Jaw Head	$3,795.00	$3,795.00
1	S8-C3C	HD Color Camera Can be side or rear mounted and includes mount for SRV-8	$2,995.00	$2,995.00
1	S8-Oculus M750d	Includes: Mounting and Integration on the ROV and SubNav software	$23,995.00	$23,995.00
1	S8-BP USBL	Includes: Mounting and Integration of the X010 beacon on ROV, X150 Surface Beacon with Cable Assembly, Integration into SubNav Software, and Support Accessories.	$12,995.00	$12,995.00
1	S8-DVL-50m	DVL Solution for the SRV-8. 50M Altitude, 300m depth rated, SRV-8 benefits from increased navigation and control.	$9,995.00	$9,995.00
1	S8-OT	Onsite Training for SRV-8 ROV. Oceanbotics will provide two days of training for up to 9 learners. Training Includes Setup, maintenance, operations, and ROV theory. Attendees will have a certification test at the end of training.	$7,500.00	$7,500.00

Total: $101,870.00

This quotation is valid for only 60 days from the date hereof and is automatically canceled thereafter. Any order given us after 60 days above referred to is subject to our acceptance.

HALL COUNTY
GEORGIA

Sole-Source/Brand Justification

Request Submitted By

Name:	**Division Chief Kris Boggs**
Job Title:	**Division Chief of Safety and Special Operations**
Department:	**Fire Rescue**
E-Mail Address:	kboggs@hallcounty.org
Date of Request:	12/01/2022

Request Details

Sole-Source: Any contract entered into without a competitive solicitation process, based on a justification that only one known source exits or that only one single supplier can fulfill the requirements of the County.

Sole-Brand: A purchasing situation in which only one brand of equipment/supply, etc. will meet the requirements of the County.

Identify efforts made to locate other possible sources.

Hall County Fire Rescue members hosted a demonstration on two similar ROV units. This particular ROV best fits the needs of the organization.

Desired Supplier Name:	Oceanbotics
Desired Supplier Email:	wprice@oceanbotics.com
Desired Supplier Phone Number:	559-273-5455

Scope of Work

Provide a detailed description of commodities/services to be provided. Also, include the following details: exact or estimated quantity, per unit price, and the total estimated cost.

Qty 1
Model No SRV-8 DSS
Description

Includes: SRV-8 ROV with two hot swappable Lithium batteries, analog/digital camera, two underwater lights. Ruggedized Notebook PC with daylight readable screen with SubNav Software, Xbox controller. Tether reel with slip-ring assembly and 100m of tether. SubNav Software, Two Battery Chargers, Spares Kit, Tool Kit. System is package in two shipping cases with wheels.
$39,995.00

S8-XX
Additional 50 Meters of Tether (150 Meters (495ft) total)
$600.00

S8-RG-2J
Robotic Grabber with Two Jaw Head
$3,795.00

S8-C3C
HD Color Camera
Can be side or rear mounted and includes mount for SRV-8
$2,995.00

S8-Oculus M750d
Includes: Mounting and Integration on the ROV and SubNav software
$23,995.00

S8-BP USBL
Includes: Mounting and Integration of the X010 beacon on ROV, X150 Surface Beacon with Cable Assembly, Integration into SubNav Software, and Support Accessories.
$12,995.00

S8-DVL-50m
DVL Solution for the SRV-8. 50M Altitude, 300m depth rated, SRV-8 benefits from increased navigation and control.
$9,995.00

S8-OT
Onsite Training for SRV-8 ROV.
Oceanbotics will provide two days of training for up to 6 learners. Training Includes Setup, maintenance, operations, and ROV theory. Attendees will have a certification test at the end of training.
$7,500.00

Total: $101,870.00

Exclusive Capability: Justifying a Sole Source/Sole Brand

Provide an explanation why only a particular style, model, type or manufacturer is required (i.e. why the commodity is the only commodity which will meet the County needs).

Hall County Fire Rescue is seeking an underwater ROV (remotely operated vehicle) to assist with the recovery of drowning victims within the jurisdiction. After demonstrating two ROV's, and reviewing the spec sheets of a third ROV it was determined by Fire Rescue members that the Oceanbotics SRV-8 was the most user friendly ROV. The SRV-8 was the easiest to operate, the software was the most user friendly, and came standard with eight thrusters compared to six thrusters on the similar ROV. The additional two thrusters provide for more precise underwater navigation.

Provide a detailed description of proposed source's unique capabilities and/or personnel to perform the work and why this is the only source.

The Oceanbotics SRV-8 was the easiest to operate, the software was the most user friendly, and the unit comes standard with eight thrusters compared to six thrusters on the similar ROV. The additional two thrusters provide for more precise underwater navigation.

Letter from Original Equipment Manufacturer (required): ☑ Attached

Purchasing Use Only	
Buyer:	
Buyer E-Mail Address:	
Buyer Telephone:	
Contract #:	
Contract Name:	
If publicly solicited, number of protests:	
Outcome:	Choose One
Bid # (if competitively bid):	
Purchase Order #:	

OCEANBOTICS™

15375 Barranca Pkwy, Suite I-112, Irvine, CA 92618 USA Tel (949) 656-8038 x38

Date: 10/3/2022
Subject: Sole Source Products

Dear Sir or Madam,

This letter is to confirm that the Oceanbotics SRV-8 ROV and SRV-8X ROV systems are sole source product(s), manufactured, sold, and distributed exclusively by Oceanbotics, a division of RJE International; nor any other company, makes a similar or competing product. This product must be purchased directly by institutions from Oceanbotics at the address listed above.

SRV-8 Patent Number: D922301

There is no other like item(s) or product(s) available for purchase that would serve the same purpose or function as the SRV-8 and there is only one price for the above name(s) item(s) or product(s) because of exclusive distribution rights.

If you desire additional information, do not hesitate to contact me at (559) 273-5455 at any time or visit our website at www.oceanbotics.com.

We appreciate the opportunity to partner with your agency.

Respectfully,

Waylon Price

Waylon Price

Sales Manager
Oceanbotics

US00D922301S

(12) **United States Design Patent** (10) **Patent No.: US D922,301 S**
Engle (45) **Date of Patent: ** Jun. 15, 2021**

(54) **UNDERWATER ROBOTIC VEHICLE**

(71) Applicant: **RJE Ocean Robotics LLC**, Irvine, CA (US)

(72) Inventor: **Ryan Engle**, San Diego, CA (US)

(73) Assignee: **RJE Oceanbotics LLC**, Irvine, CA (US)

(**) Term: **15 Years**

(21) Appl. No.: **29/640,317**

(22) Filed: **Mar. 13, 2018**

(51) **LOC (13) Cl.** **12-06**

(52) **U.S. Cl.**
USPC **D12/308**

(58) **Field of Classification Search**
USPC D12/308; D21/545
CPC B63G 8/00; B63G 8/001; B63G 8/002; B63G 8/004; B63G 8/005; B63G 8/41; B63G 8/42; B63B 3/13; G03B 17/08
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

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2020/0398958	A1 *	12/2020	Gao	B63C 11/52

* cited by examiner

Primary Examiner — Cynthia M. Chin
(74) *Attorney, Agent, or Firm* — BakerHostetler

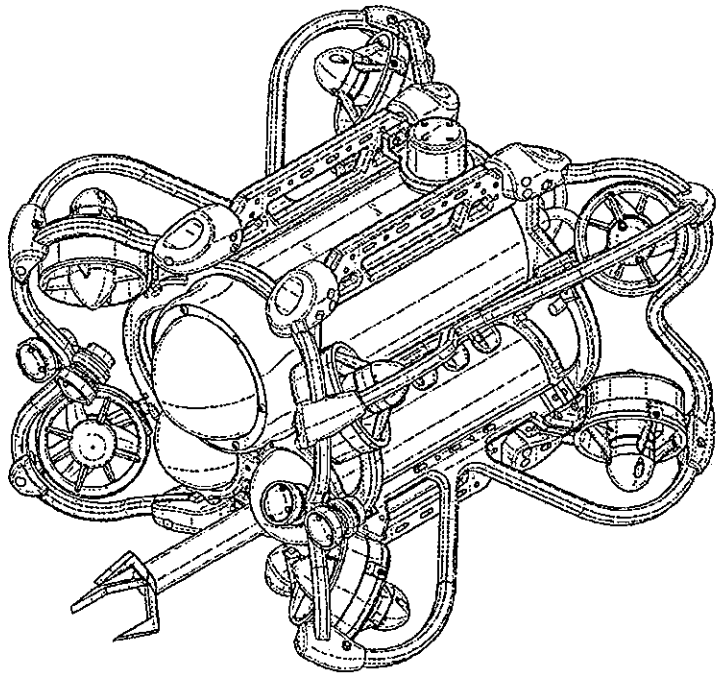
(57) **CLAIM**

I claim the ornamental design for an underwater robotic vehicle, as shown and described.

DESCRIPTION

FIG. **1** is a perspective view of an underwater robotic vehicle showing my new design of the present invention;
FIG. **2** is a front view thereof;
FIG. **3** is a rear view thereof;
FIG. **4** is a left side view thereof;
FIG. **5** is a right side view thereof;
FIG. **6** is a top plan view thereof; and,
FIG. **7** is bottom plan view thereof.
The broken lines are for the purpose of illustrating portions of the underwater robotic vehicle that form no part of the claim.

1 Claim, 7 Drawing Sheets



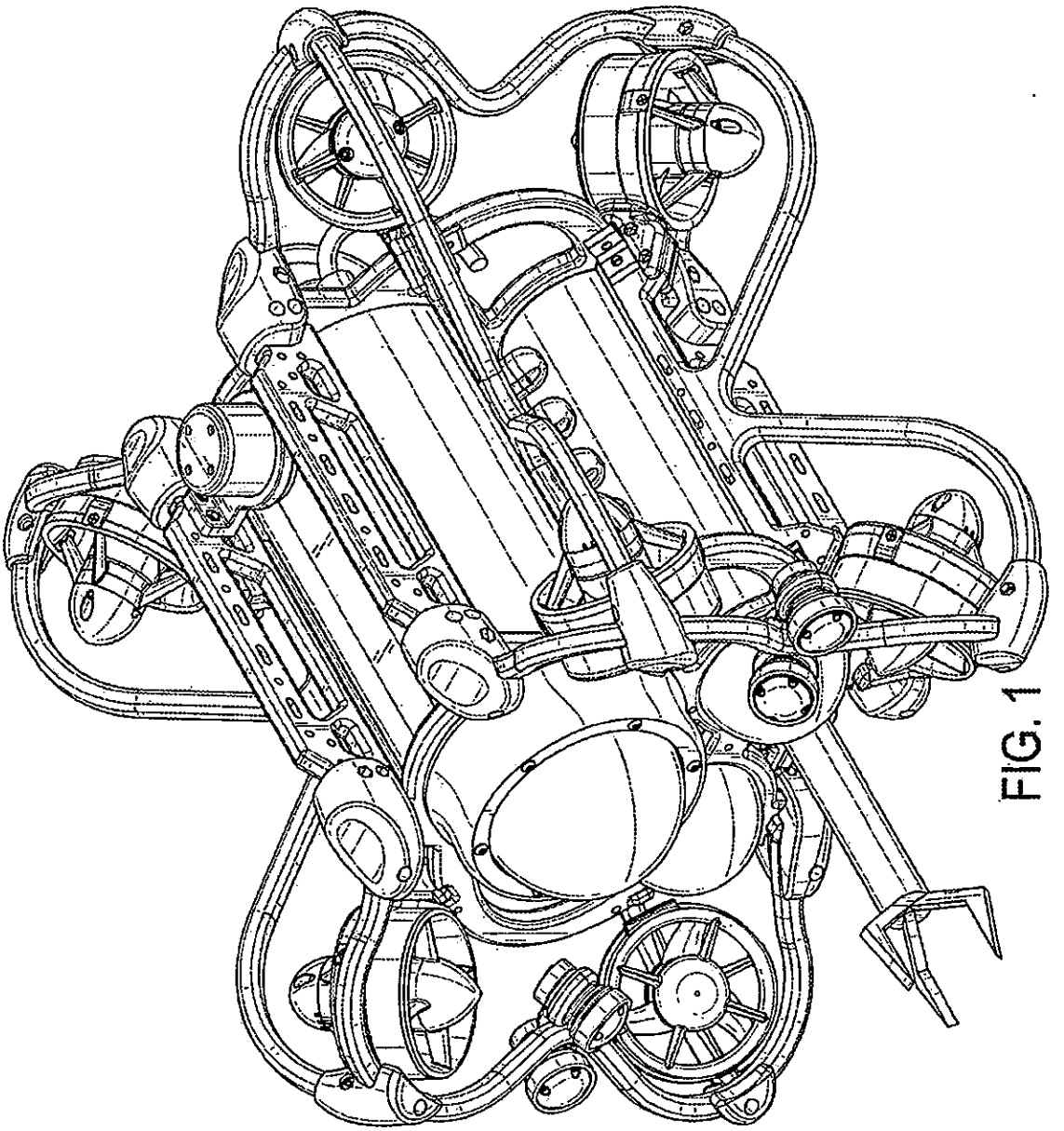


FIG. 1

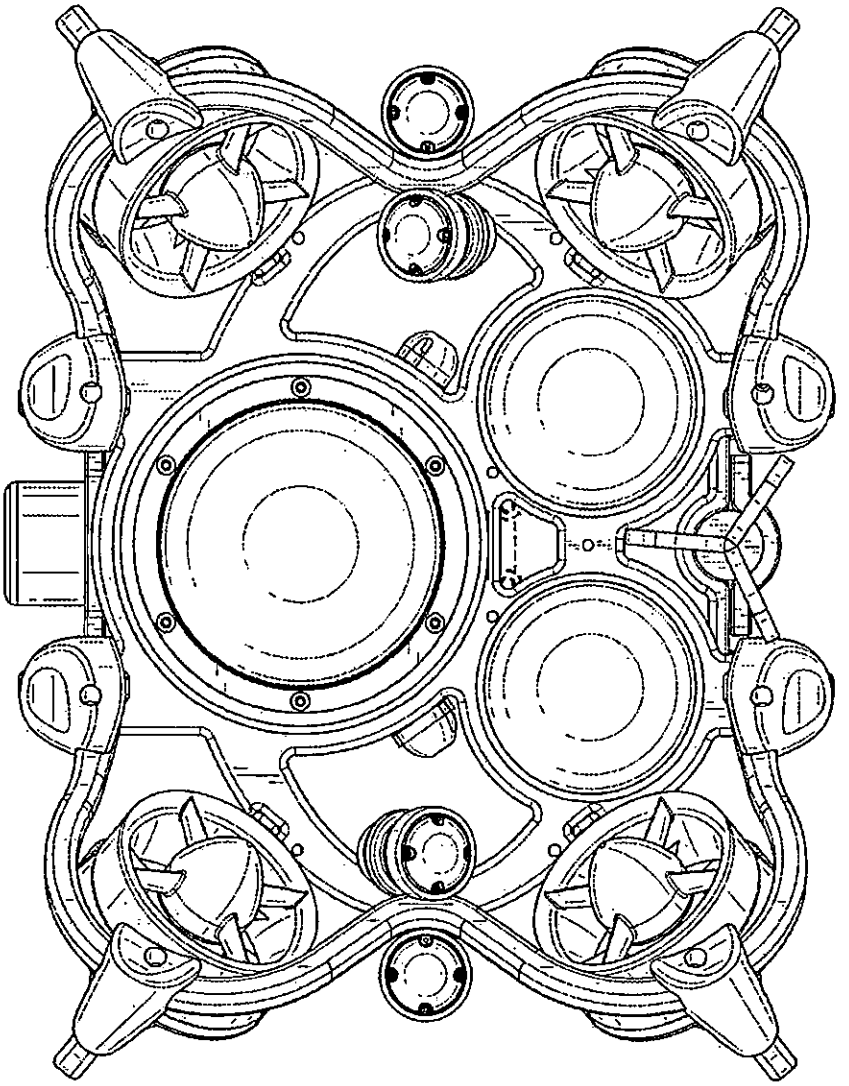


FIG. 2

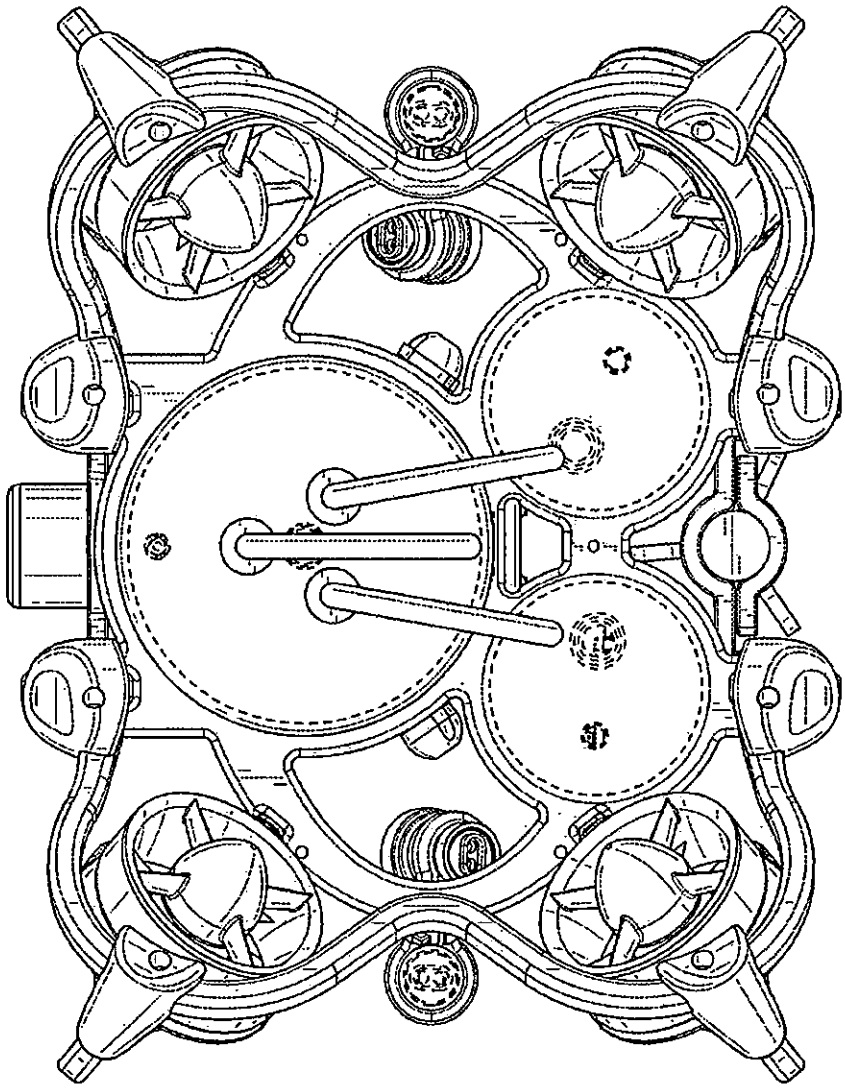


FIG. 3

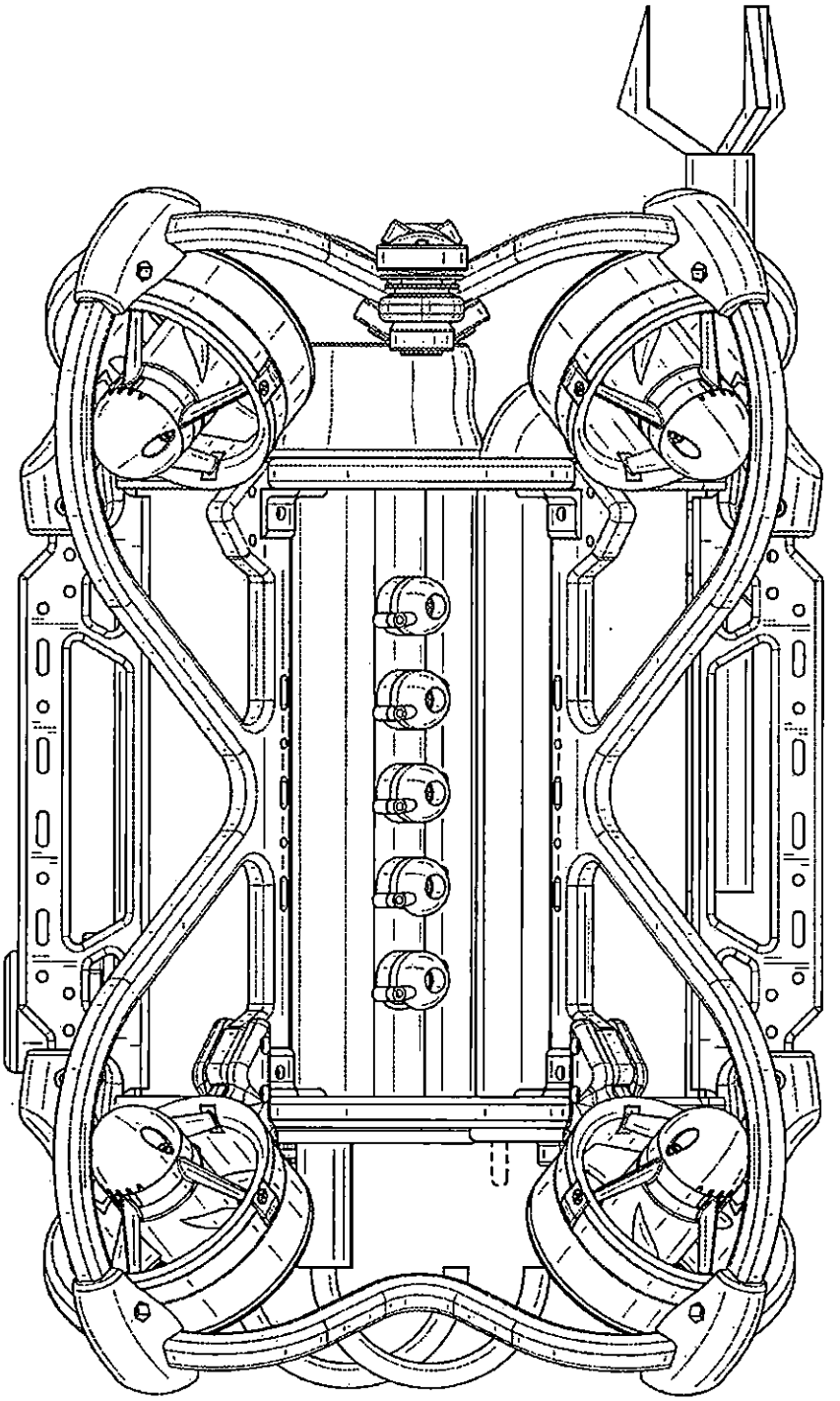


FIG. 4

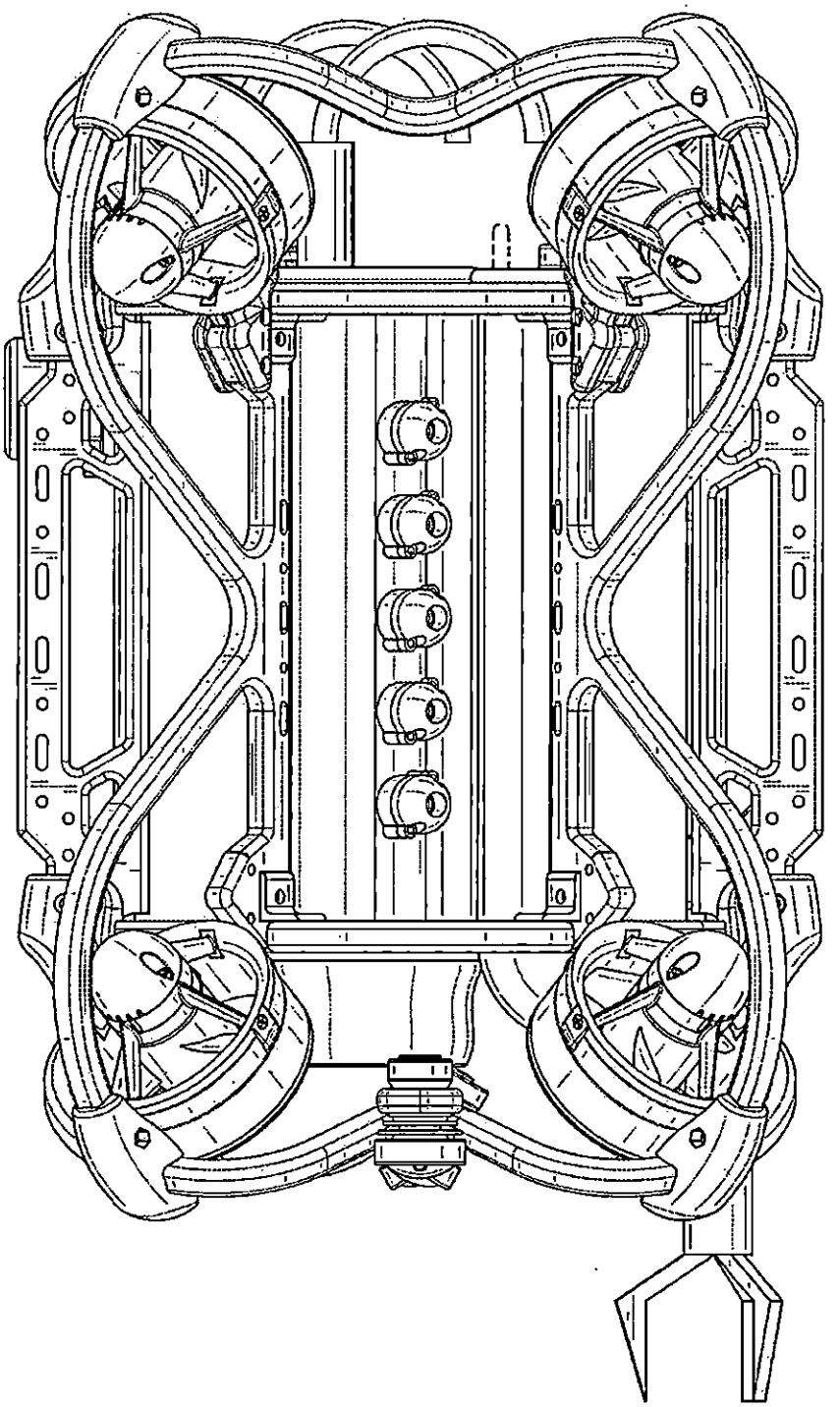


FIG. 5

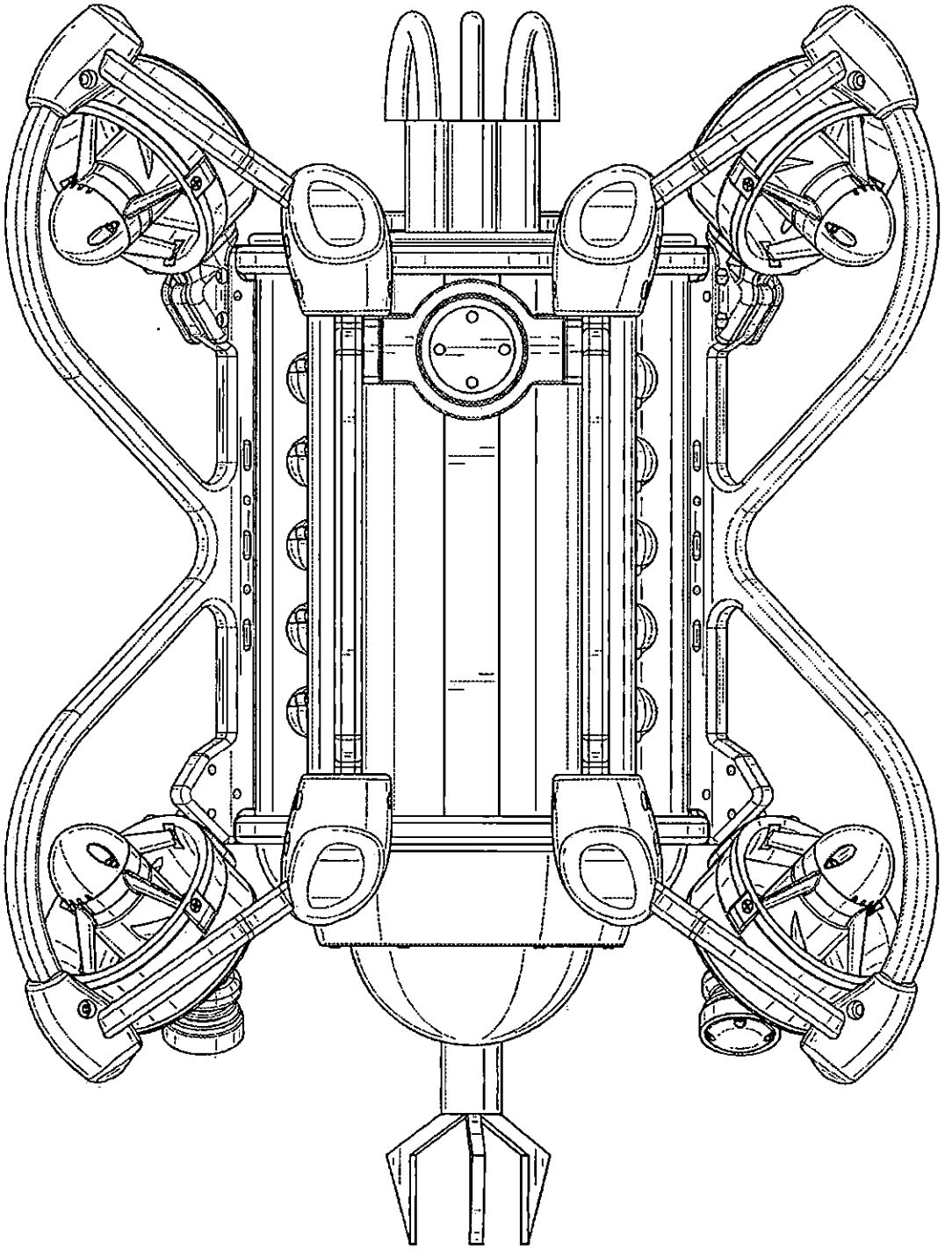


FIG. 6

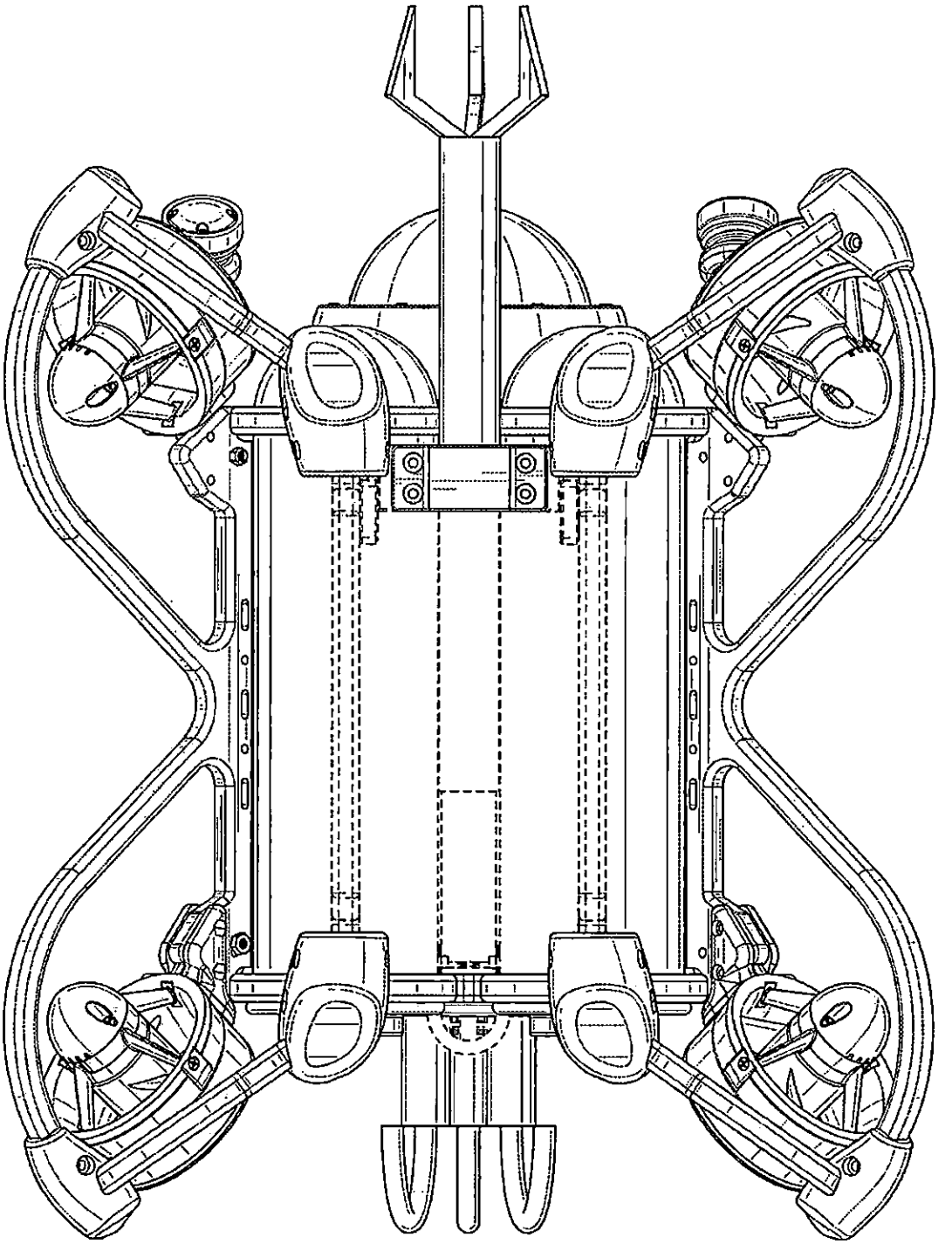


FIG. 7

AGENDA ITEM

Fire Rescue

REPORT TO: **Work Session (01/09/23)**

REPORT TO: **Voting Meeting (01/12/23)**

ITEM NO: 657/2022

SUBJECT: Approve the Task Order 2023-016 for asphalt repair paving services at Fire Stations 10, 11, 12, and 13 for Fire Rescue to Allied Paving Contractors, Inc. of Pendergrass, GA, in the amount of $227,148.75.

Meetings:

Work Session Date: 01/09/23 **Voting Meeting Date:** 01/12/23

Executive Summary:

Presenter: CA

Recommendation:

Approve the purchase of Asphalt Repair Paving Services at four (4) Fire Stations for Fire Rescue to Allied Paving Contractors of Pendergrass, GA, in the amount of $227,148.75 for the four (4) fire stations notated below: Fire Station # 10, Asphalt Patching, Overlay, Edging, Crack Seal & Restriping, $52,045.00 Fire Station # 11, Asphalt Patching, Overlay, Edging, Crack Seal & Restriping, $53,691.25 Fire Station # 12, Asphalt Patching, Overlay, Edging, Crack Seal & Restriping, $65,962.50 Fire Station # 13, Asphalt Patching, Overlay, Edging, Crack Seal & Restriping, $55,450.00.

Purpose of Request:

To provide much needed asphalt repair work to driveways and parking lots at the four (4) fire stations mentioned.

History:

Allied Paving Contractors of Pendergrass, GA is an awarded On-Call asphalt paving contract holder, in good standing with the County, and was awarded from the competitive bid RFQ/P #42-002 Demand Services for Resurfacing, Paving and Full Depth Reclamation, approved by the Board on Agenda Item #445 /2021 on 2021-08-26.

Facts and Issues:

Pittman Construction, the other Demand Service On-Call contract holder for RFQ/P #42-002 Demand Services for Resurfacing, Paving and Full Depth Reclamation, declined to bid, citing that driveways and parking lots are not their speciality.

Options:

Funding Requested $ 227,148.75

Are funds within current budget?	Yes
Source of Funds	Capital Projects Fund
Does the action involve a Resolution, Ordinance, Contract, Agreement, etc.?	Yes
Has it been reviewed by the County Attorney?	Yes
Is there a deadline for this item?	

Approvals:

Buyer	submit	approve	Purchasing
JD	CA	CA	AP
Budget	**Finance**	**Attorney**	**Administration**
EW	WG	WLI	CR
Clerk			
JR			

Attachments:

Financial Supplement
Fire Station #13 Proposal
Fire Station #12 Proposal
Fire Station #11 Proposal
Fire Station #10 Proposal

HALL COUNTY BOARD OF COMMISSIONERS
FINANCIAL SUPPLEMENT REPORT

AGENDA ITEM 657/2022

Funds Requested: $ 227,148.75

Request Budgeted: Yes

Proposed Source of Funding:

Capital Projects Fund

Budget Transfer Requested:

No

Funding Source Items:

Fiscal Year	Fund	Division	Account	Amount
2023	005 - CAPITAL PROJECTS	527 - FIRE DIST CAPITAL PROJECT	6003 - IMPROVEMENTS	$227,148.75

Budget Transfer Items:

Additional Information/Comments:

These are planned improvements

Contact for Questions: BM

Phone: ext. 6774

P.O. Box 509 Pendergrass, GA 30567
Phone (706)693-4042 Fax (706)693-4052

PROPOSAL AND CONTRACT

SUBMITTED TO:	PROJECT NAME	DATE
Hall County Government	Hall County Fire Station #13	1/3/2023
	PROJECT LOCATION	PROPOSAL NO.
	Hall County	10753
	PLANS PREPARED BY	
Blair Reynolds	N/A	ESTIMATOR
	DATE OF PLANS	Steven DeLong
	N/A	

Allied Paving Contractors, Inc. , subject to the terms and conditions following and hereinafter stated, proposes to furnish all labor, materials and equipment required for the performance of the following described work in connection with construction or improvements at the above stated project. Description of work and price:

	ITEM	APPROXIMATE QUANTITY		UNIT PRICE	TOTAL
1.	Asphalt Patch Mill 2"; 2" 19mm	875	SY	$ 27.50	$24,062.50
2.	Asphalt Overlay 1.5" 9.5mm	1,650	SY	$ 15.00	$24,750.00
3.	Edge Mill Mill 1.5"	825	SY	$ 5.50	$4,537.50
4.	Crack Seal & Restripe	1	LS	$ 2,100.00	$2,100.00

Pricing is based on 1 mobilization

Total Items 1-4 = $55,450.00

Unless specified otherwise above, payment in full, less -0- % retainage, for all work performed hereunder during any month shall be made no later than the 10th day of the month next following. Final and complete payment for all work performed hereunder including retainage, if any, shall be made no later than the 10th day of the month following the month during which our work is completed.

Unless a lump sum price is to be paid for the above work and is clearly so stated, it is understood and agreed that the quantities referred to above are estimates only and that payment shall be made at the stated unit prices on the actual quantities of work performed by Allied Paving Contractors, Inc. as determined by actual field measurements upon completion of the work.

This proposal expires 30 days from the date hereof, but may be accepted at any later date at the sole option of Allied Paving Contractors, Inc.

ACCEPTED: _____
Corporation name or Tradename

By: _____
Name and Title

Allied Paving Contractors, Inc.

By: _____ Title Vice President
Bryan Jones

SUBMITTED TO:	PROJECT NAME	DATE
Hall County Government	Hall County Fire Station #13	1/3/2023
	PROJECT LOCATION: Hall County	PROPOSAL NO.: 10753
	PLANS PREPARED BY: N/A	ESTIMATOR: Steven DeLong
	DATE OF PLANS: N/A	

Allied Paving Contractors, Inc. , subject to the terms and conditions following and hereinafter stated, proposes to furnish all labor, materials and equipment required for the performance of the following described work in connection with construction or improvements at the above stated project. Description of work and price:

(1) Subgrade to be within +/- 1/10' of planned subgrade elevation, compacted to project specifications and have sufficient stability prior to Allied Paving's fine grading operation beginning.
(2) Price excludes bond costs, engineering, testing, sealing, stone under curb, sawing, curb backfill, as-built drawings and striping or cleaning.
(3) Satisfactory evidence of project funding to be submitted prior to mobilization.
(4) Final measurements to be taken upon completion of project and billed accordingly.
(5) Price based on one base crew and one asphalt crew move-in, additional move-in(s) Base Crew-$2,500 each and Paving Crew $5,000 each.
(6) All cleaning of the binder course will be the buyer's responsibility.
(7) Design grade to be a minimum of 1% to insure drainage and a maximum of 12 % to prevent slippage.
(8) Prime coat is excluded unless specifically listed as included as part of each individual bid item on page one of this proposal.
(9) Base and paving work will not commence on this project until all concrete work is complete that will effect asphalt grade.
(10) We will not be responsible for damage to any existing surface due to construction traffic required to complete this project.
(11) Price is based on the asphalt paving being placed immediately following base course to aviod preparation and contamination.
(12) Base and binder course used for construction build out will be used at the owner/contractors risk.
(13) Monthly draws based on work completed. Net due upon completion of job.
(14) Asphalt prices based on current liquid asphalt price published by the GDOT. Price may be adjusted based on the liquid asphalt price at the time of placement.
(15) Any third party compaction testing will require notification to Allied Paving and a test strip prior to asphalt placement per GDOT specifications.

Unless specified otherwise above, payment in full, less -0- % retainage, for all work performed hereunder during any month shall be made no later than the 10th day of the month next following. Final and complete payment for all work performed hereunder including retainage, if any, shall be made no later than 10 days after completed work is invoiced.

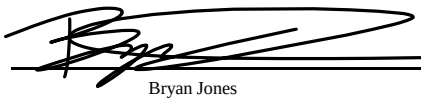
Unless a lump sum price is to be paid for the above work and is clearly so stated, it is understood and agreed that the quantities referred to above are estimates only and that payment shall be made at the stated unit prices on the actual quantities of work performed by Allied Paving Contractors, Inc. as determined by actual field measurements upon completion of the work.

This proposal expires 30 days from the date hereof, but may be accepted at any later date at the sole option of Allied Paving Contractors, Inc.

ACCEPTED: _____
Corporation name or Tradename

By: _____
Name and Title

Allied Paving Contractors, Inc.

By:  Title Vice President

Bryan Jones

Allied Paving Contractors, Inc., will not become obligated to perform the work called for under this contract until your credit has been approved by Allied Paving Contractors, Inc. If your credit becomes unsatisfactory to Allied Paving Contractors, Inc., at any time prior to Allied Paving Contractors, Inc.'s beginning or completing the work hereunder, or if any payment or payments are not made in accordance with the terms hereof, or if under any other existing contract or contracts between Allied Paving Contractors, Inc. and you payments are not made in accordance with the terms thereof, you will furnish Allied Paving Contractors, Inc. upon request with adequate security which meets Allied Paving Contractors, Inc.'s approval. Any of the above conditions will relieve Allied Paving Contractors, Inc. from any obligation hereunder to complete the uncompleted portion of this contract, and payment for all work completed work will become immediately due.

If authorization to begin work is not given within forty-five (45) days after acceptance of this proposal by you, at the option of Allied Paving Contractors, Inc., this contract may be declared null and void and Allied Paving Contractors, Inc. will no longer be bound by the terms hereof.

All material is guaranteed to be as specified by the manufacturer and all work will be completed in a workman-like manner. EXCEPT FOR THE LIMITED WARRANTY PROVIDED HEREIN, ALLIED PAVING CONTRACTORS, INC. DOES NOT MAKE ANY GUARANTY, REPRESENTATION OR WARRANTY, AND DISCLAIMS ANY IMPLIED OR STATUTORY WARRANTY, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR IMPLIED WARRANTY FOR A PARTICULAR PURPOSE. In no event shall Allied Paving Contractors, Inc. be liable for any special, incidental, exemplary, punitive, statutory, or consequential damages irrespective of whether in contract, tort or equity. Any claim or cause of action you may have against Allied Paving Contractors, Inc. based, directly or indirectly, upon an alleged breach of this agreement must be brought within eighteen (18) months of the date of this agreement or else such claim or cause of action shall be waived.

Any deviations from the specifications or modifications of the terms of this contract or reductions in work shall be set forth in writing and signed by both parties prior to the making of such change, and any increase or decrease in the contract price resulting from such change shall be included in such writing. Any work not covered by the terms hereof or by written modification hereof, performed at your request, will be separately billed to you at the reasonable or agreed value thereof.

Interest at the highest legal rate allowable under the laws of the jurisdiction and in which the contract is executed or two percent (2%) per month, whichever is less, shall be charged and paid on all unpaid balances from the due date to the date we receive payment. If any unpaid balances due hereunder are collected by or through an Attorney at Law, you, as acceptor of this proposal, agree to pay all costs of collection including fifteen percent (15%) of the unpaid balances and interest thereon as attorney's fees.

Allied Paving Contractors, Inc. shall be provided with suitable access to the work area, and if its work is dependent upon or must be undertaken in conjunction with work of others, you shall be responsible to see that such work shall be so performed and completed as to permit Allied Paving Contractors, Inc. to perform its work hereunder in a normal uninterrupted single shift operation.

Unless a time for the performance of Allied Paving Contractors, Inc.'s work is specified, Allied Paving Contractors, Inc. shall undertake it in the course of its normal operating schedule. Allied Paving Contractors, Inc. shall not be liable for delays or any failure to undertake or complete the work for causes beyond its control, including but not limited to: fire, flood, labor disputes, other casualties or other operations in which Allied Paving Contractors, Inc. is involved, directly or indirectly.

If for causes beyond Allied Paving Contractors, Inc.'s control its work is not completed within twelve (12) months after the date of your acceptance of this proposal, Allied Paving Contractors, Inc. may cancel this agreement at any time thereafter on ten (10) days notice. In such event, Allied Paving Contractors, Inc. shall be relieved of any further obligation with respect to the balance of the work. Furthermore, Allied Paving Contractors, Inc. shall be entitled to receive final and complete payment for all work performed to the date of cancellation within ten (10) days thereafter.

By acceptance of this proposal you agree Allied Paving Contractors, Inc. shall be not be held liable for damage resulting from damages to utilities or other facilities, or buried objects, or to sidewalks, driveways or other improvements located within its work area or designated area of access. It is further understood that Allied Paving Contractors, Inc. shall not be responsible for any damage to or deterioration of any of its work, whether completed or in process, resulting from any cause or causes beyond its control including but not limited to failure of subgrade or failure or inadequacy of any labor or material not furnished and installed by Allied Paving Contractors, Inc., whether or not such failure or inadequacy was or could have been known at the time its work was undertaken.

Allied Paving Contractors, Inc. will provide and pay for Workmen's Compensation Insurance covering its employees and public liability and property damage insurance protecting themselves. Allied Paving Contractors, Inc. will also assume responsibility for the collection and payment of social security and state unemployment taxes applicable to its employees.

In the event his document is executed in the name of a corporation, the person signing in behalf of the corporation warrants that he has the authority to execute this instrument in behalf of the corporation and binds the corporation to this contract.

This agreement constitutes the sole contract between the parties, in that no previous negotiations or representations shall be binding unless incorporated herein. Time is of the essence.

Allied Paving Contractors, Inc. is an Equal Opportunity Employer.

Acceptance of proposal: The prices, terms and conditions hereinbefore stated or attached are accepted. You are authorized to do the work as specified and payment will be made as set out herein.

ACCEPTED: _____

Corporation name or Tradename

By: _____

Date

Name and Title

P.O. Box 509 Pendergrass, GA 30567
Phone (706)693-4042 Fax (706)693-4052

PROPOSAL AND CONTRACT

SUBMITTED TO:	PROJECT NAME	DATE
Hall County Government	Hall County Fire Station #12	1/3/2023
	PROJECT LOCATION: Hall County	PROPOSAL NO.: 10752
	PLANS PREPARED BY: N/A	ESTIMATOR: Steven DeLong
Blair Reynolds	DATE OF PLANS: N/A	

Allied Paving Contractors, Inc. , subject to the terms and conditions following and hereinafter stated, proposes to furnish all labor, materials and equipment required for the performance of the following described work in connection with construction or improvements at the above stated project. Description of work and price:

	ITEM	APPROXIMATE QUANTITY		UNIT PRICE	TOTAL
1.	Asphalt Patch Mill 2"; 2" 19mm	725	SY	$ 32.50	$23,562.50
2.	Asphalt Overlay 1.5" 9.5mm	2,600	SY	$ 13.50	$35,100.00
3.	Edge Mill Mill 1.5"	1,300	SY	$ 4.00	$5,200.00
4.	Crack Seal & Restripe	1	LS	$ 2,100.00	$2,100.00

Pricing is based on 1 mobilization

Total Items 1-4 = $65,962.50

Unless specified otherwise above, payment in full, less -0- % retainage, for all work performed hereunder during any month shall be made no later than the 10th day of the month next following. Final and complete payment for all work performed hereunder including retainage, if any, shall be made no later than the 10th day of the month following the month during which our work is completed.

Unless a lump sum price is to be paid for the above work and is clearly so stated, it is understood and agreed that the quantities referred to above are estimates only and that payment shall be made at the stated unit prices on the actual quantities of work performed by Allied Paving Contractors, Inc. as determined by actual field measurements upon completion of the work.

This proposal expires 30 days from the date hereof, but may be accepted at any later date at the sole option of Allied Paving Contractors, Inc.

ACCEPTED: _____
Corporation name or Tradename

By: _____
Name and Title

Allied Paving Contractors, Inc.

By: _____ Title Vice President
Bryan Jones

SUBMITTED TO:	PROJECT NAME	DATE
Hall County Government	Hall County Fire Station #12	1/3/2023
	PROJECT LOCATION: Hall County	PROPOSAL NO.: 10752
	PLANS PREPARED BY: N/A	ESTIMATOR: Steven DeLong
	DATE OF PLANS: N/A	

Allied Paving Contractors, Inc. , subject to the terms and conditions following and hereinafter stated, proposes to furnish all labor, materials and equipment required for the performance of the following described work in connection with construction or improvements at the above stated project. Description of work and price:

(1) Subgrade to be within +/- 1/10' of planned subgrade elevation, compacted to project specifications and have sufficient stability prior to Allied Paving's fine grading operation beginning.
(2) Price excludes bond costs, engineering, testing, sealing, stone under curb, sawing, curb backfill, as-built drawings and striping or cleaning.
(3) Satisfactory evidence of project funding to be submitted prior to mobilization.
(4) Final measurements to be taken upon completion of project and billed accordingly.
(5) Price based on one base crew and one asphalt crew move-in, additional move-in(s) Base Crew-$2,500 each and Paving Crew $5,000 each.
(6) All cleaning of the binder course will be the buyer's responsibility.
(7) Design grade to be a minimum of 1% to insure drainage and a maximum of 12 % to prevent slippage.
(8) Prime coat is excluded unless specifically listed as included as part of each individual bid item on page one of this proposal.
(9) Base and paving work will not commence on this project until all concrete work is complete that will effect asphalt grade.
(10) We will not be responsible for damage to any existing surface due to construction traffic required to complete this project.
(11) Price is based on the asphalt paving being placed immediately following base course to aviod preparation and contamination.
(12) Base and binder course used for construction build out will be used at the owner/contractors risk.
(13) Monthly draws based on work completed. Net due upon completion of job.
(14) Asphalt prices based on current liquid asphalt price published by the GDOT. Price may be adjusted based on the liquid asphalt price at the time of placement.
(15) Any third party compaction testing will require notification to Allied Paving and a test strip prior to asphalt placement per GDOT specifications.

Unless specified otherwise above, payment in full, less -0- % retainage, for all work performed hereunder during any month shall be made no later than the 10th day of the month next following. Final and complete payment for all work performed hereunder including retainage, if any, shall be made no later than 10 days after completed work is invoiced.

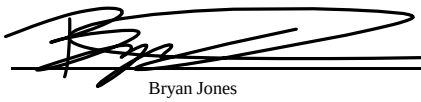
Unless a lump sum price is to be paid for the above work and is clearly so stated, it is understood and agreed that the quantities referred to above are estimates only and that payment shall be made at the stated unit prices on the actual quantities of work performed by Allied Paving Contractors, Inc. as determined by actual field measurements upon completion of the work.

This proposal expires 30 days from the date hereof, but may be accepted at any later date at the sole option of Allied Paving Contractors, Inc.

ACCEPTED: _____
Corporation name or Tradename

By: _____
Name and Title

Allied Paving Contractors, Inc.

By:  Title Vice President

Bryan Jones

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If authorization to begin work is not given within forty-five (45) days after acceptance of this proposal by you, at the option of Allied Paving Contractors, Inc., this contract may be declared null and void and Allied Paving Contractors, Inc. will no longer be bound by the terms hereof.

All material is guaranteed to be as specified by the manufacturer and all work will be completed in a workman-like manner. EXCEPT FOR THE LIMITED WARRANTY PROVIDED HEREIN, ALLIED PAVING CONTRACTORS, INC. DOES NOT MAKE ANY GUARANTY, REPRESENTATION OR WARRANTY, AND DISCLAIMS ANY IMPLIED OR STATUTORY WARRANTY, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR IMPLIED WARRANTY FOR A PARTICULAR PURPOSE. In no event shall Allied Paving Contractors, Inc. be liable for any special, incidental, exemplary, punitive, statutory, or consequential damages irrespective of whether in contract, tort or equity. Any claim or cause of action you may have against Allied Paving Contractors, Inc. based, directly or indirectly, upon an alleged breach of this agreement must be brought within eighteen (18) months of the date of this agreement or else such claim or cause of action shall be waived.

Any deviations from the specifications or modifications of the terms of this contract or reductions in work shall be set forth in writing and signed by both parties prior to the making of such change, and any increase or decrease in the contract price resulting from such change shall be included in such writing. Any work not covered by the terms hereof or by written modification hereof, performed at your request, will be separately billed to you at the reasonable or agreed value thereof.

Interest at the highest legal rate allowable under the laws of the jurisdiction and in which the contract is executed or two percent (2%) per month, whichever is less, shall be charged and paid on all unpaid balances from the due date to the date we receive payment. If any unpaid balances due hereunder are collected by or through an Attorney at Law, you, as acceptor of this proposal, agree to pay all costs of collection including fifteen percent (15%) of the unpaid balances and interest thereon as attorney's fees.

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ACCEPTED: _____

Corporation name or Tradename

By: _____

Date

Name and Title

P.O. Box 509 Pendergrass, GA 30567
Phone (706)693-4042 Fax (706)693-4052

PROPOSAL AND CONTRACT

SUBMITTED TO:	PROJECT NAME	DATE
Hall County Government	Hall County Fire Station #11	1/3/2023
	PROJECT LOCATION: Hall County	PROPOSAL NO.: 10751
	PLANS PREPARED BY: N/A	ESTIMATOR: Steven DeLong
Blair Reynolds	DATE OF PLANS: N/A	

Allied Paving Contractors, Inc. , subject to the terms and conditions following and hereinafter stated, proposes to furnish all labor, materials and equipment required for the performance of the following described work in connection with construction or improvements at the above stated project. Description of work and price:

	ITEM	APPROXIMATE QUANTITY		UNIT PRICE	TOTAL
1.	Asphalt Patch Mill 2"; 2" 19mm	850	SY	$ 32.00	$27,200.00
2.	Asphalt Overlay 1.5" 9.5mm	1,375	SY	$ 16.50	$22,687.50
3.	Edge Mill Mill 1.5"	235	SY	$ 7.25	$1,703.75
4.	Crack Seal & Restripe	1	LS	$ 2,100.00	$2,100.00

Pricing is based on 1 mobilization

Total Items 1-4 = $53,691.25

Unless specified otherwise above, payment in full, less -0- % retainage, for all work performed hereunder during any month shall be made no later than the 10th day of the month next following. Final and complete payment for all work performed hereunder including retainage, if any, shall be made no later than the 10th day of the month following the month during which our work is completed.

Unless a lump sum price is to be paid for the above work and is clearly so stated, it is understood and agreed that the quantities referred to above are estimates only and that payment shall be made at the stated unit prices on the actual quantities of work performed by Allied Paving Contractors, Inc. as determined by actual field measurements upon completion of the work.

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ACCEPTED: _____
Corporation name or Tradename

By: _____
Name and Title

Allied Paving Contractors, Inc.

By: _____ Title Vice President
Bryan Jones

SUBMITTED TO:	PROJECT NAME	DATE
Hall County Government	Hall County Fire Station #11	1/3/2023
	PROJECT LOCATION: Hall County	PROPOSAL NO.: 10751
	PLANS PREPARED BY: N/A	ESTIMATOR: Steven DeLong
	DATE OF PLANS: N/A	

Allied Paving Contractors, Inc. , subject to the terms and conditions following and hereinafter stated, proposes to furnish all labor, materials and equipment required for the performance of the following described work in connection with construction or improvements at the above stated project. Description of work and price:

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(2) Price excludes bond costs, engineering, testing, sealing, stone under curb, sawing, curb backfill, as-built drawings and striping or cleaning.
(3) Satisfactory evidence of project funding to be submitted prior to mobilization.
(4) Final measurements to be taken upon completion of project and billed accordingly.
(5) Price based on one base crew and one asphalt crew move-in, additional move-in(s) Base Crew-$2,500 each and Paving Crew $5,000 each.
(6) All cleaning of the binder course will be the buyer's responsibility.
(7) Design grade to be a minimum of 1% to insure drainage and a maximum of 12 % to prevent slippage.
(8) Prime coat is excluded unless specifically listed as included as part of each individual bid item on page one of this proposal.
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Name and Title

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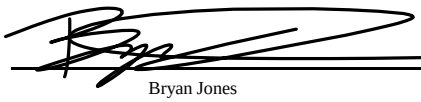
By:  Title Vice President

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ACCEPTED: _____

Corporation name or Tradename

By: _____

Date

Name and Title

P.O. Box 509 Pendergrass, GA 30567
Phone (706)693-4042 Fax (706)693-4052

PROPOSAL AND CONTRACT

SUBMITTED TO:	PROJECT NAME	DATE
Hall County Government	Hall County Fire Station #10	1/3/2023
	PROJECT LOCATION: Hall County	PROPOSAL NO.: 10750
	PLANS PREPARED BY: N/A	ESTIMATOR: Steven DeLong
Blair Reynolds	DATE OF PLANS: N/A	

Allied Paving Contractors, Inc. , subject to the terms and conditions following and hereinafter stated, proposes to furnish all labor, materials and equipment required for the performance of the following described work in connection with construction or improvements at the above stated project. Description of work and price:

	ITEM	APPROXIMATE QUANTITY		UNIT PRICE	TOTAL
1.	Asphalt Patch Mill 2"; 2" 19mm	325	SY	$ 45.00	$14,625.00
2.	Asphalt Overlay 1.5" 9.5mm	1,975	SY	$ 15.00	$29,625.00
3.	Edge Mill Mill 1.5"	670	SY	$ 8.50	$5,695.00
4.	Crack Seal & Restripe	1	LS	$ 2,100.00	$2,100.00

Pricing is based on 1 mobilization

Total Items 1-4 = $52,045.00

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ACCEPTED: _____
Corporation name or Tradename

By: _____
Name and Title

Allied Paving Contractors, Inc.

By: _____ Title Vice President
Bryan Jones

SUBMITTED TO:	PROJECT NAME	DATE
Hall County Government	Hall County Fire Station #10	1/3/2023
	PROJECT LOCATION: Hall County	PROPOSAL NO.: 10750
	PLANS PREPARED BY: N/A	ESTIMATOR: Steven DeLong
	DATE OF PLANS: N/A	

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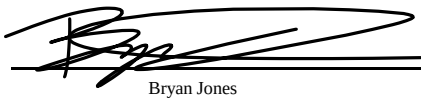
By:  Title Vice President

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ACCEPTED: _____

Corporation name or Tradename

By: _____

Date

Name and Title

AGENDA ITEM

Human Resources

REPORT TO: **Work Session (01/09/23)**

REPORT TO: **Voting Meeting (01/12/23)**

ITEM NO: 740/2022

SUBJECT: Approve the renewal of the Third Party Administrator and Excess Workers Compensation for plan year 2023 with Arthur J. Gallagher Risk Management Services Inc. of Atlanta, GA and Gallagher Bassett Services, Inc. of Rolling Meadows, IL. The estimated cost of this renewal is $363,347.00; authorization for the Chairman to execute all related documents, subject to review and approval by the County Attorney.

Meetings:

Work Session Date: 01/09/23 **Voting Meeting Date:** 01/12/23

Executive Summary:

Presenter: DLJ

Recommendation:
Department recommends approval of the Excess Workers Compensation renewal, which includes the Risk Management and claims TPA fees.

Purpose of Request:
The purpose of this request is to renew the Excess Workers Compensation with Midwest Employers Casualty Company, as well as the Risk Management and claims TPA fees.

History:

Facts and Issues:
The renewal of the Excess Workers Compensation with Midwest Employers Casualty Company will cost $363,347, which is an 8.4% increase, and includes the Risk Management fees at $25,000 and the claims TPA fees at $60,000. There was no change in fees for the Risk Management Services and claims TPA.

Options:

Funding Requested $ 363,347.00

Are funds within current budget? Yes

Source of Funds Risk Management Fund

Does the action involve a Resolution, Ordinance, Contract, Agreement, etc.?	Yes
Has it been reviewed by the County Attorney?	Yes
Is there a deadline for this item?	

Approvals:

Submit	Approve	Budget	Finance
LJ	LJ	TS	WG

Attorney	Administration	Clerk
WLI	CR	JR

Attachments:

Financial Supplement
Excess Workers Compensation Renewal 2023-2024

HALL COUNTY BOARD OF COMMISSIONERS
FINANCIAL SUPPLEMENT REPORT

AGENDA ITEM 740/2022

Funds Requested: $ 363,347.00

Request Budgeted: Yes

Proposed Source of Funding:

Risk Management Fund

Budget Transfer Requested:

No

Funding Source Items:

Fiscal Year	Fund	Division	Account	Amount
2023	012 - RISK MANAGEMENT	012 - RISK MANAGEMENT	4463 - PROPERTY & CASUALTY INS	$181,673.50
2024	012 - RISK MANAGEMENT	012 - RISK MANAGEMENT	4463 - PROPERTY & CASUALTY INS	$181,673.50

Budget Transfer Items:

Additional Information/Comments:

Contact for Questions: DLJ

Phone: 770-531-6712

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01/01/2023 - 01/01/2024

FLAT FEE - LIFE OF PARTNERSHIP	Est. Claim Frequency	Per Claim Fee	Projected Service Fee
Workers' Compensation			
WC Medical Only	98		Included
WC Indemnity (All Other States)	29		Included
Incidents - Workers' Compensation			Included
Total Workers' Compensation Fee Per Claim			**$60,000**

ADMINISTRATIVE SERVICES	Quantity	Rate	Estimated Annual Fee
Administrative Services			
Administration / Data Management			Included
RMIS - 5 Users Full Access			Included
Total Administrative Services			**$0**

TOTAL			**$60,000**

Claim count limitations:
If the number of newly reported indemnity claims for this contract term exceeds 29 total indemnity claims then Gallagher Bassett will be paid a per-claim fee of $1,034 for each claim in excess of 29. If the number of newly reported medical only claims for this contract term exceeds 98 total medical only claims then Gallagher Bassett will be paid a per-claim fee of $170 for each claim in excess of 98. The audit reconciliation would be performed 12 months post the expiration of the contract term.

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GBCARE MEDICAL MANAGEMENT SERVICES

SERVICES	CHARGES
Fee Schedule (Bill Review / UCR / System Savings)	$9.50 Per Bill
All Other Savings • **Clinical Validation/Nurse Review (CV)** • **Preferred Provider Networks (PPO)** • **Out Of Network (OON)** • **Specialty Networks/Physical Therapy (PT)**	 28% of Savings 28% of Savings 28% of Savings 28% of Savings
Electronic Receipt of Medical Bills	$2 additional per bill
Telephonic Case Management	$90 Medical Triage $340 per claim (each 30 days)
Utilization Review Program	$120 Inpatient Pre-Certification $105 Outpatient Pre-Certification
UR Physician Review	$270 per Review
Medical Case Management and Vocational Rehabilitation - Hourly	$115 per hour plus expenses $135 per hour plus expenses - AK, CA, HI, NY
Priority Care 365	$90 per call
Texas HCN Service Option	Available options if client enrolls in Texas HCN (otherwise, Not Applicable) Option #1- Unbundled rate: $17 per bill to include bill review & network access, $75 for triage. Option #2- Bundled rate: $27 per bill to include bill review, network access & Nurse triage. Option #3- Percent of savings: 9.5% of total savings to include bill review, network access & Nurse triage.
Other State Service Options: • **California MPN Service Options** • **Illinois PPP Service Option** • **New York PPO Service Option** • **West Virginia MHCP Service Option**	For claims handled in the designated states (otherwise, Not Applicable) No additional fees beyond the normal Cost & Terms No additional fees beyond the normal Cost & Terms No additional fees beyond the normal Cost & Terms Available option if client enrolls in a West Virginia MHCP. If selected, fees include $45 per claim. Network Management and Administration of $45 per hour when required
Medical Cost Projection (MCP) and Clinical Recommendations	$125 per hour
Pharmacy Benefit Management (PBM)	Cost of prescriptions - no charge for Bill Review or PPO reductions for PBM transactions

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SERVICES	CHARGES
Durable Medical Equipment (DME) Program	Cost of medical equipment - no charge for Bill Review or PPO reductions for Prospective DME transactions
Dental Review Program	Charged on a per review basis

Client and GB agree as follows: If a vendor other than the GBCARE Medical Management Services preferred vendor is utilized, an administrative fee may apply in exchange for bona fide administrative services. The administrative services may include, but not be limited to overhead costs for the oversight and management of medical management vendors which includes the development and oversight of quality standards, development and maintenance of EDI interfaces and reports, and ensuring proper mandatory state compliance and reporting.

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01/01/2023 - 01/01/2024

OTHER SERVICES

SERVICES	CHARGES
RMIS Additional Users (RMIS Standard License includes a set number of Full Access Users outlined under Administrative Services, and unlimited use of GB standard scheduled training classes)	RMIS View-only User, $0 annually per user
	RMIS Full Access User, $0 annually per user
Loss control	$140 per hour
OSHA Reporting	$6,000, OSHA platform to produce compliant OSHA 301 Report, 300 and 300a Logs, and electronic data file. Oversight and accuracy of all OSHA data is responsibility of the employer prior to posting or submitting any OSHA log.
Subrogation and Recovery	20% of net recovery amount less legal and collections expense based on recovery date Recoveries include subrogation, credits, lien waivers, file transfer (based on lien to date at time of transfer), and contribution or coverage handled in a separate action. Applies to all coverage types
Gallagher Bassett Investigative Services (GBIS)	
Special Fraud Investigations - SIU, Outside Field Investigations, Surveillance Investigations, Targeted Field Investigations	Prevailing hourly rate plus expenses
Targeted Database Searches, Self Service Database Searches	Prevailing rate per report
Gallagher Bassett Litigation Management Program (GBLMP)	
Invoice and Matter Management platform for adjusters/ counsel	If utilized, 2% of net legal invoice (invoice net of disbursements and invoice review savings). Charged as discount off total payment remitted to counsel and will be reflected as an allocated expense on the claim file.
5 client licenses for Legal Analytics platform	
Attorney-led legal bill review	
Gallagher Bassett Compliance Services (GBCS)	
Medicare Set-Aside Services: Allocation, CMS Submission, Medicare Eligibility Inquiry (MEI), SSDI Verification, Medical Cost Projection (MCP)	Prevailing rate per each service Rush fees apply for MSA completed within 5 business days MSA Revision fees apply
Medicare Secondary Payer Services: BCRC Notification, Conditional Payment Research (CPR), Conditional Payment Negotiations (CPN), Conditional Payment Notice Evaluation, Conditional Payment Dispute, Securing Final Demand for Settlement (SFD), Release / Settlement Agreement Review, Lien Research and Resolution (Advantage Plan, Medicaid, Part D)	Prevailing rate per each service
Taxes	
Taxes	All applicable taxes will be added to the service fees where required

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01/01/2023 - 01/01/2024

PROGRAM SPECIFIC TERMS AND CONDITIONS

1. **Claim Count Reconciliation:**

   A claim count reconciliation will take place 12 months after the end of the service period.

2. **Billing and Payment Terms:** Fees will be billed annually during the service period.

3. **Claim Pricing Terms:**

   Life of Partnership:
   Claims will be handled for the life of the partnership with no additional per claim fees. If the client decides to non-renew all or a portion of the program, all open files will be handled in one of the following two ways:
   - GB will return the files to the client (contingent upon Carrier approval) at the client's expense.
   - GB will continue to handle the open files at our prevailing annual rate per year open.

   Additional Charges:
   There will be additional charges for ongoing Data Management (RISX-FACS®), RMIS users, Administration, Banking fees and monthly reports for as long as GB handles claims.

4. **Account Administration includes the following:**
   - Client Services
   - 2 Telephonic Claim Strategy Meeting(s)
   - 2 Standard Meeting(s) Included
   - Detailed Status Reports All Lines of Business @ $50,000
   - Settlement Consultation All Lines of Business @ $0
   - Loss Fund /Banking Services (SIMMS)
   - Claim Reporting
   - Data Transfer to Carrier(s)
   - Acknowledgement Letter to Injured Employee WC

5. Claim Charges: Claim and incident fees will be assessed on a per occurrence, per claimant, per line of coverage basis.

6. This material is the proprietary, confidential property of Gallagher Bassett Services, Inc. It has been provided to you for the sole purpose of considering a quote for claims administration services. It is not to be duplicated or shared in any form with anyone other than the individuals of such prospective client that have a business need to know the information. It must be destroyed or returned to Gallagher Bassett Services, Inc. after its intended use.

7. Gallagher Bassett Services, Inc. will not pay a fee, commission, or rebate to any party for the privilege of presenting our proposal or in order to secure the awarding of any program to Gallagher Bassett Services, Inc.

8. Pricing is based on using GBCARE Medical Management Services preferred vendors for Bill Review, PPO, out-of-network, utilization review, telephonic case management, MSA and field case management.

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HALL COUNTY, GA
01/01/2023 - 01/01/2024

GENERAL CONTRACT TERMS AND CONDITIONS

1. Independent Adjusters - If applicable, following any significant loss as a result of a single event (i.e., hurricane, tornado, flood, earthquake, etc.), GB reserves the right to retain outside resources (adjusters) when appropriate and those fees will be paid as an Allocated Expense off the file.

2. The pricing quoted in this Cost & Terms is based upon the data and information provided by Client, as well as existing legislative and regulatory requirements. Material inaccuracies or changes to the foregoing may require adjustments to the quoted pricing.

3. Taxes - All applicable taxes will be added to the service fees where required.

4. Allocated Expenses: Shall be your responsibility as applicable and shall include, but not be limited to:

   - Legal Fees
   - Legal Bill Review
   - Medical Examination
   - Professional Photographs
   - Travel made at client's request
   - Costs for witness statements
   - Court reporter service, translation, and interpretation
   - Record retrieval and copying services (Including medical and legal)
   - Accident reconstruction
   - Experts' rehabilitation costs
   - Chemist
   - Fees for service of process
   - Collection cost payable to third parties on subrogation
   - Architects, contractors
   - Engineer
   - Any other similar cost, fee or expense reasonably chargeable to the investigation, negotiation, settlement or defense of a claim or loss which must have the explicit prior approval of the client
   - Police, fire, coroner, weather, or other such reports
   - Property damage appraisals
   - Vehicle appraisals (vehicle damage assessment)
   - SIU, surveillance and sub rosa investigation
   - Official documents and transcripts
   - Pre- and post-judgment interest paid
   - Outside Field Investigations
   - Subrogation at 20% of net recovery
   - Index Bureau Reporting (All Coverages)
   - Second Injury Fund Recovery
   - Data Intelligence Self-Service Reports
   - Medical Management - Medical Management services may include, but are not limited to:
     - Preferred provider organization networks
     - Utilization review services
     - Automated state fee scheduling
     - Light duty/return-to-work programs
     - Medical case management and Vocational rehabilitation network
     - Prospective injury management services
     - Hospital bill audit services

DEFINITIONS

Incidents
An incident is a loss reported electronically through ClaimLine and/or the Web, or set up manually at the branc GB will review the incident and make a courtesy call (if necessary) to determine if it is a claim or incident. GB will have full discretion in the determination and handling of these incidents and/or their conversion into claim status.

Workers' Compensation - Medical Only Claims
A work-related Claim that meets the following criteria:

- Payments for either indemnity or vocational rehabilitation were not required
- The Claim has not become contested or in suit
- Investigation to determine compensability or subrogation requirements was not required
- No loss notices, captioned reports, client meetings (other than routine meetings where the claim is listed and noted) or settlement consultation approvals were required
- Payments on the Claim do not exceed $5,000
- Days open do not exceed 180 days

Workers' Compensation - Indemnity Claims
A work-related claim that is not a Medical Only Claim.

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01/01/2023 - 01/01/2024

ACKNOWLEDGEMENT OF COST & TERMS

The undersigned parties acknowledge and agree that this Cost & Terms is effective for the service period stated above.

Notices to Gallagher Bassett Services, Inc. should be directed to:
Gallagher Bassett Services, Inc.
2850 Golf Road
Rolling Meadows, Illinois 60008-4050
Attn: Legal Department
Email: GB-Contracts@gbtpa.com

ACCEPTED AND AGREED TO BY:

GALLAGHER BASSETT SERVICES, INC.

By: _____

Print Name: _____

Title: _____

Date: _____

ACCEPTED AND AGREED TO BY:

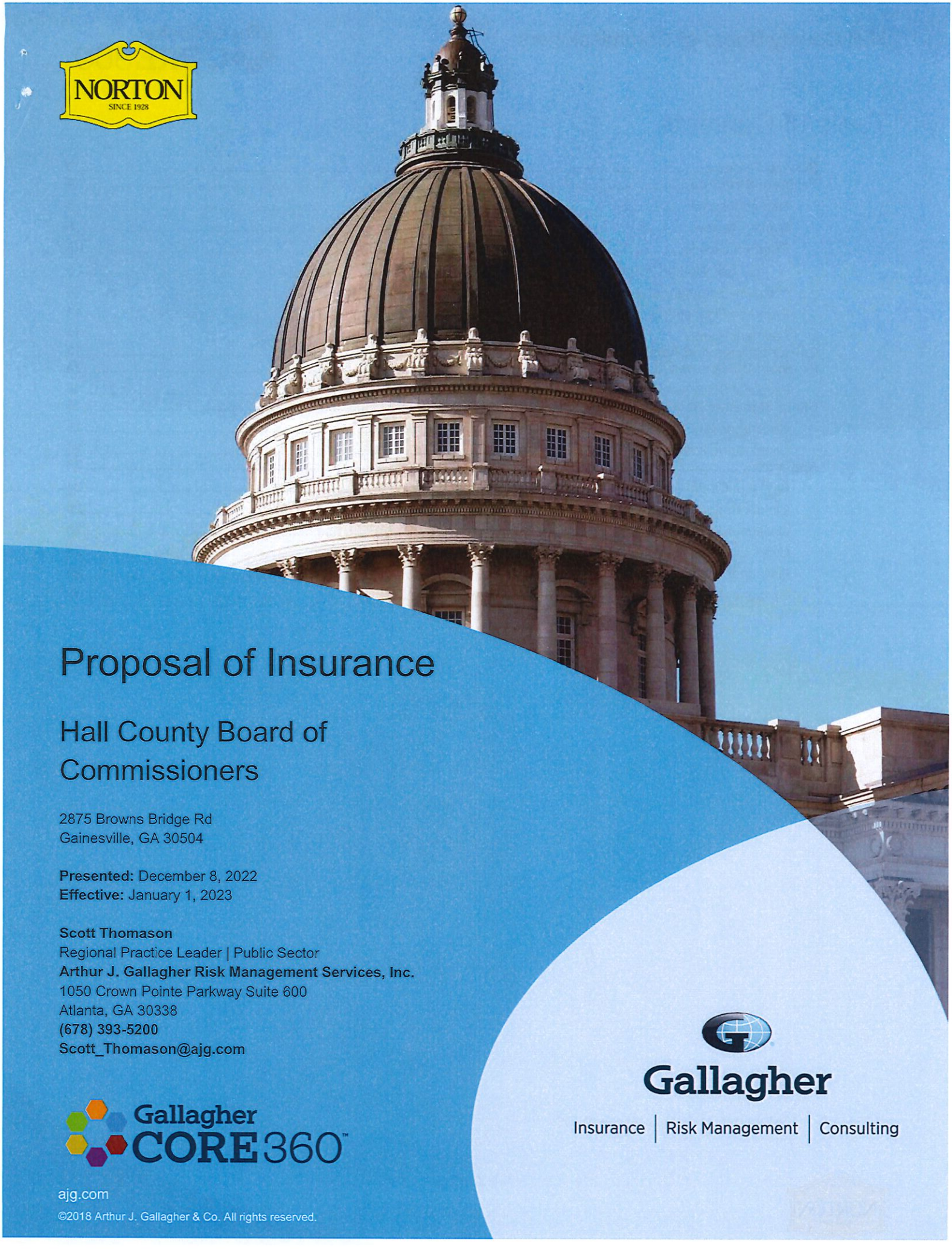
HALL COUNTY, GA

By: _____

Print Name: _____

Title: _____

Date: _____



NORTON
SINCE 1928

Proposal of Insurance

Hall County Board of Commissioners

2875 Browns Bridge Rd
Gainesville, GA 30504

Presented: December 8, 2022
Effective: January 1, 2023

Scott Thomason
Regional Practice Leader | Public Sector
Arthur J. Gallagher Risk Management Services, Inc.
1050 Crown Pointe Parkway Suite 600
Atlanta, GA 30338
(678) 393-5200
Scott_Thomason@ajg.com

Gallagher CORE360™

Gallagher

Insurance | Risk Management | Consulting

ajg.com

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Service Team

Scott Thomason has primary service responsibility for your company. We operate using a team approach. Your Service Team consists of:

NAME / TITLE	PHONE / ALT. PHONE	EMAIL	ROLE
Scott Thomason Producer	(678) 393-5234	Scott_Thomason@ajg.com	Regional Practice Leader
Bob Norton	770-718-5236	Bnorton@nortoninsurance.com	President – Norton Agency
John Beckett Account Executive	(678) 393-5282	John_Beckett@ajg.com	Account Executive
Anthony McCree, ARM Senior Client Service Manager	(678) 393-5279	Anthony_McCree@ajg.com	Client Service Manager

Arthur J. Gallagher Risk Management Services, Inc.
Main Office Phone Number: (678) 393-5200

Program Structure

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Named Insured

Named Insured Schedule:

Add / Change / Delete	Named Insured	Excess Workers' Compensation
	Hall County Board of Commissioners	X

Note: Any entity not named in this proposal, may not be an insured entity. This may include affiliates, subsidiaries, LLC's, partnerships and joint ventures.

Market Review

We approached the following carriers in an effort to provide the most comprehensive and cost effective insurance program.

INSURANCE COMPANY	LINE OF COVERAGE	RESPONSE	PREMIUM
Midwest Employers Casualty Company	Excess Workers' Compensation	Recommended Quote	$278,347.00

Renewal Comparison

Carrier Information	Expiring Program 2022-2023 Midwest Employers	Renewal Proposal 2023-2024 Recommended Midwest Employers	% Change vs Expiring
Financial Rating	A+, XV	A+, XV	
Broker Commission	20%	20%	
COVERAGE			
Workers Comp Limit	STATUTORY	STATUTORY	
Employers Liability Limit	$1,000,000	$1,000,000	
Self-Insured Retention (SIR)	$600,000	$600,000	
Police/Fire SIRs	$600,000	$600,000	
Terrorism / TRIA Coverage	Included	Included	
Aggregate Limit	$2,000,000	$2,000,000	
Aggregate Retention	$2,848,074	$2,990,544	*5.0%*
Aggregate Loss Limitation	$500,000	$500,000	
EXPOSURE & RATING			
Estimated Annual Payroll	$82,707,992	$86,843,395	*5.0%*
Policy Premium	**$250,310**	**$278,347**	*11.2%*
Rate per $100 Payroll	0.3026	0.3205	***5.9%***
Risk Management Fee	**$25,000**	**$25,000**	*0.0%*
Claims TPA Fee	**$60,000**	**$60,000**	*0.0%*
Total Cost	**$335,310**	**$363,347**	*8.4%*

Notes:
1. MidWest provided additional retention options including split retentions.

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Program Details

Coverage: Excess Workers' Compensation

Carrier: Midwest Employers Casualty Company

Policy Period: 1/1/2023 to 1/1/2024

Coverage:

DESCRIPTION	LIMIT TYPE	AMOUNT
Specific Limit		Statutory
Employers Liability Limit	Limit	$1,000,000
Aggregate Limit	Limit	$2,000,000

Deductibles / Self-Insured Retention

TYPE	COVERAGE	AMOUNT
Retention	Specific Retention	**$600,000**

States:

DESCRIPTION	STATE
States Covered:	GA
States Excluded:	OH, ND, WA, WY

Endorsements include, but are not limited to:

DESCRIPTION
Amendment to Schedule Item 6 - CMB-6-CLS
Foreign - CMB-160
Amendment to Schedule Item 1 - CMB-1
Amendment to Schedule Item 11 - CMB-11
Change in Notification Time Required for Cancellation - Insured NOC 60 Days; MECC NOC 90 Days - CMB-184
Policyholder Disclosure Notice of Terrorism Insurance - CMB-199
Voluntary Compensation - ISI-261
Endemic Disease and Repatriation - ISI-266
Georgia - ISI-GA (11-16)

Exclusions include, but are not limited to:

DESCRIPTION
Longshore & Harbor Workers' Act
Owners or Officers

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Exclusions include, but are not limited to:

DESCRIPTION
Bodily Injury to an Employee While Employed in Violation of Law
Bodily Injury Intentionally Caused by Insured
Federal Employers' Liability Act
Assumptions under Contract
Aircraft Exclusion - ISI-254-EXC

Other Significant Terms and Conditions/Restrictions:

DESCRIPTION
Total Premium Includes Terrorism Premium of $8,350
MECC must be notified of any aircraft changes occurring during the policy period.

Premium	**$278,347.00**
ESTIMATED PROGRAM COST	**$278,347.00**
Minimum Premium -	**$250,512.00**
TRIA/TRIPRA PREMIUM (+ Additional Surcharges, Taxes and Fees as applicable)	**INCLUDED**

Optional Coverage

DESCRIPTION	NEW	DEDUCTIBLE / SELF-INSURED RETENTION	OTHER	PREMIUM
Excess WC Option:1	No	Specific Retention: $600,000	Rate: 13.86%; Policy Minimum Premium $250,512; Deposit Premium $278,347; Premium Includes TRIA of $8,350.00	$278,347.00
Excess WC Option:2	No	Specific Retention: $650,000	Rate: 12.79%; Policy Minimum Premium $231,173; Deposit Premium $256,859; Premium Includes TRIA of $7,706.00	$256,859.00
Excess WC Option:3	No	Specific Retention: $750,000	Rate: 12.1%; Policy Minimum Premium $218,701; Deposit Premium $243,001; Premium Includes TRIA of $7,290.00	$243,001.00

Subject to Audit: Annually

Auditable Exposures:

STATE	CLASS CODE	DESCRIPTION	EXPOSURE	RATE PER $100
GA		Total Payroll	$86,843,395 - Payroll	13.86%

Premium Summary

The estimated program cost for the options are outlined in the following table:

LINE OF COVERAGE		EXPIRING PROGRAM CARRIER	EXPIRING PROGRAM EXPIRING COST	PROPOSED PROGRAM CARRIER	PROPOSED PROGRAM ESTIMATED COST
Excess Workers' Compensation	Premium TRIA Premium	Midwest Employers Casualty Company (W. R. Berkley Group)	**$250,310.00** Included	Midwest Employers Casualty Company (W. R. Berkley Group)	**$278,347.00** Included
Risk Management Fee	Fee		**$25,000.00**		**$25,000.00**
Claims TPA Fee	Fee		**$60,000.00**		**$60,000.00**
Total Estimated Program Cost			**$335,310.00**		**$363,347.00**

Quote from **Midwest Employers Casualty Company (W. R. Berkley Group)** is valid until **1/22/2023**

Premiums are due and payable as billed and may be financed, subject to acceptance by an approved finance company. Following acceptance, completion (and signature) of a premium finance agreement with the specified down payment is required. Note: Unless prohibited by law, Gallagher may earn compensation for this optional value-added service.

Gallagher is responsible for the placement of the following lines of coverage:

Excess Workers' Compensation

It is understood that any other type of exposure/coverage is either self-insured or placed by another brokerage firm other than Gallagher. If you need help in placing other lines of coverage or covering other types of exposures, please contact your Gallagher representative.

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Premium Financing

Arthur J. Gallagher is pleased to offer Premium Financing for our clients.

What is Premium Financing?

Premium financing is a short-term loan that provides premium payment flexibility. By financing, you have the option to spread out your premium payments instead of paying in full at the time of policy purchase or renewal.

Why Premium Financing May be Good for Your Business?

- May improve **capital and cash flow management** by spreading out premium payments over the policy period.
- Allows for **consolidation of** multiple policies into one premium finance agreement with a single monthly or quarterly payment.
- Provides automated **ACH options and flexible payment** terms.

Want to Learn More?

If you are interested in learning more or obtaining a quote, contact your Client Service Manager.

Payment Plans

CARRIER / PAYABLE CARRIER	LINE OF COVERAGE	PAYMENT SCHEDULE	PAYMENT METHOD
Midwest Employers Casualty Company (W. R. Berkley Group)	Excess Workers' Compensation	Deposit Premium $278,347	Agency Bill

Carrier Ratings and Admitted Status

PROPOSED INSURANCE COMPANIES	A.M. BEST'S RATING & FINANCIAL SIZE CATEGORY *	ADMITTED/NON-ADMITTED **
Midwest Employers Casualty Company	A+ XV	Admitted

*Gallagher companies use A.M. Best rated insurers and the rating listed above was verified on the date the proposal document was created.

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A Best's Financial Strength Rating is an independent opinion of an insurer's financial strength and ability to meet its ongoing insurance policy and contract obligations. It is not a warranty of a company's financial strength and ability to meet its obligations to policyholders. Best's Credit Ratings™ are under continuous review and subject to change and/or affirmation. For the latest Best's Credit Ratings™ and Guide to Best's Credit Ratings, visit the A.M. Best website at http://www.ambest.com/ratings.

**If coverage placed with a non-admitted carrier, it is doing business in the state as a surplus lines or non-admitted carrier, and is neither subject to the same regulations as an admitted carrier nor do they participate in any state insurance guarantee fund.

Gallagher companies make no representations and warranties concerning the solvency of any carrier, nor does it make any representation or warranty concerning the rating of the carrier which may change.

Proposal Disclosures

Proposal Disclosures

The following disclosures are hereby made a part of this proposal. Please review these disclosures prior to signing the Client Authorization to Bind or e-mail confirmation.

Proposal Disclaimer

IMPORTANT: The proposal and/or any executive summaries outline certain terms and conditions of the insurance proposed by the insurers, based on the information provided by your company. The insurance policies themselves must be read to fully understand the terms, coverages, exclusions, limitations and/or conditions of the actual policy contract of insurance. Policy forms will be made available upon request. We make no warranties with respect to policy limits or coverage considerations of the carrier.

Compensation Disclosure

1. Gallagher Companies are primarily compensated from the usual and customary commissions, fees or, where permitted, a combination of both, for brokerage and servicing of insurance policies, annuity contracts, guarantee contracts and surety bonds (collectively "insurance coverages") handled for a client's account, which may vary based on market conditions and the insurance product placed for the client.

2. In placing, renewing, consulting on or servicing your insurance coverages, Gallagher companies may participate in contingent and supplemental commission arrangements with intermediaries and insurance companies that provide for additional compensation if certain underwriting, profitability, volume or retention goals are achieved. Such goals are typically based on the total amount of certain insurance coverages placed by Gallagher with the insurance company, not on an individual policy basis. As a result, Gallagher may be considered to have an incentive to place your insurance coverages with a particular insurance company. If you do not wish to have your commercial insurance placement included in consideration for additional compensation, contact your producer or service team for an Opt-out form.

3. Gallagher Companies may receive investment income on fiduciary funds temporarily held by them, or from obtaining or generating premium finance quotes, unless prohibited by law.

4. Gallagher Companies may also access or have an ownership interest in other facilities, including wholesalers, reinsurance intermediaries, captive managers, underwriting managers and others that act as intermediaries for both Gallagher and other brokers in the insurance marketplace some of which may earn and retain customary brokerage commission and fees for their work.

If you have specific questions about any compensation received by Gallagher and its affiliates in relation to your insurance placements, please contact your Gallagher representative for more details.

In the event you wish to register a formal complaint regarding compensation Gallagher receives from insurers or third-parties, please contact Gallagher via e-mail at Compensation_Complaints@ajg.com or by regular mail at:

Chief Compliance Officer
Gallagher Global Brokerage
Arthur J. Gallagher & Co.
2850 Golf Rd.
Rolling Meadows, IL 60008

TRIA/TRIPRA Disclaimer

If this proposal contains options to purchase TRIA/TRIPRA coverage, the proposed TRIA/TRIPRA program may not cover all terrorism losses. While the amendments to TRIA eliminated the distinction between foreign and domestic acts of terrorism, a number of lines of coverage excluded under the amendments passed in 2005 remain excluded including commercial automobile, burglary and theft insurance; surety insurance, farm owners multiple perils and professional liability (although directors and officers liability is specifically included). If such excluded coverages are required, we recommend that you consider purchasing a separate terrorism policy. Please note that a separate terrorism policy for these excluded coverages may be necessary to satisfy loan covenants or other contractual obligations. TRIPRA includes a $100 billion cap on insurers' aggregate liability.

TRIPRA is set to expire on December 31, 2027. There is no certainty of extension, thus the coverage provided by your insurers may or may not extend beyond December 31, 2027. In the event you have loan covenants or other contractual obligations requiring that TRIA/TRIPRA be maintained throughout the duration of your policy period, we recommend that a separate ""Stand Alone"" terrorism policy be purchased to satisfy those obligations.

Terms and Conditions

It is important that we clearly outline the nature of our mutual relationship. The following terms and conditions (these "Terms") govern your relationship with Gallagher unless you have separately entered into a written services agreement with Gallagher relative to the policies and services outlined in this Proposal, in which case that services agreement will govern and control with respect to any conflicts with these Terms. These Terms will become effective upon your execution of the Client Authorization to Bind Coverage (the "CAB") included in this Proposal and shall survive for the duration of your relationship with Gallagher relative to the policies placed pursuant to the CAB or otherwise at your request.

Services

Gallagher will represent and assist you in all discussions and transactions with insurance companies relating to the lines of insurance coverage set forth in the CAB and any other lines of insurance coverage with which you request Gallagher's assistance. Gallagher will consult with you regarding any matters involving these or other coverages for which you have engaged Gallagher. You have the sole discretion for approving any insurance policies placed, as well as all other material decisions involving your risk management, risk transfer and/or loss prevention needs.

Although you are responsible for notifying applicable insurance companies directly in connection with any claims, demands, suits, notices of potential claims or any other matters as required by the terms and conditions of your policies, Gallagher will assist you in determining applicable claim reporting requirements.

Treatment of Information

Gallagher understands the need to protect the confidentiality and security of your confidential and sensitive information and strives to comply with applicable data privacy and security laws. Your confidential and sensitive information will be protected by Gallagher and only used to perform services for you; provided that Gallagher may disclose and transfer your information to our affiliates, agents or vendors that have a need to know such information in connection with the provision of such services (including insurance markets, as necessary, for marketing, quoting, placing and/or servicing insurance coverages). We may also disclose such information as required by applicable data protection laws or the order of any court or tribunal, subject to our providing you with prior notice as permitted by law.

We will (i) implement appropriate administrative, physical and technical safeguards to protect personal information; (ii) timely report security incidents involving personal information to affected parties and/or regulatory bodies; (iii) create and maintain required policies and procedures; and (iv) comply with data subjects' rights, as applicable. To the extent applicable under associated data protection laws, you are a "business" or "controller" and Gallagher is a "service provider" or "data processor." You will ensure that any information provided to Gallagher has been provided with any required notices and that you have obtained all required consents, if any and where required, or are otherwise authorized to transfer all information to Gallagher and enable Gallagher to process the information for the purposes described in this Proposal and as set forth in Gallaher's Privacy Policy located at https://www.ajg.com/privacy-policy/. Gallagher may update its Privacy Policy from time to time and any updates will be posted to such site.

Dispute Resolution

Gallagher does not expect that it will ever have a formal dispute with any of its clients. However, in the event that one should arise, we should each strive to achieve a fair, expedient and efficient resolution and we'd like to clearly outline the resolution process.

A. If the parties have a dispute regarding Gallagher's services or the relationship governed by this Proposal ("Dispute"), each party agrees to resolve that Dispute by mediation. If mediation fails to resolve the Dispute, you and Gallagher agree to binding arbitration. Each party waives all rights to commence litigation in court to resolve a Dispute, and specifically waives all rights to pursue relief by class action or mass action in court or through arbitration. However, the parties do not waive the ability to seek a court order of injunction in aid of the mediation and arbitration required by these Terms.

B. The party asserting a Dispute must provide a written notice ("Notice") of the claim to the other party and to the American Arbitration Association ("AAA") in accordance with its Commercial Arbitration Rules and Mediation Procedures. All Dispute resolutions will take place in Chicago, IL, unless you and Gallagher agree to another location. The parties will equally divide all costs of the mediation and arbitration proceedings and will each pay their own attorneys' fees. All matters will be before a neutral, impartial and disinterested mediator or arbitrator(s) that have at least 20 years' experience in commercial and insurance coverage disputes.

C. Mediation will occur within sixty (60) days of filing the Notice with the AAA. Mediation results will be reduced to a memorandum of understanding signed by you, Gallagher and the mediator. A Dispute that is not resolved in mediation will commence to binding arbitration. For Disputes in excess of $500,000, either party may elect to have the Dispute heard by a panel of three (3) arbitrators. The award of the arbitrator(s) must be accompanied by a reasoned opinion prepared and signed by the arbitrator(s). Except as may be required by law, neither you, Gallagher, nor a mediator or arbitrator may disclose the existence, content or results of any Dispute or its dispute resolution proceeding without the prior written consent of both you and Gallagher.

Electronic Delivery

In lieu of receiving documents in paper format, you agree, to the fullest extent permitted by law, to accept electronic delivery of any documents that Gallagher may be required to deliver to you (including, but not limited to, insurance policies and endorsements, account statements and all

other agreements, forms and communications) in connection with services provided by Gallagher. Electronic delivery of a document to you may be made via electronic mail or by other electronic means, including posting documents to a secure website.

Miscellaneous Terms

Gallagher is engaged to perform services as an independent contractor and not as your employee or agent, and Gallagher will not be operating in a fiduciary capacity.

Where applicable, insurance coverage placements and other services may require the payment of federal excise taxes, surplus lines taxes, stamping or other fees to the Internal Revenue Service, various State(s) departments of revenue, state regulators, boards or associations. In such cases, you will be responsible for the payment of the taxes and/or fees, which Gallagher will separately identify on related invoices.

The Proposal and these Terms are governed by the laws of the State of Illinois, without regard to its conflict of law rules.

If an arbitrator/court of competent jurisdiction determines that any provision of these Terms is void or unenforceable, that provision will be severed, and the arbitrator/court will replace it with a valid and enforceable provision that most closely approximates the original intent, and the remainder of these Terms will remain in effect.

Except to the extent in conflict with a services agreement that you may enter into with Gallagher, these Terms and the remainder of the Proposal constitute the entire agreement between you and Gallagher with respect to the subject matter of the Proposal, and supersede all prior negotiations, agreements and understandings as to such matters.

Client Signature Requirements

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Client Authorization to Bind Coverage

After careful consideration of Gallagher's proposal dated 11/30/2022, we accept the following coverage(s). Please check the desired coverage(s) and note any coverage amendments below:

	COVERAGE/CARRIER	DESCRIPTION / MAJOR DIFFERENCES
☑ Accept ☐ Reject	**Excess Workers' Compensation**	
☑ Option # 1	Midwest Employers Casualty Company Premium: $278,347	Specific Retention: $600,000
☐ Option # 2	Midwest Employers Casualty Company Premium: $256,859	Specific Retention: $650,000
☐ Option # 3	Midwest Employers Casualty Company Premium: $243,001	Specific Retention: $750,000
TRIA Cannot Be Rejected		
☑ Accept ☐ Reject	**Risk Management Fee - $25,000**	
☑ Accept ☐ Reject	**Claims TPA Fee - $60,000**	

Additional Recommended Coverages

Gallagher recommends that you purchase the following additional coverages for which you have exposure. By checking the box(es) below, you are requesting that Gallagher provide you with a Proposal for this coverage. By not requesting a Proposal for this coverage, you assume the risk of any uncovered loss.

Other Coverages to Consider

☐ Environmental Liability

The above coverage(s) does not necessarily represent the entirety of available insurance products. If you are interested in pursuing additional coverages other than those listed in the Additional Recommended Coverages, please list below:

Coverages for Consideration

Overview

Gallagher recommends that you consider purchasing the following additional coverages for which you have exposure. A Proposal for any of the coverages below can be provided.

- Environmental Liability

Please note the recommendations and considerations summarized in this section are not intended to identify all potential exposures. Gallagher is not an expert in all aspects of your business and assumes no responsibility to independently investigate the risks your business faces. Gallagher has relied upon the information you provided in making our insurance Proposals. If you are interested in pursuing additional coverages other than those listed above, please list the additional coverages in the Client Authorization to Bind.

Coverage Amendments and Notes:

Exposures and Values

You confirm the payroll, values, schedules, and any other information pertaining to your operations, and submitted to the underwriters, were compiled from information provided by you. If no updates were provided to Gallagher, the values, exposures and operations used were based on the expiring policies. You acknowledge it is your responsibility to notify Gallagher of any material change in your operations or exposures.

Additional Terms and Disclosures

Gallagher is not an expert in all aspects of your business. Gallagher's Proposals for insurance are based upon the information concerning your business that was provided to Gallagher by you. Gallagher expects the information you provide is true, correct and complete in all material respects. Gallagher assumes no responsibility to independently investigate the risks that may be facing your business, but rather have relied upon the information you provide to Gallagher in making our insurance Proposals.

Fee Agreement: *In lieu of / In addition to* commission received by Gallagher for the policy term reflected herein, 01/01/2023 Gallagher will receive a fee of: **$25,000.00** for:

- Self-Insured program management and oversight, claims advocacy, and claims analytics services.
- Services shall include up to 40 hours of risk control services

This fee IS NOT refundable, is fully earned by signing below, and is due and payable within thirty (30) days of such signing. Any placements that require the payment of additional state or federal taxes and/or fees are the client's responsibility.

By accepting this fee agreement, we agree and understand that it reflects services to be provided that have been discussed with and fully disclosed to us, and the above fee is consistent with our understanding. This agreement and any disputes that arise out of this fee agreement shall be governed by the laws of the state of Illinois.

Gallagher's liability to you arising from any of Gallagher's acts or omissions will not exceed $20 million in the aggregate. The parties each will only be liable for actual damages incurred by the other party, and will not be liable for any indirect, special, exemplary, consequential, reliance or punitive damages. No claim or cause of action, regardless of form (tort, contract, statutory, or otherwise), arising out of, relating to or in any way connected with the Proposal, any of Gallagher's services or your relationship with Gallagher may be brought by either party any later than two (2) years after the accrual of the claim or cause of action.

Gallagher has established security controls to protect Client confidential information from unauthorized use or disclosure. For additional information, please review Gallagher's Privacy Policy located at https://www.ajg.com/privacy-policy/.

You have read, understand and agree that the information contained in the Proposal and all documents attached to and incorporated into the Proposal, is correct and has been disclosed to you prior to authorizing Gallagher to bind coverage and/or provide services to you. By signing below, or authorizing Gallagher to bind your insurance coverage through email when allowed, you acknowledge you have reviewed and agree with terms, conditions and disclosures contained in the Proposal.

By: _____

Print Name (Specify Title)

_____

Company

_____

Signature

Date: _____

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Bindable Quotations & Compensation Disclosure Schedule

Client Name: Hall County Board of Commissioners

COVERAGE(S)	CARRIER NAME(S)	WHOLESALER, MGA, OR INTERMEDIARY NAME[1]	EST. ANNUAL PREMIUM[2]	COMM.% OR FEE[3]	GALLAGHER U.S. OWNED WHOLESALER, MGA, OR INTERMEDIARY %
Excess Workers' Compensation	Midwest Employers Casualty Company (W. R. Berkley Group)	N/A	$278,347.00	20 %	
Risk Management Fee	Arthur J. Gallagher Risk Management Services, Inc.	N/A	N/A	$25,000	
Claims TPA Fee	Gallagher Basset TPA Services	N/A	N/A	$60,000	

1 We were able to obtain more advantageous terms and conditions for you through an intermediary/ wholesaler.

2 If the premium is shown as an indication: The premium indicated is an estimate provided by the market. The actual premium and acceptance of the coverage requested will be determined by the market after a thorough review of the completed application.

* A verbal quotation was received from this carrier. We are awaiting a quotation in writing.

3 The commission rate is a percentage of annual premium excluding taxes & fees.

* Gallagher is receiving ___% commission on this policy. The fee due Gallagher will be reduced by the amount of the commissions received.

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Appendix

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Claims Reporting By Policy

Immediately report all claims. Each insurer requires notice of certain types of claims depending on the potential exposure or particular injury types. It is important to thoroughly review your policy to ensure you are reporting particular incidents and claims, based upon the insurer's policy requirements.

If you are using a third party administrator ("TPA"), your TPA may or may not report claims to an insurer on your behalf. Although we will assist you where requested, it is important that you understand whether your TPA will be completing this notification.

Reporting Direct to Carrier [Only When Applicable]

COVERAGE(S): Excess Workers' Compensation	IMMEDIATELY REPORT CLAIMS DIRECTLY TO:
Insurer: Midwest Employers Casualty Company Policy Term: 1/1/2023 - 1/1/2024	Insurer/TPA Name: Midwest Employers Casualty Company Phone: (866) 758-1934 Fax: 844.550.5639 Email: 6408BerkleyLifeSciences@sedgwickcms.com Web: https://berkleyls.com/claims-services/report-a-claim/

Reporting to Gallagher or Assistance in Reporting

COVERAGE(S):	IMMEDIATELY REPORT CLAIMS DIRECTLY TO:
Gallagher Claim Center Policy Number: Policy Term:	Phone: 855-497-0578 Fax: 225-663-3224 Email: ggb.nrcclaimscenter@ajg.com

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Gallagher STEP

Gallagher | STEP



Reduce Your Risk and Simplify Training

Safety training programs and educational materials for employees are critical for reducing accidents, increasing retention, and minimizing your total cost of risk now and in the future.

Gallagher Safety Training Education Platform (STEP) is our proprietary learning management system (LMS) that supports your safety program, provides real-time access to your loss control plans and keeps employees up to date with the latest safety standards.

Key Benefits of Gallagher STEP

- **Register** for up to 10 complimentary modules every year from a library of over 100 training and safety shorts. In addition, monthly bulletins are available, covering topics such as general and environmental safety, human resources, and health and wellness.
- **Save** valuable time by assigning employee training and monitoring their latest progress and completion.
- **Simplify** the process of training to stay in compliance and avoid costly penalties.
- **Onboard and train** an unlimited number of users while enhancing your overall risk control program.
- **Customize** your platform with your company's logo, training content and modules tailored to your business, and personalized procedures and forms for an added fee.

Please visit **ajg.com/us/gallagher-step/** to learn more.

Most Popular Training Modules

- Sexual Harassment and Discrimination
- Slip, Trip and Fall Training
- Electrical Safety Training
- Back Safety Training
- Bloodborne Pathogens
- Safe Lifting Practices
- Defensive Driving Basics
- Fire Prevention Basics
- Personal Protective Equipment
- GHS Hazard Communication

Gallagher CORE360™

Gallagher **CORE360**™ is our unique, comprehensive approach of evaluating your risk management program that leverages our analytical tools and diverse resources for custom, maximum impact on six cost drivers of your total cost of risk.

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Sample of Available Training Modules and Safety Shorts

Human Resources Training

- Americans with Disabilities Act (ADA)
- California Ethics
- California Sexual Harassment & Discrimination—Employees (English and Spanish)
- California Sexual Harassment and Discrimination—Supervisors (English and Spanish)
- Connecticut Sexual Harassment Prevention and Response
- Diversity
- Drug-Free Workplace—Supervisor
- Ethics in Action
- Fair and Accurate Credit Transaction Act (FACTA)
- Family Medical Leave Act (FMLA)
- Interviewing Strategies
- Job Applications
- Maine Sexual Harassment Prevention and Response
- Personnel Files
- Sensitivity Basics: Creating Positive Working Relationships
- Sexual Harassment and Discrimination—Employees
- Sexual Harassment and Discrimination—Supervisors
- New York City Sexual Harassment and Discrimination—Employees (English and Spanish)
- New York City Sexual Harassment and Discrimination—Supervisors (English and Spanish)
- New York State Sexual Harassment and Discrimination—Employees (English and Spanish)
- New York State Sexual Harassment and Discrimination—Supervisors (English and Spanish)
- Smart Hiring
- Smart Risk Management—Core Principles
- Theft
- Unsafe Acts
- Violence Prevention
- Workers Compensation Essentials
- Workplace Investigations Basics
- Wrongful Termination

Safety Training

- Accident Investigation Techniques
- Asbestos Awareness (General Industry)
- Basic Conveyor Safety
- Bloodborne Pathogens (English and Spanish)
- Creating a Safe Holiday Celebration
- Common Fire and Life Safety Hazards
- Continuity of Operations Planning
- Defensive Driving—Accident Scene Management
- Defensive Driving—Backing Safely, R is for Reverse
- Defensive Driving Basics—Part I (English and Spanish)
- Defensive Driving—Changing Lanes Safely
- Defensive Driving—Driving Safely in School Zones
- Defensive Driving—General Auto Risk Management
- Defensive Driving—Intersections
- Defensive Driving—Reducing Deer-Related Incidents
- Defensive Driving—Safe Following Distance
- Defensive Driving—Spring Weather Conditions
- Defensive Driving—Winter Weather Conditions
- Determining the Root Cause of Accidents
- Disaster Planning 101
- Electrical Safety (English and Spanish)
- Ladder Safety
- Employee and Family Disaster Planning
- Evacuation Planning and Procedures
- Fire Prevention Practices (English and Spanish)
- Forklift Safety Basics for General Industry
- Hazard Communication (English and Spanish)
- Hearing Protection
- Housekeeping—Custodial, Safe Housekeeping Practices
- Identifying Strain and Exertion Exposures (English and Spanish)
- Lead-Based Paint
- Lockdown Procedures
- Lockout/Tagout (English and Spanish)
- Machine Guarding (English and Spanish)
- Means of Egress (English and Spanish)
- Mold
- Office Ergonomics Defined
- Office Ergonomics—Working in Comfort
- Office Workstation Safety
- Office Workstation Safety for Supervisors
- Personal Protective Equipment (English and Spanish)
- Portable Fire Extinguishers I
- Portable Fire Extinguishers II
- Power Tool Safety
- Preparation for Physical Activity
- Preventing Back Injuries (English and Spanish)
- Preventing Slips, Trips and Falls (English and Spanish)
- Preventing Injuries When Lifting, Moving and Transferring Residents
- Safety Pays for Life
- Temp Staffing Services. Employee Safety Orientation (English and Spanish)

Safety Shorts

Two safety shorts are considered one module selection.

- Bloodborne Pathogens
- Electrical Safety
- Emergency Procedures
- Fire Prevention and Protection
- Hand and Power Tools
- Hazard Communication
- Housekeeping/Custodial—Before You Start
- Housekeeping/Custodial—Cleaning by Hand
- Housekeeping/Custodial—Emptying Trash
- Housekeeping/Custodial—Mopping and Emptying Buckets
- Housekeeping/Custodial—Preventing Slips, Trips and Falls
- Housekeeping—General
- Ladder Safety
- Lockout/Tagout
- Personal Protective Equipment
- Safe Lifting Practices
- Slip, Trip and Fall

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Please visit ajg.com/us/gallagher-step/ to learn more.

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Gallagher | eRiskHub®

Overview and Login Information

The Gallagher eRiskHub® portal provides you with exclusive risk management tools and best practices to improve your organization's cyber risk posture. This important resource serves your cyber risk management strategies by enhancing your capabilities in cyberattack prevention, loss mitigation and cyber risk transfer techniques.

To access the Gallagher eRiskHub® now:

1. Navigate to https://eriskhub.com/gallagher
2. Complete the new user registration at the bottom of the page. Choose your own user ID and password. The access code is **447597**.
3. After registering, you can access the hub immediately using your newly created credentials in the member login box located at the top right of the page.

If you have any questions about the Gallagher eRiskHub®, please reach out the eRiskHub® support staff at support@eriskhub.com

Key Features of the Gallagher eRiskHub®

- **Risk Manager Tools**—A collection of tools for risk managers including research of known breach events, information to calculate the potential cost of a breach event, sample policies, breach response planning and more.
- **Learning Center**—An extensive collection of thought leadership articles, webinars, videos and blog posts covering everything from emerging cyber threats to data protection and more.
- **Security and Privacy Training**—Resources for creating an effective security training program for your employees.
- **Strategic Third-Party Relationships and Partner Resources**—Information on third-party vendors that can assist your organization improve your overall cyber risk, as well as access to exclusive Gallagher discounts on tools.

Gallagher's Cyber Capabilities

Gallagher's Cyber practice has the expertise to deliver a full complement of cyber risk management and insurance services to help your team stay protected. We take a consultative, action-based approach to address the sophisticated and evolving nature of cyber liability to design custom solutions that meet your unique needs. For more information, please contact us.

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The information contained herein is offered as insurance industry guidance and provided as an overview of current market risks and available coverages and is intended for discussion purposes only. This publication is not intended to offer legal advice or client-specific risk management advice. Any description of insurance coverages is not meant to interpret specific coverages that your company may already have in place or that may be generally available. General insurance descriptions contained herein do not include complete insurance policy definitions, terms, and/or conditions, and should not be relied on for coverage interpretation. Actual insurance policies must always be consulted for full coverage details and analysis.
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Gallagher | Insight

A Next Generation Engagement Solution



Gallagher Insight is a user-friendly web portal that allows secure, real-time collaboration between you and your Gallagher team. It empowers Clients with 24/7 access to their summary insurance information and an array of materials needed to run your risk management program, all at your fingertips on any device. Gallagher Insight is a password-protected portal accessible through any browser on your mobile phone, tablet or PC. Insight offers a modern design, robust features and upgraded functionality, including:

- Secure web-based document libraries for our clients
- Policy and document sharing with your Gallagher account team
- A private social network between your global team and ours
- Stewardship through goals, events and tasks set up by you and your Gallagher team
- Access to Gallagher's resource library
- Submission and tracking of service requests

Insight can be accessed from any electronic device using a secure ID and password to login.



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Contractual Risk Compliance

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Gallagher | Verify℠

> Gallagher Verify monitors expiration dates, insurance limits and other details across thousands of COIs. In addition, their team delivers a very consultative, custom approach, which has allowed us to significantly improve our overall risk exposure.

Mitigate contractual risk with confidence

There is more to managing compliance than just collecting your third-party vendors' certificates. **Gallagher Verify**℠ ensures you are tracking all the information you need to keep your company organized, compliant and properly protected. Take advantage of our intelligent technology and experienced compliance experts to gain insight into your level of risk, giving you the freedom to focus on your day-to-day operations.

Protect your business from unknown risk

A majority of organizations face unknown risk. In fact, research shows that most organizations average only 20% compliance for vendor insurance. Gallagher Verify limits your unknown risk and significantly improves compliance. Most companies that use Gallagher Verify average over 80% compliance.*

Track more than just Certificates of Insurance

Our cloud software has the capability to track and verify compliance for any type of document your business is required to keep on file. These documents can include but are not limited to:

W-9 forms	OSHA mod rates	Background checks
MVRs	Contracts	Certifications and licenses

Gallagher Verify brings big benefits to your business

- Increased profitability due to reduced internal administrative costs
- Insurance consulting with a risk advisor
- Reports and dashboards to manage compliance trends
- Ongoing monitoring of A.M. Best insurance carrier ratings and vendor compliance with A.M. Best rating
- Easy-to-use cloud software used to track and record incoming COIs
- Proactive compliance calls to vendors
- Industry-specific software configurations

*Tier 2 model.

Gallagher CORE360™

Learn More About CORE360™

Gallagher Verify is part of Gallagher **CORE360™**, our unique, comprehensive approach to evaluating your risk management program that leverages our analytical tools and diverse resources for custom, maximum impact on six cost drivers of your total cost of risk.

We consult with you to understand your **Contractual Liability,** and how to mitigate risks and associated costs.

This will empower you to know, control and minimize your total cost of risk, and improve your profitability.

Tiers of service tailored to the needs of your organization

	TIER 1	TIER 2
Gallagher Verify cloud software	✓	✓
Dedicated implementation project managers (includes data entry and software configuration)	✓	✓
Automated COI endorsement and document compliance verification	✓	✓
Automated noncompliance and renewal notifications to vendors	✓	✓
Client access to software support	✓	✓
Customizable daily, weekly and monthly reports, and historical compliance dashboard widgets	✓	✓
Risk management consulting for clients (insurance requirement exception guidance)	✓	✓
Outgoing vendor compliance enforcement and educational phone calls (up to four phone calls per certificate of insurance)		✓
Weekly or monthly client stewardship calls with a risk advisor		✓
Unlimited phone support for vendors with insurance and contract-related questions		✓

> When we initially implemented Gallagher Verify, our third-party insurance compliance was less than 20%. Today, compliance is more than 90%. The aggressive tracking of insurance requirements and vendor compliance mitigates financial exposure, should there be a claim.

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Gallagher

AGENDA ITEM

Human Resources

REPORT TO: **Work Session (01/09/23)**

REPORT TO: **Voting Meeting (01/12/23)**

ITEM NO: 741/2022

SUBJECT: Approve the Employment Agreement for the Assistant Chief Appraiser.

Meetings:

Work Session Date: 01/09/23 **Voting Meeting Date:** 01/12/23

Executive Summary:

Presenter: DLJ

Recommendation:
Department recommends approval of the Employment Agreement for the Assistant Chief Appraiser.

Purpose of Request:
The purpose of this request is to approve the Agreement for the Assistant Chief Appraiser.

History:

Facts and Issues:

Options:

Funding Requested	$ 174,814.00
Are funds within current budget?	Yes
Source of Funds	General Fund
Does the action involve a Resolution, Ordinance, Contract, Agreement, etc.?	Yes
Has it been reviewed by the County Attorney?	Yes
Is there a deadline for this item?	

Approvals:

Submit	Approve	Budget	Finance
LJ	LJ	TS	WG

Attorney	Administration	Clerk
WLI	CR	JR

Attachments:

Financial Supplement
Position Cost Worksheet - Assistant Chief Appraiser
Employment Agreement for Assistant Chief Appraiser

HALL COUNTY BOARD OF COMMISSIONERS
FINANCIAL SUPPLEMENT REPORT

AGENDA ITEM 741/2022

Funds Requested: $ 174,814.00

Request Budgeted: Yes

Proposed Source of Funding:

General Fund

Budget Transfer Requested:

No

Funding Source Items:

Fiscal Year	Fund	Division	Account	Amount
2023	001 - GENERAL	109 - TAX ASSESSORS-REAL	4104 - SALARIES	$59,225.00
2023	001 - GENERAL	109 - TAX ASSESSORS-REAL	4110 - F.I.C.A.	$4,531.00
2023	001 - GENERAL	109 - TAX ASSESSORS-REAL	4131 - RETIREMENT	$8,291.50
2023	001 - GENERAL	109 - TAX ASSESSORS-REAL	4121 - HEALTH INSURANCE	$14,379.00
2023	001 - GENERAL	109 - TAX ASSESSORS-REAL	4123 - OTHER CNTY-PD INSURANCE	$783.50
2023	001 - GENERAL	109 - TAX ASSESSORS-REAL	4122 - LIFE INSURANCE	$197.00
2024	001 - GENERAL	109 - TAX ASSESSORS-REAL	4104 - SALARIES	$59,225.00
2024	001 - GENERAL	109 - TAX ASSESSORS-REAL	4110 - F.I.C.A.	$4,531.00
2024	001 - GENERAL	109 - TAX ASSESSORS-REAL	4131 - RETIREMENT	$8,291.50
2024	001 - GENERAL	109 - TAX ASSESSORS-REAL	4121 - HEALTH INSURANCE	$14,379.00
2024	001 - GENERAL	109 - TAX ASSESSORS-REAL	4123 - OTHER CNTY-PD INSURANCE	$783.50
2024	001 - GENERAL	109 - TAX ASSESSORS-REAL	4122 - LIFE INSURANCE	$197.00

Budget Transfer Items:

Additional Information/Comments:

Contact for Questions: DLJ

Phone: 770-531-6712

HALL COUNTY
GEORGIA *We have it all in Hall*

REQUEST TYPE: FULL-TIME POSITION

109	Tax Assessors
Department #	**Department Name**
Assistant Chief Appraiser	
Position Title	**Priority #**

ADDITIONAL PERSONNEL COST CALCULATION

New Position		Account	FY 2023	FY 2024	
$118,450.00	Salary	4104	$ 59,225.00	$ 59,225.00	
9,062.00	Taxes	4110	4,531.00	4,531.00	
16,583.00	Retirement	4131	8,291.50	8,291.50	
28,300.00	Health	4121	14,150.00	14,150.00	14,379.00
1,567.00	Dental & Vision	4123	783.50	783.50	
308.00	Life	4122	154.00	154.00	
86.00	AD&D	4122	43.00	43.00	197.00
458.00	Short Term Disability	4121	229.00	229.00	
$174,814.00	**Total Additional Personnel Costs**		$ 87,407.00	$ 87,407.00	$ 174,814.00

JUSTIFICATION (please provide a short explanation of your request on the lines below):

Please note taxes, retirement, and benefits are all estimates based on the maximum potential cost. John's position is already budgeted, but him going to contract will add some additional costs for benefits and salaries. Based on their current budget standing, there isn't a need for any budget increase.

PERSONNEL EQUIPMENT REQUEST (list all equipment required and estimated cost)

**Do not add these estimated costs to your department's operating budget. It is calculated separately by OMB.

EQUIPMENT DESCRIPTION (uniform, gun, fire safety suit, vehicle, computer, cell phone etc.)	ESTIMATED COST		
	$ -	-	-
	$ -		
	$ -		

EMPLOYMENT AGREEMENT

Assistant Chief Appraiser – Tax Assessors

THIS AGREEMENT made and entered into this ____ day of _____, 2023, by and between **THE HALL COUNTY BOARD OF TAX ASSESSORS,** hereinafter called "the Assessors", as party of the first part, and **John Smith,** herein called "Employee", as party of the second part, both of whom agree as follows:

WITNESSETH

WHEREAS, the Assessors desire to employ the services of said **John Smith** as the **Assistant Chief Appraiser** for the Hall County Tax Assessors' Office; and

WHEREAS, it is the desire of the Assessors to provide certain benefits, establish certain conditions of employment, and to set working conditions of said Employee; and

WHEREAS, it is the desire of the Assessors to secure and retain the services of said Employee and provide inducement for him to remain in such employment, and to make possible full work productivity by assuring said Employee's morale and peace of mind with respect to future security, and to provide a just means of terminating the Employee's services at such a time as desired by the Assessors; and

WHEREAS, the Employee desires to accept employment as **Assistant Chief Appraiser** for the Hall County Tax Assessors' Office**;**

NOW THEREFORE; in consideration of the mutual covenants herein contained, the parties agree as follows:

SECTION 1. **Duties**

The Assessors hereby agree to employ **John Smith** as **Assistant Chief Appraiser** for the Hall County Tax Assessors' Office, to perform legally permissible functions and duties specified and assigned by the Assessors.

DRAFT

_____Initials

SECTION 2. Term

A. Nothing in this agreement shall prevent, limit, or otherwise interfere with the right of the Assessors to terminate the services of this Employee at any time, subject only to the provisions set forth in SECTION 3 of this agreement. The Employee understands that he serves at the pleasure of the Assessors.

B. Nothing in the agreement shall prevent, limit, or otherwise interfere with the right of the Employee to resign at any time from his or her position with the County, subject to the provisions set forth in SECTION 3, Paragraphs B and C of this agreement.

SECTION 3. Termination and Severance Pay

A. In the event the Employee is terminated pursuant to Paragraph B hereof and the Employee is willing and able to perform the duties of the position under this agreement, upon execution of a Separation Agreement and General Release, the Assessors agree to pay the Employee a lump sum cash payment equal to three (3) months aggregate annual salary, exclusive of other forms of compensation, less standard withholdings, in addition to the continuation of medical, dental and vision insurance benefits during the three (3) month period immediately following the date of termination. However, in the event the Employee is terminated because the Employee has been convicted of a misdemeanor or a felony, or if the Assessors determine that the Employee has engaged in unprofessional and improper practice, other than negligence, and/or breach of public trust, including but not limited to illegal acts involving personal gain or moral turpitude, the Assessors shall be entitled to terminate the Employee immediately without any severance pay, or medical, dental and/or vision insurance continuation aside from COBRA.

B. In the event the Assessors at any point during the term of this agreement reduce the salary or other financial benefits of the Employee in a greater percentage than reductions to all other employees of the County, or if the Assessors refuse, following a written request to comply with any provision benefiting Employee herein; or the Employee resigns following a suggestion, whether formal or informal, by the Assessors that he resign, then, in that event, Employee may, at his option, be deemed to be terminated at the date of such reduction or refusal to comply within the meaning and context of the herein severance pay provision.

_____Initials

DRAFT

C. In the event the Employee voluntarily resigns his position with the Assessors as **Assistant Chief Appraiser** then the Employee shall give the Assessors **thirty (30)** days written notice in advance, unless the parties otherwise agree. The provision for severance pay and continuation of employment benefits detailed in SECTION 3, Paragraph A shall not apply to a voluntary resignation.

SECTION 4. Termination Due to Disability

If the Employee is unable to perform his duties because of sickness, accident, injury, or mental incapacity, and no reasonable accommodations are available, the Assessors shall have the option to terminate employment, subject to the severance pay requirements of SECTION 3, Paragraph A. However, the Employee shall be compensated for any accrued benefits, in accordance with current policies.

SECTION 5. Salary

The Assessors agree to pay the Employee for his services rendered pursuant hereto, an annual base salary of **$118,450.00,** payable in installments at the same time as other employees of the County are paid, except that the County/Assessors may put in place cost reduction measures at any time and for any duration as required by a lack of financial resources. The base annual salary and benefits may be reviewed annually by the Assessors and consideration for increases may be determined based upon the performance of the employee or consideration of providing a Cost of Living Adjustment (COLA).

SECTION 6. Performance Evaluation

The Assessors shall review and evaluate the performance of the Employee at least annually on the anniversary day of this agreement. Said review and evaluation shall be in accordance with criteria developed by the Assessors and Employee. Performance criteria may be added to or deleted from, as the Assessors may from time to time determine. Further, the Assessors shall provide the Employee with a written summary statement of the findings of the evaluation.

DRAFT

_____Initials

SECTION 7. Hours of Work

It is generally recognized that the position of **Assistant Chief Appraiser** for the Hall County Board of Tax Assessors involves the devotion of a great deal of time beyond typically recognized business hours.

SECTION 8. Outside Activities

The Employee shall devote his full time to the position described in this agreement. With the approval of the Assessors, the Employee may engage in teaching, consulting, or other non-employer related activities as long as they do not interfere with the execution of the duties of this position, or present a conflict of interest. Such consent must be obtained by advance approval, in writing, detailing the specifics of such activity.

SECTION 9. Political Activity

If the Employee announces as a candidate for any elective office during the duration of this contract, he or she will resign from employment immediately upon declaring candidacy as defined by state law. During the term of this contract, the Employee may not:

A. Be involved in any political activity that would constitute a conflict of interest; including participation in any aspect of any local political campaign on behalf of one's self if intending to seek elected office, or other individual or in opposition to any candidate for office within Hall County; including municipal and/or county government office. This restriction includes but is not limited to displaying or distributing information, materials, or paraphernalia in support of any political candidate, party or organization.
B. Knowingly solicit, accept, or receive political contributions from any person, to be used in support of or in opposition to any political candidate for election within Hall County, including municipal and/or county government office.
C. Use, or promise to use, directly or indirectly, any official authority or influence, whether possessed or anticipated, to secure or attempt to secure for any person a job or other advantage for the purpose of influencing the vote or political action of any person.

DRAFT

_____Initials

SECTION 10. Vehicle and Phone

When the Employee's duties require the use of an automobile during his term of employment, it will be provided by the Assessors. The Assessors will be responsible for paying liability, property damage, and comprehensive insurance for the operation and maintenance of said vehicles. A cellular phone dedicated solely for business usage may be provided by the Assessors. In such case, the Assessors shall be responsible for paying for and maintaining regular monthly service.

SECTION 11. Insurance Benefits

The Assessors agree to put in force and make premium payments for Medical, Dental, Vision, Short-Term Disability and Life Insurance policies on behalf of the Employee and if so elected, eligible dependents, at a level of coverage available to County employees. The Employee may choose not to cover his dependents.

SECTION 12. Retirement Benefits

Provided that contributions are being made by the County, if the Employee elects, the Assessors agree to contribute 8% of annual compensation as defined by the retirement plan in addition to matching contributions made on contributions by the Employee as received by County employees, into a defined contribution plan, except that the County/Assessors may reduce or suspend this contribution at any time and for any duration as required due to a lack of financial resources. Retirement contributions shall not be made on any severance pay provided by the Assessors, paid in accordance with Section 3.

SECTION 13. Paid Time Off (PTO) or Vacation and Sick Leave

As applicable, the Assessors will provide for Paid Time Off (PTO) or vacation and sick leave in the same manner as the accruals currently received by County Employees. In the event that the County changes or adopts a new program for all employees, such changes shall also apply to the **Assistant Chief Appraiser**. Accrued PTO or vacation leave, whichever is applicable, shall be paid to Employee upon termination of employment.

DRAFT

_____Initials

SECTION 14. Dues, Subscriptions and Professional Development

A. The Assessors agree to pay the Employee's annual membership dues, subscriptions, and conference expenses incurred by the Employee in conjunction with the Employee's duties, not to exceed the budget and subject to prior approval by the Assessors.

B. The County agrees to pay the travel and subsistence expenses of the Employee for expenses related to maintenance of professional certifications, professional and official travel, meetings and occasions adequate to continue the professional development of the Employee and to adequately pursue necessary official and other functions for the department, not to exceed the budget and subject to prior approval by the Assessors.

SECTION 15. Indemnification

The Assessors shall defend, save harmless and indemnify the Employee against any claim or demand or legal action, whether groundless or otherwise, arising out of an alleged act or omission occurring in the performance of the Employee's duties as **Assistant Chief Appraiser**. The County/Assessors or their insurance carrier will pay the amount of any settlement or judgment agreed to or rendered against the Employee and the County/Assessors may agree to such settlement or the payment of a judgment with or without the express consent of the Employee. Any defense and/or indemnification of the Employee by the County/Assessors shall be subject to all of the terms and conditions found in the County's Defense and Indemnification ordinance/policy.

SECTION 16. General Provisions

A. The text herein shall constitute the entire agreement between the parties. Any amendment hereto shall be in writing and be executed by both parties.

B. This agreement shall be binding upon and inure to the benefit of the heirs at law and executors of the Employee.

C. If any provision, or any portion thereof, contained in this agreement is held unconstitutional, invalid, or unenforceable, the remainder of this agreement, or portion thereof, shall be deemed severable, shall not be affected and shall remain in full force and effect.

DRAFT

_____Initials

D. This agreement will become effective on the ___ day of _____, 2023, and shall continue thereafter unless or until the agreement is terminated by either party as set forth herein.

E. This agreement shall be executed in duplicate, each of which shall be deemed to be complete of itself and may be introduced into evidence or used for any purpose without the production of the other copy.

IN WITNESS WHEREOF, THE PARTIES HERETO HAVE SET THEIR HANDS AND SEALS THIS_____DAY OF_____2023.

EMPLOYEE:

_____

John Smith

HALL COUNTY, GEORGIA:

_____

County Administrator

ATTEST:

_____

County Commission Clerk

_____

(Seal)

APPROVED AS TO FORM:

_____

County Attorney

DRAFT

_____Initials

EMPLOYMENT AGREEMENT

Assistant Chief Appraiser – Tax Assessors

HALL COUNTY BOARD OF TAX ASSESSORS:

_____

Assessor

_____

Assessor

_____

Assessor

_____

Assessor

_____

Assessor

DRAFT

_____Initials

AGENDA ITEM

Human Resources

REPORT TO: **Work Session (01/09/23)**

REPORT TO: **Voting Meeting (01/12/23)**

ITEM NO: 1/2023

SUBJECT: Approve the Employment Agreement for the County Administrator.

Meetings:

Work Session Date: 01/09/23 **Voting Meeting Date:** 01/12/23

Executive Summary:

Presenter: DLJ

Recommendation:
Department recommends approval of the Employment Agreement for the County Administrator.

Purpose of Request:
The purpose of this request is to seek approval of the Employment Agreement for County Administrator.

History:

Facts and Issues:

Options:

Funding Requested	$ 363,967.00
Are funds within current budget?	No
Source of Funds	General Fund
Does the action involve a Resolution, Ordinance, Contract, Agreement, etc.?	Yes
Has it been reviewed by the County Attorney?	Yes
Is there a deadline for this item?	

Approvals:

Submit	Approve	Budget	Finance
LJ	LJ	EW	WG

Attorney	Administration	Clerk
VS	CR	JR

Attachments:
Financial Supplement
Employment Agreement - County Administrator
Position Cost Worksheet - County Administrator

HALL COUNTY BOARD OF COMMISSIONERS
FINANCIAL SUPPLEMENT REPORT

AGENDA ITEM 1/2023

Funds Requested: $ 363,967.00

Request Budgeted: No

Proposed Source of Funding:

General Fund

Budget Transfer Requested:

No

Funding Source Items:

Fiscal Year	Fund	Division	Account	Amount
2023	001 - GENERAL	101 - ADMINISTRATION	4104 - SALARIES	$118,450.00
2023	001 - GENERAL	101 - ADMINISTRATION	4433 - CAR USE ALLOWANCE	$4,800.00
2023	001 - GENERAL	101 - ADMINISTRATION	4131 - RETIREMENT	$32,770.00
2023	001 - GENERAL	101 - ADMINISTRATION	4110 - F.I.C.A.	$9,429.00
2023	001 - GENERAL	101 - ADMINISTRATION	4121 - HEALTH INSURANCE	$14,608.00
2023	001 - GENERAL	101 - ADMINISTRATION	4123 - OTHER CNTY-PD INSURANCE	$783.50
2023	001 - GENERAL	101 - ADMINISTRATION	4122 - LIFE INSURANCE	$393.00
2023	001 - GENERAL	101 - ADMINISTRATION	4421A - CELL PHONE/DATA CHARGES	$750.00
2024	001 - GENERAL	101 - ADMINISTRATION	4104 - SALARIES	$118,450.00
2024	001 - GENERAL	101 - ADMINISTRATION	4433 - CAR USE ALLOWANCE	$4,800.00
2024	001 - GENERAL	101 - ADMINISTRATION	4131 - RETIREMENT	$32,770.00
2024	001 - GENERAL	101 - ADMINISTRATION	4110 - F.I.C.A.	$9,429.00
2024	001 - GENERAL	101 - ADMINISTRATION	4121 - HEALTH INSURANCE	$14,608.00
2024	001 - GENERAL	101 - ADMINISTRATION	4123 - OTHER CNTY-PD INSURANCE	$783.50
2024	001 - GENERAL	101 - ADMINISTRATION	4122 - LIFE INSURANCE	$393.00
2024	001 - GENERAL	101 - ADMINISTRATION	4421A - CELL PHONE/DATA CHARGES	$750.00

Budget Transfer Items:

Additional Information/Comments:

Contact for Questions:	VS	**Phone:**	770-535-8288

EMPLOYMENT AGREEMENT

County Administrator

THIS AGREEMENT made and entered into this 12th day of January 2023, by and between **HALL COUNTY, STATE OF GEORGIA,** hereinafter called "the County", as party of the first part, and **Zach Propes**, herein called "Employee", as part of the second part, both of whom agree as follows:

WITNESSETH

WHEREAS, the County desires to employ the services of said **Zach Propes** as the **County Administrator** of Hall County; and

WHEREAS, it is the desire of the governing board, hereafter called "Commission" to provide certain benefits, establish certain conditions of employment and to set working conditions of said Employee; and

WHEREAS, it is the desire of Hall County to secure and retain the services of said Employee and provide inducement for him or her to remain in such employment, and to make possible full work productivity by assuring said Employee's morale and peace of mind with respect to future security, and to provide a just means of terminating the Employee's services at such a time as desired by the Commission; and

WHEREAS, the Employee desires to accept employment as **County Administrator** for Hall County**;**

NOW THEREFORE; in consideration of the mutual covenants herein contained, the parties agree as follows:

SECTION 1. **Duties**

The County hereby agrees to employ **Zach Propes** as **County Administrator**, to perform legally permissible functions and duties specified and assigned by the Commission.

_____Initials

SECTION 2. **Term**

A. Nothing in this agreement shall prevent, limit or otherwise interfere with the right of the Commission to terminate the services of this Employee at any time, subject only to the provisions set forth in SECTION 3 of this agreement. The Employee understands that he or she serves at the pleasure of the Commission.

B. Nothing in the agreement shall prevent, limit or otherwise interfere with the right of the Employee to resign at any time from his or her position with the County, subject to the provisions set forth in SECTION 3, Paragraphs B and C of this agreement.

SECTION 3. **Termination and Severance Pay**

A. In the event the Employee is terminated pursuant to Paragraph B hereof and the Employee is willing and able to perform the duties of the position under this agreement, upon execution of a Separation Agreement and General Release, the Employer agrees to pay the Employee a lump sum cash payment equal to twelve (12) months aggregate annual salary, exclusive of other forms of compensation, less standard withholdings, in addition to the continuation of medical, dental and vision insurance benefits during the twelve (12) month period immediately following the date of termination. However, in the event the Employee is terminated because the Employee has been convicted of a misdemeanor or a felony, or if the County determines that the Employee has engaged in unprofessional and improper practice, other than negligence, and breach of public trust, including but not limited to illegal acts involving personal gain, or moral turpitude, the County shall be entitled to terminate the Employee immediately without any severance pay, or medical, dental and vision insurance continuation aside from COBRA.

B. In the event the Employer at any point during the term of this agreement reduces the salary or other financial benefits of the Employee in a greater percentage than reductions to all other employees of Employer, or if Employer refuses, following a written request to comply with any provision benefiting Employee herein; or the Employee resigns following a suggestion, whether formal or informal, by the Commission that he or she resign, then, in that event, Employee may, at his or her option, be deemed to be terminated at the date of such reduction or refusal to comply within the meaning and context of the herein severance pay provision.

_____Initials

C. In the event the Employee voluntarily resigns his or her position with the County as **County Administrator** then the Employee shall give the County **thirty (30)** days written notice in advance, unless the parties otherwise agree. The provision for severance pay and continuation of employment benefits detailed in SECTION 3, Paragraph A shall not apply to a voluntary resignation.

SECTION 4. Termination Due to Disability

If the Employee is unable to perform his or her duties because of sickness, accident, injury, or mental incapacity, and no reasonable accommodations are available, the County shall have the option to terminate employment, subject to the severance pay requirements of SECTION 3, Paragraph A. However, the Employee shall be compensated for any accrued benefits, in accordance with current policies.

SECTION 5. Salary

The County agrees to pay the Employee for his or her services rendered, pursuant hereto, an annual base salary of **$236,900.00,** payable in installments at the same time as other employees of the County are paid, except that the County may put in place cost reduction measures at any time and for any duration as required by a lack of financial resources. The base annual salary and benefits may be reviewed annually by the Commission and consideration for increases may be determined based upon the performance of the Employee or consideration of providing a Cost of Living Adjustment (COLA).

SECTION 6. Performance Evaluation

The Commission shall review and evaluate the performance of Employee at least annually on the anniversary day of this agreement. Said review and evaluation shall be in accordance with criteria developed by the Employer and Employee. Performance criteria may be added to or deleted from, as the Employer may from time to time determine. Further, the Chairman of the Commission shall provide the Employee with a written summary statement of the findings of the evaluation.

_____Initials

SECTION 7. Hours of Work

It is generally recognized that the position of **County Administrator** involves the devotion of a great deal of time beyond typically recognized business hours.

SECTION 8. Outside Activities

The Employee shall devote his or her full time to the position described in this agreement. With the approval of the Commission, the Employee may engage in teaching, consulting or other non-employer related activities as long as he or she does not interfere with the execution of the duties of this position, or present a conflict of interest. Such consent must be obtained by advance approval, in writing, detailing the specifics of such activity.

SECTION 9. Political Activity

If the Employee announces as a candidate for any elective office during the duration of this contract, he or she will resign from Hall County employment immediately upon declaring candidacy as defined by state law. During the term of this contract, the Employee may not:

A. Be involved in any political activity that would constitute a conflict of interest; including participation in any aspect of any local political campaign on behalf of one's self if intending to seek elected office, or other individual or in opposition to any candidate for office within Hall County; including municipal and/or county government office. This restriction includes but is not limited to displaying or distributing information, materials, or paraphernalia in support of any political candidate, party or organization.
B. Knowingly solicit, accept, or receive political contributions from any person, to be used in support of or in opposition to any political candidate for election within Hall County, including municipal and/or county government office.
C. Use, or promise to use, directly or indirectly, any official authority or influence, whether possessed or anticipated, to secure or attempt to secure for any person a job or other advantage for the purpose of influencing the vote or political action of any person.

_____Initials

SECTION 10. Vehicle and Phone

Employee's duties require the substantial use of their personal automobile during the term of employment. The County shall pay to the Employee in addition to salary a monthly vehicle allowance of $1,000.00. A cellular phone dedicated solely for business usage may be provided by the Employer. In such case, the Employer shall be responsible for paying for and maintaining regular monthly service. Should the Employee desire to use their personal cellular phone for business purposes, Employer shall reimburse the Employee the amount of $125 per month.

SECTION 11. Insurance Benefits

The County agrees to put in force and make premium payments for Medical, Dental, Vision, Short-Term Disability and Life Insurance policies on behalf of the Employee and if so elected, eligible dependents, at a level of coverage available to other County employees. The Employee may choose not to cover his/her dependents.

SECTION 12. Retirement Benefits

Provided that contributions are being made by the County, if the Employee elects, Hall County agrees to contribute 10% of annual compensation as defined by the retirement plan in addition to Employer matching contributions made on contributions by the Employee as received by other County employees, into a defined contribution plan, except that the County may reduce or suspend this contribution at any time and for any duration as required due to a lack of financial resources. The County shall pay a sum equal to one-hundred percent of the maximum allowed by law in a calendar year on behalf of the Employee into the Employee's Deferred Compensation Plan, payable in installments at the same time as other employees of the County are paid, except that the County may put in place cost reduction measures at any time and for any duration as required by a lack of financial resources. Retirement contributions shall not be made on any severance pay provided by the Employer, paid in accordance with Section 3.

SECTION 13. Paid Time Off (PTO) or Vacation and Sick Leave

As applicable, the County will provide for Paid Time Off (PTO) or vacation and sick leave in the same manner as the accruals currently received by other County employees. In the event that the County changes or adopts a new program for all employees, such changes shall

also apply to the **County Administrator**. Accrued PTO or accrued vacation leave, whichever is applicable, shall be paid to Employee upon termination of employment.

SECTION 14. Dues, Subscriptions and Professional Development

A. The County agrees to pay the Employee's annual membership dues, subscriptions and conference expenses incurred by the Employee in conjunction with the Employee's duties, not to exceed the budget.

B. The County agrees to pay the travel and subsistence expenses of the Employee for expenses related to maintenance of professional certifications, professional and official travel, meetings and occasions adequate to continue the professional development of the Employee and to adequately pursue necessary official and other functions, not to exceed the budget.

SECTION 15. Indemnification

The County shall defend, save harmless and indemnify the Employee against any claim or demand or legal action, whether groundless or otherwise, arising out of an alleged act or omission occurring in the performance of the Employee's duties as **County Administrator**. The County or its insurance carrier will pay the amount of any settlement or judgment agreed to or rendered against the Employee and the County may agree to such settlement or the payment of a judgment with or without the express consent of the Employee.

SECTION 16. General Provisions

A. The text herein shall constitute the entire agreement between the parties. Any amendment hereto shall be in writing and be executed by both parties.

B. This agreement shall be binding upon and inure to the benefit of the heirs at law and executors of the Employee.

C. If any provision, or any portion thereof, contained in this agreement is held unconstitutional, invalid or unenforceable, the remainder of this agreement, or portion thereof, shall be deemed severable, shall not be affected and shall remain in full force and effect.

_____Initials

D. This agreement will become effective on the 12th day of January 2023, and shall continue thereafter unless or until the agreement is terminated by either party as set forth herein.

E. This agreement may be executed in duplicate, each of which shall be deemed to be complete of itself and may be introduced into evidence or used for any purpose without the production of the other copy.

IN WITNESS WHEREOF, THE PARTIES HERETO HAVE SET THEIR HANDS AND SEALS THIS_____DAY OF_____2023.

HALL COUNTY, GEORGIA

_____

Chairman, Hall County Board of Commissioners

ATTEST:

_____

County Commission Clerk

(Seal)

_____

Employee

APPROVAL AS TO FORM

_____

County Attorney

_____Initials

HALL COUNTY
GEORGIA *We have it all in Hall*

REQUEST TYPE: FULL-TIME POSITION

101	Administration
Department #	**Department Name**
County Administrator	
Position Title	**Priority #**

ADDITIONAL PERSONNEL COST CALCULATION

New Position		Account	FY 2023	FY 2024	
$236,900.00	Salary	4104	$ 118,450.00	$ 118,450.00	
$9,600.00	Car Allowance	4433	4,800.00	$ 4,800.00	
$22,500.00	457 Contribution	4131	11,250.00	$ 11,250.00	32,770.00
18,858.00	Taxes	4110	9,429.00	$ 9,429.00	
43,040.00	Retirement	4131	21,520.00	$ 21,520.00	
28,300.00	Health	4121	14,150.00	$ 14,150.00	14,608.00
1,567.00	Dental & Vision	4123	783.50	$ 783.50	
615.00	Life	4122	307.50	$ 307.50	
171.00	AD&D	4122	85.50	$ 85.50	393.00
916.00	Short Term Disability	4121	458.00	$ 458.00	
$362,467.00	**Total Additional Personnel Costs**		$ 181,233.50	$ 181,233.50	

JUSTIFICATION (please provide a short explanation of your request on the lines below):

Please note taxes, retirement, and benefits are all estimates based on the maximum potential cost.

PERSONNEL EQUIPMENT REQUEST (list all equipment required and estimated cost)

**Do not add these estimated costs to your department's operating budget. It is calculated separately by OMB.

EQUIPMENT DESCRIPTION (uniform, gun, fire safety suit, vehicle, computer, cell phone etc.)	ESTIMATED COST		
Cell phone allowance - 4421A	$ 1,500.00	750.00	750.00
	$ -		
	$ -		

AGENDA ITEM

Planning and Development

REPORT TO: **Work Session (01/09/23)**

REPORT TO: **Voting Meeting (01/12/23)**

ITEM NO: 735/2022

SUBJECT: **Section 17.20.300 | Text Amendment, Official Code of Hall County, GA | Amend the Definition of Community Residence |** 17.20.300, ("pregnant or parenting youth who are displaced and /or in State custody.") by amending the definition of a Community Residence. The intent of the proposed change is to expand the type of care facility allowed as a Community Residence. | All Districts | **Crystal F. Toombs, applicant.**

Meetings:

Work Session Date: 01/09/23 **Voting Meeting Date:** 01/12/23

Executive Summary:

Presenter: RD

Recommendation:
Approval.

Purpose of Request:
Section 17.20.300 | Text Amendment, Official Code of Hall County, GA | Amend the Definition of Community Residence | 17.20.300, ("pregnant or parenting youth who are displaced and /or in State custody.") by amending the definition of a Community Residence. The intent of the proposed change is to expand the type of care facility allowed as a Community Residence. | All Districts | Crystal F. Toombs, applicant.

History:

Facts and Issues:

Options:

Funding Requested	$ 0.00
Are funds within current budget?	No
Source of Funds	
Does the action involve a Resolution, Ordinance, Contract, Agreement, etc.?	No
Has it been reviewed by the County Attorney?	Yes
Is there a deadline for this item?	

Approvals:

Submit	Approve	Budget	Finance
AD	RD	TS	WG

Attorney	Administration	Clerk
WLI	CR	JR

Attachments:

Board Memo
Recommendation Report
Application
Narrative
Environmental Health Comments
GDOT Comments
Public Works Comments
Resolution

HALL COUNTY
GEORGIA
We have it all in Hall

POST OFFICE DRAWER 1435
GAINESVILLE, GA 30503

t: 770.531.6809 | f: 770.531.3902

DIRECTOR
Randi Doveton

Hall County Government
PLANNING & DEVELOPMENT

To: Richard Higgins, Chairman
Kathy Cooper, District 1
Billy Powell, District 2
Gregg Poole, District 3
Jeff Stowe, District 4

From: Randi Doveton, Director

Date: December 13, 2022

Subject: **Section 17.20.300 | Text Amendment, Official Code of Hall County, GA | Amend the Definition of Community Residence |** 17.20.300, (**"**pregnant or parenting youth who are displaced and /or in State custody.") by amending the definition of a Community Residence. The intent of the proposed change is to expand the type of care facility allowed as a Community Residence. | **Crystal F. Toombs, applicant.**

The request before you is the application of Crystal F. Toombs for a text amendment to expand the type of care allowed as a Community Residence. **This item applies to all zoning districts and Commission districts.**

During the Planning Commission meeting the applicant clarified that "in State custody" **meant under the care of DFACS and not the juvenile justice system**. GA Code requires 2 public hearings held at least 6 months apart and not more than 9 for any transitional housing from the judicial system or drug and alcohol rehabilitation.

As defined by DHS, a maternity home is "any place in which any person, society, agency, corporation or facility receives, treats or cares for, within any six-month period, more than one (1) pregnant woman whose child is to be born out of wedlock, either before, during or within two (2) weeks after childbirth. For purposes of these rules, services provided include full-time residential care, support and supervision for more than one (1) pregnant youth through 21 years of age who is either admitted during pregnancy or within two (2) weeks after delivery and who is not related to the owner by blood or marriage. For purposes of these rules, a maternity home may only provide such services to youth admitted to the home for a maximum period of eight (8) weeks following delivery unless providing second chance home services."

At their December 5, 2022 meeting, the Hall County Planning Commission voted to recommend approval of the text amendment **(5-0).**

There were no written comments submitted in advance of the Planning Commission meeting and no one spoke during the public hearing.

There have been no changes to the request since the Planning Commission took action.

HALL COUNTY PLANNING COMMISSION
RECOMMENDATION REPORT

Applicant ..... Crystal F. Toombs

Request ..... Text Amendment

Proposed Use ..... Revise definition of Community Residence (17.20.300)

Zoning ..... Applicable in V-C, R-I,R-I-L,R-II,R-TF,R-MF, AR-III,AR-IV districts

Location ..... **Throughout Hall County**

Commission District ..... One, Two, Three, and Four

Planning Commission Date ..... December 05, 2022

Staff Recommendation ..... Approval to amend the code provided "state custody" does not mean the judicial system but the Department of Human Services custody

Planning Commission Recommendation……Approval
Vote: 5-0

Public Forum:

There were no comments in support or opposition.

Summary Analysis

The applicant is proposing to change the definition of *community residence* (17.20.300) to include pregnant or parenting youth. The applicant has expressed that there is a need for those youth in this situation; however, no statitics were provided.

Section 17.20.300 shall be amended to read as follows:

7.20.300. - Community residence.

"Community residence" means a single dwelling unit occupied on a relatively permanent basis in a family-like environment by a group of unrelated persons with disabilities, **or pregnant or parenting youth who are displaced and/or in State custody**, plus paid professional support staff provided by a sponsoring agency, either living with the residents on a 24-hour basis, or present whenever residents with disabilities are present at the dwelling; and which complies with the zoning regulations for the district in which the site is located. (See also the definitions of "care home," "disability," "dwelling unit," and "family.") "Family" means one or more persons permanently occupying a single dwelling unit, provided that unless all members are related by

blood or marriage no such family shall contain over five persons, but further provided that domestic servants employed on the premises may be housed on the premises or in an accessory building.

Text amendments are not specific to any one parcel but are applicable in all zoning districts where a community residence is allowed. Currently community residences are allowed in V-C, R-I,R-I-L,R-II,R-TF,R-MF, AR-III, and AR-IV districts.

When considering a text amendment, the Planning Commission must follow the same procedural guidelines as for a rezoning request (17.380.040), this includes public notice. The proposal was advertised in the Gainesville Times but since the proposal is not related to a specific parcel, no signs were posted.

The amendment proposal was submitted after the applicant inquired as to what districts allow "maternity homes". Hall County regulations did not include a definition for maternity home, the most closely related term in the regulations is "community residence".

As defined by DHS, a maternity home is "any place in which any person, society, agency, corporation or facility receives, treats or cares for, within any six-month period, more than one (1) pregnant woman whose child is to be born out of wedlock, either before, during or within two (2) weeks after childbirth. For purposes of these rules, services provided include full-time residential care, support and supervision for more than one (1) pregnant youth through 21 years of age who is either admitted during pregnancy or within two (2) weeks after delivery and who is not related to the owner by blood or marriage. For purposes of these rules, a maternity home may only provide such services to youth admitted to the home for a maximum period of eight (8) weeks following delivery unless providing second chance home services."

- **Excerpts from the minutes of the December 5, 2022 meeting**

Applicant's Presentation:

Randi Doveton, Planning Director, presented a summary of the request.

Crystal Toombs, 5721 Ridgewater Drive, Gainesville, presented the request. The applicant stated that she would like to be licensed to run a maternity care home for underage girls. She currently helps underage girls as a foster parent. Being a maternity care home would allow the applicant to run the home services without going through other agencies. The applicant stated they would only have 5-6 unrelated girls at a time.

Public Forum:

There were no comments in support or opposition.

Planning Commission Comments:

Mr. Braswell questioned if the type of use would need to be state licensed. The applicant stated that they will need licensing by the state to operate as well as go through other channels.

Motion: A motion to approve was made by Mr. Hunt and seconded by Mr. Varner. Vote: 5-0

PLANNING AND DEVELOPMENT DEPARTMENT
2875 BROWNS BRIDGE ROAD, GAINESVILLE, GA, 30504
MAILING ADDRESS: PO BOX 1435, GAINESVILLE. GA 30503
t: 770-531-6809 I f: 770-531-3902

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ZONING APPLICATION

Applicant (Name & Mailing Address)
Crystal F. Toombs
5721 Ridgewater Drive
Gainesville, GA 30506
Phone 404-414-2554
Email Address ctoombs@tvtsolutions.org

Property Owner (Name & Mailing Address)
Same
Phone
Email Address

Proposed Use Zoning Text Amendment for Community Residence Regulation: 17.20.300

Contact Person (Name & Mailing Address)
Same As Above
Phone
Email Address

Status of Applicant
- [x] Owner
- [ ] Option to Purchase
- [ ] Area Resident
- [ ] Other

Requested Action
Existing Zoning:
Rezone to:
Fee:$ 350
Receipt #:
Check #:

Tax Parcel Number 10011B000069 Acreage 0.66
Location Address 5721 Ridgewater Drive, Gainesville, GA 30506

I hereby certify that the above information and all attached information are true and correct.

Sign Crystal F. Toombs Date: 10/17/22

Applicant must complete all information above. Failure to complete this section will result in the refusal of the application. The Planning Department has 15 days to review all applications and will set the dates for each application. If the application is found insufficient, an agenda date will not be set until the required information is submitted. Please note that the Planning Commission and County Commission dates are tentative.

Application Withdrawal: I hereby **withdraw** the application.

Sign Date:

Staff Use Only

Application Date: Taken by:
Tentative Planning Commission Date: Tentative County Commission Date:
County Commission District:

PLANNING AND DEVELOPMENT DEPARTMENT
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CAMPAIGN CONTRIBUTIONS DISCLOSURE FORM

This form must be completed by the applicant and property owner, or person representing the property owner, for all zoning actions.

OCGA § 36-67A-3[C] Disclosure of campaign contributions:

(b) When any applicant for zoning action has made, within two years immediately preceding the filing of the applicant's application for the zoning action, campaign contributions aggregating $250.00 or more to a local government official who will consider the application, it shall be the duty of the applicant to file a disclosure report with the governing authority of the respective local government showing:

(3) The name and official position of the local government official to whom the campaign contribution was made; and

(4) The dollar amount and description of each campaign contribution made by the applicant to the local government official during the two years immediately preceding the filing of the application for the rezoning action and the date of each such contribution.

(b) The disclosures required by subsection (a) of this Code section shall be filed within ten days after the application for the zoning action is first filed. (Code 1981, Section OCGA § 36-67A-3[C], enacted by GA L. 1986, page 1269, Section 1, GA L. 1991, page 1365, Section 1).

I hereby certify that I have read the above and that:

I have**____ I have not X

within the two years immediately preceding this date, made any contribution(s) aggregating $250.00 or more to any local government official involved in the review or consideration of this application.

**If you have made such contributions, you must provide the data required below within ten (10) days of filing this application.

Name of Official(s): _____ Office: _____

Dollar Amount: _____ Date of Contribution: _____

Applicant's/Owner's Signature: Crystal Toombs **Date:** 10/17/22

Applicant's/Owner's Name (Printed): Crystal Toombs

PLANNING AND DEVELOPMENT DEPARTMENT
2875 BROWNS BRIDGE ROAD, GAINESVILLE, GA, 30504
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I have**____ I have not X

within the two years immediately preceding this date, made any contribution(s) aggregating $250.00 or more to any local government official involved in the review or consideration of this application.

**If you have made such contributions, you must provide the data required below within ten (10) days of filing this application.

Name of Official(s): _____ Office: _____

Dollar Amount: _____ Date of Contribution: _____

Applicant's/Owner's Signature: Crystal Toombs **Date:** 10/17/22

Applicant's/Owner's Name (Printed): Crystal Toombs

Proposed Zoning Text Amendment

Date: 10-17-2022
Address: 5721 Ridgewater Drive, Gainesville, GA 30506
Subdivision: Ridgewater on Lanier

Current Regulation

17.20.300. - Community residence.
"Community residence" means a single dwelling unit occupied on a relatively permanent basis in a family-like environment by a group of unrelated persons with disabilities plus paid professional support staff provided by a sponsoring agency, either living with the residents on a 24-hour basis, or present whenever residents with disabilities are present at the dwelling; and which complies with the zoning regulations for the district in which the site is located. (See also the definitions of "care home," "disability," "dwelling unit," and "family.")

(Res. of 1-27-92; Code 1991, § 17.20.215; Res. of 2-27-03(1), § 1)

Proposed Amended Text (in bold)

17.20.300. - Community residence.
"Community residence" means a single dwelling unit occupied on a relatively permanent basis in a family-like environment by a group of unrelated persons with disabilities **[or pregnant or parenting youth who are displaced and/or in State custody]** plus paid professional support staff provided by a sponsoring agency, either living with the residents on a 24-hour basis, or present whenever residents with disabilities are present at the dwelling; and which complies with the zoning regulations for the district in which the site is located. (See also the definitions of "care home," "disability," "dwelling unit," and "family.") "Family" means one or more persons permanently occupying a single dwelling unit, provided that unless all members are related by blood or marriage no such family shall contain over five persons, but further provided that domestic servants employed on the premises may be housed on the premises or in an accessory building.

Proposed Zoning Text Amendment

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Anael Dominguez (Planning)

From: Emily McGahee (Environmental Health)
Sent: Monday, November 14, 2022 12:09 PM
To: Anael Dominguez (Planning); Randi Doveton (Planning)
Cc: Chad Harper (Environmental Health); Kelly Hairston (Environmental Health)
Subject: HCPC Tentative Agenda 12.5.22

Please find Environmental Health comments below:

Items 1 & 2, 4745 Cagle Mill Rd, Boling: Public sewer. Any abandoned well shall be properly closed as per Water Well Standards Act. Any abandoned septic tank shall be pumped by a State certified pumper/hauler and crushed/filled.

Item 3, 2124 Imperial Drive, Maynard: An existing system evaluation will be required.

Item 4, 3252/3264 Poplar Springs Road, Lykins: This plat is currently under review by the Hall County Plat Review Team and Environmental Health can approve the subdivision plat as the lots are considered lots of record.

Item 5, 5625/5633 Bogus Road, Mejia: This plat is currently under review by the Hall County Plat Review Team and Environmental Health can approve the subdivision plat.

Items 6 & 7, 5871 McEver Road, Anchor Inn: Must meet all Environmental Health commercial septic system permitting requirements if plumbing proposed and public sewer not available. A detailed business plan must be submitted to Hall County Environmental Health for review.

Item 8, 6541 Henry Smith, Crawford: Environmental Health issued a septic permit (OSC 7294) for storage building/barn (sink/toilet) in May 2022. The system has not been installed as of this date.

Item 9, Text Amendment: No comment

Emily McGahee
Hall County Environmental Health
Hall County Government Center
2875 Browns Bridge Road
Mailing: PO Box 5901
Gainesville, GA 30504
(770) 531-3973
(770) 531-6767 (fax)

http://dph.georgia.gov/environmental-health (State Website)
http://www.phdistrict2.org/HallCounty.htm (District Website)
http://www.hallcounty.org/devserv/environmental.asp (County Website & Forms)

Anael Dominguez (Planning)

From: Niebauer, Parker J <PNiebauer@dot.ga.gov>
Sent: Thursday, November 17, 2022 2:20 PM
To: Anael Dominguez (Planning); Randi Doveton (Planning)
Cc: Chavers, Veronica E; Peevy, Jonathan
Subject: RE: Tentative Planning Agenda for December 5, 2022

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Please see our comments in red below

#4 (Lynkin) – is the proposal just to move the property line? If so, disregard comment below about GDOT coordination being required.

Thank you,

Parker Niebauer
D1TO Traffic Operations Supervisor

GDOT Georgia Department of Transportation

District 1 Division of Field Services
1475 Jesse Jewell Pkwy
Suite 100
Gainesville, GA, 30501
770.533.8275 office
770.519.3223 cell

From: Anael Dominguez (Planning) <adominguez@hallcounty.org>
Sent: Friday, November 11, 2022 11:14 AM
To: Becky Ruffner (Parks & Leisure) <bruffner@hallcounty.org>; Bill Nash (Public Works) <bnash@hallcounty.org>; Bill Schmid <weschmid@rochester-assoc.com>; Brandi Smith (Business License) <bsmith@hallcounty.org>; Bryan Cash (Fire Services) <bcash@hallcounty.org>; Chad Harper (Environmental Health) <charper@hallcounty.org>; Chris Braswell (Planning) <cbraswell@hallcounty.org>; Christopher Armstrong (Fire Services) <carmstrong@hallcounty.org>; Dan Barnes <Daniel.C.Barnes@usace.army.mi>; Ellis Still (Planning) <estill@hallcounty.org>; Emily McGahee (Environmental Health) <emcgahee@hallcounty.org>; Frank Miller (Engineering) <fmiller@hallcounty.org>; Dykes, Jason <jdykes@dot.ga.gov>; Jason Skarda (Engineering) <jskarda@hallcounty.org>; Jeremy Wills <jeremy.wills@gainesville.org>; John Hornick (Fire Services) <jhornick@hallcounty.org>; Peevy, Jonathan <jpeevy@dot.ga.gov>; Kelly Hairston (Environmental Health) <khairston@hallcounty.org>; Matt Cox <matt.cox@hallco.org>; Michael Vieira (Fire Services) <mvieira@hallcounty.org>; Nicole Griffin (Tax Assessors) <nicole.griffin@hallcounty.org>; nswafford (nswafford@gainesvillega.org) <nswafford@gainesvillega.org>; Pam Cravero <Pam.Cravero@hallco.org>; Niebauer, Parker J <PNiebauer@dot.ga.gov>; Randi Doveton (Planning) <rdoveton@hallcounty.org>; rich <rich@flowerybranchga.org>; Scott Puckett <spuckett@hallcounty.org>; Srikanth Yamala (Public Works) <syamala@hallcounty.org>; Stephen Cain <troy.s.cain@usace.army.mil>; Steve Watson (Real Property) <rswatson@hallcounty.org>; Tammie Croy (Engineering) <tcroy@hallcounty.org>; Tracy Gilreath (Tax Assessors) <tgilreath@hallcounty.org>; Wanda Moreno (Engineering) <wmoreno@hallcounty.org>; Wanda Sutton

(Engineering) <wsutton@hallcounty.org>; will schofield <will.schofield@hallco.org>
Subject: Tentative Planning Agenda for December 5, 2022

Good afternoon –

Here is the Tentative Agenda and Maps for the **Monday, December 5, 2022** Hall County Planning Commission Meeting.

Please use the links to review the documents and respond with comments to Hall County Planning and Development. Failure to provide comments in a timely manner may result in the information not being included in the staff report.

When submitting comments, please include the name of the applicant along with the address of the property with the corresponding comment.

Comments are due by **Friday, November 18th**. Email comments to Randi (rdoveton@hallcounty.org) and Ana (adominguez@hallcounty.org).

CALL TO ORDER

AGENDA REVIEW

APPROVAL OF MINUTES - November 21, 2022

OLD BUSINESS

1. **4745 Cagle Mill Road | Rezone |** from Agricultural Residential-III (AR-III) and Agricultural Residential-IV (AR-IV) to Planned Residential Development (PRD) on a 69.50± acre tract located on the west side of Cagle Mill Road approximately 429 feet from Noah Martin Drive | Zoned AR-III & AR-IV; Tax Parcel 15007 000254 (pt.) | **Proposed use: single family, townhome, & cluster home development, 225 residential units** | ** Commission District 3 | **Josh Boling, applicant.**

2. **4745 Cagle Mill Road | Rezone |** from Agricultural Residential-III (AR-III) to Light Industrial (I-I) on a 5.30± acre tract located on the east side of Cornelia Highway approximately 4,970 feet from Cagle Road | Zoned AR-III; Tax Parcel 15007 000254 (pt.) | **Proposed use: 2 commercial outparcels** | ** Commission District 3 | **Josh Boling, applicant.**

NEW BUSINESS

3. **2124 Imperial Drive | Variance |** for a left side yard setback variance from 10 feet to 3 feet on a .93± acre tract located on the east side of Imperial Drive approximately 72 feet from its intersection with Elysian Circle | Zoned R-I ; Tax Parcel 00094 000006H **| Proposed use: above ground pool |** * Commission District 4 **| Jeff Maynard & Vanessa Schaeffer , applicant.**
   None

4. **3264 & 3252 Poplar Springs Road | Variance |** for a road frontage variance from 150 to 109 feet on a 1.91± acre tract located on the south side of Poplar Springs Road approximately 736 feet from its intersection with Hawthorne Drive | Zoned R-I & AR-III; Tax Parcel 15036C000008 (pt.) & 000009A | **Proposed use: reconfiguration plat** | * Commission District 1 | **Brian Lykins, applicant.**
   GDOT coordination required.

5. **5625 & 5633 Bogus Road | Variance |** for a variance on road frontages and required lot widths from 150 feet to 80 feet for two proposed lots on a 3± acre tract located on the east side of Bogus Road approximately 1,345 feet from its intersection with Wellspring Trail | Zoned AR-IV ; Tax Parcel 12050 000042 & 000043 **| Proposed use: 2-lot subdivision |** * Commission District 3 | **Francisco Mejia, applicant.**
   None

6. **5871 McEver Road | Rezone |** from Agricultural-Residential-III (AR-III) to Highway-Business (H-B) on a 9.06± acre tract located on the east side of McEver Road at its intersection with Silverthorn Drive | Zoned AR-III; Tax

Parcel 08119 000233 | **Proposed use: RV & boat storage |** ** Commission District 2 | **Anchor Inn RV & Boat Storage, applicant.**
None

7. **5871 McEver Road | Use Subject to County Commission Approval |** on a 9.06± acre tract located on the east side of McEver Road at its intersection with Silverthorn Drive | Zoned AR-III; Tax Parcel 08119 000233 | **Proposed use: RV & boat storage |** ** Commission District 2 | **Anchor Inn RV & Boat Storage, applicant.**
None

8. **6541 Henry Smith Road | Appeal an Administrative Decision |** for a Use Subject to Planning Commission approval on a 5.65± acre tract located on the west side of Henry Smith Road at its intersection with Edwards Road | Zoned AR-IV; Tax Parcel 11023 000024 |**Proposed use: rural business |** * Commission District 3 | **Tyler Crawford, applicant.**
None

9. **Section 17.20.300 | Text Amendment, Official Code of Hall County, GA | Amend the Definition of Community Residence |** 17.20.300, ("pregnant or parenting youth who are displaced and /or in State custody.") by amending the definition of a Community Residence. The intent of the proposed change is to expand the type of care facility allowed as a Community Residence. | ** All Districts | **Crystal F. Toombs, applicant.**
None

*The Planning Commission's decision will be the final action taken unless appealed to the Board of Commissioners. To do so, file an application with the Planning Department within five working days of the Planning Commission's decision.

The Hall County Board of Commissioners will hear appeals at a public hearing Thursday, January 12, 2023 at 6:00 p.m. at the Hall County Government Center, 2nd Floor Meeting Room, 2875 Browns Bridge Road, Gainesville, Georgia.

**The Planning Commission's recommendation will be forwarded to the Board of Commissioners for final action at a public hearing on Thursday, January 12, 2023. The Board will meet at 6:00 p.m. at the Hall County Government Center, 2nd Floor Meeting Room, 2875 Browns Bridge Road, Gainesville, Georgia.

Thank you,
Ana Dominguez
Planning Commission Clerk
Hall County Government
2875 Browns Bridge Road, Gainesville, GA 30504
www.hallcounty.org | 770-531-6810

HALL COUNTY
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Georgia is a state of natural beauty. And it's a state that spends millions each year cleaning up litter that not only mars that beauty, but also affects road safety, the environment and the economy. Do your part – don't litter. How can you play an active role in protecting the splendor of the Peach State? Find out at http://keepgaclean.com/.

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POST OFFICE DRAWER 1435
GAINESVILLE, GA 30503

t: 770.531.6800 | f: 770.531.3945

SRIKANTH YAMALA
Director

BILL NASH, P.E.
Assistant Director

FRANKLIN P. MILLER, P.E.
County Engineer

Hall County Government

PUBLIC WORKS AND UTILITIES
ENGINEERING DIVISION

M E M O R A N D U M

To: Randi Doveton, Director of Planning and Development

From: Srikanth Yamala, Director of Public Works and Utilities

Date: November 17, 2022

Subject: December 5, 2022 - Hall County Planning Commission Agenda

Please be advised that our office has reviewed the Hall County Planning Commission agenda for the December 5, 2022 meeting. Upon review, we provide the following comments.

OLD BUSINESS

1. **4745 Cagle Mill Road | Rezone |** from Agricultural Residential-III (AR-III) and Agricultural Residential-IV (AR-IV) to Planned Residential Development (PRD) on a 69.50± acre tract located on the west side of Cagle Mill Road approximately 429 feet from Noah Martin Drive | Zoned AR-III & AR-IV; Tax Parcel 15007 000254 (pt.) **| Proposed use: single family, townhome, & cluster home development, 225 residential units |** ** Commission District 3 | **Josh Boling, applicant.**

   a) **Engineering:** The site may require a stormwater management report should the site plan indicate the proposed development meets stormwater threshold for impervious surfaces and/or disturbed acreage
   Show FEMA and Hall County studied flood plain
   Part of North Oconee Water Protection District.
   Hall County will not maintain a bridge over river.
   b) **Traffic:** 1. Access onto Cornelia Hwy (SR365) must be approved and permitted by GDOT.
   2. Internal roadways are proposed to be private; however, they still need to meet Hall County Code Title 16 (subdivision regulations). Any proposed variances to Title 16 must be specific, justified and approved through the rezoning process. In addition, there is a proposed bridge shown near the Cornelia Hwy (SR365) entrance and it should be noted that Hall County does not accept bridges into County maintenance. A cul-de sac will be required at the end of the proposed County maintained section. Current site plan does not meet Hall County requirements.
   3. Recommend that the gravel section of Cagle Mill Road from existing end of pavement to White Hall Road (approximately 1,400 feet) be improved and paved to Hall County standards to provide safe and efficient access to and from the site via Old Cornelia Highway/White Hall Road.
   4. Recommend that all necessary improvements be the financial responsibility of the developer and constructed concurrently with the development.
   c) **Utilities:** Hall County Sewer district.
   Sewer lift station @ 365.

HALL COUNTY
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SRIKANTH YAMALA
Director

BILL NASH, P.E.
Assistant Director

FRANKLIN P. MILLER, P.E.
County Engineer

Hall County Government

PUBLIC WORKS AND UTILITIES
ENGINEERING DIVISION

2. **4745 Cagle Mill Road | Rezone |** from Agricultural Residential-III (AR-III) to Light Industrial (I-I) on a 5.30± acre tract located on the east side of Cornelia Highway approximately 4,970 feet from Cagle Road | Zoned AR-III; Tax Parcel 15007 000254 (pt.) | **Proposed use: 2 commercial outparcels** | ** Commission District 3 | **Josh Boling, applicant.**

   a) **Engineering:** The site may require a stormwater management report should the site plan indicate the proposed development meets stormwater threshold for impervious surfaces and/or disturbed acreage.
   Show FEMA and Hall County studied flood plain.
   Part of North Oconee Water Protection District.
   Show buffer and impervious setback from wrested vegetation, not centerline of creek. (150')
   Hall County will not maintain bridge over river.
   b) **Traffic:** 1. Access onto Cornelia Hwy (SR365) must be approved and permitted by GDOT.
   2. Roadway will need to meet Hall County industrial standards.
   3. There is a proposed bridge shown near the Cornelia Hwy (SR365) entrance and it should be noted that Hall County does not accept bridges into County maintenance. A cul-de sac will be required at the end of the proposed County maintained section.
   4. Recommend that all necessary improvements be the financial responsibility of the developer and constructed concurrently with the development.
   c) **Utilities:** Sewer at 365, need sewer availability letter flows?

NEW BUSINESS

3. **2124 Imperial Drive | Variance |** for a left side yard setback variance from 10 feet to 3 feet on a .93± acre tract located on the east side of Imperial Drive approximately 72 feet from its intersection with Elysian Circle | Zoned R-I ; Tax Parcel 00094 000006H **| Proposed use: above ground pool |** * Commission District 4 **| Jeff Maynard & Vanessa Schaeffer , applicant.**

   a) **Engineering:** No Comments
   b) **Traffic**: No Comments
   c) **Utilities**: No Comments

4. **3264 & 3252 Poplar Springs Road | Variance |** for a road frontage variance from 150 to 109 feet on a 1.91± acre tract located on the south side of Poplar Springs Road approximately 736 feet from its intersection with Hawthorne Drive | Zoned R-I & AR-III; Tax Parcel 15036C000008 (pt.) & 000009A | **Proposed use: reconfiguration plat** | * Commission District 1 | **Brian Lykins, applicant.**

   a) **Engineering:** No Comments
   b) **Traffic:** Need authorization from the GDOT for new or modifications to existing driveways.
   c) Utilities: City of Oakwood Sewer District

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GAINESVILLE, GA 30503

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SRIKANTH YAMALA
Director

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Hall County Government

PUBLIC WORKS AND UTILITIES
ENGINEERING DIVISION

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a) **Engineering:** No Comments
b) **Traffic:** No Comments
c) **Utilities:** No Comments

6. **5871 McEver Road | Rezone |** from Agricultural-Residential-III (AR-III) to Highway-Business (H-B) on a 9.06± acre tract located on the east side of McEver Road at its intersection with Silverthorn Drive | Zoned AR-III; Tax Parcel 08119 000233 **| Proposed use: RV & boat storage |** ** Commission District 2 | **Anchor Inn RV & Boat Storage, applicant.**

a) **Engineering:** This site may require a stormwater management report should the site plan indicate the proposed development meets stormwater thresholds for impervious surfaces and/or disturbed acreage. Stream and impervious setback from wrested vegetation not centerline of stream.
b) **Traffic:** Adequate connection to roadway is not clear. Traffic study will be required that documents/impacts to the McEver Road/Lights Ferry intersection. Improvements that remediate impacts to intersection will be required.
c) **Utilities:** Flowery Branch Sewer District

7. **5871 McEver Road | Use Subject to County Commission Approval |** on a 9.06± acre tract located on the east side of McEver Road at its intersection with Silverthorn Drive | Zoned AR-III; Tax Parcel 08119 000233 **| Proposed use: RV & boat storage |** ** Commission District 2 **| Anchor Inn RV & Boat Storage, applicant.**

a) **Engineering:** This site may require a stormwater management report should the site plan indicate the proposed development meets stormwater thresholds for impervious surfaces and/or disturbed acreage.
b) **Traffic:** Adequate connection to roadway is not clear. Traffic study will be required that documents/impacts to the McEver Road/Lights Ferry intersection. Improvements that remediate impacts to intersection will be required.
c) **Utilities:** No Comments

8. **6541 Henry Smith Road | Appeal an Administrative Decision |** for a Use Subject to Planning Commission approval on a 5.65± acre tract located on the west side of Henry Smith Road at its intersection with Edwards Road | Zoned AR-IV; Tax Parcel 11023 000024 **|Proposed use: rural business |** * Commission District 3 | **Tyler Crawford, applicant.**

HALL COUNTY
GEORGIA

POST OFFICE DRAWER 1435
GAINESVILLE, GA 30503

t: 770.531.6800 | f: 770.531.3945

SRIKANTH YAMALA
Director

BILL NASH, P.E.
Assistant Director

FRANKLIN P. MILLER, P.E.
County Engineer

Hall County Government

PUBLIC WORKS AND UTILITIES
ENGINEERING DIVISION

a) **Engineering:** This site may require a stormwater management report should the site plan indicate the proposed development meets stormwater thresholds for impervious surfaces and/or disturbed acreage.
b) **Traffic:** No Comments
c) **Utilities:** No Comments

9. **Section 17.20.300 | Text Amendment, Official Code of Hall County, GA | Amend the Definition of Community Residence** | 17.20.300, ("pregnant or parenting youth who are displaced and /or in State custody.") by amending the definition of a Community Residence. The intent of the proposed change is to expand the type of care facility allowed as a Community Residence. | ** All Districts | **Crystal F. Toombs, applicant.**

a) **Engineering:** No Comments
b) **Traffic:** No Comments
c) **Utilities:** No Comments

STATE OF GEORGIA

COUNTY OF HALL

A RESOLUTION TO AMEND THE CODE OF ORDINANCES OF HALL COUNTY WITH REGARD TO ZONING REGULATIONS

WHEREAS, Hall County has developed comprehensive regulations governing zoning and development in the County found in Title 17 of the Official Code of Hall County, Georgia; and

WHEREAS, the County's Board of Commissioners wishes to alter the current definition of "Community Residence"; and

WHEREAS, the County's Board of Commissioners wishes to add the language "**or pregnant or parenting youth who are displaced and/or in DFACS custody**"; and

WHEREAS, the County's Board of Commissioners believes that these changes to its zoning and development regulations as described herein are in the best interests of residents and businesses of Hall County, Georgia, and would promote the public health, safety, and general welfare of such residents and businesses.

NOW, THEREFORE, the Board of Commissioners does hereby amend the official Code of Hall County, Georgia as follows:

1.

Section 17.20.300 (Community Residence) is hereby amended by deleting the definition of Community Residence and by inserting in its place the following:

""Community residence" means a single dwelling unit occupied on a relatively permanent basis in a family-like environment by a group of unrelated persons with disabilities or pregnant or parenting youth who are displaced and/or in DFACS custody plus paid professional support staff provided by a sponsoring agency, either living with the residents on a 24-hour basis, or present

whenever residents with disabilities are present at the dwelling; and which complies with the zoning regulations for the district in which the site is located. (See also the definitions of "care home," "disability," "dwelling unit," and "family.") "Family" means one or more persons permanently occupying a single dwelling unit, provided that unless all members are related by blood or marriage no such family shall contain over five persons, but further provided that domestic servants employed on the premises may be housed on the premises or in an accessory building."

2.

The remaining provisions of Title 17 (Zoning Regulations) of the Hall County Code of Ordinances shall remain as they were, unchanged by this amendment.

SO RESOLVED, this the _____ day of _____, 2023.

HALL COUNTY BOARD OF COMMISSIONERS

By: _____
Richard Higgins, Chairman

ATTEST:

_____ (SEAL)
Jennifer Rivera, County Clerk

APPROVED AS TO FORM:

_____
County Attorney

AGENDA ITEM

Planning and Development

REPORT TO: **Work Session (01/09/23)**

REPORT TO: **Voting Meeting (01/12/23)**

ITEM NO: 728/2022

SUBJECT: **4336 Cornelia Highway | Variance** | for a sign variance on sign design and dimensions with an Amendment to Planned Commercial Development conditions on a 14.09± acre tract located on the south side of Cornelia Highway approximately 1,497 feet from its intersection with Lula Road | Zoned PCD; Tax Parcel 09085 000008 | **Proposed use: new monument sign** | Commission District 3 | **Sophie Le Tily (Big Mouth Signs), applicant.**

Meetings:

Work Session Date: 01/09/23 **Voting Meeting Date:** 01/12/23

Executive Summary:

Presenter: RD

Recommendation:
Approval, with conditions: 1. The proposed sign shall be approved as presented in the sign rendering submitted with this application and dated 8.19.2022. The sign shall not exceed 13 feet in height, nor shall it exceed 11.25 feet in width. 2. Internal illumination is permitted but there shall be no electronic message board permitted as a component of the sign. 3. There shall be approval from GDOT for the sign's location prior to issuance of the Building Permit.

Purpose of Request:
4336 Cornelia Highway | Variance | for a sign variance on sign design and dimensions with an Amendment to Planned Commercial Development conditions on a 14.09± acre tract located on the south side of Cornelia Highway approximately 1,497 feet from its intersection with Lula Road | Zoned PCD; Tax Parcel 09085 000008 | Proposed use: new monument sign | Commission District 3 | Sophie Le Tily (Big Mouth Signs), applicant.

History:

Facts and Issues:

Options:

Funding Requested $ 0.00

Are funds within current budget? No

Source of Funds

Does the action involve a Resolution, Ordinance, Contract, Agreement, etc.?	No
Has it been reviewed by the County Attorney?	Yes
Is there a deadline for this item?	

Approvals:

Submit	Approve	Budget	Finance
AD	RD	TS	WG

Attorney	Administration	Clerk
WLI	CR	JR

Attachments:

Board Memo
Recommendation Report
Application
Site Plan
Maps
Renderings
Environmental Health Comments
GDOT Comments
Public Works Comments
Fire Comments
Notice Sign Photos

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GAINESVILLE, GA 30503

t: 770.531.6809 | f: 770.531.3902

DIRECTOR
Randi Doveton

Hall County Government
PLANNING & DEVELOPMENT

To: Richard Higgins, Chairman
Kathy Cooper, District 1
Billy Powell, District 2
Gregg Poole, District 3
Jeff Stowe, District 4

From: Randi Doveton, Director

Date: December 5, 2022

Subject: **4336 Cornelia Highway | Variance |** for a sign variance on sign design and dimensions with an Amended to Planned Commercial Development conditions to allow a new monument sign | **Sophie Le Tily (Big Mouth Signs), applicant.**

The request before you is the request of Sophie Le Tily (Big Mouth Signs) to allow a new monument sign and amend the Planned Commercial Development Conditions on a 14.09± acre tract. This item is located within Commission District 3.

At their November 21, 2022 meeting, the Hall County Planning Commission voted to recommend approval of this request with three (3) conditions **(4-0, Pilcher Absent).**

There were no written comments submitted in advance of the Planning Commission meeting and no one spoke during the public hearing.

There have been no changes to the request since the Planning Commission took action.

Planning Commission Approval Conditions:

1. The proposed sign shall be approved as presented in the sign rendering submitted with this application and dated 8.19.2022. The sign shall not exceed 13 feet in height, nor shall it exceed 11.25 feet in width.
2. Internal illumination is permitted but there shall be no electronic message board permitted as a component of the sign.
3. There shall be approval from GDOT for the sign's location prior to issuance of the Building Permit.

HALL COUNTY PLANNING COMMISSION
RECOMMENDATION REPORT

Applicant ..... Sophie Le Tily (Big Mouth Signs)

Request ..... Variance in height and Amending PCD conditions

Proposed Use ..... New monument sign

Size ..... 14.09± acres

Zoning ..... PCD

Location ..... **4336 Cornelia Highway** | Tax Parcel 09085 000008

Commission District ..... Three

Planning Commission Date ..... November 21, 2022

Staff Recommendation ..... **Approval, based on the existing site conditions and other signage along Cornelia Highway**

Planning Commission Recommendation.....**Approval, with conditions**

Vote: 4-0 (Pilcher Absent)

1. The proposed sign shall be approved as presented in the sign rendering submitted with this application and dated 8.19.2022. The sign shall not exceed 13 feet in height, nor shall it exceed 11.25 feet in width.
2. Internal illumination is permitted but there shall be no electronic message board permitted as a component of the sign.
3. There shall be approval from GDOT for the sign's location prior to issuance of the Building Permit.

Public Forum:

There were no comments in support or opposition.

Summary Analysis

The applicant is requesting to amend the conditions of an existing Planned Commercial Development (PCD, 17.180.080) to construct an internally illuminated sign on the property. The proposed sign will replace an existing non-conforming sign on the property.

Within the Gateway Corridors Overlay District (GCOD, 17.420) internally illuminated signs are prohibited, unless approved as part of a planned development. The applicant is requesting to amend the previously approved conditions of the planned development to permit an internally illuminated sign.

The proposed sign monument sign is located 15 feet from the front property line, to the north side of where the driveway connects to Cornelia Highway. The sign is proposed to be 15 feet in height and includes areas for signs to be installed, one identifying the business and two representing brands sold on premises. The business sign is proposed to be 60 square feet in area (6' x 10') and the two brand signs are approximately a combined 25 square feet in area (2.5' x 10').

- Within the Gateway Corridors Overlay District (GCOD, 17.420) one ground mounted monument sign with a maximum sign area of 48 square feet and a maximum height of 8 feet above grade is permitted for parcels containing 10,001 – 50,000 square feet of building area, (17.420.060).
    - The proposed sign is 12.666 feet / 152.8 inches in height.
    - The applicant's statement of hardship states that the wide right of way and drive speeds along Cornelia Highway necessitate the need for an increase in the height of the

One **variance** related to sign height will be required if the sign renderings, as presented, are approved:

Maximum Height Allowed. = 8FT
Maximum Height Proposed = 13FT
Variance Req'd. = 5FT

Based on the existing site conditions and other signage along Cornelia Highway, staff finds the proposed increase in sign height and internally illuminated signage consistent with the development pattern of that area.

Zoning Analysis

The proposed signage is consistent with other signage along Cornelia Highway due to site conditions, right-of-way width, and travel speed.

The Planning Commission is hereby authorized to grant variances from the strict application of this Resolution upon proof by a preponderance of the evidence that 2.60.030.J provided the request meets the criteria set forth in 2.60.030.K.

1. There are extraordinary and exceptional conditions pertaining to the particular lot in question because of its size, shape or topography (the hardship must relate to the physical character of the lot and not to a personal or economic hardship); **The property is located on a divided state highway. The parcel's front property line is approximately 132FT from the edge of pavement of the northbound right turn lane. The proposed sign is an additional 15FT from the front property line, in order to meet the required setback.**

2. The application of the requirements of this Title 17 to this particular piece of property would create an unusual hardship; **An 8FT non-illuminated sign would not be an effective business identification given the distance from the lanes of travel; a smaller sign could possibly impede safe travel along Cornelia Hwy/Hwy 365 since it would be harder for drivers to read.**

3. Such conditions are peculiar to the particular piece of property involved and are not common to other properties in the neighborhood; and **The condition is common to other properties in the area. Although the conditions are not unique to this parcel, the request is consistent with other signs in the area.**

4. Such conditions are not the result of any actions of the property owner; **The owners have not created the parcel conditions that place their property line so far from the edge of pavement. The existing sign is larger than the proposed sign but must be removed because it is located within an easement.**

5. Relief, if granted, would not cause substantial detriment to the public good or impair the purposes and intent of Title 17; provided, however, that no variance may be granted for a use of land or building or structure that is prohibited by Title 17 or for a conditional use which has been denied by the county planning commission. **Granting relief should not cause any detriment to the public good or impair the intent and purposes of** Title 17.

Per Planning Commission and Hall County Commission consideration and decision (17.380.060), the planning commission shall study the need and justification for the change based on a determination of the facts applicable to the particular case, and the following general lines of inquiry shall be considered, to wit:

1. Whether the zoning proposal will permit a use that is suitable in view of the use, development and zoning of adjacent and nearby property; **The proposed signage is consistent with other signage along Cornelia Highway due to site conditions, right-of-way width, and travel speed and thus is suitable in view of the use, development and zoning of adjacent and nearby property.**

2. Whether the zoning proposal will adversely affect the existing use or usability of adjacent or nearby property; **The proposed signage should not adversely affect the existing use or usability of adjacent or nearby property.**

3. Whether the property to be affected by the zoning proposal has a reasonable economic use as currently zoned; **The property is zoned Planned Commercial Development (PCD, 17.180.080) and as such has reasonable economic use as currently zoned. A sign that meets the requirements of the Zoning Regulations (Title 17) could be permitted without amending the zoning approval. The current request is to amend the PCD zoning conditions to allow an internally lighted monument.**

4. Whether the zoning proposal will result in a use which will or could cause an excessive or burdensome use of existing streets, transportation facilities, utilities, schools, police protection, fire protection, public health facilities or emergency medical service; **The proposed sign should have no impact on of existing streets, transportation facilities, or utilities.**

5. Whether the zoning proposal is in conformity with the policy and intent of the future land use plan for the physical development of the area; **The proposed sign does not comply with the regulations of the Zoning Regulations (Title 17). Signage is not explicitly discussed in the Comprehensive Plan.**

6. The extent to which property values are diminished by the existing zoning restrictions; **Multiple factors impact property value including construction types, proposed uses, and maintenance. Often it is difficult to determine the effect of a development on adjacent properties until the development is complete.**

7. The extent to which the destruction of the subject property's value under the existing zoning promotes the health, safety, morals or general welfare of the public; **Staff has not identified that the existing property values have been impacted by the existing zoning or conditions.**

8. The relative gain to the public as compared to the hardship imposed upon the individual property owner; **Staff has not identified a hardship imposed on the property owner as the property is currently zoned. This is not a request to rezone but to amend a condition of the original PCD approval.**

9. The length of time the property has been vacant as zoned considered in the context of land development in the area in the vicinity of the property; **The property is developed. This is not a request to rezone but to amend a condition of the original PCD approval to allow an internally lighted sign.**

10. Whether there are other existing or changing conditions affecting the use or development of the property which give supporting grounds for either approval or disapproval of the zoning proposal; **The proposed signage is consistent with other signage along Cornelia Highway due to site conditions, right-of-way width, and travel speed and thus the existing conditions can give supporting grounds for approval of the proposed sign and the request to amend the previous PCD rezoning conditions.**

11. Whether the change would create an isolated district unrelated to the surrounding districts; **No, there are no proposed changes to the underlying zoning district. This is not a request to rezone but to amend a condition of the original PCD approval to allow an internally lighted sign.**

12. Whether the present zoning district boundaries are illogically drawn in relation to existing conditions in the area; **No, the Planned Commercial Development (PCD, 17.180.080) zoning was established in 2004 and there is no evidence that the district boundaries are illogically drawn.**

13. Whether the change requested is out of scale with the needs of the county as a whole or the immediate neighborhood; **The request does not appear to be out of scale with the needs of the County as a whole.**

14. Whether it is impossible to find adequate sites for the proposed use in districts permitting such use and already appropriately zoned; **The proposed amendment relates to signage for the existing business which is located on the subject property. The proposed sign is only permissible for properties that are developed with a gross floor area of over 100,000 square feet. Internal illumination is permissible outside of the Gateway Corridors Overlay District (GCOD, 17.420).**

15. Whether the need for rezoning could be handled instead by a variance request to the [Planning Commission]; **This is not a request to rezone but to amend a condition of the original PCD approval to allow an internally lighted sign.**

16. Whether there would be an ecological or pollution impact resulting from major modifications to the land if the request is granted; **The proposed sign will be required to meet all applicable local, state, and federal regulations during the development permitting process.**

17. Whether there is reasonable evidence based upon existing and anticipated land use that would indicate a mistake was made in the original zoning of the property; **The current request is to amend a Planned Commercial Development (PCD, 17.180.080) to permit internal illumination of a sign and is not a rezoning request; therefore, the question is not applicable.**

Section 17.180.080, supplemented with the application materials from the rezoning request, provide the standards and allowable uses for this development.

Section 17.420.60 provides the sing standards Gateway Corridors Overlay District (GCOD).

Development Support and Constraints –Departmental /agency comments

Hall County Environmental Health
An email dated October 31, 2022 from Emily McGahee states "no comment".

Hall County Fire Rescue
In an email dated November 2, 2022, Lieutenant John Hornick, NPQ Fire Inspector 1, Plans Review, states: "Fire Marshal's office has no comments regarding new monument sign as proposed."

Hall County Public Works and Utilities
In a memo dated November 3, 2022, from Srikanth Yamala, Director of Public Works and Utilities, the following comments were provided:

Engineering:
No comments

Traffic:
No comments

Utilities:
No comments

Georgia Department of Transportation
Per an email dated November 3, 2022, Parker Niebauer, District 1 Traffic Operations Supervisor, confirmed that this project will require GDOT coordination to verify no work being performed in GDOT R/W.

- **Excerpts from the minutes of the November 21, 2022 meeting**

Applicant's Presentation:

Randi Doveton, Planning Director, presented a summary of the request.

Andy Darnell, 4336 Cornelia Highway, Lula, presented the request. The applicant stated that the current sign needed to be updated.

Public Forum:

There were no comments in support or opposition.

Planning Commission Comments

Mr. Braswell stated that the note in the application stated that there would be a 72 x 170 top light cabinet for internal lighting.

Motion: ***A motion to approve, with conditions was made by Mr. Hunt and seconded by Mr. Bell. Vote: 4-0 (Pilcher absent)***

Conditions:

1. *The proposed sign shall be approved as presented in the sign rendering submitted with this application and dated 8.19.2022. The sign shall not exceed 13 feet in height, nor shall it exceed 11.25 feet in width.*
2. *Internal illumination is permitted but there shall be no electronic message board permitted as a component of the sign.*
3. *There shall be approval from GDOT for the sign's location prior to issuance of the Building Permit.*

PLANNING AND DEVELOPMENT DEPARTMENT
2875 BROWNS BRIDGE ROAD, GAINESVILLE, GA, 30504
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VARIANCE APPLICATION

Applicant (Name and Mailing Address)

Sophie Le Tily (Big Mouth Signs)
40 Rockbrige Rd Suite 200
Lilburn GA 30047
Phone 770-381-9300 (678) 860-2760
Email Address sophie@bigmouthsigns.com

Property Owner (Name and Mailing Address)

Howard Brothers
4336 Cornelia Hwy.
Lula, GA 30554
Phone 678-469-4005
Email Address andy@howardbrothers.com

Location of Property 4336 Cornelia Hwy.

Present Zoning PCD Existing Structures will be taken down

Type of Appeal:

____ Setback Variance	___ Front Yard	From ___ ft. to ___ ft.
	___ Right Side Yard	From ___ ft. to ___ ft.
	___ Left Side Yard	From ___ ft. to ___ ft.
____ Road Frontage Variance	___ Rear Yard	From ___ ft. to ___ ft.
	___ Road Frontage	From ___ ft. to ___ ft.
X Sign Variance	___ Sign Area	From ___ ft. to ___ ft.
	___ Sign Height	From ___ ft. to ___ ft.
____ Hardship Mobile Home	___ Doctor's Letter	___ Terms Agreement

---

Supporting Documents: X Plat of Property — X Site Plan
___ Deed of Property — ___ Floor Plans
X Hardship Statement — ___ Other

Fee (Must be paid for application to be complete): $ 400.00

Hardship Mobile Home:

I understand that, if granted, the mobile home must be removed from the property when my hardship ceases to exist.

_____
(Signature)

I hereby certify that the above information is true & correct to the best of my knowledge.

Sign Sophie Le Tily Date 8/21/22

I hereby withdraw this application.

Sign _____ Date _____

Staff Use Only

Application Date: _____ Taken by: _____

Tentative Planning Commission Date: 11/21/22 If Appealed County Commission Date: 1/12/23

County Commission District: 3

Revised December 2019

QC; RCPT #859048

VAR2022-00029

PLANNING AND DEVELOPMENT DEPARTMENT
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AUTHORIZATION OF PROPERTY OWNERS

Note: If the applicant is the property owner, please disregard this form.

Name of owner(s) John J Howard

Address PO Box 5044
3616 Buford Hwy Duluth GA 30096

Phone Number 770 476 3006

Name of applicant(s) Sophie Le Tily

Address 40 Rockbrige Rd Suite 200 Lilburn GA 30047

Phone Number 770-381-9300

I swear that I am the owner of the property which is the subject matter of the attached applications as shown in the records of Hall County, Georgia.

I authorize the person named above to act as applicant in the pursuit of a rezoning, permissive use, or variance of this property.

Signature of Owner(s) 8-24-22

Personally appeared before me
John J. Howard

who swears that the information contained in this authorization is true and correct to the best of his/her knowledge and belief.

Kristan A. Ross
Notary Public

8/24/22
Date

KRISTAN A. ROSS
My Commission Expires
NOTARY PUBLIC
March 3, 2025
HALL COUNTY, GEORGIA

Revised December 2019

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CAMPAIGN CONTRIBUTIONS DISCLOSURE FORM

This form must be completed by the applicant and property owner, or person representing the property owner, for all zoning actions.

OCGA § 36-67A-3[C] Disclosure of campaign contributions:

(b) When any applicant for zoning action has made, within two years immediately preceding the filing of the applicant's application for the zoning action, campaign contributions aggregating $250.00 or more to a local government official who will consider the application, it shall be the duty of the applicant to file a disclosure report with the governing authority of the respective local government showing:

(3) The name and official position of the local government official to whom the campaign contribution was made; and

(4) The dollar amount and description of each campaign contribution made by the applicant to the local government official during the two years immediately preceding the filing of the application for the rezoning action and the date of each such contribution.

(b) The disclosures required by subsection (a) of this Code section shall be filed within ten days after the application for the zoning action is first filed. (Code 1981, Section OCGA § 36-67A-3[C], enacted by GA L. 1986, page 1269, Section 1, GA L. 1991, page 1365, Section 1).

I hereby certify that I have read the above and that:

I have**____ I have not X

within the two years immediately preceding this date, made any contribution(s) aggregating $250.00 or more to any local government official involved in the review or consideration of this application.

**If you have made such contributions, you must provide the data required below within ten (10) days of filing this application.

Name of Official(s): _____ Office: _____

Dollar Amount: _____ Date of Contribution: _____

Applicant's/Owner's Signature: John Howard **Date:** 8-9-22

Applicant's/Owner's Name (Printed): John Howard

PLANNING AND DEVELOPMENT DEPARTMENT
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I hereby certify that I have read the above and that:

I have**____ I have not__X__

within the two years immediately preceding this date, made any contribution(s) aggregating $250.00 or more to any local government official involved in the review or consideration of this application.

**If you have made such contributions, you must provide the data required below within ten (10) days of filing this application.

Name of Official(s): _____ Office: _____

Dollar Amount: _____ Date of Contribution: _____

Applicant's/Owner's Signature: John Howard **Date:** 8/9/22

Applicant's/Owner's Name (Printed): John Howard

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(3) The name and official position of the local government official to whom the campaign contribution was made; and

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(b) The disclosures required by subsection (a) of this Code section shall be filed within ten days after the application for the zoning action is first filed. (Code 1981, Section OCGA § 36-67A-3[C], enacted by GA L. 1986, page 1269, Section 1, GA L. 1991, page 1365, Section 1).

I hereby certify that I have read the above and that:

I have**____ I have not__X__

within the two years immediately preceding this date, made any contribution(s) aggregating $250.00 or more to any local government official involved in the review or consideration of this application.

**If you have made such contributions, you must provide the data required below within ten (10) days of filing this application.

Name of Official(s): _____ Office: _____

Dollar Amount: _____ Date of Contribution: _____

Applicant's/Owner's Signature: Sophie Le Tily **Date:** 10/13/22

Applicant's/Owner's Name (Printed): Sophie Le Tily

SIGN PERMIT APPLICATION

Hall County Planning Department
2875 Browns Bridge Road, 3rd Floor, Gainesville, GA 30504
Phone 770-531-6809 Fax 770-531-3902

The following documentation must accompany your application:

- **Freestanding signs - a survey or engineered site plan of the property showing the proposed sign, any existing freestanding signs, and existing buildings and other improvements.**
- **Wall signs - a drawing to scale showing the proposed sign and all other wall signs, with dimensions, on the subject facade.**
- **A sealed engineering drawing of the sign design for all freestanding signs and electrical wall signs, and a sealed engineering drawing of the sign footing for freestanding signs.**

All signs must be designed and constructed to withstand 90 mile per hour winds.

Proposed Sign and Location

Business Name Howard Brothers

Address 4336 Cornelia Hwy.

Tax Parcel _____ Zoning _____

Total square foot of commercial buildings on site _____ ***or*** Number of residential units in project _____

Sign Type: X Freestanding ..... Size 168 sq. ft. Height 12.73 ft.

_____ Wall or ____ Projecting sign …Size _____sq. ft. Area of this façade _____ sq. ft.

Area of other signs this facade _____sq. ft.

Applicant Information

Name Sophie Le Tily (Big Mouth Signs)

Address 40 Rockbrige Rd Suite 200 Lilburn GA 30047

Phone 770-381-9300 Fax _____ Email sophie@bigmouthsigns.com

Applicant is: _____Property Owner X Owner's Agent _____Lessee _____Sign Company

I hereby certify the above information and attached documentation is true and correct.

Applicant's Signature Sophie Le Tily Date 8/18/22

Staff Comments/Conditions: _____

_____

Issued By _____ Date _____

Revised January 2015

PLANNING AND DEVELOPMENT DEPARTMENT
2875 BROWNS BRIDGE ROAD, GAINESVILLE, GA, 30504
MAILING ADDRESS: PO BOX 1435, GAINESVILLE. GA 30503
t: 770-531-6809 I f: 770-531-3902

HALL COUNTY
GEORGIA
We have it all in Hall

STATEMENT OF HARDSHIP

The Hall County Planning Commission has the authority, in specific cases, to grant variances from the terms of the Zoning Regulations when the variance will not be contrary to the public interest where, owing to special conditions, a literal enforcement of the Zoning Regulations will, in specific cases, result in unnecessary hardship and so that the resolution shall be observed, public safety and welfare secured, and substantial justice done. The authority to grant such variances shall be limited to those instances where a hardship is clearly established as required by the Zoning Regulations.

In all cases involving requests for residential variances from the terms of the Zoning Regulations, a plat or survey of the property prepared by a registered surveyor, architect, or engineer shall be required. In all cases involving variances for commercial or industrial uses of land, a site plan of the property prepared by a registered surveyor, architect, or engineer shall be required. Variances may be granted only upon a finding by the board that:

Describe how each situation listed below relates to your application:

1. There are extraordinary and exceptional conditions pertaining to the particular piece of property in question because of its size, shape or topography (the hardship must relate to the physical character of the lot and not to a personal or economic hardship).

As it currently exists, the current sign does not meet the zoning for hall county... we just want to update it. We took over the business in 2021 and have made many exterior painting/cleaning improvements. This sign will identify us better and will look nicer. The monument is what is zoned now for the area. Due to the size and multiple tenants in the property, we feel the size required is as requests.

2. The application of the requirements of this resolution to this particular property would create an unusual hardship.

This is a common sense variance request. What is there does not look nice, and is no longer relevant. The requirements are meant for a much smaller parcel of land and much smaller business. We're trying to clean up the property and show our branding like it is at other stores.

3. Such conditions are peculiar to the particular piece of property involved and not common to other properties in the neighborhood. That is, the application of the regulation would deprive the applicant of the rights commonly enjoyed by others in the neighborhood.

This does not apply. We're trying to meet requirements. The variance is mostly in the size. We're replacing a larger sign with a smaller one, but at the same time cleaning it up. The road frontage and size of this property and multiple tenants warrants a variance.

4. Such conditions are not the result of any actions of the property owner.

As stated, we took over and bought this property. The existing sign is no longer applicable to our business. We need to change it. We're trying to replace it with a monument which will look nicer and more permanent than the junky looking pole sign that is up there now.

5. Relief, if granted, would not cause substantial detriment to the public good or impair the purposes and intent of this resolution provided; however, that no variance may be granted for a use of land or building or structure that is prohibited by this resolution. For example, granting the variance would not confer any special privilege that is denied by this regulation to other property in the same zoning district.

There would be no detriment to public good on this request. The public would welcome a cleaner road frontage sign.

I hereby certify that the above information and all attached information is true and correct.

Applicant Sophia LeTily **Date** 10/5/22

LINE
E1
E2
E3
E4
E5
E6

R/W

GUARD RAIL

SOUTHBOUND LANES

TURN / DECEL LANE

GRASSED MEDIAN

NORTHBOUND LANES

GUARD RAIL

SSMH

54" CULVERT

SANITARY SEWER MAIN

SSMH

GRAVEL

GUARD RAIL

Call 811 Sign

STOP

DOT HOODED DI

18" CMP

FLUME

/ DECEL LANE

FLUME

APPROX. FORCE MAIN

WOOD SIGN

SIGN

DWCB

E1

ELEC. GATE

E2

GRAVEL

E3

U.G.POWER

U.G.POWER

W.V.

18" CMP

E4 QHP

APPROXIMATE LAND

POWER STND.

GUY

PP

CENTERLINE 20' POND ACCESS EASEMENT PER PLAT REF NO. 7 (FOR MAINTENANCE)

DWCB

MULCH MATERIAL STORAGE

IPF R-BAR

R/W

4.83'

L1

L2

L3

L4

L5

L6

L7

L8

258.90' CENTERLINE EASEMENT TO IPF

AT&T STANDARD

WOOD SPLIT RAIL

SIGN

15.5' - DISTANCE FROM R/W

NEW SIGN PLACEMENT

GRAVEL

4" E 1094.49'

UNDERGROUND CABLE (FIELD MARKED) 15' EASEMENT - SOUTHERN BELL DEED BOOK 1353, PAGE 323.

WOOD SPLIT RAIL

IELD LOCATED (SIZE AND TYPE UNKNOWN) DEED BOOK 5454, PAGE 644

GI

18" CMP

CURB & GUTTER (TYP)

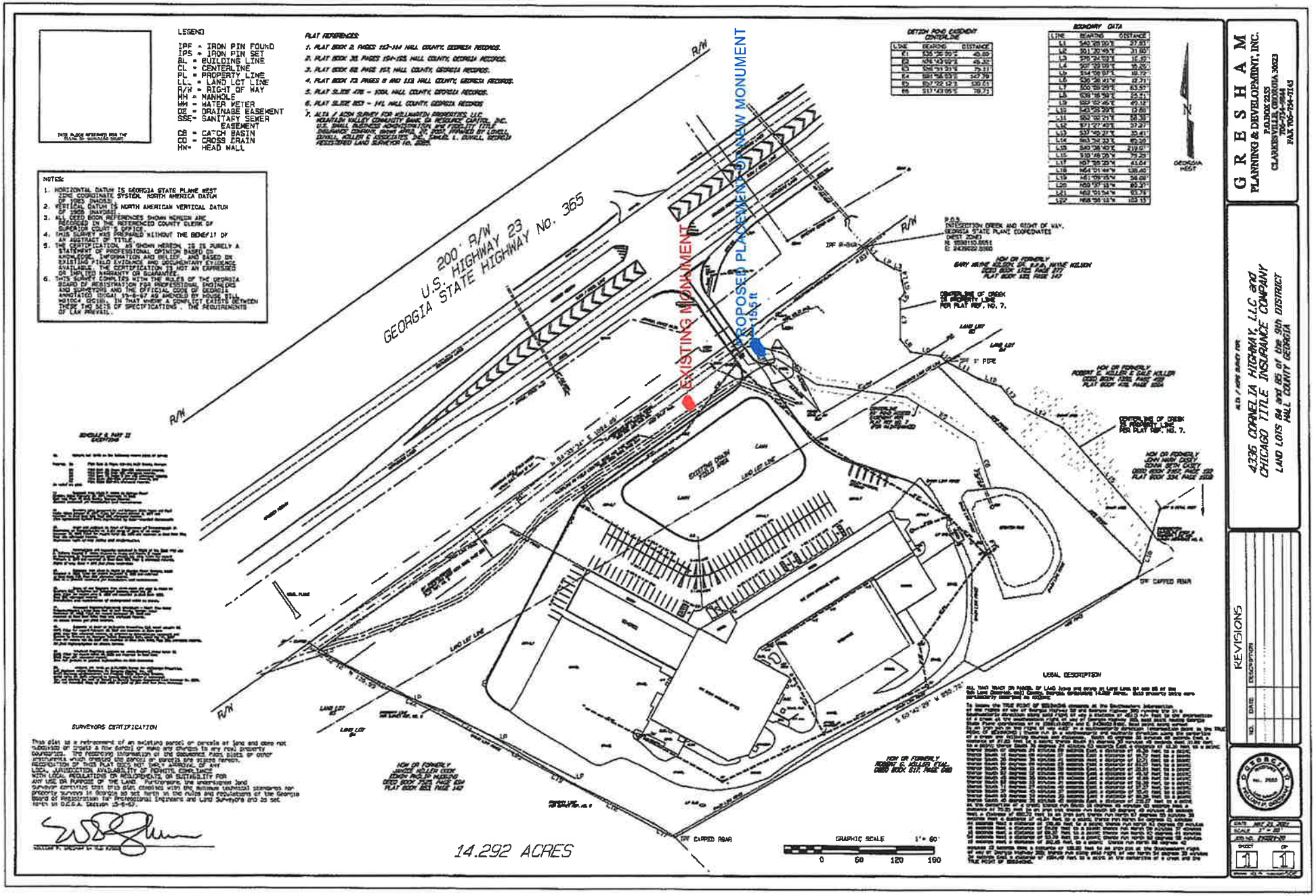
W.M.

EXISTING DRAIN FIELD AREA

LAWN

LAND LOT LINE

LAWN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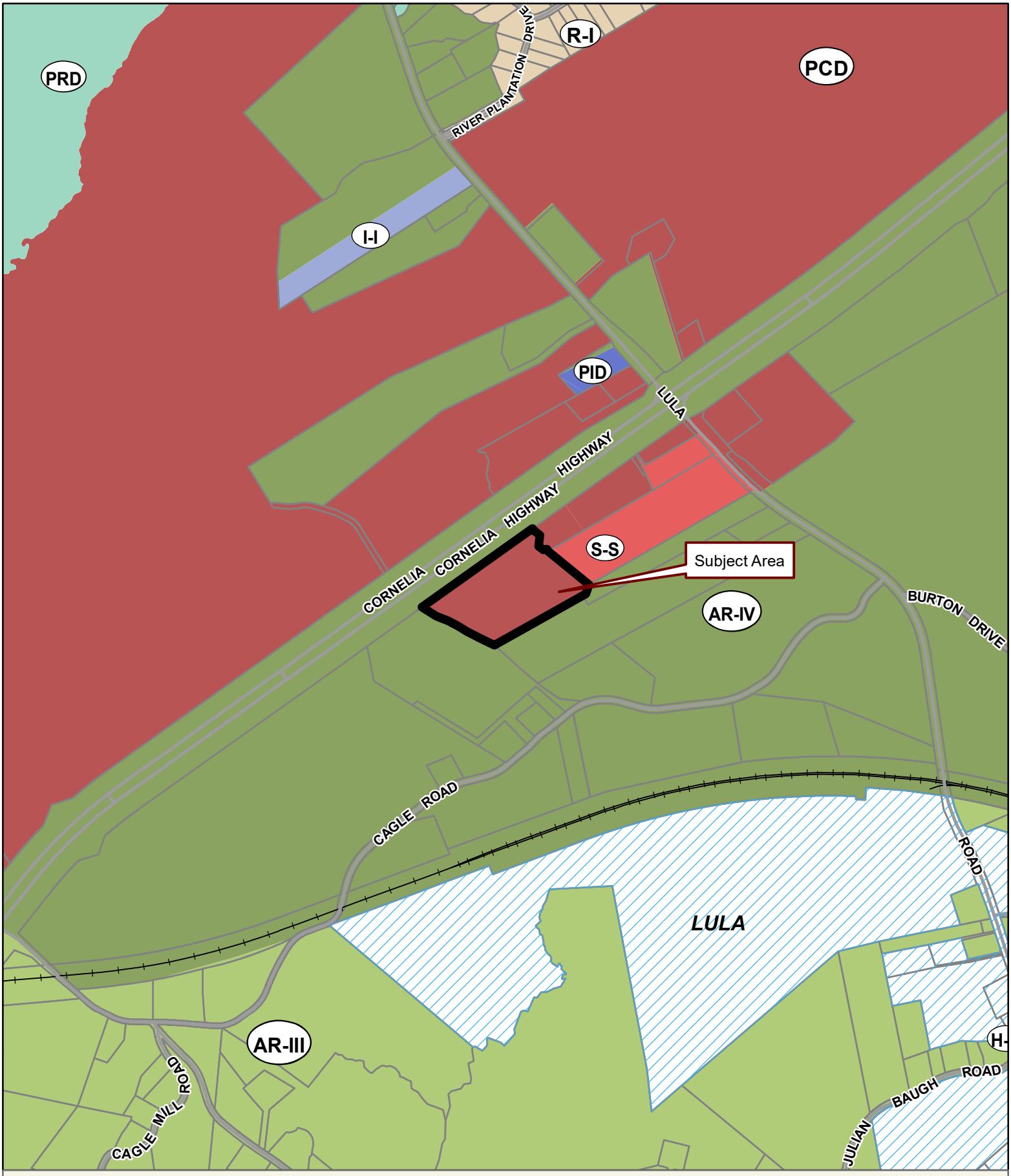
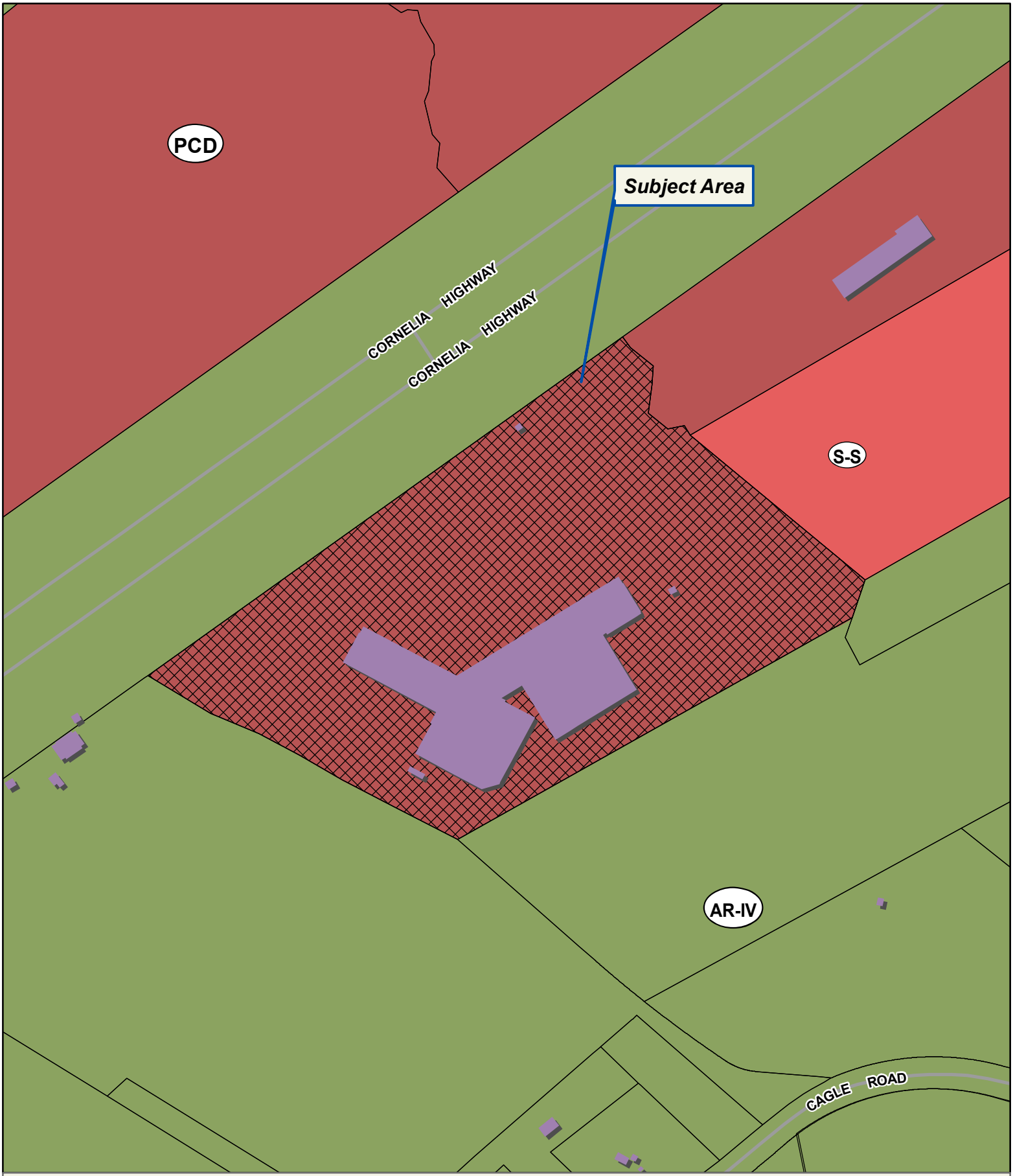


Applicant: SOPHIE LE TILY (BIG MOUTH SIGNS)
Tax Parcel #: 09085 000008
Location: 4336 CORNELIA HIGHWAY, LULA, GA 30554
Commission District 3 **PC Mtg. Date:** 11/21/2022

0 300 600 1,200
Feet

Zoning Boundary
City Limits
Subject Area
Structure

N



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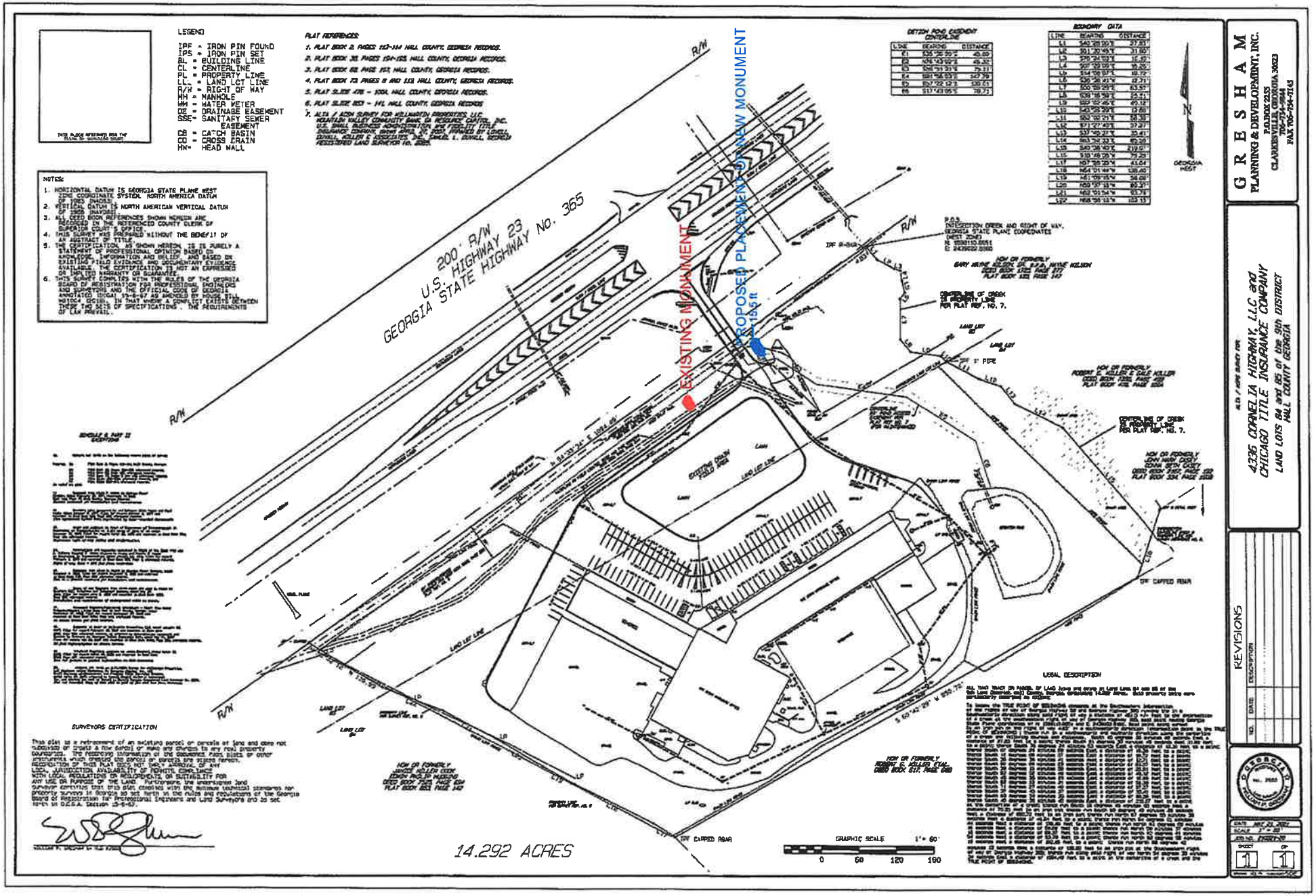
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SHEET 1 OF 1

DATE: 8.19.2022	SALES ORDER: 7469	CUSTOMER: Howard Brothers	JOB TITLE: New Monument Sign

TOTAL SF: 168

Monument Sign

BIG MOUTH SIGNS
"We Help Your Business Get Noticed"
40 Rockbridge Rd, Suite 200,
Lilburn, GA 30047
770-381-9300 BigMouthSigns.com

Designer: Steven Lawya
Email: Steven@bigmouthsigns.com
Project Manager: Austin Robb
Email: Austin@bigmouthsigns.com



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Proof Approval

☐ **Approved (OK as is)**

☐ **Editing Needed**

X _____

_____

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Specifications & Dimensions:

1. ARCHITECTURAL MONUMENT

DESCRIPTION:

STACKED STONE STRUCTURE

OVERALL DIMENSIONS: 144" (tall) x 166" (wide) x 24" (deep)

CONTENT:

TOP LIGHT CABINET: 72" x 120"

TOP CABINET: "HOWARD BROTHERS"

(2) BOTTOM CABINETS: 28" x 60"

LOWER LEFT CAB: "STIHL"

LOWER RIGHT CAB: "EXMARK"

Color System: Pantone

165c	186c	black	000C

DATE: 8.19.2022	SALES ORDER: 7469	CUSTOMER: Howard Brothers	JOB TITLE: New Monument Sign

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Monument Sign Night

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"We Help Your Business Get Noticed"
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770-381-9300 BigMouthSigns.com

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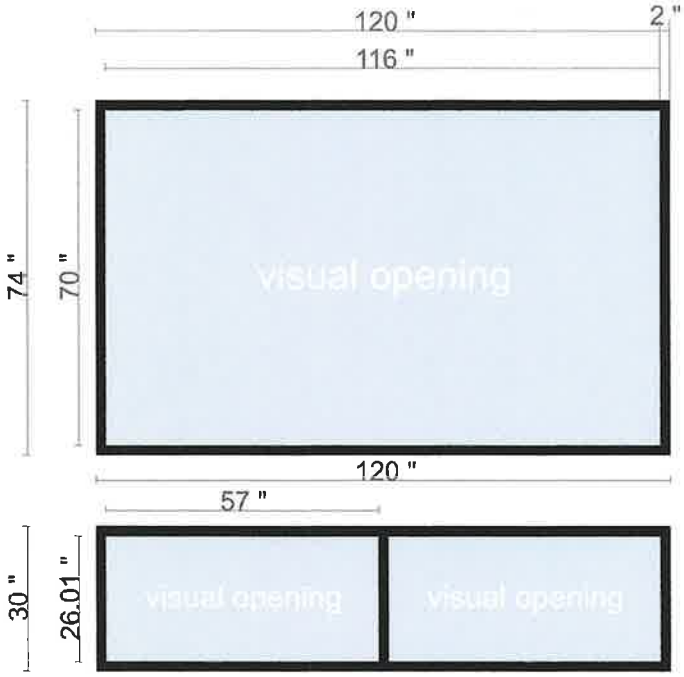

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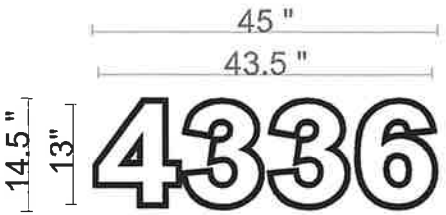

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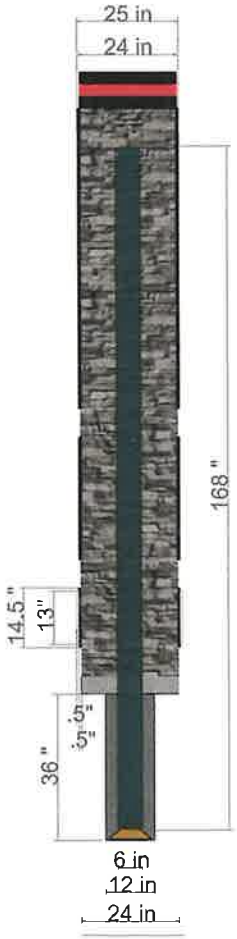

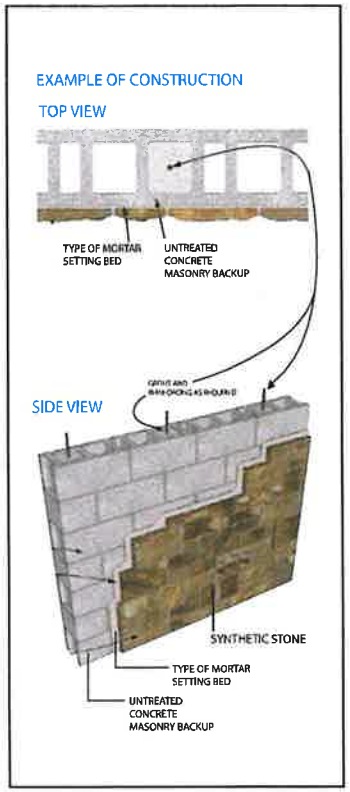

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Anael Dominguez (Planning)

From: Emily McGahee (Environmental Health)
Sent: Monday, October 31, 2022 4:22 PM
To: Anael Dominguez (Planning); Randi Doveton (Planning)
Cc: Kelly Hairston (Environmental Health); Chad Harper (Environmental Health)
Subject: HCPC Tentative Agenda 11.21.22

Please find Environmental Health comments below:

Item 1, 2363 Whippoorwill Lane, Beddingfield: Must meet all Environmental Health residential septic system permitting requirements. Existing system evaluation and/or septic system modification may be required for system serving existing home on property. Level 3 Soil Evaluation will be required prior to application if existing septic system will not be used.

Item 2, 5385 Winder Hwy, Dell Group: All proposed lots must meet Hall County Board of Health Lot Size Resolution requirements.

Item 3, 4336 Cornelia Hwy, Le Tily: No comment.

Item 4, 3519 White Sulphur Rd, Reynolds-Hemmer: No comment. Public sewer.

Item 5, 4139 Cagle Road, DeLeon: All proposed lots must meet Hall County Board of Health Lot Size Resolution requirements.

Item 6, 3055 Tumbling Creek Road, Rochester: No comment. Public sewer.

Item 7, 4053 Cleveland Hwy, Crayton: Non-domestic wastewater treatment and disposal must be permitted by EPD.

Emily McGahee
Hall County Environmental Health
Hall County Government Center
2875 Browns Bridge Road
Mailing: PO Box 5901
Gainesville, GA 30504
(770) 531-3973
(770) 531-6767 (fax)

http://dph.georgia.gov/environmental-health (State Website)
http://www.phdistrict2.org/HallCounty.htm (District Website)
http://www.hallcounty.org/devserv/environmental.asp (County Website & Forms)

Anael Dominguez (Planning)

From: Niebauer, Parker J <PNiebauer@dot.ga.gov>
Sent: Wednesday, November 2, 2022 10:05 AM
To: Anael Dominguez (Planning); Randi Doveton (Planning)
Subject: RE: Tentative Planning Agenda for November 21, 2022

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Please see GDOT responses in red below

Parker Niebauer
D1TO Traffic Operations Supervisor

GDOT Georgia Department of Transportation

District 1 Division of Field Services
1475 Jesse Jewell Pkwy
Suite 100
Gainesville, GA, 30501
770.533.8275 office
770.519.3223 cell

From: Anael Dominguez (Planning) <adominguez@hallcounty.org>
Sent: Thursday, October 27, 2022 10:44 AM
To: Becky Ruffner (Parks & Leisure) <bruffner@hallcounty.org>; Bill Nash (Public Works) <bnash@hallcounty.org>; Brandi Smith (Business License) <bsmith@hallcounty.org>; Bryan Cash (Fire Services) <bcash@hallcounty.org>; Chad Harper (Environmental Health) <charper@hallcounty.org>; Chris Braswell (Planning) <cbraswell@hallcounty.org>; Christopher Armstrong (Fire Services) <carmstrong@hallcounty.org>; Dan Barnes <Daniel.C.Barnes@usace.army.mi>; Ellis Still (Planning) <estill@hallcounty.org>; Emily McGahee (Environmental Health) <emcgahee@hallcounty.org>; Frank Miller (Engineering) <fmiller@hallcounty.org>; Dykes, Jason <jdykes@dot.ga.gov>; Jason Skarda (Engineering) <jskarda@hallcounty.org>; Jeremy Wills <jeremy.wills@gainesville.org>; John Hornick (Fire Services) <jhornick@hallcounty.org>; Peevy, Jonathan <jpeevy@dot.ga.gov>; Kelly Hairston (Environmental Health) <khairston@hallcounty.org>; Matt Cox <matt.cox@hallco.org>; Michael Vieira (Fire Services) <mvieira@hallcounty.org>; Nicole Griffin (Tax Assessors) <nicole.griffin@hallcounty.org>; nswafford <nswafford@gainesville.org>; Pam Cravero <Pam.Cravero@hallco.org>; Niebauer, Parker J <PNiebauer@dot.ga.gov>; Randi Doveton (Planning) <rdoveton@hallcounty.org>; rich <rich@flowerybranchga.org>; Scott Puckett <spuckett@hallcounty.org>; Srikanth Yamala (Public Works) <syamala@hallcounty.org>; Stephen Cain <troy.s.cain@usace.army.mil>; Steve Watson (Real Property) <rswatson@hallcounty.org>; Tammie Croy (Engineering) <tcroy@hallcounty.org>; Tracy Gilreath (Tax Assessors) <tgilreath@hallcounty.org>; Wanda Moreno (Engineering) <wmoreno@hallcounty.org>; Wanda Sutton (Engineering) <wsutton@hallcounty.org>; will schofield <will.schofield@hallco.org>
Subject: Tentative Planning Agenda for November 21, 2022

Good morning –

Here is the Tentative Agenda and Maps for the **Monday, November 21, 2022** Hall County Planning Commission Meeting.

Please use the links to review the documents and respond with comments to Hall County Planning and Development. Failure to provide comments in a timely manner may result in the information not being included in the staff report.

When submitting comments, please include the name of the applicant along with the address of the property with the corresponding comment.

Comments are due by **Thursday, November 3rd.** Email comments to Randi (rdoveton@hallcounty.org) and Ana (adominguez@hallcounty.org).

CALL TO ORDER

AGENDA REVIEW

APPROVAL OF MINUTES - November 7, 2022

OLD BUSINESS

1. **2363 Whippoorwill Lane | Variance** | for a front yard setback variance from 55 feet to 35 feet, right side yard setback variance from 10 feet to 3 feet, and a left side yard setback variance from 10 feet to 9 feet on a .14± acre tract located on the west side of Whippoorwill Lane approximately 848 feet from its intersection with Sportsman Club Road | Zoned R-I; Tax Parcel 00109A000029 | Proposed use: single-family residence | * Commission District 4 | **Thomas Ryan & Vicki Beddingfield, applicant.**

2. **5385 Winder Highway | Amend Conditions |** of a Planned Commercial Development (PCD) on a 21.20± acre tract located on the north side of Winder Highway at its intersection with Benefield Road | Zoned PCD; Tax Parcel 15028B000015 **| Proposed use: car condos, storage, commercial uses, and retail |** ** Commission District 1 | **The Dell Group, LLC, applicant.**

NEW BUSINESS

3. **4336 Cornelia Highway | Variance |** for a sign variance on sign design and dimensions with an Amended to Planned Commercial Development conditions on a 14.09± acre tract located on the south side of Cornelia Highway approximately 1,497 feet from its intersection with Lula Road | Zoned PCD; Tax Parcel 09085 000008 | **Proposed use: new monument sign** | ** Commission District 3 | **Sophie Le Tily (Big Mouth Signs), applicant.**
   GDOT coordination required to verify no work being performed in GDOT R/W

4. **3519 White Sulphur Road | Use subject to County Commission Approval |** on a 5.45± acre tract located on the east side of White Sulphur Road at its intersection with Cornelia Highway | Zoned I-II; Tax Parcel 15020A000030 | **Proposed use: trailer storage** | ** Commission District 3 | **Reynolds-Hemmer Properties, LP, applicant.**
   GDOT Coordination required

5. **4139 Cagle Road | Use subject to County Commission Approval |** on a 7.43± acre tract located on the north side of Cagle Road approximately 1,637 feet from its intersection with Eli Jackson Road | Zoned AR-III & V-C; Tax Parcel 09099 000008 | **Proposed use: 2-lot subdivision |** ** Commission District 3 | **Robert & Valerie DeLeon, applicant.**
   None

6. **3055 Tumbling Creek Road | Amend conditions |** of a Planned Residential Development (PRD) on a 5.1± acre tract located on the west side of Tumbling Creek Road at approximately 30 feet from its intersection with Campus Pointe Circle | Zoned PRD; Tax Parcel 08026 000005 (pt.) | **Proposed use: 38-unit residential rental community** | ** Commission District 2 | **Rochester/DCCM, applicant.**
   None

7. **4053 Cleveland Highway | Rezone |** from Agriculture-Residential-III (AR-III) to Suburban-Shopping (SS) on a 6.34± acre tract located on the west side of Cleveland Highway at its intersection with Jim Hood Road | Zoned AR-III; Tax Parcel 12025 000036 | **Proposed use: grocery store, convenience store with gas & restaurant |** ** Commission District 3 | **Reginald Crayton, P.E., applicant.**
   GDOT Coordination Required

HALL COUNTY
GEORGIA

POST OFFICE DRAWER 1435
GAINESVILLE, GA 30503

t: 770.531.6800 | f: 770.531.3945

SRIKANTH YAMALA
Director

BILL NASH, P.E.
Assistant Director

FRANKLIN P. MILLER, P.E.
County Engineer

Hall County Government

PUBLIC WORKS AND UTILITIES
ENGINEERING DIVISION

M E M O R A N D U M

To: Randi Doveton, Director of Planning and Development

From: Srikanth Yamala, Director of Public Works and Utilities

Date: November 3, 2022

Subject: November 21, 2022 - Hall County Planning Commission Agenda

Please be advised that our office has reviewed the Hall County Planning Commission agenda for the November 21, 2022 meeting. Upon review, we provide the following comments.

OLD BUSINESS

1. **2363 Whippoorwill Lane | Variance** | for a front yard setback variance from 55 feet to 35 feet, right side yard setback variance from 10 feet to 3 feet, and a left side yard setback variance from 10 feet to 9 feet on a .14± acre tract located on the west side of Whippoorwill Lane approximately 848 feet from its intersection with Sportsman Club Road | Zoned R-I; Tax Parcel 00109A000029 | Proposed use: single-family residence | * Commission District 4 | **Thomas Ryan & Vicki Beddingfield, applicant.**

   a) **Engineering:** Show flood Hall County studied and FEMA.
   b) **Traffic:** No comments.
   c) **Utilities:** No comments.

2. **5385 Winder Highway | Amend Conditions |** of a Planned Commercial Development (PCD) on a 21.20± acre tract located on the north side of Winder Highway at its intersection with Benefield Road | Zoned PCD; Tax Parcel 15028B000015 **| Proposed use: car condos, storage, commercial uses, and retail |** ** Commission District 1 | **The Dell Group, LLC, applicant.**

   a) **Engineering:** The site may require a stormwater management report should the site plan indicate the proposed development meets stormwater thresholds for impervious surfaces and/or disturbed acreage.
   Show stream buffers and impervious setback from wrested vegetation not centerline of stream.
   b) **Traffic:** No comments.
   c) **Utilities:** No sewer in the area of project; septic proposed requires Health Department Approval.

HALL COUNTY
GEORGIA

POST OFFICE DRAWER 1435
GAINESVILLE, GA 30503

t: 770.531.6800 | f: 770.531.3945

SRIKANTH YAMALA
Director

BILL NASH, P.E.
Assistant Director

FRANKLIN P. MILLER, P.E.
County Engineer

Hall County Government

PUBLIC WORKS AND UTILITIES
ENGINEERING DIVISION

NEW BUSINESS

3. **4336 Cornelia Highway | Variance |** for a sign variance on sign design and dimensions with an Amended to Planned Commercial Development conditions on a 14.09± acre tract located on the south side of Cornelia Highway approximately 1,497 feet from its intersection with Lula Road | Zoned PCD; Tax Parcel 09085 000008 | **Proposed use: new monument sign** | ** Commission District 3 | **Sophie Le Tily (Big Mouth Signs), applicant.**

   a) **Engineering:** No comments.
   b) **Traffic**: No comments.
   c) **Utilities**: No comments.

4. **3519 White Sulphur Road | Use subject to County Commission Approval |** on a 5.45± acre tract located on the east side of White Sulphur Road at its intersection with Cornelia Highway | Zoned I-II; Tax Parcel 15020A000030 | **Proposed use: trailer storage** | ** Commission District 3 | **Reynolds-Hemmer Properties, LP, applicant.**

   a) **Engineering:** The site may require a stormwater management report, should the site plan indicate the proposed development meets stormwater thresholds for impervious surfaces and/or disturbed acreage.
   b) **Traffic:** No comments.
   c) **Utilities:** No comments.

5. **4139 Cagle Road | Use subject to County Commission Approval |** on a 7.43± acre tract located on the north side of Cagle Road approximately 1,637 feet from its intersection with Eli Jackson Road | Zoned AR-III & V-C; Tax Parcel 09099 000008 | **Proposed use: 2-lot subdivision |** ** Commission District 3 | **Robert & Valerie DeLeon, applicant.**

   a) **Engineering:** Further subdivisions of these lots will result in the necessity of a stormwater management plan, if the total number of lots reaches more than 6.
   b) **Traffic:** No comments.
   c) **Utilities:** No comments.

6. **3055 Tumbling Creek Road | Amend conditions |** of a Planned Residential Development (PRD) on a 5.1± acre tract located on the west side of Tumbling Creek Road at approximately 30 feet from its intersection with Campus Pointe Circle | Zoned PRD; Tax Parcel 08026 000005 (pt.) | **Proposed use: 38-unit residential rental community** | ** Commission District 2 | **Rochester/DCCM, applicant.**

   a) **Engineering:** The site may require a stormwater management report, should the site plan indicate the proposed development meets stormwater thresholds for impervious surfaces and/or disturbed acreage.
   Show buffer and impervious setback from wrested vegetation, not centerline of creek.

HALL COUNTY
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SRIKANTH YAMALA
Director

BILL NASH, P.E.
Assistant Director

FRANKLIN P. MILLER, P.E.
County Engineer

Hall County Government

PUBLIC WORKS AND UTILITIES
ENGINEERING DIVISION

There seems to be a "Tumbling Creek Preserve Trail" through proposed development. Need to verify ownership and/or easements.

b) **Traffic:** No comments.

c) **Utilities:** City of Gainesville sewer district.

7. **4053 Cleveland Highway | Rezone |** from Agriculture-Residential-III (AR-III) to Suburban-Shopping (SS) on a 6.34± acre tract located on the west side of Cleveland Highway at its intersection with Jim Hood Road | Zoned AR-III; Tax Parcel 12025 000036 | **Proposed use: grocery store, convenience store with gas & restaurant** | ** Commission District 3 | **Reginald Crayton, P.E., applicant.**

a) **Engineering:** The site may require a stormwater management report, should the site plan indicate the proposed development meets stormwater thresholds for impervious surfaces and/or disturbed acreage.
Show buffer and impervious setback from wrested vegetation, not centerline of creek.

b) **Traffic:** GDOT permit required.

c) **Utilities:** Gainesville/Hall County sewer district.
No sewer available. On-site septic system proposed for wastewater, therefore Health Department approval required.

Anael Dominguez (Planning)

From: John Hornick (Fire Services)
Sent: Wednesday, November 2, 2022 1:05 PM
To: Randi Doveton (Planning); Anael Dominguez (Planning)
Subject: Agenda Review #3

3) **4336 Cornelia Highway | Variance |** for a sign variance on sign design and dimensions with an Amended to Planned Commercial Development conditions on a 14.09± acre tract located on the south side of Cornelia Highway approximately 1,497 feet from its intersection with Lula Road | Zoned PCD; Tax Parcel 09085 000008 | **Proposed use: new monument sign** | ** Commission District 3 | **Sophie Le Tily (Big Mouth Signs), applicant.**

The Hall County Fire Marshal's Office has no comments regarding new monument sign as proposed.

Regards,

John Hornick, NPQ Fire Inspector 1, Plans Review
Lieutenant, Hall County Fire Rescue
Hall County Government
Main: 770-531-6838 | Cell: 404-597-0083
Website: www.Hallcounty.org

ZONING NOTICE

AN APPLICATION HAS BEEN FILED WITH HALL COUNTY IN REGARD TO THE ZONING REGULATIONS AS THEY APPLY TO THIS PROPERTY

APPLICANT: SOPHIE LE TILY (BIG MOUTH SIGNS)

REQUEST: SIGN VARIANCE ON SIGN DESIGN & DIMENSIONS & AMENDMENT TO PCD CONDITIONS

PUBLIC HEARINGS WILL BE HELD ON:

PLANNING COMMISSION
Date: NOV. 21, 2022
Time: 5:15 PM

AND

COUNTY COMMISSION
Date: JAN. 12, 2023
Time: 6:00 PM

HALL COUNTY GOVERNMENT CENTER, 2875 BROWNS BRIDGE ROAD, GAINESVILLE, GA

FOR MORE INFORMATION CALL: (770) 531-6809


ZONING NOTICE
ZONING NOTICE
3 MILES
EMOR
ARMS


Howard
BROTHERS
STIHL
ZONING NOTICE

FOR SALE
BY OWNER
$2,500

ZONING NOTICE

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APPLICANT: SOPHIE LE TILY (BIG MOUTH SIGNS)

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Date: JAN. 12, 2023
Time: 6:00 PM

HALL COUNTY GOVERNMENT CENTER, 2875 BROWNS BRIDGE ROAD, GAINESVILLE, GA

FOR MORE INFORMATION CALL: (770) 531-6809

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& AMENDMENT TO PCD CONDITIONS
PUBLIC HEARINGS WILL BE HELD ON:
PLANNING COMMISSION Date: NOV. 21, 2022 Time: 5:15 PM
AND
COUNTY COMMISSION Date: JAN. 12, 2023 Time: 6:00 PM
HALL COUNTY GOVERNMENT CENTER, 2875 BROWNS BRIDGE ROAD, GAINESVILLE, GA
FOR MORE INFORMATION CALL: (770) 531-6809

AGENDA ITEM

Planning and Development

REPORT TO: **Work Session (01/09/23)**

REPORT TO: **Voting Meeting (01/12/23)**

ITEM NO: 739/2022

SUBJECT: **0, 490, 496, 508 & 536 Crescent Drive | Amend Conditions/Revise site plan** | of a Planned Residential Development (PRD) on a 32.67± acre tract located on the east side of Crescent Drive approximately 253 feet from its intersection with White Sulphur Road| Zoned PRD; Tax Parcels 15033D000010F, -000014, -000015, -000010C, -000010B, -000009, & -000008 | **Proposed Use: revise the site plan of the previously approved 143-unit townhome development** | Commission District 3 | **Williams Brothers Development LLC, applicant.**

Meetings:

Work Session Date: 01/09/23 **Voting Meeting Date:** 01/12/23

Executive Summary:

Presenter: RD

Recommendation:
Approval.

Purpose of Request:
0, 490, 496, 508 & 536 Crescent Drive | Amend Conditions/Revise site plan | of a Planned Residential Development (PRD) on a 32.67± acre tract located on the east side of Crescent Drive approximately 253 feet from its intersection with White Sulphur Road| Zoned PRD; Tax Parcels 15033D000010F, -000014, -000015, -000010C, -000010B, -000009, & -000008 | Proposed Use: revise the site plan of the previously approved 143-unit townhome development | Commission District 3 | Williams Brothers Development LLC, applicant.

History:

Facts and Issues:

Options:

Funding Requested $ 0.00

Are funds within current budget? No

Source of Funds

Does the action involve a Resolution, Ordinance, Contract, Agreement, etc.?	No
Has it been reviewed by the County Attorney?	Yes
Is there a deadline for this item?	

Approvals:

Submit	Approve	Budget	Finance
AD	RD	TS	WG

Attorney	Administration	Clerk
WLI	CR	JR

Attachments:

Board Memo
Application
Narrative
Site Plan
Maps
Notice Sign Photos
Legal Ad

HALL COUNTY
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POST OFFICE DRAWER 1435
GAINESVILLE, GA 30503

t: 770.531.6809 | f: 770.531.3902

DIRECTOR
Randi Doveton

Hall County Government
PLANNING & DEVELOPMENT

To: Richard Higgins, Chairman
Kathy Cooper, District 1
Billy Powell, District 2
Gregg Poole, District 3
Jeff Stowe, District 4

From: Randi Doveton, Director

Date: December 15, 2022

Subject: 0, 490, 496, 508 & 536 Crescent Drive | Amend Conditions/Revise site plan | of a Planned Residential Development (PRD) | Zoned PRD | Commission District 3 | Williams Brothers Development LLC, applicant.

The request before you is a request to amend the previous PRD approval to allow site plan revisions. This item is located within Commission District 3.

It should be noted that the subject properties were within Commission District 4 when the rezoning process began but are currently in Commission District 3 due to redistricting.

This is an amendment to conditions of ZON2021-00129. This application seeks approval of the engineered site plan verses the conceptual presented to BOC on 2-10-2022. The 2-10-2022 approval was tied to the submitted site plan, which was a conceptual plan. The engineered site plan has a different drive, parking, amenity, and building layout than the conceptual; the engineered plan is more detailed and provides better traffic flow but requires BOC approval since it differs from the approved conceptual plan.

There is no change in number of buildings, or dwelling units and there is no reduction in the required greenspace percentage, buffers, setbacks, or parking. The applicant is requesting to change the previously approved playground to a dog park.

The February 10, 2022 conditions shall remain in effect, except for the layout and dog park.

2-10-2022 BOC Conditions of approval:

1. The development shall generally occur as depicted on the site plan and described in the project narrative, modified for compliance with zoning conditions and Hall County regulations.

2. The proposed residential development shall conform to §17.180.060 Planned Residential Development (PRD) standards with the following exceptions:
    a. Sidewalks: In lieu of 5' sidewalks on both sides of the street, 5' hardscape and softscape trails shall be constructed in a manner generally as depicted on conceptual site plan to connect all buildings to amenity and open space with limited travel on internal roads.
    b. Townhouse Garages: Townhouses facing the arterial street, Crescent Drive, can be front-loaded so long as a planted buffer conforming to 17.260.020 is provided.
3. There shall be no more than 143 total units in the development.
4. The following standards shall apply to the development:
    a. Buffers:
        1. Front: 55 feet from center line of road or 30 feet from property line, whichever is greater.
        2. Side: 50 feet
        3. Rear: 50 feet
    b. Buildings shall be no greater than 3 stories in height.
    c. Open Space: minimum of 9.8 acres {30%)
    d. Buffers: A minimum 50 foot planted buffer shall be established along the perimeter of all property boundaries adjacent to residential and/or nonresidential zoning districts to ensure that the planned residential development is appropriately screened. The planted buffers shall conform to the requirements as described in section 17.260.020 titled Vegetation Buffers and Vision Clearance.
    e. Architectural standards: All facades of all residences shall be finished with brick, stone, stucco, wood siding, wood shakes, or fiber cement type siding. The front facades shall incorporate changes in building material, texture, and/or color. Vinyl siding on all residential and nonresidential buildings shall be prohibited.
5. Development driveway access from Crescent Drive must be reviewed, approved and permitted by the City of Gainesville as it is under the City's jurisdiction.
6. An updated traffic study may be required prior to the issuance of a land disturbance permit. The developer shall work with Hall County Engineering, City of Gainesville Traffic Engineer, and/or the Georgia Department of Transportation (GDOT) in determining the road improvements necessary to serve this development.
7. All conditions of zoning shall be made part of any plats created for the property.
8. Stagger buildings as per §17.180.060 Planned Residential Development (PRD) standards.
9. A 70% garage facade shall be allowed.
10. Setbacks from sidewalk to garage:

1. For units that are front-loaded, garage doors shall be a minimum of 18 feet between the garage and curb.
2. For units that are rear-loaded, garage doors shall not have a minimum setback from the curb. 11. 3-story units shall be limited to 70% of the total unit count, not including units that have a basement garage condition.

11. 3-story units shall be limited to 70% of the total unit count, not including units that have a basement garage condition.
12. A left turn lane shall be added at the proposed entrance.
13. A decel lane shall be added at the proposed entrance.

PLANNING AND DEVELOPMENT DEPARTMENT
2875 BROWNS BRIDGE ROAD, GAINESVILLE, GA, 30504
MAILING ADDRESS: PO BOX 1435, GAINESVILLE. GA 30503
t: 770-531-6809 I f: 770-531-3902

HALL COUNTY
GEORGIA
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ZONING APPLICATION

Applicant (Name & Mailing Address)

Williams Brothers Development, LLC and Charter Mellon, LLC
3343 Peachtree Rd. NE Suite 145-835
Atlanta, GA 30326
Phone 404-548-7128
Email Address cgrogan@williamsbrothersdev.com

Property Owner (Name & Mailing Address)

Pierce Family, L.P.
1525 Blue Ridge Parkway
Gainesville, GA 30501
Phone 770-531-2771
Email Address hdpierce@bellsouth.net

Proposed Use Amend Condition #1 for the development approved at the February 10, 2022 Hall County Board of Commissioners Meeting

Contact Person (Name & Mailing Address)

Cameron Grogan
5875 Pine Brook Rd
Atlanta, GA 30328
Phone 404-548-7128
Email Address cgrogan@williamsbrothersdev.com

Status of Applicant

☐ Owner
☒ Option to Purchase
☐ Area Resident
☐ Other

Requested Action

Existing Zoning: PRD
Rezone to: Amend Condition
Fee:$
Receipt #:
Check #:

Tax Parcel Number Attached Survey. Tracts 1/2/4/5/6/7
Acreage 31 +/-
Location Address 536 Crescent Dr.

I hereby certify that the above information and all attached information are true and correct.

Sign _____ Date: 11/30/2022

Applicant must complete all information above. Failure to complete this section will result in the refusal of the application. The Planning Department has 15 days to review all applications and will set the dates for each application. If the application is found insufficient, an agenda date will not be set until the required information is submitted. Please note that the Planning Commission and County Commission dates are tentative.

Application Withdrawal: I hereby **withdraw** the application.

Sign _____ Date: _____

Staff Use Only

Application Date: _____ Taken by: _____

Tentative Planning Commission Date: _____ Tentative County Commission Date: _____

County Commission District: _____

PLANNING AND DEVELOPMENT DEPARTMENT
2875 BROWNS BRIDGE ROAD, GAINESVILLE, GA, 30504
MAILING ADDRESS: PO BOX 1435, GAINESVILLE. GA 30503
t: 770-531-6809 I f: 770-531-3902

HALL COUNTY
GEORGIA
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AUTHORIZATION OF PROPERTY OWNERS

Note: If the applicant is the property owner, please disregard this form.

Name of owner(s) PIERCE FAMILY, L.P.

Address 1525 BLUE RIDGE DR.

GAINESVILLE, GA 30501

Phone Number 770-531-2771

Name of applicant(s) CM HOLDING COMPANY

Address 3343 PEACHTREE RD NE SUITE 145-835

ATLANTA, GA 30326

Phone Number 404-548-7128

I swear that I am the owner of the property which is the subject matter of the attached applications as shown in the records of Hall County, Georgia.

I authorize the person named above to act as applicant in the pursuit of a rezoning, permissive use, or variance of this property.

Signature of Owner(s) Pierce Family, LP by Herbert David Pierce, Partner

Personally appeared before me, Herbert David Pierce

Nancy L. Lussier
Notary Public

who swears that the information contained in this authorization is true and correct to the best of his/her knowledge and belief.

Nancy L. Lussier
Notary Public

NANCY L LUSSIER
My Commission Expires
NOTARY PUBLIC
June 19, 2026
HALL COUNTY, GEORGIA

11-29-22
Date

PLANNING AND DEVELOPMENT DEPARTMENT
2875 BROWNS BRIDGE ROAD, GAINESVILLE, GA, 30504
MAILING ADDRESS: PO BOX 1435, GAINESVILLE. GA 30503
t: 770-531-6809 | f: 770-531-3902

HALL COUNTY
GEORGIA
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CAMPAIGN CONTRIBUTIONS DISCLOSURE FORM

This form must be completed by the applicant and property owner, or person representing the property owner, for all zoning actions.

OCGA § 36-67A-3[C] Disclosure of campaign contributions:

(b) When any applicant for zoning action has made, within two years immediately preceding the filing of the applicant's application for the zoning action, campaign contributions aggregating $250.00 or more to a local government official who will consider the application, it shall be the duty of the applicant to file a disclosure report with the governing authority of the respective local government showing:

(3) The name and official position of the local government official to whom the campaign contribution was made; and

(4) The dollar amount and description of each campaign contribution made by the applicant to the local government official during the two years immediately preceding the filing of the application for the rezoning action and the date of each such contribution.

(b) The disclosures required by subsection (a) of this Code section shall be filed within ten days after the application for the zoning action is first filed. (Code 1981, Section OCGA § 36-67A-3[C], enacted by GA L. 1986, page 1269, Section 1, GA L. 1991, page 1365, Section 1).

I hereby certify that I have read the above and that:

I have**____ I have not ✓

within the two years immediately preceding this date, made any contribution(s) aggregating $250.00 or more to any local government official involved in the review or consideration of this application.

**If you have made such contributions, you must provide the data required below within ten (10) days of filing this application.

Name of Official(s): _____ Office: _____

Dollar Amount: _____ Date of Contribution: _____

Applicant's/Owner's Signature: Pierce Family, LP by Herbert David Pierce, partner **Date:** November 29, 2022

Applicant's/Owner's Name (Printed): Pierce Family, LP by Herbert David Pierce, partner

PLANNING AND DEVELOPMENT DEPARTMENT
2875 BROWNS BRIDGE ROAD, GAINESVILLE, GA, 30504
MAILING ADDRESS: PO BOX 1435, GAINESVILLE, GA 30503
t: 770-531-6809 | f: 770-531-3902

HALL COUNTY
We have it all in Hall

CAMPAIGN CONTRIBUTIONS DISCLOSURE FORM

This form must be completed by the applicant and property owner, or person representing the property owner, for all zoning actions.

OCGA § 36-67A-3[C] Disclosure of campaign contributions:

(b) When any applicant for zoning action has made, within two years immediately preceding the filing of the applicant's application for the zoning action, campaign contributions aggregating $250.00 or more to a local government official who will consider the application, it shall be the duty of the applicant to file a disclosure report with the governing authority of the respective local government showing:

(3) The name and official position of the local government official to whom the campaign contribution was made; and

(4) The dollar amount and description of each campaign contribution made by the applicant to the local government official during the two years immediately preceding the filing of the application for the rezoning action and the date of each such contribution.

(b) The disclosures required by subsection (a) of this Code section shall be filed within ten days after the application for the zoning action is first filed. (Code 1981, Section OCGA § 36-67A-3[C], enacted by GA L. 1986, page 1269, Section 1, GA L. 1991, page 1365, Section 1).

I hereby certify that I have read the above and that:

I have**____ I have not X

within the two years immediately preceding this date, made any contribution(s) aggregating $250.00 or more to any local government official involved in the review or consideration of this application.

**If you have made such contributions, you must provide the data required below within ten (10) days of filing this application.

Name of Official(s): _____ Office: _____

Dollar Amount: _____ Date of Contribution: _____

Applicant's/Owner's Signature: _____ **Date:** 11/30/2022

Applicant's/Owner's Name (Printed): Cameron Grogan

CRESCENT DRIVE TOWNHOME COMMUNITY

NARRATIVE

Applicants, Williams Brothers Development, and Charter Mellon, both located in Atlanta, Georgia, are proposing to build a townhome multifamily community located on Crescent Dr., bordering Highway 365 with access from Howard Rd. in Hall County, Georgia. The development entrance will be off Crescent Dr.

Project Description: The proposed project site is currently comprised of six contiguous land parcels. All parcels are under the same ownership. Three parcels have no road frontage or access, and three parcels have frontage along Crescent Dr. The six parcels total approximately 31 +/- acres. The subject site is in District 4, Hall County, Georgia. Per Hall County code, the development will comprise less than 150 residential units and therefore, only require one point of access.

The community will contain no more than 143 townhomes, comprised of a mix of front-loaded garage 2-story townhomes, and rear-loaded garage 3-story townhomes. The development's units will range in size from approximately 1,250 SF to 2,200 heated SF with 2 car garages. The site will be professionally maintained, and managed, and on-street parking will be prohibited. The proposed project will be platted as 1 parcel, and individual units will have a zero-foot front, rear, and side setback. Individual buildings will be spaced as allowed by fire regulations, and the fire department's approval of engineered plans.

Architectural elevations and floorplans are provided as supplemental guidelines for exterior roofing surfaces, building materials, and garage placement and width. Roof pitch may be shallower than 4:12 on dormers and porches. Building height may not exceed 38 feet from finish floor elevation to top of roof pitch. Developer may amend the internal layout and elevations from what is provided in this application so long as any changes are in compliance with Hall County building code and zoning conditions.

The open space will be utilized for storm water management, pocket parks, and a natural walking trail for residents. Additionally, an amenity building will be constructed for uses including, but not limited to, leasing office, restrooms, cluster mailbox unit, and common area for residents. A swimming pool and dog park will be provided for the resident's enjoyment.

Pedestrian connectivity will be provided with a 5' sidewalk on one side of the street. Front-loaded townhomes will have an 18' driveway in length from the garage door to the edge of street. Rear-loaded townhomes will not have a driveway. Additional off-street parking is provided throughout the development and adjacent to the amenity building and mailbox.

Setbacks and Buffers: All buffers will abide by the zoning conditions from the 02/10/22 BOC hearing. Side and rear buffers will have a 50 foot transitional buffer from the property line. The front buffer along Crescent Dr will meet the 55 foot buffer from the center line of the road or 30 feet from property line, whichever is greater. There will be no setbacks within the development.

Landscaping: Will be in compliance with Hall County buffer, tree, and other landscaping requirements. Since each unit will not be individually platted, the requirement for 2 trees per lot will not be required, but ornamental shrubbery and plantings will be provided.

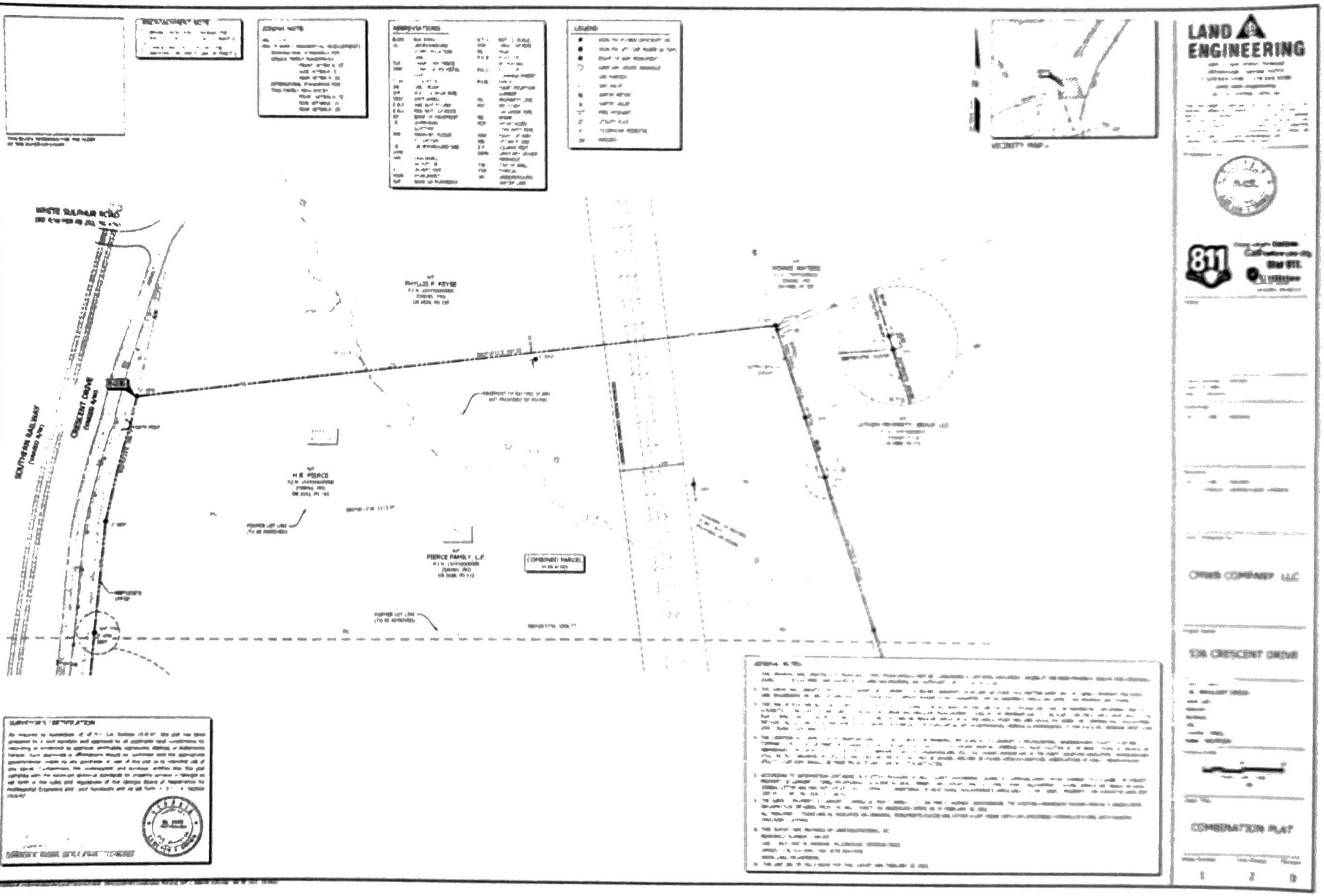
Street Lighting: Will be in compliance with Hall County code

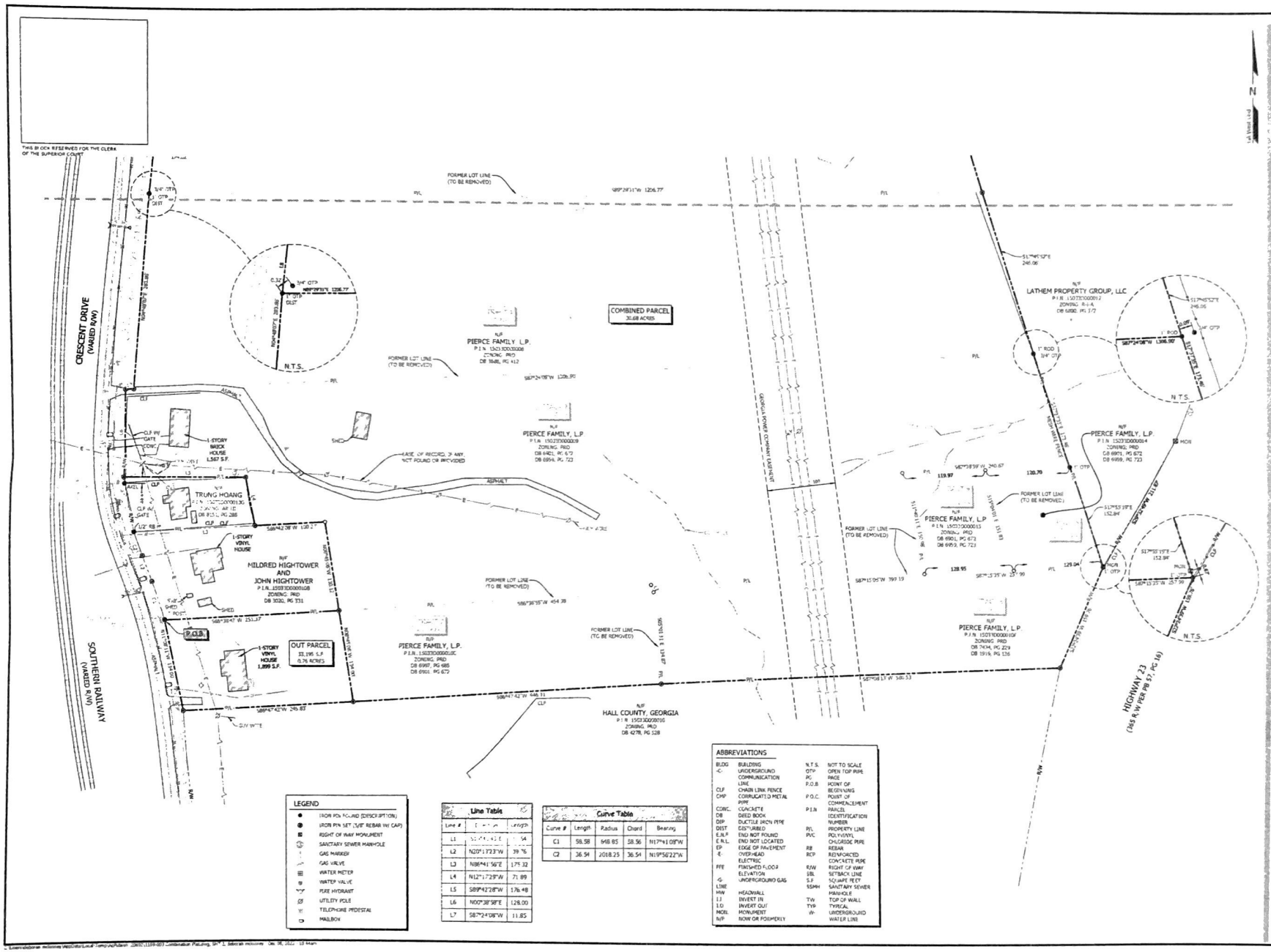
Traffic Study: Marc R. Acampora, P.E., LLC, Traffic Engineer, performed a traffic study for the proposed development.

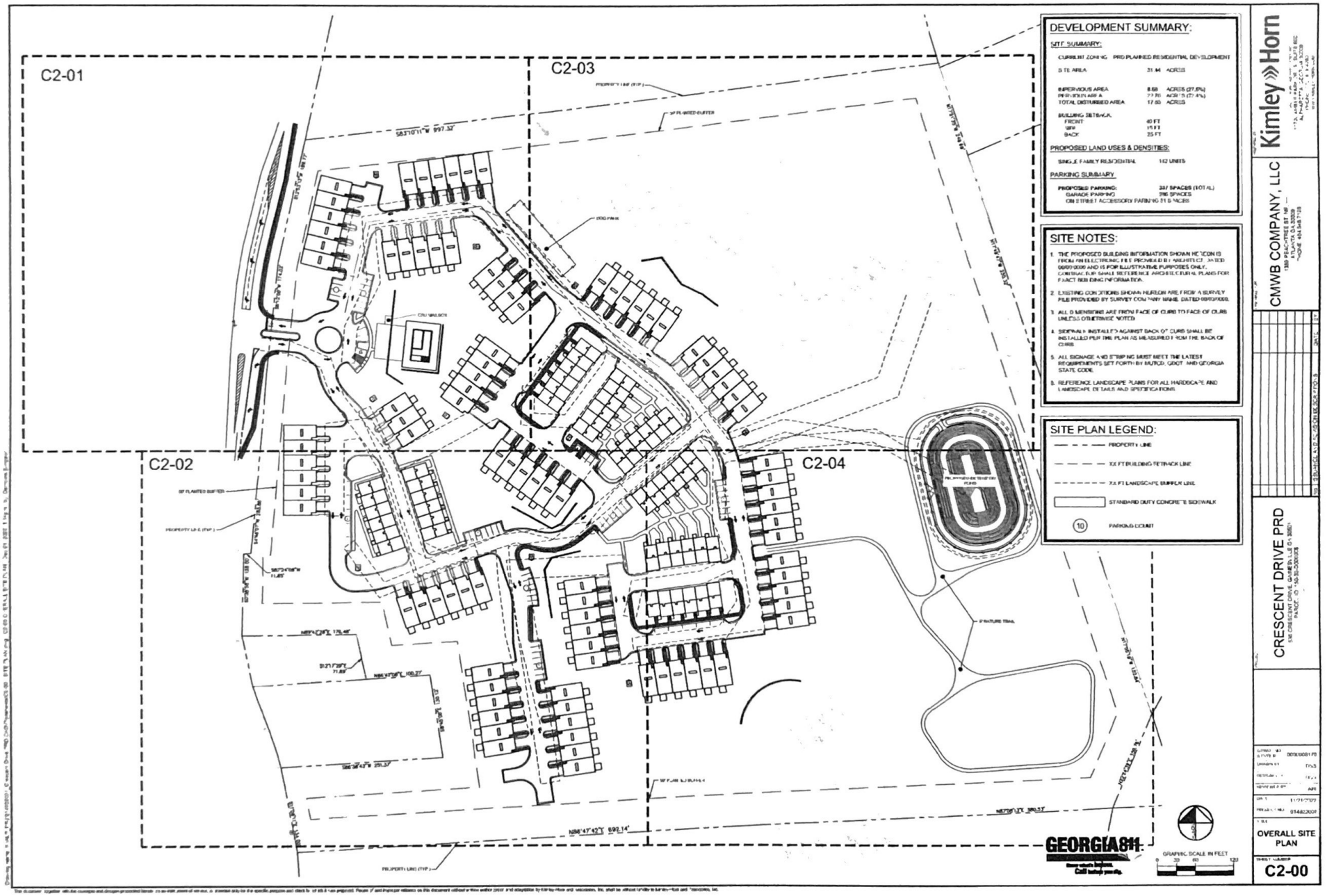
Architectural Standard and Building: The exterior construction of the buildings will be architectural asphalt shingles, and quality finishes including, but not limited, to lap-siding, board and batten, brick, and shake siding. The architectural finishes will be in compliance with Hall County code.

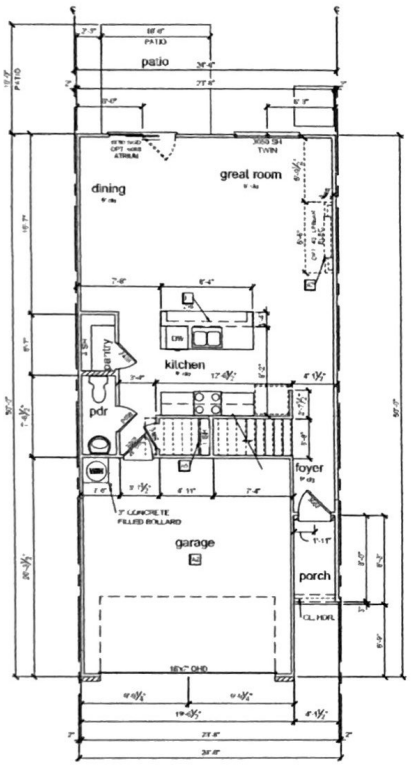
Signage: Signage for the property will meet the sign Standards for Specific Zoned districts in all County Ordinance 17.270.070.

Requested Zoning: The property is currently zoned PRD for 143 townhomes. The request is for an updated site plan and narrative to replace condition #1 approved at the 2/10/2022 Hall County Board of Commissioners Meeting.

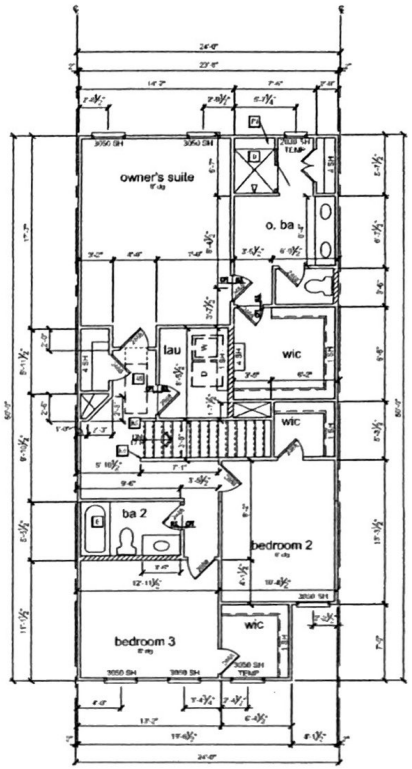

LAND ENGINEERING
811
WHITE SULPHUR ROAD
CRESCENT DRIVE
SOUTHERN RAILWAY
Phyllis P. Keyse
H.R. Pierce
Pierce Family, L.P.
COMBINED PARCEL
CRWB COMPANY, LLC
536 CRESCENT DRIVE
COMBINATION PLAT


CRESCENT DRIVE
(VARIED R/W)
SOUTHERN RAILWAY
(VARIED R/W)
HIGHWAY 23
(165' R.W. PER PB 57, PG 16)
FORMER LOT LINE
(TO BE REMOVED)
COMBINED PARCEL
30.68 ACRES
OUT PARCEL
33,195 S.F.
0.76 ACRES
P.O.B.
N.T.S.
PIERCE FAMILY, L.P.
P.I.N. 1503D000008
ZONING: PRD
DB 1848, PG 412
PIERCE FAMILY, L.P.
P.I.N. 1503D000009
ZONING: PRD
DB 6421, PG 672
DB 6954, Pg 723
PIERCE FAMILY, L.P.
P.I.N. 1503D000010
ZONING: PRD
DB 6901, PG 672
DB 6959, PG 723
PIERCE FAMILY, L.P.
P.I.N. 1503D000015
ZONING: PRD
DB 6901, PG 672
DB 6959, PG 723
PIERCE FAMILY, L.P.
P.I.N. 1503D000010F
ZONING: PRD
DB 7434, PG 229
DB 1919, PG 136
PIERCE FAMILY, L.P.
P.I.N. 1503D000010E
ZONING: PRD
DB 6967, PG 685
DB 6901, PG 672
LATHEM PROPERTY GROUP, LLC
P.I.N. 1503D000012
ZONING: R-1-A
DB 6892, PG 177
TRUNG HOANG
P.I.N. 1503D000013G
ZONING: AR-1E
DB 8151, PG 288
MILDRED HIGHTOWER
AND
JOHN HIGHTOWER
P.I.N. 1503D000016B
ZONING: PRD
DB 3020, PG 731
HALL COUNTY, GEORGIA
P.I.N. 1503D000016
ZONING: PRD
DB 4278, PG 128
1-STORY
BRICK
HOUSE
1,567 S.F.
1-STORY
VINYL
HOUSE
1,899 S.F.
SHED
ASPHALT
CLF
GATE
EDGE OF RECORD, IF ANY,
NOT FOUND OR PROVIDED
FORMER LOT LINE
(TO BE REMOVED)
N89°26'31"W 1256.77
S89°42'38"W 1,081.7
S89°38'47"W 251.39
S89°42'42"W 246.87
S89°42'42"W 646.31
S87°08'13"W 580.53
S89°38'35"W 454.39
S87°24'08"W 1226.95
S87°08'39"W 240.67
S87°15'05"W 769.19
S87°45'52"E 246.06
S87°45'52"E 245.06
S87°45'52"E 152.84
S87°55'19"E 152.84
S87°55'19"E 152.84
S87°45'52"E 125.95

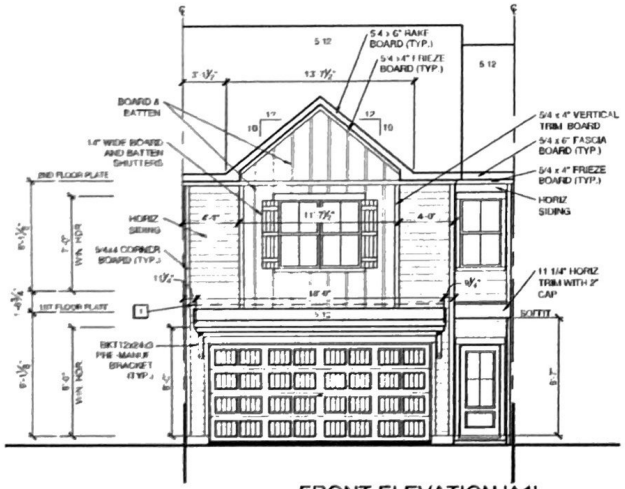

C2-01
C2-02
C2-03
C2-04
DEVELOPMENT SUMMARY:
SITE SUMMARY:
CURRENT ZONING PRD PLANNED RESIDENTIAL DEVELOPMENT
SITE AREA 31.44 ACRES
IMPERVIOUS AREA 8.68 ACRES (27.6%)
PERVIOUS AREA 22.76 ACRES (72.4%)
TOTAL DISTURBED AREA 17.60 ACRES
BUILDING SETBACK
FRONT 40 FT
SIDE 15 FT
BACK 25 FT
PROPOSED LAND USES & DENSITIES:
SINGLE FAMILY RESIDENTIAL 142 UNITS
PARKING SUMMARY
PROPOSED PARKING: 337 SPACES (TOTAL)
GARAGE PARKING 286 SPACES
ON STREET ACCESSORY PARKING 51 SPACES
SITE NOTES:
1. THE PROPOSED BUILDING INFORMATION SHOWN HEREON IS FROM AN ELECTRONIC FILE PROVIDED BY ARCHITECT JAMES 08/07/2020 AND IS FOR ILLUSTRATIVE PURPOSES ONLY. CONTRACTOR SHALL REFERENCE ARCHITECTURAL PLANS FOR EXACT BUILDING INFORMATION.
2. EXISTING CONDITIONS SHOWN HEREON ARE FROM A SURVEY FILE PROVIDED BY SURVEY COMPANY NAME DATED 08/07/2020.
3. ALL DIMENSIONS ARE FROM FACE OF CURB TO FACE OF CURB UNLESS OTHERWISE NOTED.
4. SIDEWALK INSTALLED AGAINST BACK OF CURB SHALL BE INSTALLED PER THE PLAN AS MEASURED FROM THE BACK OF CURB.
5. ALL SIGNAGE AND STRIPING MUST MEET THE LATEST REQUIREMENTS SET FORTH BY MUTCD, GDOT AND GEORGIA STATE CODE.
6. REFERENCE LANDSCAPE PLANS FOR ALL HARDSCAPE AND LANDSCAPE DETAILS AND SPECIFICATIONS.
SITE PLAN LEGEND:
PROPERTY LINE
XX FT BUILDING SETBACK LINE
XX FT LANDSCAPE BUFFER LINE
STANDARD DUTY CONCRETE SIDEWALK
10 PARKING COUNT
GEORGIA 811
GRAPHIC SCALE IN FEET
0 30 60 120
Kimley»Horn
CMWB COMPANY, LLC
CRESCENT DRIVE PRD
OVERALL SITE PLAN
C2-00



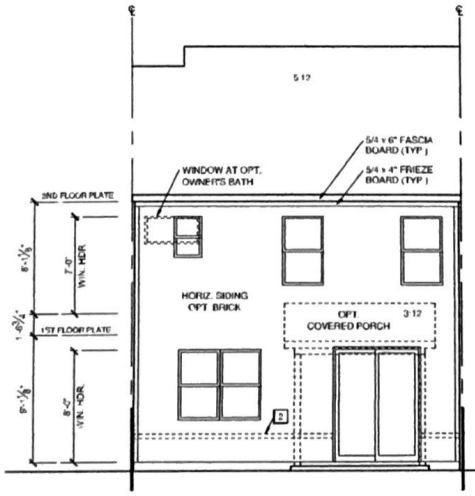
FIRST FLOOR PLAN 'B2'
1/8" = 1'-0" @ 11x17
1/4" = 1'-0" @ 22x34



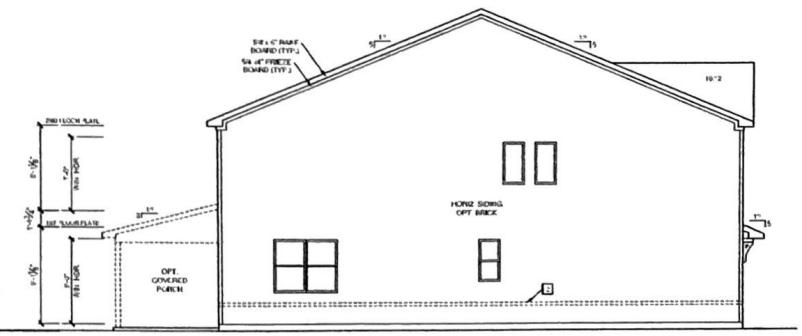
SECOND FLOOR PLAN 'B2'
1/8" = 1'-0" @ 11x17
1/4" = 1'-0" @ 22x34



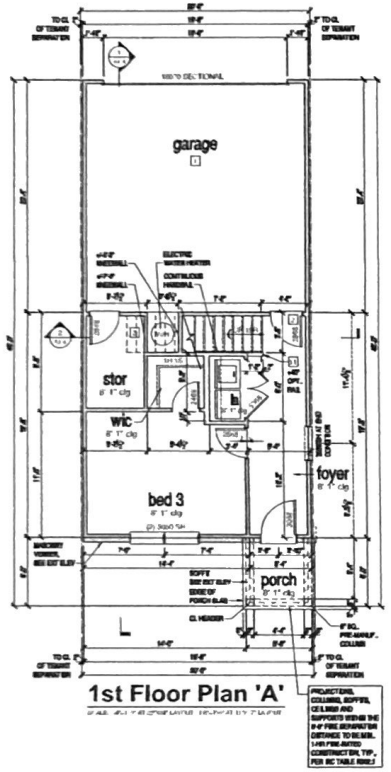
FRONT ELEVATION 'A1'
1/8" = 1'-0" @ 11x17
1/4" = 1'-0" @ 22x34



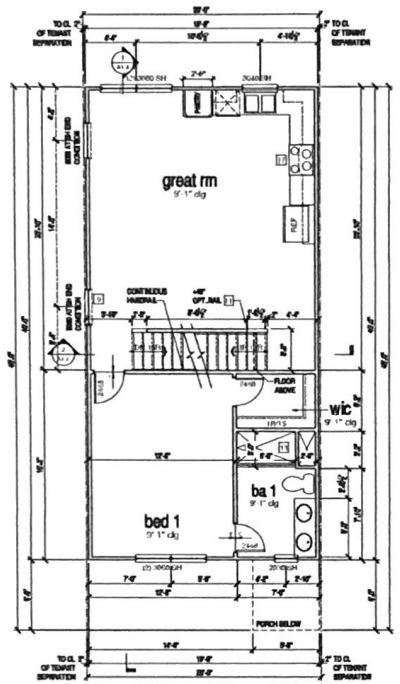
REAR ELEVATION 'A1'
1/8" = 1'-0" @ 11x17
1/4" = 1'-0" @ 22x34



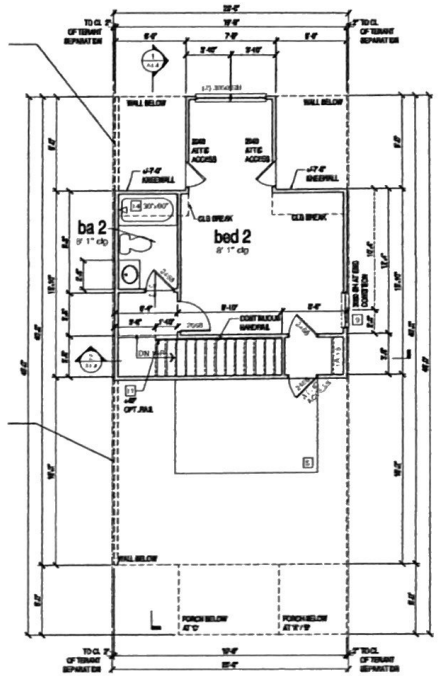
LEFT SIDE ELEVATION 'A1'
1/8" = 1'-0" @ 11x17
1/4" = 1'-0" @ 22x34



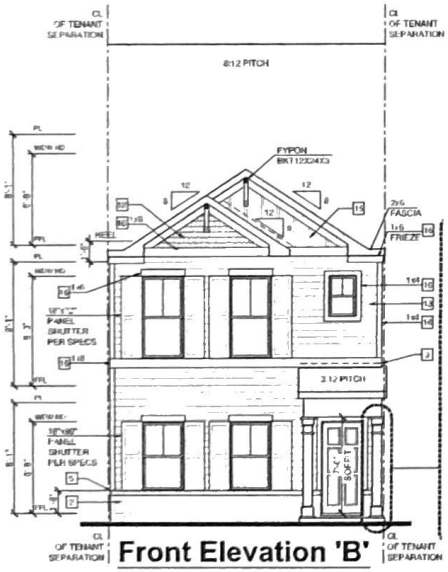
1st Floor Plan 'A'



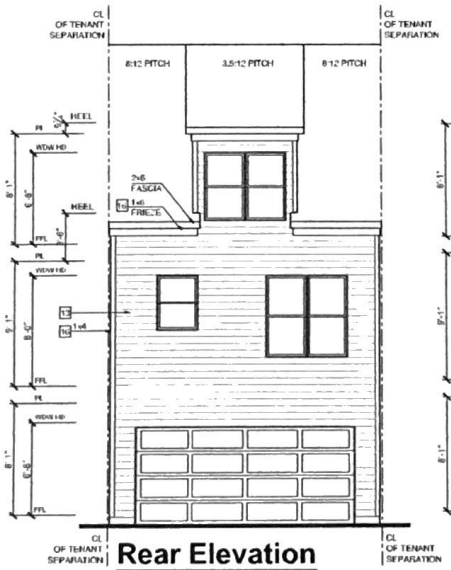
2nd Floor Plan 'A'



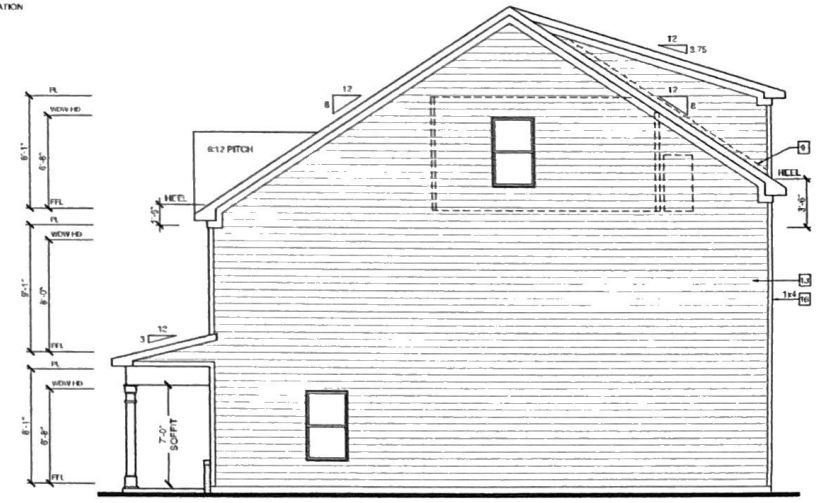
3rd Floor Plan



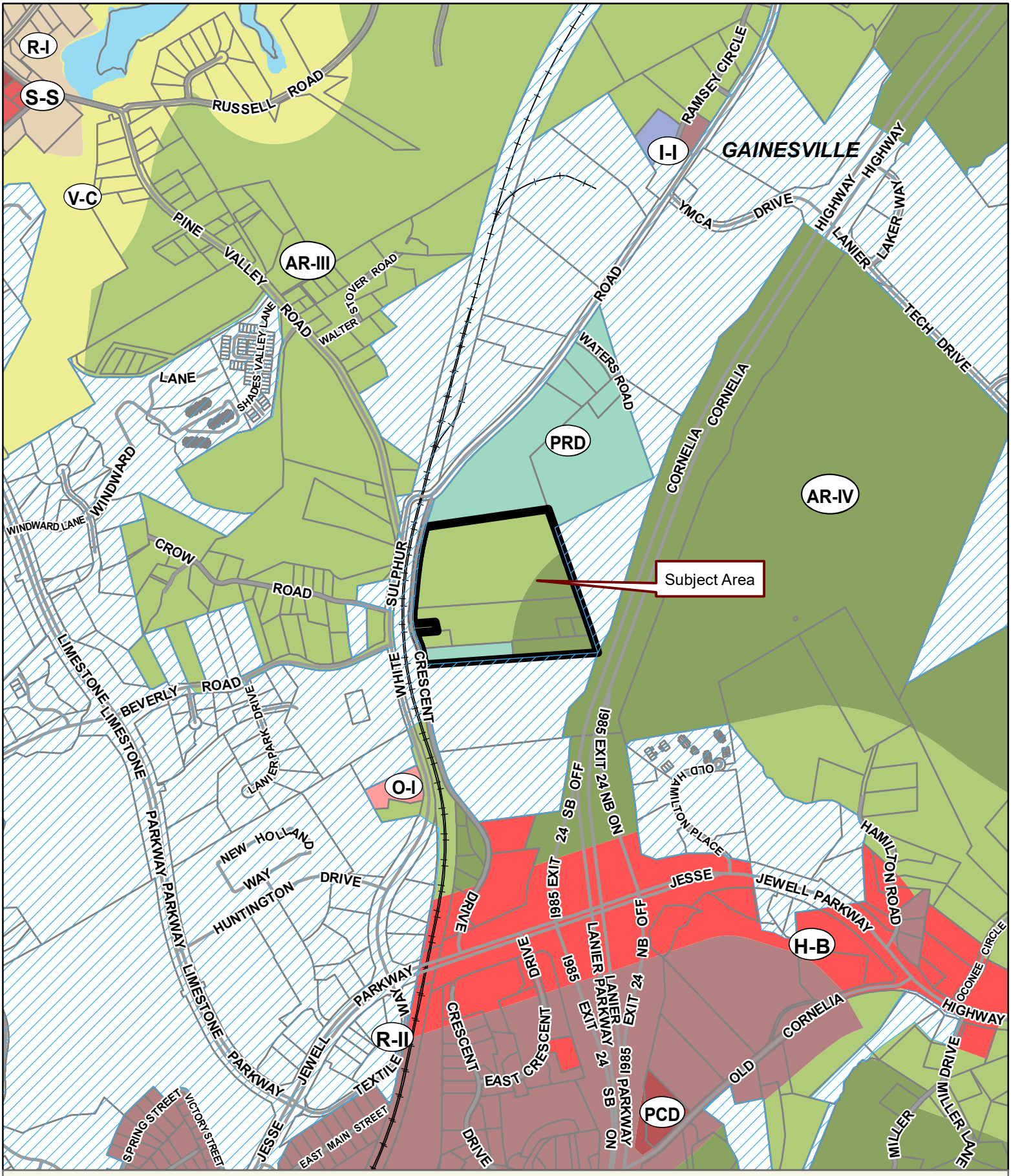
Front Elevation 'B' At Interior Unit Condition



Rear Elevation 'A/B/C' At Interior Unit Condition



Right Elevation 'C' At Right End Unit Condition

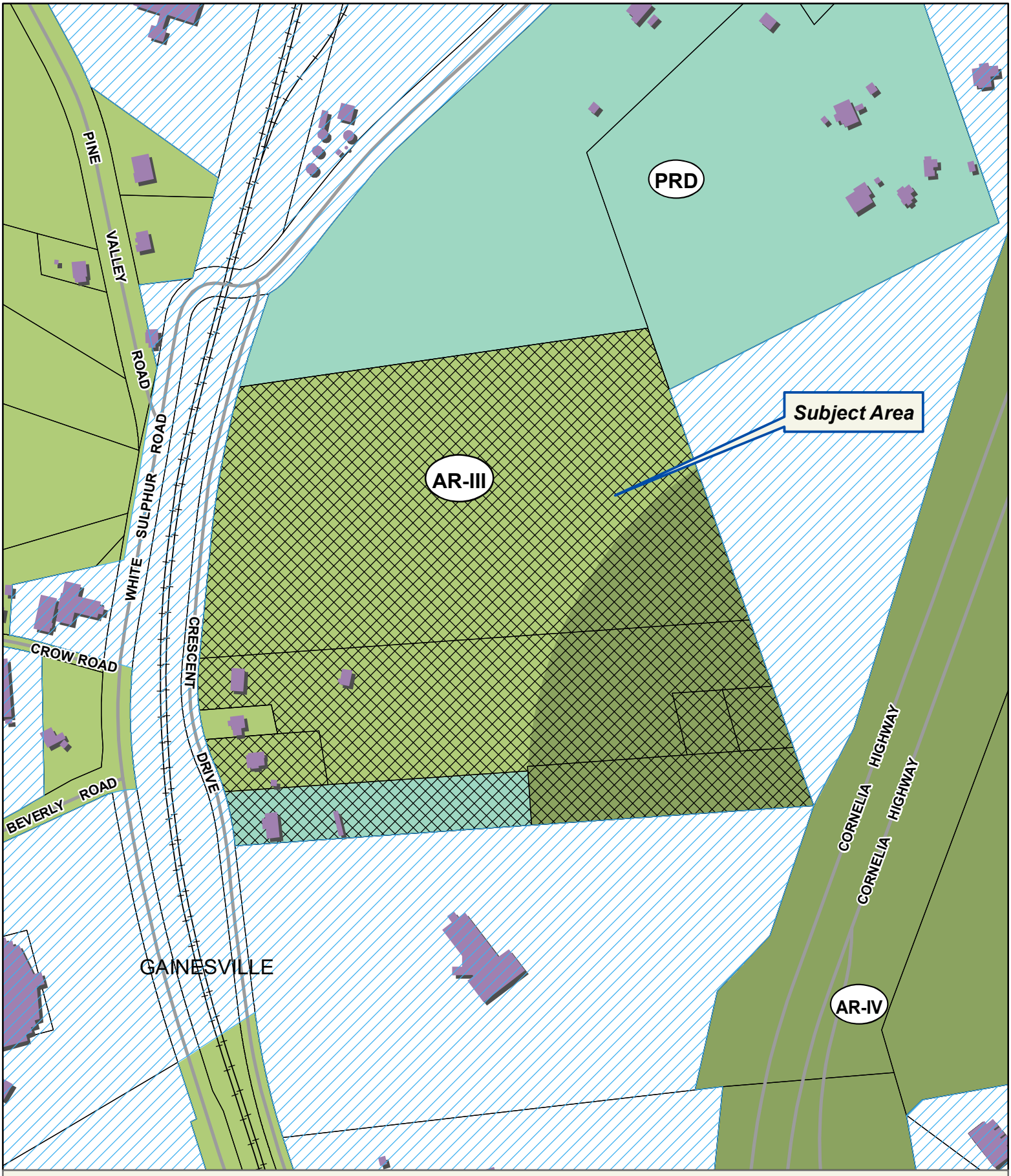


Applicant: WILLIAMS BROTHERS DEVELOPMENT, LLC
Tax Parcel #: 15033D000008, 000009, 000010C, 000010F, 000015, 000014, & 000010B
Location: 0, 490, 496, 508, & 536 CRESCENT DRIVE, GAINESVILLE, GA 30501
Commission District 4 **PC Mtg. Date:** 01/04/2022

0 300 600 1,200
Feet

Zoning Boundary
City Limits
Subject Area
Structure

N



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Location: 0, 490, 496, 508, & 536 CRESCENT DRIVE, GAINESVILLE, GA 30501
Commission District 4 **PC Mtg. Date:** 01/04/2022

0 75 150 300
Feet

Zoning Boundary
City Limits
Subject Area
Structure

N



Applicant: WILLIAMS BROTHERS DEVELOPMENT, LLC
Tax Parcel #: 15033D000008, 000009, 000010C, 000010F, 000015, 000014, & 000010B
Location: 0, 490, 496, 508, & 536 CRESCENT DRIVE, GAINESVILLE, GA 30501
Commission District 4 **PC Mtg. Date:** 01/04/2022

0 75 150 300
Feet

Zoning Boundary
City Limits
Subject Area

N


Dec 15, 2022 at 12:30:22 PM
508 Crescent Dr
Gainesville GA 30501
United States
ZONING NOTICE
AN APPLICATION HAS BEEN FILED WITH HALL COUNTY IN REGARD TO THE ZONING REGULATIONS AS THEY APPLY TO THIS PROPERTY
APPLICANT: WILLIAMS BROTHERS DEVELOPMENT LLC
REQUEST: AMEND CONDITIONS OF PRD FOR
143 UNIT TOWNHOME DEVELOPMENT
PUBLIC HEARINGS WILL BE HELD ON:
PLANNING COMMISSION
Date: —
Time: —
COUNTY COMMISSION
Date: JAN. 12, 2023
Time: 6:00 PM
HALL COUNTY GOVERNMENT CENTER, 2875 BROWNS BRIDGE ROAD, GAINESVILLE, GA
FOR MORE INFORMATION CALL: (770) 531-6809


Dec 15, 2022 at 12:30:06 PM
508 Crescent Dr
Gainesville GA 30501
United States
ZONING NOTICE


Dec 15, 2022 at 12:31:32 PM
490–598 Crescent Dr
Gainesville GA 30501
United States
ZONING NOTICE

PUBLISH Saturday, December 31, 2022

TO: Trent Sexton [tsexton@gainesvilletimes.com]
CLASSIFIEDS 770-535-6336
FAX: 770/532-8187

FROM: Ana Dominguez PO# ADominguez
HALL CO. PLANNING DEPT.
Customer # 4303 379217
PHONE: 770/531-6809 FAX: 770/531-3902

BILLING AND TEARSHEET for the following legal ad should be mailed to:
Hall County Planning Department
P.O. Box 1435
Gainesville, GA 30503

NOTICE is hereby given that the **Hall County Board of Commissioners** shall conduct a public hearing at the Hall County Government Center, 2nd Floor Meeting Room, 2875 Browns Bridge Road, Gainesville, Georgia, at 6:00 p.m. on **Thursday, January 12, 2023** to consider the following:

1. **0, 490, 496, 508 & 536 Crescent Drive | Amend Conditions/Revise site plan |** of a Planned Residential Development (PRD) on a 32.67± acre tract located on the east side of Crescent Drive approximately 253 feet from its intersection with White Sulphur Road| Zoned PRD; Tax Parcels 15033D000010F, -000014, -000015, -000010C, -000010B, -000009, & -000008 | **Proposed Use: revise the site plan of the previously approved 143-unit townhome development |** Commission District 3 | **Williams Brothers Development LLC, applicant.**

NOTE: In accordance with Georgia law, anyone who
(a) wishes to express opposition to the proposed rezoning and
(b) has made, within two years immediately preceding the filing of the proposed rezoning, campaign contributions aggregating $250 or more to a member of the County Commission shall file a disclosure of contributions with the Planning Department at least five (5) days prior to the first hearing of the proposed rezoning by the County Commission. (OCGA § 36-67A-3[C]).

AGENDA ITEM

Planning and Development

REPORT TO: **Work Session (01/09/23)**

REPORT TO: **Voting Meeting (01/12/23)**

ITEM NO: 730/2022

SUBJECT: **4139 Cagle Road | Use subject to County Commission Approval** | on a 7.43± acre tract located on the north side of Cagle Road approximately 1,637 feet from its intersection with Eli Jackson Road | Zoned AR-III & V-C; Tax Parcel 09099 000008 | **Proposed use: 2-lot subdivision** | Commission District 3 | **Robert & Valerie DeLeon, applicant.**

Meetings:

Work Session Date: 01/09/23 **Voting Meeting Date:** 01/12/23

Executive Summary:

Presenter: RD

Recommendation:
Approval, with conditions: 1. The development shall conform with the proposed narrative and site plan. 2. Standard Hall County plat approval process shall be followed. 3. The Board of Commission action letter shall be placed on the plat.

Purpose of Request:
4139 Cagle Road | Use subject to County Commission Approval | on a 7.43± acre tract located on the north side of Cagle Road approximately 1,637 feet from its intersection with Eli Jackson Road | Zoned AR-III & V-C; Tax Parcel 09099 000008 | Proposed use: 2-lot subdivision | Commission District 3 | Robert & Valerie DeLeon, applicant.

History:

Facts and Issues:

Options:

Funding Requested	$ 0.00
Are funds within current budget?	No
Source of Funds	
Does the action involve a Resolution, Ordinance, Contract, Agreement, etc.?	No
Has it been reviewed by the County Attorney?	Yes
Is there a deadline for this item?	

Approvals:

Submit	Approve	Budget	Finance
AD	RD	TS	WG

Attorney	Administration	Clerk
WLI	CR	JR

Attachments:

Board Memo
Recommendation Report
Application
Narrative
Site Plan
Maps
Environmental Health Comments
GDOT Comments
Public Works Comments
Fire Comments
Notice Sign Photos

HALL COUNTY
GEORGIA
We have it all in Hall

POST OFFICE DRAWER 1435
GAINESVILLE, GA 30503

t: 770.531.6809 | f: 770.531.3902

DIRECTOR
Randi Doveton

Hall County Government
PLANNING & DEVELOPMENT

To: Richard Higgins, Chairman
Kathy Cooper, District 1
Billy Powell, District 2
Gregg Poole, District 3
Jeff Stowe, District 4

From: Randi Doveton, Director

Date: December 5, 2022

Subject: **4139 Cagle Road | Use subject to County Commission Approval** | for a 2-lot subdivision | Robert & Valerie DeLeon, applicant.

The request before you is the conditional use application of Robert & Valerie DeLeon to allow a 2-lot subdivision on 7.43± acres within an AR-III and V-C district. This item is located within Commission District 3.

At their November 21, 2022 meeting, the Hall County Planning Commission voted to recommend approval of the Rezoning request with three (3) conditions **(4-0, Pilcher absent).**

There were no written comments submitted in advance of the Planning Commission meeting and no one spoke during the public forum.

There have been no changes to the request since the Planning Commission took action.

Planning Commission Approval Conditions:

1. The development shall conform with the proposed narrative and site plan.
2. Standard Hall County plat approval process shall be followed.
3. The Board of Commission action letter shall be placed on the plat.

HALL COUNTY PLANNING COMMISSION
RECOMMENDATION REPORT

Applicant ..... Robert and Valerie DeLeon

Request ..... Conditional Use Subject to County Commission Approval

Proposed Use ..... 2-lot subdivision

Size ..... 7.43 ± acres

Zoning ..... AR-III and V-C

Location ..... **4139 Cagle Road** | Tax Parcel 09099 000008

Commission District ..... Three

Planning Commission Date ..... November 21, 2022

Staff Recommendation ..... **Approval with conditions, based on the findings that this request is consistent with the Comprehensive Plan and that it meets the criteria outlined in 17.380.060.**

Planning Commission Recommendation.....**Approval, with conditions**

Vote: 4-0 (Pilcher Absent)

1. The development shall conform with the proposed narrative and site plan.
2. Standard Hall County plat approval process shall be followed.
3. The Board of Commission action letter shall be placed on the plat.

Public Forum:

There were no comments in support or opposition.

Summary Analysis

The applicant is requesting a use subject to County Commission approval for purpose of subdividing a 7.5 acre property into two lots for the purpose of constructing a home on 2.5 of those acres. The narrative submitted by the applicant states that they are turning 70 in the next year and a half and would like to give

their daughter and her husband 2.5 acres so that they can build their "dream home" and be close to one another. The property has dual zoning designations of V-C, Vacation Cottage, and AR-III, Agriculture Residential III. Within the Vacation Cottage (V-C, 17.50.040.K) minor subdivisions are subject to the approval of the County Commission.

The subject property is located on the north side of Cagle Road approximately 1,637 feet from its intersection with Eli Jackson Road.

No variances are being requested as part of this request.

Zoning Analysis

When considering a conditional use certain criteria must be considered.

(a) The existing land use pattern. **The subject property is located on the north side of Cagle Road and is zoned both Vacation Cottage (V-C, 17.50) and Agricultural Residential III (AR-III, 17.110). The proposed minor subdivision meets the area and setback requirements (17.240) for both zoning districts.**

(b) Whether the proposed use would have an adverse effect on the comprehensive land development plan. **The proposed use would not have an adverse effect on the comprehensive land development plan. The subject property is within the Residential future land use classification where the recommended density is not to exceed 2 dwelling units per acre.**

(c) Whether all proposed structures, equipment or material will be readily accessible for fire and police protection. **Any development to occur on the subject property will be subject to the review and approval through the Hall County permitting process and shall be subject to the all applicable local, state, and federal requirements.**

(d) Whether the proposed use will be of such location, size, and character that, in general, it will be in harmony with the appropriate and orderly development of the area in which it is proposed to be situated and will not be detrimental to the orderly development of adjacent properties or a deterrent to the improvement of adjacent properties in accordance with the zoning classification of such properties, the existing land use pattern, or the comprehensive land development plan. **The proposed use will be in harmony with the appropriate and orderly development of the area in which it is proposed to be situated and will not be detrimental to the orderly development of adjacent properties or a deterrent to the improvement of adjacent properties.**

(e) Whether, in the case of any use located in, or directly adjacent to, a residential district or area:

i. The nature and intensity of operations will be such that both pedestrian and vehicular traffic to and from the use and the assembly of persons in connection therewith will not be hazardous or inconvenient to, or incongruous with, said residential district or area, or conflict with the normal traffic of the neighborhood; and **The proposed development is not anticipated to lead to hazardous or inconvenient conditions for pedestrian or vehicular traffic.**

ii. The location and height of buildings, and other structures, and the crosswalks or pedestrian ways are nature and extent of screening, buffering or landscaping on the site will be such that the use will not hinder or discourage the appropriate development and use of adjacent land and buildings in conformance with existing zoning districts and development pattern. **The proposed development of the site will be such that the use will not hinder or discourage the appropriate**

development and use of adjacent land and buildings in conformance with existing zoning districts and development pattern.

(f) Whether the proposed use will increase the population density resulting in the increase or overtaxing of the load on public facilities such as schools, utilities, streets, etc.; or approval of the use would encourage adjacent areas to develop at higher densities than provided in the comprehensive plan resulting in the overtaxing of such public facilities. **No, the proposed development will not increase the population density resulting in the increase or overtaxing of public facilities. Only one single-family residence may be constructed on the subject property.**

(g) Whether the proposed use will cause a health hazard, a public safety problem, or nuisance created or excessively increasing traffic and associated congestion; creating a drainage problem; generating unnecessary disturbances due to noise, the emittance of smoke or other contaminants, odor, electrical interference or causing pollution to land, air and/or water. **Any development to occur on the subject property will be subject to the review and approval through the Hall County permitting process and shall be subject to the all applicable local, state, and federal requirements.**

(h) Whether the proposed change will adversely affect property values in adjacent areas. . **Multiple factors impact property value including construction types, proposed uses, and maintenance. Often it is difficult to determine the effect of a development on adjacent properties until the development is complete.**

(i) Whether there are substantial reasons why the property cannot be used for a permitted use in the district where the property is located. **Approval from the Board of Commissioners is required for any minor subdivision within the Vacation Cottage (V-C, 17.50) district.**

Per Planning Commission and Hall County Commission consideration and decision (17.380.060), the planning commission shall study the need and justification for the change based on a determination of the facts applicable to the particular case, and the following general lines of inquiry shall be considered, to wit:

1. Whether the zoning proposal will permit a use that is suitable in view of the use, development and zoning of adjacent and nearby property; **The proposed use is suitable in view of the use, development, and zoning of adjacent and nearby properties.**

2. Whether the zoning proposal will adversely affect the existing use or usability of adjacent or nearby property; **The zoning has already been established on the property and the current request is for a conditional use approval. The minor subdivision request will not adversely affect the existing uses or usability of adjacent or nearby property.**

3. Whether the property to be affected by the zoning proposal has a reasonable economic use as currently zoned; **The property is currently developed with a single-family residence and may continue to be used as such. This is a conditional use to subdivide the property into 2 parcels and is not a rezoning request.**

4. Whether the zoning proposal will result in a use which will or could cause an excessive or burdensome use of existing streets, transportation facilities, utilities, schools, police protection, fire protection, public health facilities or emergency medical service; **The proposed development is unlikely to cause an excessive or burdensome use of existing streets, transportation facilities, utilities, schools, police protection, fire protection, public health facilities, or emergency medical services.**

5. Whether the zoning proposal is in conformity with the policy and intent of the future land use plan for the physical development of the area; **The zoning has already been established on the property and the current request is for a conditional use approval. This minor subdivision request is in conformity with the policy and intent of the Residential future land use classification of the Comprehensive Plan.**

6. The extent to which property values are diminished by the existing zoning restrictions; **Staff has not identified that the existing property values have been impacted by the existing zoning.**

7. The extent to which the destruction of the subject property's value under the existing zoning promotes the health, safety, morals or general welfare of the public; **Staff is unable to comment on the impact of property values without a full market analysis. Multiple factors impact property value including construction types, proposed uses, and maintenance. Often it is difficult to determine the effect of a development on adjacent properties until the development is completed.**

8. The relative gain to the public as compared to the hardship imposed upon the individual property owner; **Staff has not identified a hardship imposed on the property owner as the property is currently zoned. This is a conditional use to subdivide the property into 2 parcels and is not a rezoning request.**

9. The length of time the property has been vacant as zoned considered in the context of land development in the area in the vicinity of the property; **The property is currently developed with a single-family residence and associated accessory structures.**

10. Whether there are other existing or changing conditions affecting the use or development of the property which give supporting grounds for either approval or disapproval of the zoning proposal; **Staff is not aware of any changing conditions that affect the use and development of the property.**

11. Whether the change would create an isolated district unrelated to the surrounding districts; **The zoning has already been established on the property and the current request is for a conditional use approval. This question is not applicable to this request.**

12. Whether the present zoning district boundaries are illogically drawn in relation to existing conditions in the area; **There is no evidence that the present zoning district boundaries are illogically drawn in relation to existing conditions in the area; this is a conditional use to subdivide the property into 2 parcels and is not a rezoning request.**

13. Whether the change requested is out of scale with the needs of the county as a whole or the immediate neighborhood; **This is a conditional use to subdivide the property into 2 parcels and is not a rezoning request.**

14. Whether it is impossible to find adequate sites for the proposed use in districts permitting such use and already appropriately zoned; **This is a conditional use to subdivide the property into 2 parcels and is not a rezoning request. The property is appropriately zoned.**

15. Whether the need for rezoning could be handled instead by a variance request to the [Planning Commission]; **This is a conditional use to subdivide the property into 2 parcels and is not a rezoning request.**

16. Whether there would be an ecological or pollution impact resulting from major modifications to the land if the request is granted; **The property will be required to meet all local, state, and federal requirements pertaining to stormwater management as part of the development process.**

17. Whether there is reasonable evidence based upon existing and anticipated land use that would indicate a mistake was made in the original zoning of the property; **There is no indication a mistake was made in the original zoning of the property. This is a conditional use to subdivide the property into 2 parcels and is not a rezoning request.**

- **Vacation Cottage (V-C)** standards are found in chapter 17.50 which include the permitted and conditional uses allowed within the V-C district. The standards for the **Agricultural Residential III (AR-III)** may be found in chapter 17.110.

Development Support and Constraints –Departmental /agency comments

Hall County Environmental Health
An email dated October 31, 2022 from Emily McGahee states "All proposed lots must meet Hall County Board of Health Lot Size Resolution requirements."

Hall County Fire Rescue
In an email dated November 2, 2022, Lieutenant John Hornick, NPQ Fire Inspector 1, Plans Review states "International Fire Code Section 503.2.1 requires fire apparatus access roads public or private to be 20 foot wide exclusive of shoulders, road will have to be widened to 20 feet to meet fire access code requirements."

Hall County Public Works and Utilities
In a memo dated November 3, 2022, from Srikanth Yamala, Director of Public Works and Utilities, the following comments were provided:

Engineering:
Further subdivisions of these lots will result in the necessity of a stormwater management plan, if the total number of lots reaches more than 6.

Traffic: No comments.

Utilities: No comments.

Georgia Department of Transportation
Per an email dated November 2, 2022, Parker Niebauer, District 1, Traffic Operations supervisor states that this project will **not** require GDOT coordination.

- **Excerpts from the minutes of the November 21, 2022 meeting**

Applicant's Presentation:

Randi Doveton, Planning Director, presented a summary of the request.

Robert Deleon, 4139 Cagle Mill, Lula, presented the request. The applicant stated that the property is their retirement home where they would like their daughter to build her own home to be close to them.

Public Forum:

There were no comments in support or opposition.

***Motion:* A motion to approve, with conditions was made by Mr. Hunt and seconded by Mr. Bell. Vote: 4-0 (Pilcher absent)**

Conditions:

1. *The development shall conform with the proposed narrative and site plan.*
2. *Standard Hall County plat approval process shall be followed.*
3. *The Board of Commission action letter shall be placed on the plat.*

PLANNING AND DEVELOPMENT DEPARTMENT
2875 BROWNS BRIDGE ROAD, GAINESVILLE, GA, 30504
MAILING ADDRESS: PO BOX 1435, GAINESVILLE. GA 30503
t: 770-531-6809 I f: 770-531-3902

HALL COUNTY
GEORGIA
We have it all in Hall

CONDITIONAL USE APPLICATION

Applicant (Name & Mailing Address)

Robert & Valerie DeLeon
4139 Cagle Road
Lula, GA. 30554

Phone 404-538-1046

Email Address bobdeon@bellsouth.net

Property Owner (Name & Mailing Address)

same as applicant

Phone

Email Address

Proposed Use 2 lot division

Contact Person (Name & Mailing Address)

Phone

Email Address

Tax Parcel Number

Location Address 4139 Cagle Road

Status of Applicant

X Owner
☐ Option to Purchase
☐ Area Resident
☐ Other

Zoning: AR-III / V-C

Acreage 7.57

Requested Action

Permissive Use:
☐ HCPC X HCC

Fee:$ 400.00

Receipt #: 859049

Check #CC: 4089195

I hereby certify that the above information and all attached information are true and correct.

Sign Valerie de Leon Date: 10/6/22

Applicant must complete all information above. Failure to complete this section will result in the refusal of the application. The Planning Department has 15 days to review all applications and will set the dates for each application. If the application is found insufficient, an agenda date will not be set until the required information is submitted. Please note that the Planning Commission and County Commission dates are tentative.

Application Withdrawal: I hereby **withdraw** the application.

Sign Date:

Staff Use Only

Application Date:

Taken by:

Tentative Planning Commission Date: 11/21/22

Tentative County Commission Date: 01/12/23

County Commission District: 3

ZON2022-00092

PLANNING AND DEVELOPMENT DEPARTMENT
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HALL COUNTY
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CAMPAIGN CONTRIBUTIONS DISCLOSURE FORM

This form must be completed by the applicant and property owner, or person representing the property owner, for all zoning actions.

OCGA § 36-67A-3[C] Disclosure of campaign contributions:

(b) When any applicant for zoning action has made, within two years immediately preceding the filing of the applicant's application for the zoning action, campaign contributions aggregating $250.00 or more to a local government official who will consider the application, it shall be the duty of the applicant to file a disclosure report with the governing authority of the respective local government showing:

(3) The name and official position of the local government official to whom the campaign contribution was made; and

(4) The dollar amount and description of each campaign contribution made by the applicant to the local government official during the two years immediately preceding the filing of the application for the rezoning action and the date of each such contribution.

(b) The disclosures required by subsection (a) of this Code section shall be filed within ten days after the application for the zoning action is first filed. (Code 1981, Section OCGA § 36-67A-3[C], enacted by GA L. 1986, page 1269, Section 1, GA L. 1991, page 1365, Section 1).

I hereby certify that I have read the above and that:

I have**____ I have not ✓

within the two years immediately preceding this date, made any contribution(s) aggregating $250.00 or more to any local government official involved in the review or consideration of this application.

**If you have made such contributions, you must provide the data required below within ten (10) days of filing this application.

Name of Official(s): _____ Office: _____

Dollar Amount: _____ Date of Contribution: _____

Applicant's/Owner's Signature: _____ **Date:** 10-6-22

Applicant's/Owner's Name (Printed): ROBERT DELEON

PLANNING AND DEVELOPMENT DEPARTMENT
2875 BROWNS BRIDGE ROAD, GAINESVILLE, GA, 30504
MAILING ADDRESS: PO BOX 1435, GAINESVILLE. GA 30503
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HALL COUNTY
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I hereby certify that I have read the above and that:

I have**____ I have not X

within the two years immediately preceding this date, made any contribution(s) aggregating $250.00 or more to any local government official involved in the review or consideration of this application.

**If you have made such contributions, you must provide the data required below within ten (10) days of filing this application.

Name of Official(s): _____ Office: _____

Dollar Amount: _____ Date of Contribution: _____

Applicant's/Owner's Signature: Valerie de Leon **Date:** 10/6/22

Applicant's/Owner's Name (Printed): Valerie DeLeon

Michelle Yang (Planning)

From: Robert deleon <bobdeleon@bellsouth.net>
Sent: Wednesday, October 12, 2022 4:36 PM
To: Michelle Yang (Planning); Anna de Leon; Robby Coats; Valerie de Leon
Subject: 4139 Cagle rd Lula Subdivided into 2 lots
Attachments: Coats plot.jpg; soil sample.jpeg

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hi Michelle,
I will be turning 70 in the next year and a half, I wanted a house were I could live on a main floor and have my daughter next to us to help us in our later years.
I would like to subdivide our 7.5 acres so that I can give my daughter and her husband 2.5 acres next door to build their dream home, so when they have kids they will be close to us so we can help each other.
Please do all possible to expedite our request.
Please find the plat which also shows where they plan on building their home as well as a soil sample.

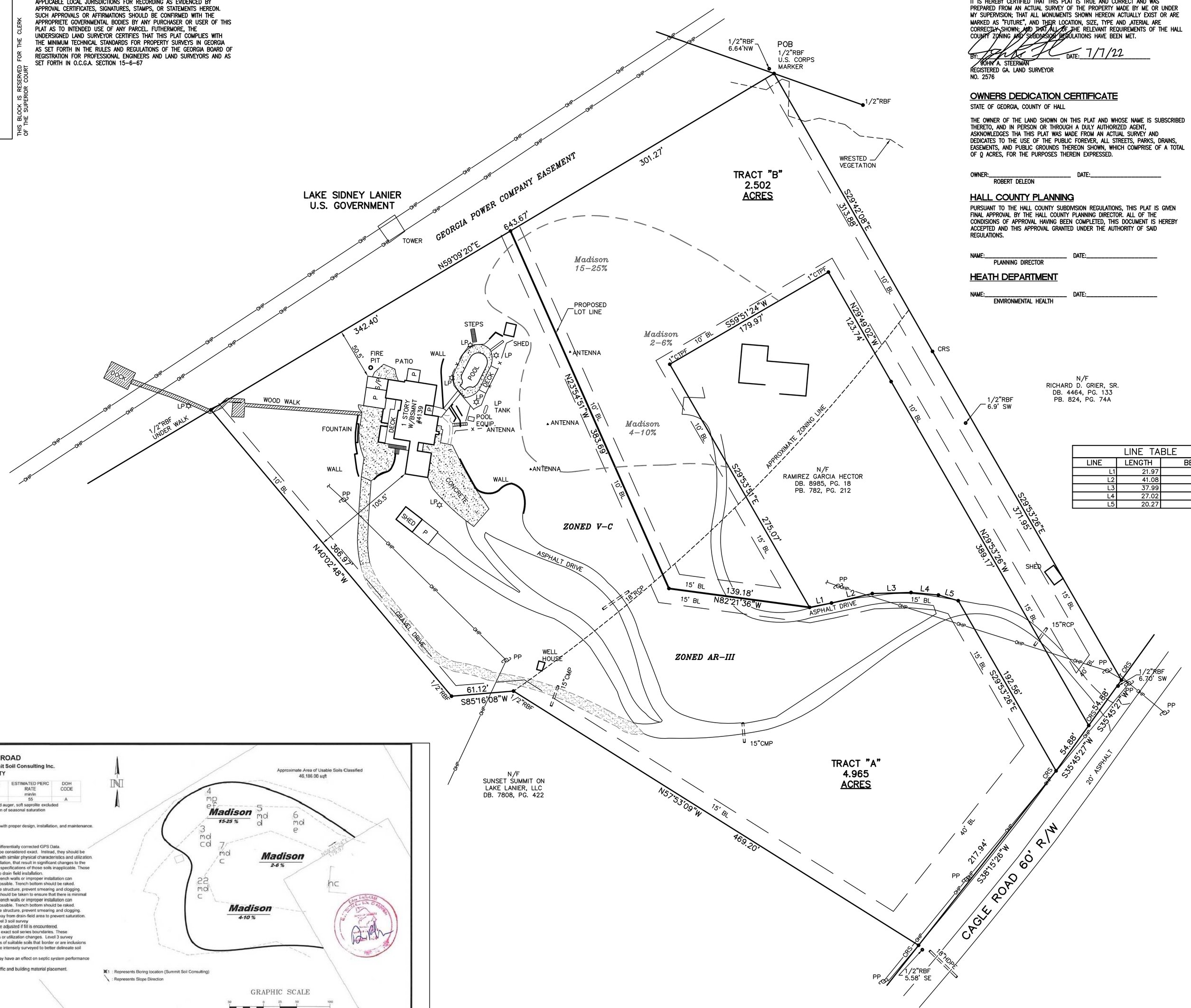
Sincerely,
Robert Deleon

THIS BLOCK IS RESERVED FOR THE CLERK OF THE SUPERIOR COURT

AS REQUIRED BY SUBSECTION (d) OF O.C.G.A. SECTION 15-6-67, THIS PLAT HAS BEEN PREPARED BY A LAND SURVEYOR AND APPROVED BY ALL APPLICABLE LOCAL JURISDICTIONS FOR RECORDING AS EVIDENCED BY APPROVAL CERTIFICATES, SIGNATURES, STAMPS, OR STATEMENTS HEREON. SUCH APPROVALS OR AFFIRMATIONS SHOULD BE CONFIRMED WITH THE APPROPRIETE GOVERNMENTAL BODIES BY ANY PURCHASER OR USER OF THIS PLAT AS TO INTENDED USE OF ANY PARCEL. FUTHERMORE, THE UNDERSIGNED LAND SURVEYOR CERTIFIES THAT THIS PLAT COMPLIES WITH THE MINIMUM TECHNICAL STANDARDS FOR PROPERTY SURVEYS IN GEORGIA AS SET FORTH IN THE RULES AND REGULATIONS OF THE GEORGIA BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS AND AS SET FORTH IN O.C.G.A. SECTION 15-6-67

LEGEND

RBF	REBAR FOUND (1/2" REBAR)
CRS	CAPPED REBAR SET (1/2" REBAR)
OTF	OPEN TOP FOUND
CTF	CRIMP TOP FOUND
MNS	MAG NAIL SET
	JUNCTION BOX
LLL	LAND LOT LINE
	LIGHT POLE
MH	MANHOLE
	PROPERTY LINE
BL	BUILDING LINE
C.L.F	CHAIN LINK FENCE
C/O	SEWER CLEAN OUT
DE	DRAINAGE EASEMENT
	DROP INLET
RBF	REBAR FOUND
R/W	RIGHT-OF-WAY
SE	SANITARY SEWER EASEMENT
CRZ	CRITICAL ROOT ZONE
UE	UTILITY EASEMENT
	FIRE HYDRANT
	SINGLE WING CATCHBASIN
	DOUBLE WING CATCHBASIN
	WATER VALVE
	GAS VALVE
	HEADWALL



LINE TABLE		
LINE	LENGTH	BEARING
L1	21.97	N79°01'48"E
L2	41.08	N76°58'58"E
L3	37.99	N88°22'02"E
L4	27.02	S84°47'46"E
L5	20.27	S74°00'44"E

SURVEYORS CERTIFICATE

IT IS HEREBY CERTIFIED THAT THIS PLAT IS TRUE AND CORRECT AND WAS PREPARED FROM AN ACTUAL SURVEY OF THE PROPERTY MADE BY ME OR UNDER MY SUPERVISION; THAT ALL MONUMENTS SHOWN HEREON ACTUALLY EXIST OR ARE MARKED AS "FUTURE", AND THEIR LOCATION, SIZE, TYPE AND ,ATERIAL ARE CORRECTLY SHOWN; AND THAT ALL OF THE RELEVANT REQUIREMENTS OF THE HALL COUNTY ZONING AND SUBDIVISION REGULATIONS HAVE BEEN MET.

BY: _____ DATE: 7/1/22
JOHN A. STEERMAN
REGISTERED GA. LAND SURVEYOR
NO. 2576

OWNERS DEDICATION CERTIFICATE

STATE OF GEORGIA, COUNTY OF HALL

THE OWNER OF THE LAND SHOWN ON THIS PLAT AND WHOSE NAME IS SUBSCRIBED THERETO, AND IN PERSON OR THROUGH A DULY AUTHORIZED AGENT, ASKNOWLEDGES THA THIS PLAT WAS MADE FROM AN ACTUAL SURVEY AND DEDICATES TO THE USE OF THE PUBLIC FOREVER, ALL STREETS, PARKS, DRAINS, EASEMENTS, AND PUBLIC GROUNDS THEREON SHOWN, WHICH COMPRISE OF A TOTAL OF 0 ACRES, FOR THE PURPOSES THEREIN EXPRESSED.

OWNER:_____ DATE:_____
ROBERT DELEON

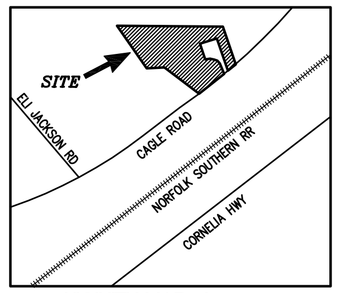
HALL COUNTY PLANNING

PURSUANT TO THE HALL COUNTY SUBDIVISION REGULATIONS, THIS PLAT IS GIVEN FINAL APPROVAL BY THE HALL COUNTY PLANNING DIRECTOR. ALL OF THE CONDISIONS OF APPROVAL HAVING BEEN COMPLETED, THIS DOCUMENT IS HEREBY ACCEPTED AND THIS APPROVAL GRANTED UNDER THE AUTHORITY OF SAID REGULATIONS.

NAME:_____ DATE:_____
PLANNING DIRECTOR

HEATH DEPARTMENT

NAME:_____ DATE:_____
ENVIRONMENTAL HEALTH



VICINITY MAP nts

GENERAL NOTES

TRACT "A"
THIS PLAT HAS BEEN CALCULATED FOR CLOSURE BY LATITUDES AND DEPARTURES AND IS FOUND ACCURATE TO WITHIN ONE FOOT IN 24,726 FEET.

TRACT "B"
THIS PLAT HAS BEEN CALCULATED FOR CLOSURE BY LATITUDES AND DEPARTURES AND IS FOUND ACCURATE TO WITHIN ONE FOOT IN 454,195 FEET.

THE FIELD DATA UPON WHICH THIS PLAT IS BASED HAS A CLOSURE PRECISION OF ONE FOOT IN 10,000+ FEET AND AN ANGULAR ERROR OF 02" PER ANGLE POINT AND WAS ADJUSTED USING COMPASS RULE.

A NIKON - TOTAL STATION WAS USED TO OBTAIN THE LINEAR AND ANGULAR MEASUREMENTS USED IN THE PREPARATION OF THIS PLAT.

FENCES SHOULD NOT BE PLACED USING SIDE DIMENSIONS FROM HOUSE OR STRUCTURE.

CERTIFICATION IS MADE TO PERSON(S) NAMED ON THIS PLAT AND IS NOT TRANSFERABLE TO OTHERS.

UTILITIES SHOWN ARE LOCATIONS OF GROUND IDENTIFIABLE ITEMS. ADDITIONAL UTILITES MAY EXIST ABOVE OR BELOW GROUND. THE SURVEYOR ACCEPTS NO RESPONSIBILTY FOR THE COMPLETENESS OF THIS DATA.

THIS PROPERTY IS SUBJECT TO ALL RIGHT OF WAYS AND EASEMENTS SHOWN OR NOT SHOWN, RECORDED OR UNRECORDED

FLOOD NOTE:

BASED ON GRAPHIC DETERMINATION, THIS PROPERTY DOES NOT LIE WITHIN A FEMA/FIRM SPECIAL FLOOD HAZARD AREA PER COMMUNITY PANEL NO. 13089C0062K DATED 8/5/19.

ZONING: V-C

VACATION COTTAGE DISTRICT

MIN. LOT AREA: 35,000 SF
MIN LOT FRONTAGE: 50'

SETBACKS:
FRONT-30 FEET
SIDE-10 FEET
REAR-20 FEET
REAR ALONG CORPS. PROPERTY-0 FEET

ZONING: AR-III

VACATION COTTAGE DISTRICT

MIN. LOT AREA: 43,560 SF
MIN LOT FRONTAGE: 50'

SETBACKS:
FRONT-40 FEET
SIDE-15 FEET
REAR-25 FEET
REAR ALONG CORPS. PROPERTY-0 FEET

LOT AREAS

TOTAL LOT AREA: 7.467 ACRES
TRACT "A": 4.965 ACRES
TRACT "B": 2.502 ACRES

OWNER/SUBDIVIDER

ROBERT DELEON
4139 CAGLE ROAD
LULA, GA. 30554
404-538-1046

PARCEL NUMBER

09099 000008

UTILITIES

WATER: PRIVATE WELL
SEWER: ON-SITE

SURVEY

SURVEY BY SCI DEVELOPMENT SERVICES
DATED MARCH 1, 2022

GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 inch = 50 ft

REVISIONS					
1.					
2.					
3.					
4.					
5.					

SCI Development Services
ENGINEERS - SURVEYORS - PLANNERS
2020 WESTSIDE COURT — SUITE E — SNELLVILLE, GEORGIA 30078
(770) 736-7666 FAX (770) 736-4623
MAIL@SURVEYCONCEPTS.NET

MINOR SUBDIVISION PLAT FOR:
ROBERT DELEON
4139 CAGLE ROAD
LAND LOT 99 9th DISRICT
HALL COUNTY, GEORGIA

DATE	DRAWN	CHECKED
7/6/22	DCP	JAS

SCALE 1"=50'

SHEET TITLE
MINOR SUBDIVISION PLAT

PROJECT NUMBER
55578

1

GEORGIA REGISTERED LAND SURVEYOR No. 2576 JOHN A. STEERMAN
7/1/22

782-212A
FYI

NOTES:

THIS PROPERTY IS NOT LOCATED WITHIN A FLOOD HAZARD AREA AS PER FIRM FLOOD INSURANCE RATE MAP OF HALL COUNTY, GA. COMMUNITY PANEL NO. 130 486 0050 D EFFECTIVE DATE: NOVEMBER 2, 1983.

EQUIPMENT USED FOR MEASUREMENT: TOPCON G.T.S. 303.

IN MY OPINION, THIS PLAT IS A CORRECT REPRESENTATION OF THE LAND PLATTED, & HAS BEEN PREPARED IN CONFORMITY WITH THE MINIMUM STANDARDS AND REQUIREMENTS OF LAW.

AREA: 1.52 Acres

THE FIELD DATA UPON WHICH THIS PLAT IS BASED HAS A CLOSURE PRECISION OF ONE FOOT IN ____ FEET AND AN ANGULAR ERROR OF 00°00'00" PER ANGLE POINT, AND WAS ADJUSTED USING LEAST SQUARES RULE. PARTY: T.D. / J.S. F.B. L.L.

THIS PLAT HAS BEEN CALCULATED FOR CLOSURE AND WAS FOUND TO BE ACCURATE WITHIN ONE FOOT IN ____ FEET.

THIS SURVEY WAS NOT PREPARED FROM THE AID OF A TITLE SEARCH AND IS SUBJECT TO ANY RESTRICTIONS OR EASEMENTS THAT MIGHT BE RECORDED.

Point "A" TO Point "B"
Along C/L Of Drive

COURSE	BEARING	DISTANCE
L-1	N 39°34'55"W	18.57'
L-2	N 39°31'09"W	48.11'
L-3	N 46°24'13"W	43.83'

Point "B" TO Point "C"
Along C/L Of Drive

COURSE	BEARING	DISTANCE
L-4	N 59°30'53"W	27.08'
L-5	N 79°53'28"W	24.18'
L-6	N 87°27'13"W	24.03'
L-7	S 72°12'53"W	2.58'

Point "C" TO Point "D"
Along C/L Of Drive

COURSE	BEARING	DISTANCE
L-8	N 71°34'32"W	28.35'
L-9	N 69°08'12"W	28.35'
L-10	N 65°07'26"W	42.15'
L-11	N 62°49'30"W	34.05'
L-12	N 58°45'03"W	34.05'
L-13	N 55°24'05"W	31.01'
L-14	N 51°49'23"W	31.01'
L-15	N 48°15'42"W	31.01'
L-16	N 44°08'10"W	31.01'
L-17	N 41°45'33"W	31.01'
L-18	N 32°44'15"W	35.86'

Along Northerly Edge Of Drive

COURSE	BEARING	DISTANCE
B1	N 74°19'10"W	20.57'
B2	N 69°08'12"W	42.82'
B3	N 65°07'26"W	37.86'
B4	N 62°49'30"W	41.26'
B5	N 58°45'03"W	41.26'
B6	N 55°24'05"W	41.26'
B7	N 51°49'23"W	41.26'
B8	N 48°15'42"W	41.26'
B9	N 44°08'10"W	41.26'
B10	N 41°45'33"W	41.26'
B11	N 32°44'15"W	21.87'

SURVEY FOR:

HAROLD MULLINS, JR. & LISA G. MULLINS

LOCATED IN:

LAND LOT 99
9TH LAND DISTRICT
HALL COUNTY, GEORGIA

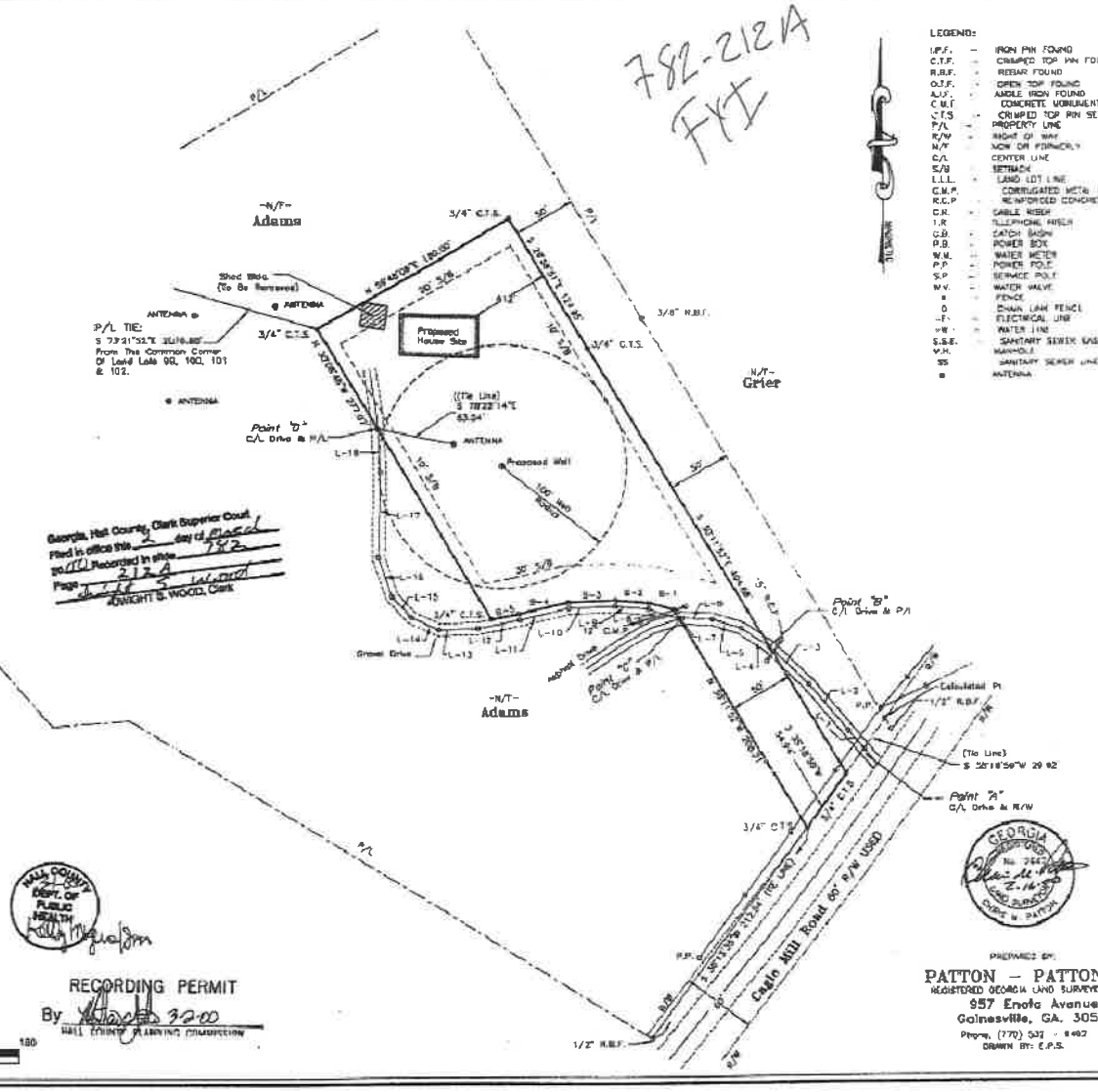
SCALE: 1" = 60' DATE: 02 - 18 - 2000
JN: 00-085 (DRAFT - 1)

60 0 60 120 180
GRAPHIC SCALE - FEET

Georgia, Hall County, Clerk Superior Court
Filed in office this 2 day of March 2000
at 10:00 Recorded in plat
Page 782 212A
DWIGHT S. WOOD, Clerk

HALL COUNTY DEPT. OF PUBLIC HEALTH

RECORDING PERMIT
By [signature] 3-2-00
HALL COUNTY PLANNING COMMISSION



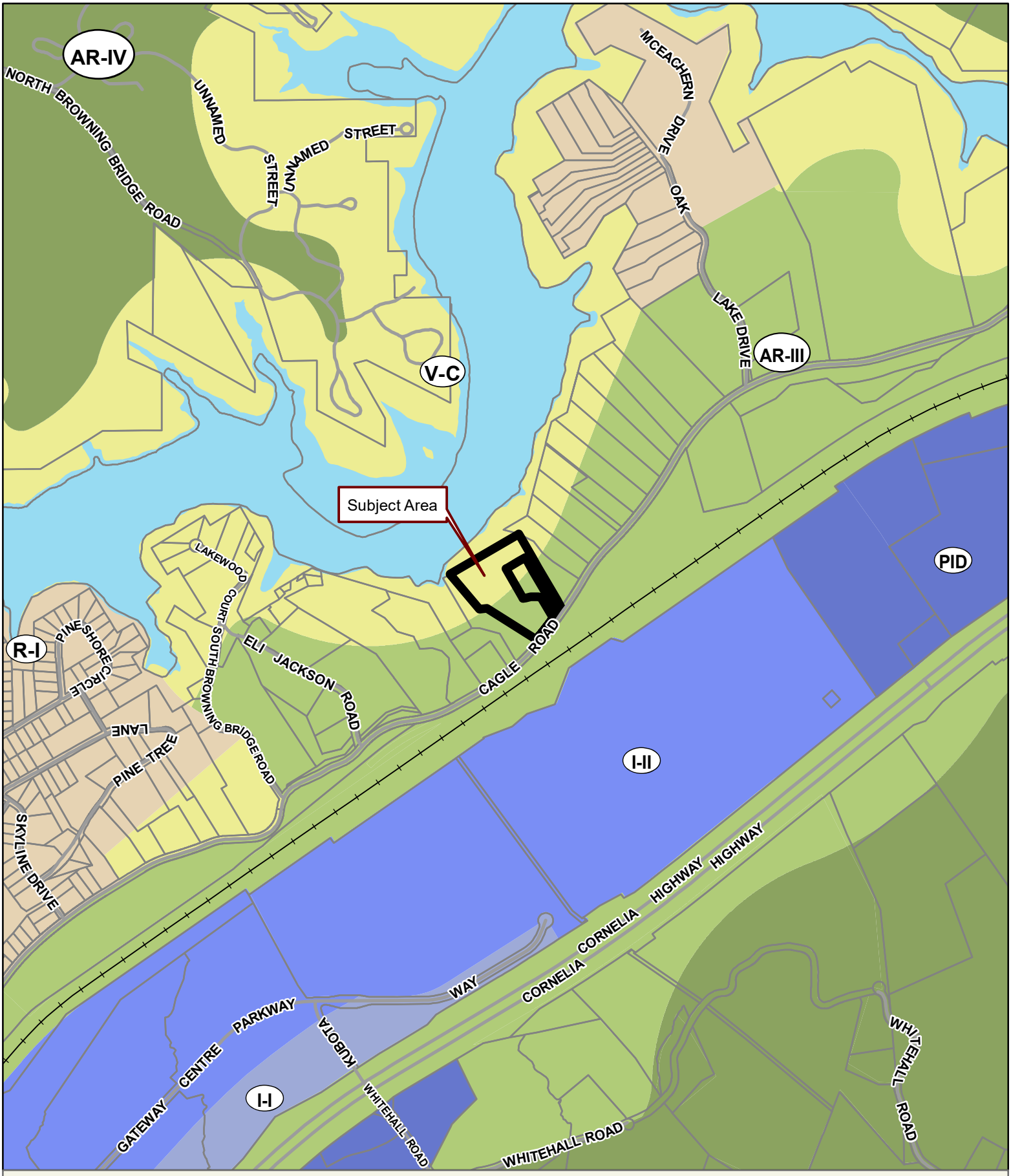
LEGEND:

I.P.F.	-	IRON PIN FOUND
C.T.P.	-	CRIMPED TOP PIN FOUND
R.B.F.	-	REBAR FOUND
O.T.P.	-	OPEN TOP FOUND
A.M.	-	ANGLE IRON FOUND
C.M.F.	-	CONCRETE MONUMENT FOUND
C.T.S.	-	CRIMPED TOP PIN SET
P/L	-	PROPERTY LINE
R/W	-	RIGHT OF WAY
N/F	-	NOW OR FORMERLY
C/L	-	CENTER LINE
S/B	-	SETBACK
L.L.L.	-	LAND LOT LINE
C.M.P.	-	CORRUGATED METAL PIPE
R.C.P.	-	REINFORCED CONCRETE PIPE
C.H.	-	CABLE RISER
T.R.	-	TELEPHONE RISER
C.B.	-	CATCH BASIN
P.B.	-	POWER BOX
W.M.	-	WATER METER
P.P.	-	POWER POLE
S.P.	-	SERVICE POLE
W.V.	-	WATER VALVE
x	-	FENCE
O	-	CHAIN LINK FENCE
-F-	-	ELECTRICAL LINE
-W-	-	WATER LINE
S.S.E.	-	SANITARY SEWER EASEMENT
M.H.	-	MANHOLE
SS	-	SANITARY SEWER LINE
■	-	ANTENNA

GEORGIA No. 2442 2-16-00 LAND SURVEYOR CHAS. H. PATTON

PREPARED BY:

PATTON - PATTON INC.
REGISTERED GEORGIA LAND SURVEYORS
957 Enota Avenue
Gainesville, GA. 30501
Phone (770) 531 - 8402
DRAWN BY: C.P.S.

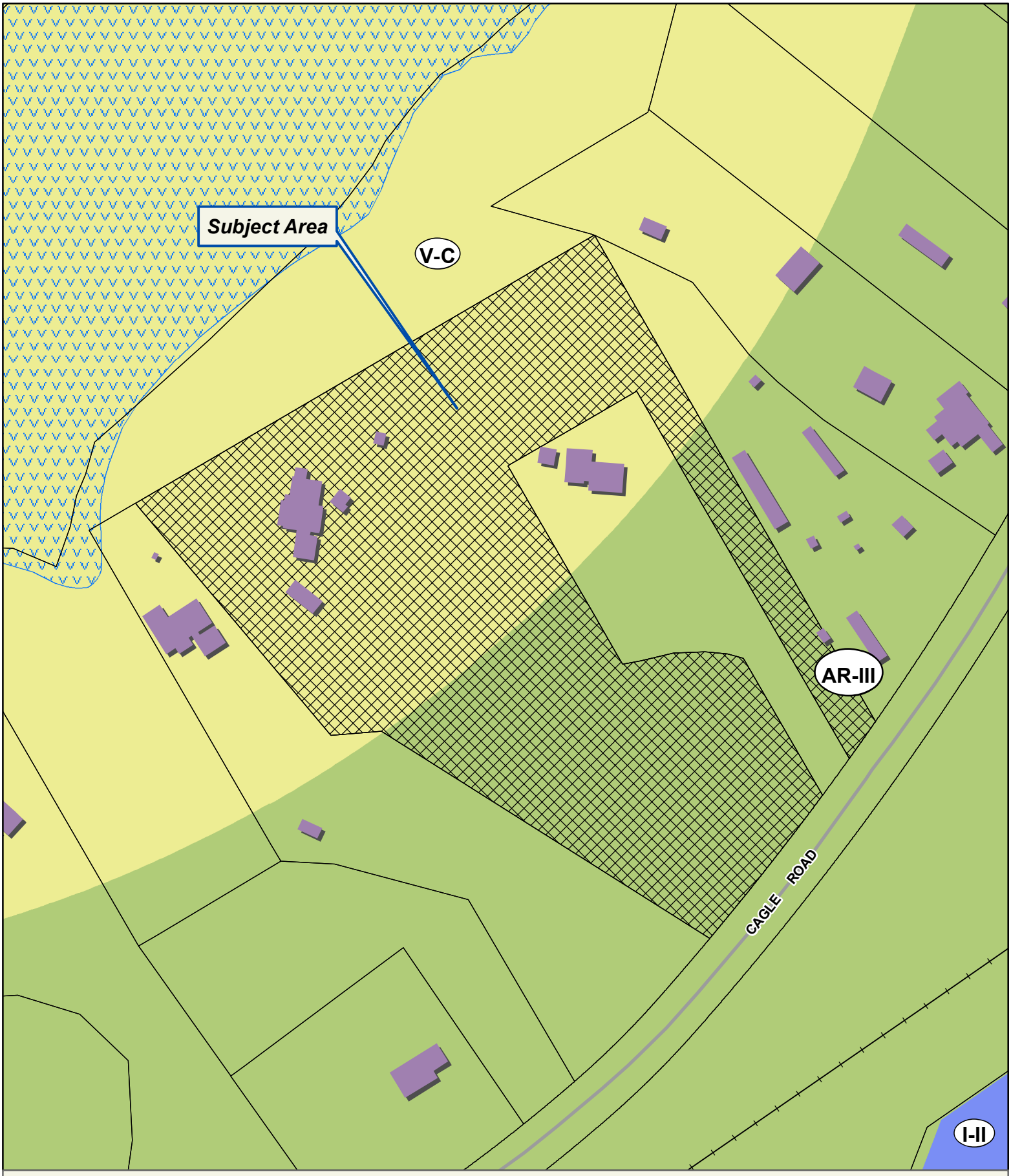


Applicant: ROBERT & VALERIE DELEON
Tax Parcel #: 09099 000008
Location: 4139 CAGLE ROAD, LULA, GA 30554
Commission District 3 **PC Mtg. Date:** 11/21/2022

0 300 600 1,200
Feet

Zoning Boundary
City Limits
Subject Area
Structure

N



Applicant: ROBERT & VALERIE DELEON
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0 50 100 200
Feet

Zoning Boundary
City Limits
Subject Area
Structure

N



Applicant: ROBERT & VALERIE DELEON
Tax Parcel #: 09099 000008
Location: 4139 CAGLE ROAD, LULA, GA 30554
Commission District 3 **PC Mtg. Date:** 11/21/2022

0 50 100 200
Feet

Zoning Boundary
City Limits
Subject Area

N

Anael Dominguez (Planning)

From: Emily McGahee (Environmental Health)
Sent: Monday, October 31, 2022 4:22 PM
To: Anael Dominguez (Planning); Randi Doveton (Planning)
Cc: Kelly Hairston (Environmental Health); Chad Harper (Environmental Health)
Subject: HCPC Tentative Agenda 11.21.22

Please find Environmental Health comments below:

Item 1, 2363 Whippoorwill Lane, Beddingfield: Must meet all Environmental Health residential septic system permitting requirements. Existing system evaluation and/or septic system modification may be required for system serving existing home on property. Level 3 Soil Evaluation will be required prior to application if existing septic system will not be used.

Item 2, 5385 Winder Hwy, Dell Group: All proposed lots must meet Hall County Board of Health Lot Size Resolution requirements.

Item 3, 4336 Cornelia Hwy, Le Tily: No comment.

Item 4, 3519 White Sulphur Rd, Reynolds-Hemmer: No comment. Public sewer.

Item 5, 4139 Cagle Road, DeLeon: All proposed lots must meet Hall County Board of Health Lot Size Resolution requirements.

Item 6, 3055 Tumbling Creek Road, Rochester: No comment. Public sewer.

Item 7, 4053 Cleveland Hwy, Crayton: Non-domestic wastewater treatment and disposal must be permitted by EPD.

Emily McGahee
Hall County Environmental Health
Hall County Government Center
2875 Browns Bridge Road
Mailing: PO Box 5901
Gainesville, GA 30504
(770) 531-3973
(770) 531-6767 (fax)

http://dph.georgia.gov/environmental-health (State Website)
http://www.phdistrict2.org/HallCounty.htm (District Website)
http://www.hallcounty.org/devserv/environmental.asp (County Website & Forms)

Anael Dominguez (Planning)

From: Niebauer, Parker J <PNiebauer@dot.ga.gov>
Sent: Wednesday, November 2, 2022 10:05 AM
To: Anael Dominguez (Planning); Randi Doveton (Planning)
Subject: RE: Tentative Planning Agenda for November 21, 2022

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Please see GDOT responses in red below

Parker Niebauer
D1TO Traffic Operations Supervisor

GDOT Georgia Department of Transportation

District 1 Division of Field Services
1475 Jesse Jewell Pkwy
Suite 100
Gainesville, GA, 30501
770.533.8275 office
770.519.3223 cell

From: Anael Dominguez (Planning) <adominguez@hallcounty.org>
Sent: Thursday, October 27, 2022 10:44 AM
To: Becky Ruffner (Parks & Leisure) <bruffner@hallcounty.org>; Bill Nash (Public Works) <bnash@hallcounty.org>; Brandi Smith (Business License) <bsmith@hallcounty.org>; Bryan Cash (Fire Services) <bcash@hallcounty.org>; Chad Harper (Environmental Health) <charper@hallcounty.org>; Chris Braswell (Planning) <cbraswell@hallcounty.org>; Christopher Armstrong (Fire Services) <carmstrong@hallcounty.org>; Dan Barnes <Daniel.C.Barnes@usace.army.mi>; Ellis Still (Planning) <estill@hallcounty.org>; Emily McGahee (Environmental Health) <emcgahee@hallcounty.org>; Frank Miller (Engineering) <fmiller@hallcounty.org>; Dykes, Jason <jdykes@dot.ga.gov>; Jason Skarda (Engineering) <jskarda@hallcounty.org>; Jeremy Wills <jeremy.wills@gainesville.org>; John Hornick (Fire Services) <jhornick@hallcounty.org>; Peevy, Jonathan <jpeevy@dot.ga.gov>; Kelly Hairston (Environmental Health) <khairston@hallcounty.org>; Matt Cox <matt.cox@hallco.org>; Michael Vieira (Fire Services) <mvieira@hallcounty.org>; Nicole Griffin (Tax Assessors) <nicole.griffin@hallcounty.org>; nswafford <nswafford@gainesville.org>; Pam Cravero <Pam.Cravero@hallco.org>; Niebauer, Parker J <PNiebauer@dot.ga.gov>; Randi Doveton (Planning) <rdoveton@hallcounty.org>; rich <rich@flowerybranchga.org>; Scott Puckett <spuckett@hallcounty.org>; Srikanth Yamala (Public Works) <syamala@hallcounty.org>; Stephen Cain <troy.s.cain@usace.army.mil>; Steve Watson (Real Property) <rswatson@hallcounty.org>; Tammie Croy (Engineering) <tcroy@hallcounty.org>; Tracy Gilreath (Tax Assessors) <tgilreath@hallcounty.org>; Wanda Moreno (Engineering) <wmoreno@hallcounty.org>; Wanda Sutton (Engineering) <wsutton@hallcounty.org>; will schofield <will.schofield@hallco.org>
Subject: Tentative Planning Agenda for November 21, 2022

Good morning –

Here is the Tentative Agenda and Maps for the **Monday, November 21, 2022** Hall County Planning Commission Meeting.

Please use the links to review the documents and respond with comments to Hall County Planning and Development. Failure to provide comments in a timely manner may result in the information not being included in the staff report.

When submitting comments, please include the name of the applicant along with the address of the property with the corresponding comment.

Comments are due by **Thursday, November 3rd.** Email comments to Randi (rdoveton@hallcounty.org) and Ana (adominguez@hallcounty.org).

CALL TO ORDER

AGENDA REVIEW

APPROVAL OF MINUTES - November 7, 2022

OLD BUSINESS

1. **2363 Whippoorwill Lane | Variance** | for a front yard setback variance from 55 feet to 35 feet, right side yard setback variance from 10 feet to 3 feet, and a left side yard setback variance from 10 feet to 9 feet on a .14± acre tract located on the west side of Whippoorwill Lane approximately 848 feet from its intersection with Sportsman Club Road | Zoned R-I; Tax Parcel 00109A000029 | Proposed use: single-family residence | * Commission District 4 | **Thomas Ryan & Vicki Beddingfield, applicant.**

2. **5385 Winder Highway | Amend Conditions |** of a Planned Commercial Development (PCD) on a 21.20± acre tract located on the north side of Winder Highway at its intersection with Benefield Road | Zoned PCD; Tax Parcel 15028B000015 **| Proposed use: car condos, storage, commercial uses, and retail |** ** Commission District 1 | **The Dell Group, LLC, applicant.**

NEW BUSINESS

3. **4336 Cornelia Highway | Variance |** for a sign variance on sign design and dimensions with an Amended to Planned Commercial Development conditions on a 14.09± acre tract located on the south side of Cornelia Highway approximately 1,497 feet from its intersection with Lula Road | Zoned PCD; Tax Parcel 09085 000008 | **Proposed use: new monument sign** | ** Commission District 3 | **Sophie Le Tily (Big Mouth Signs), applicant.**
   GDOT coordination required to verify no work being performed in GDOT R/W

4. **3519 White Sulphur Road | Use subject to County Commission Approval |** on a 5.45± acre tract located on the east side of White Sulphur Road at its intersection with Cornelia Highway | Zoned I-II; Tax Parcel 15020A000030 | **Proposed use: trailer storage** | ** Commission District 3 | **Reynolds-Hemmer Properties, LP, applicant.**
   GDOT Coordination required

5. **4139 Cagle Road | Use subject to County Commission Approval |** on a 7.43± acre tract located on the north side of Cagle Road approximately 1,637 feet from its intersection with Eli Jackson Road | Zoned AR-III & V-C; Tax Parcel 09099 000008 | **Proposed use: 2-lot subdivision |** ** Commission District 3 | **Robert & Valerie DeLeon, applicant.**
   None

6. **3055 Tumbling Creek Road | Amend conditions |** of a Planned Residential Development (PRD) on a 5.1± acre tract located on the west side of Tumbling Creek Road at approximately 30 feet from its intersection with Campus Pointe Circle | Zoned PRD; Tax Parcel 08026 000005 (pt.) | **Proposed use: 38-unit residential rental community** | ** Commission District 2 | **Rochester/DCCM, applicant.**
   None

7. **4053 Cleveland Highway | Rezone |** from Agriculture-Residential-III (AR-III) to Suburban-Shopping (SS) on a 6.34± acre tract located on the west side of Cleveland Highway at its intersection with Jim Hood Road | Zoned AR-III; Tax Parcel 12025 000036 | **Proposed use: grocery store, convenience store with gas & restaurant |** ** Commission District 3 | **Reginald Crayton, P.E., applicant.**
   GDOT Coordination Required

HALL COUNTY
GEORGIA

POST OFFICE DRAWER 1435
GAINESVILLE, GA 30503

t: 770.531.6800 | f: 770.531.3945

SRIKANTH YAMALA
Director

BILL NASH, P.E.
Assistant Director

FRANKLIN P. MILLER, P.E.
County Engineer

Hall County Government

PUBLIC WORKS AND UTILITIES
ENGINEERING DIVISION

M E M O R A N D U M

To: Randi Doveton, Director of Planning and Development

From: Srikanth Yamala, Director of Public Works and Utilities

Date: November 3, 2022

Subject: November 21, 2022 - Hall County Planning Commission Agenda

Please be advised that our office has reviewed the Hall County Planning Commission agenda for the November 21, 2022 meeting. Upon review, we provide the following comments.

OLD BUSINESS

1. **2363 Whippoorwill Lane | Variance** | for a front yard setback variance from 55 feet to 35 feet, right side yard setback variance from 10 feet to 3 feet, and a left side yard setback variance from 10 feet to 9 feet on a .14± acre tract located on the west side of Whippoorwill Lane approximately 848 feet from its intersection with Sportsman Club Road | Zoned R-I; Tax Parcel 00109A000029 | Proposed use: single-family residence | * Commission District 4 | **Thomas Ryan & Vicki Beddingfield, applicant.**

   a) **Engineering:** Show flood Hall County studied and FEMA.
   b) **Traffic:** No comments.
   c) **Utilities:** No comments.

2. **5385 Winder Highway | Amend Conditions |** of a Planned Commercial Development (PCD) on a 21.20± acre tract located on the north side of Winder Highway at its intersection with Benefield Road | Zoned PCD; Tax Parcel 15028B000015 **| Proposed use: car condos, storage, commercial uses, and retail |** ** Commission District 1 | **The Dell Group, LLC, applicant.**

   a) **Engineering:** The site may require a stormwater management report should the site plan indicate the proposed development meets stormwater thresholds for impervious surfaces and/or disturbed acreage.
   Show stream buffers and impervious setback from wrested vegetation not centerline of stream.
   b) **Traffic:** No comments.
   c) **Utilities:** No sewer in the area of project; septic proposed requires Health Department Approval.

HALL COUNTY
GEORGIA

POST OFFICE DRAWER 1435
GAINESVILLE, GA 30503

t: 770.531.6800 | f: 770.531.3945

SRIKANTH YAMALA
Director

BILL NASH, P.E.
Assistant Director

FRANKLIN P. MILLER, P.E.
County Engineer

Hall County Government

PUBLIC WORKS AND UTILITIES
ENGINEERING DIVISION

NEW BUSINESS

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   a) **Engineering:** No comments.
   b) **Traffic**: No comments.
   c) **Utilities**: No comments.

4. **3519 White Sulphur Road | Use subject to County Commission Approval |** on a 5.45± acre tract located on the east side of White Sulphur Road at its intersection with Cornelia Highway | Zoned I-II; Tax Parcel 15020A000030 | **Proposed use: trailer storage** | ** Commission District 3 | **Reynolds-Hemmer Properties, LP, applicant.**

   a) **Engineering:** The site may require a stormwater management report, should the site plan indicate the proposed development meets stormwater thresholds for impervious surfaces and/or disturbed acreage.
   b) **Traffic:** No comments.
   c) **Utilities:** No comments.

5. **4139 Cagle Road | Use subject to County Commission Approval |** on a 7.43± acre tract located on the north side of Cagle Road approximately 1,637 feet from its intersection with Eli Jackson Road | Zoned AR-III & V-C; Tax Parcel 09099 000008 | **Proposed use: 2-lot subdivision |** ** Commission District 3 | **Robert & Valerie DeLeon, applicant.**

   a) **Engineering:** Further subdivisions of these lots will result in the necessity of a stormwater management plan, if the total number of lots reaches more than 6.
   b) **Traffic:** No comments.
   c) **Utilities:** No comments.

6. **3055 Tumbling Creek Road | Amend conditions |** of a Planned Residential Development (PRD) on a 5.1± acre tract located on the west side of Tumbling Creek Road at approximately 30 feet from its intersection with Campus Pointe Circle | Zoned PRD; Tax Parcel 08026 000005 (pt.) | **Proposed use: 38-unit residential rental community** | ** Commission District 2 | **Rochester/DCCM, applicant.**

   a) **Engineering:** The site may require a stormwater management report, should the site plan indicate the proposed development meets stormwater thresholds for impervious surfaces and/or disturbed acreage.
   Show buffer and impervious setback from wrested vegetation, not centerline of creek.

HALL COUNTY
GEORGIA

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SRIKANTH YAMALA
Director

BILL NASH, P.E.
Assistant Director

FRANKLIN P. MILLER, P.E.
County Engineer

Hall County Government

PUBLIC WORKS AND UTILITIES
ENGINEERING DIVISION

There seems to be a "Tumbling Creek Preserve Trail" through proposed development. Need to verify ownership and/or easements.

b) **Traffic:** No comments.

c) **Utilities:** City of Gainesville sewer district.

7. **4053 Cleveland Highway | Rezone |** from Agriculture-Residential-III (AR-III) to Suburban-Shopping (SS) on a 6.34± acre tract located on the west side of Cleveland Highway at its intersection with Jim Hood Road | Zoned AR-III; Tax Parcel 12025 000036 | **Proposed use: grocery store, convenience store with gas & restaurant** | ** Commission District 3 | **Reginald Crayton, P.E., applicant.**

a) **Engineering:** The site may require a stormwater management report, should the site plan indicate the proposed development meets stormwater thresholds for impervious surfaces and/or disturbed acreage.
Show buffer and impervious setback from wrested vegetation, not centerline of creek.

b) **Traffic:** GDOT permit required.

c) **Utilities:** Gainesville/Hall County sewer district.
No sewer available. On-site septic system proposed for wastewater, therefore Health Department approval required.

Anael Dominguez (Planning)

From: John Hornick (Fire Services)
Sent: Wednesday, November 2, 2022 1:43 PM
To: Randi Doveton (Planning); Anael Dominguez (Planning)
Subject: Agenda Review #5

5. **4139 Cagle Road | Use subject to County Commission Approval |** on a 7.43± acre tract located on the north side of Cagle Road approximately 1,637 feet from its intersection with Eli Jackson Road | Zoned AR-III & V-C; Tax Parcel 09099 000008 | **Proposed use: 2-lot subdivision |** ** Commission District 3 | **Robert & Valerie DeLeon, applicant.**

International Fire Code Section 503.2.1 requires fire apparatus access roads public or private to be 20 foot wide exclusive of shoulders, road will have to be widened to 20 feet to meet fire access code requirements.

Regards,

John Hornick, NPQ Fire Inspector 1, Plans Review
Lieutenant, Hall County Fire Rescue
Hall County Government
Main: 770-531-6838 | Cell: 404-597-0083
Website: www.Hallcounty.org


ZONING NOTICE
AN APPLICATION HAS BEEN FILED WITH HALL COUNTY IN REGARD TO THE ZONING REGULATIONS AS THEY AFFLY TO THIS PROPERTY.
APPLICANT: ROBERT + VALERIE DELEON
REQUEST: USE SUBJECT TO COUNTY COMMISSION APPROVAL- 2 LOT SUBDIVISION
PUBLIC HEARINGS WILL BE HELD ON:
PLANNING COMMISSION
Date: NOV. 21, 2022
Time: 5:15 PM
AND
COUNTY COMMISSION
Date: JAN. 12, 2023
Time: 6:00 PM
HALL COUNTY GOVERNMENT CENTER, 2ND FLOOR, 2875 BRADFORD DRIVE, GAINESVILLE, GA
FOR MORE INFORMATION CALL: (770) 531-6809

ZONING NOTICE

AN APPLICATION HAS BEEN FILED WITH HALL COUNTY IN REGARD TO THE ZONING REGULATIONS AS THEY APPLY TO THIS PROPERTY

APPLICANT: ROBERT & VALERIE DELEON

REQUEST: USE SUBJECT TO COUNTY COMMISSION APPROVAL- 2-LOT SUBDIVISION

PUBLIC HEARINGS WILL BE HELD ON:

PLANNING COMMISSION
Date: NOV. 21, 2022
Time: 5:15 PM

AND

COUNTY COMMISSION
Date: JAN. 12, 2023
Time: 6:00 PM

HALL COUNTY GOVERNMENT CENTER, 2875 BROWNS BRIDGE ROAD, GAINESVILLE, GA

FOR MORE INFORMATION CALL: (770) 531-6809

LL
4631
15A
THE PORCH

ZONING NOTICE

AN APPLICATION HAS BEEN FILED WITH HALL COUNTY IN REGARD TO THE ZONING REGULATIONS AS THEY APPLY TO THIS PROPERTY

APPLICANT: ROBERT & VALERIE DELEON

REQUEST: USE SUBJECT TO COUNTY COMMISSION APPROVAL- 2 LOT SUBDIVISION

PUBLIC HEARINGS WILL BE HELD ON:

PLANNING COMMISSION
Date: NOV. 21, 2022
Time: 5:15 PM

AND

COUNTY COMMISSION
Date: JAN. 17, 2023
Time: 6:00 PM

HALL COUNTY GOVERNMENT CENTER, 2875 BRISTOL HIGHWAY, GAINESVILLE, GA

FOR MORE INFORMATION CALL: (770) 531-6809

AGENDA ITEM

Planning and Development

REPORT TO: **Work Session (01/09/23)**

REPORT TO: **Voting Meeting (01/12/23)**

ITEM NO: 729/2022

SUBJECT: **3519 White Sulphur Road | Use subject to County Commission Approval** | on a 5.45± acre tract located on the east side of White Sulphur Road at its intersection with Cornelia Highway | Zoned I-II; Tax Parcel 15020A000030 | **Proposed use: trailer storage** | Commission District 3 | **Reynolds-Hemmer Properties, LP, applicant.**

Meetings:

Work Session Date: 01/09/23 **Voting Meeting Date:** 01/12/23

Executive Summary:

Presenter: RD

Recommendation:

Approval, with conditions: 1. The project shall substantially conform to the submitted site plan and narrative with the following variances and conditions. 2. The use shall be limited to overflow truck and trailer storage for a single lease tenant, any use as a commercial parking lot or in a model facility shall be prohibited. No material or containers shall be allowed storage on the premises if not stored in an enclosed trailer or on a flatbed trailer. This shall be approved as a temporary storage facility allowing no trucks or trailers to be stored on the site for more than 30 days. Conditional use shall be valid for 24 months from site approval by the applicable Hall County Building inspections to assure that all conditions of zoning have been met. The owner shall not be allowed to operate the facility until all conditions of Board of Commissioners approval have been met. 3. The only approved signage shall be directional and traffic signs. 4. All lighting shall be non-spill type only, LED lighting is approved. 5. The applicant shall follow the standard Hall County Development Review process regarding pavement installation and stormwater management requirements. 6. All fencing within the Gateway Corridor 300 foot setback as well as fencing along the entirety of White Sulphur Road and Gateway Center Park Place shall be 8 feet in height, PVC opaque type, with a 10 foot planted landscape buffer. Fencing color and buffer requirements shall be approved by the Director of Planning and Development prior to the Land Disturbance Permitting process. All other fencing shall be 8 foot tall black vinyl coated chain-link fence. 7. The parking lot shall be gravel. 8. The conditional use and variances approved shall only be for Reynolds-Hemmer Properties, LP. The conditional use approved and variances shall not be transferable to any other entities. Any future use other than stated above shall be brought before the Hall County Planning Commission and Board of Commission for approval. 9. All conditions of zoning shall be made a part of the final plat for recording.

Purpose of Request: **History:**

3519 White Sulphur Road | Use subject to County Commission Approval | on a 5.45± acre tract located on the east side of White Sulphur Road at its intersection with Cornelia Highway | Zoned I-II; Tax Parcel 15020A000030 | Proposed use: trailer storage | Commission District 3 | Reynolds-Hemmer Properties, LP, applicant.

Facts and Issues: **Options:**

Funding Requested	$ 0.00
Are funds within current budget?	No
Source of Funds	
Does the action involve a Resolution, Ordinance, Contract, Agreement, etc.?	No
Has it been reviewed by the County Attorney?	Yes
Is there a deadline for this item?	

Approvals:

Submit	Approve	Budget	Finance
AD	RD	TS	WG

Attorney	Administration	Clerk
WLI	CR	JR

Attachments:

Board Memo
Recommendation Report - USE CC
Recommendation Report - VAR
Application
Updated Narrative
Narrative
Site Plan
Maps
Environmental Health Comments
GDOT Comments
Public Works Comments
Fire Comments
Notice Sign Photos

HALL COUNTY
GEORGIA
We have it all in Hall

POST OFFICE DRAWER 1435
GAINESVILLE, GA 30503

t: 770.531.6809 | f: 770.531.3902

DIRECTOR
Randi Doveton

Hall County Government
PLANNING & DEVELOPMENT

To: Richard Higgins, Chairman
Kathy Cooper, District 1
Billy Powell, District 2
Gregg Poole, District 3
Jeff Stowe, District 4

From: Randi Doveton, Director

Date: December 5, 2022

Subject: **3519 White Sulphur Road | Use subject to County Commission Approval** | to allow trailer storage| Reynolds-Hemmer Properties, LP, applicant.

The request before you is the Conditional Use request of Reynolds-Hemmer Properties, LP to allow trailer storage on 5.45± acres within an existing Heavy Industrial (I-II) district. **It should be noted that a simultaneous variance request accompanies this request but has a separate report. The Planning Commission heard and voted on the variance and use with one motion, so there is only one memo.** This item is located within Commission District 3.

At their November 21, 2021 meeting, the Hall County Planning Commission voted to recommend approval with nine (9) conditions **(4-0, Pilcher absent)**.

There were no written comments submitted in advance of the Planning Commission meeting and **one (1) individual spoke in opposition during the public hearing.**

There have been no changes to the request since the Planning Commission took action.

Planning Commission Approval Conditions:

1. *The project shall substantially conform to the submitted site plan and narrative with the following variances and conditions.*
2. *The use shall be limited to overflow truck and trailer storage for a single lease tenant, any use as a commercial parking lot or in a model facility shall be prohibited. No material or containers shall be allowed storage on the premises if not stored in an enclosed trailer or on a flatbed trailer. This shall be approved as a temporary storage facility allowing no trucks or trailers to be stored on the site for more than 30 days. Conditional use shall be valid for 24 months from site approval by the applicable Hall County Building inspections to assure that all conditions of zoning have*

been met. The owner shall not be allowed to operate the facility until all conditions of Board of Commissioners approval have been met.

3. *The only approved signage shall be directional and traffic signs.*
4. *All lighting shall be non-spill type only, LED lighting is approved.*
5. *The applicant shall follow the standard Hall County Development Review process regarding pavement installation and stormwater management requirements.*
6. *All fencing within the Gateway Corridor 300 foot setback as well as fencing along the entirety of White Sulphur Road and Gateway Center Park Place shall be 8 feet in height, PVC opaque type, with a 10 foot planted landscape buffer. Fencing color and buffer requirements shall be approved by the Director of Planning and Development prior to the Land Disturbance Permitting process. All other fencing shall be 8 foot tall black vinyl coated chain-link fence.*
7. *The parking lot shall be gravel.*
8. *The conditional use and variances approved shall only be for Reynolds-Hemmer Properties, LP. The conditional use approved and variances shall not be transferable to any other entities. Any future use other than stated above shall be brought before the Hall County Planning Commission and Board of Commission for approval.*
9. *All conditions of zoning shall be made a part of the final plat for recording.*

HALL COUNTY PLANNING COMMISSION
RECOMMENDATION REPORT

Applicant ..... Reynolds-Hemmer Properties, LP

Request ..... Conditional Use to allow trailer storage within the Gateway Corridors Overlay District (GCOD, 17.420)

Proposed Use ..... Trailer storage

Size ..... 5.45± acres

Zoning ..... I-II, Heavy Industrial

Location ..... **3519 White Sulphur Rd |** Tax Parcel 15020A000030

Commission District ..... Three

Planning Commission Date ..... November 21, 2022

Staff Recommendation ..... **Approval with conditions because the proposal is consistent with the 2022 Comprehensive Plan.**

Planning Commission Recommendation.....Approval, with conditions

Vote: 4-0 (Pilcher absent)

1. The project shall substantially conform to the submitted site plan and narrative with the following variances and conditions.
2. The use shall be limited to overflow truck and trailer storage for a single lease tenant, any use as a commercial parking lot or in a model facility shall be prohibited. No material or containers shall be allowed storage on the premises if not stored in an enclosed trailer or on a flatbed trailer. This shall be approved as a temporary storage facility allowing no trucks or trailers to be stored on the site for more than 30 days. Conditional use shall be valid for 24 months from site approval by the applicable Hall County Building inspections to assure that all conditions of zoning have been met. The owner shall not be allowed to operate the facility until all conditions of Board of Commissioners approval have been met.
3. The only approved signage shall be directional and traffic signs.
4. All lighting shall be non-spill type only, LED lighting is approved.

5. The applicant shall follow the standard Hall County *Development Review process regarding pavement installation and stormwater management requirements.*

6. *All fencing within the Gateway Corridor 300 foot setback as well as fencing along the entirety of White Sulphur Road and Gateway Center Park Place shall be 8 feet in height, PVC opaque type, with a 10 foot planted landscape buffer. Fencing color and buffer requirements shall be approved by the Director of Planning and Development prior to the Land Disturbance Permitting process. All other fencing shall be 8 foot tall black vinyl coated chain-link fence.*

7. *The parking lot shall be gravel.*

8. *The conditional use and variances approved shall only be for Reynolds-Hemmer Properties, LP. The conditional use approved and variances shall not be transferable to any other entities. Any future use other than stated above shall be brought before the Hall County Planning Commission and Board of Commission for approval.*

9. *All conditions of zoning shall be made a part of the final plat for recording.*

Public Forum:

Robert Deleon, 4139 Cagle Road, Lula, spoke in opposition. Concerns were traffic and safety.

Summary Analysis

The applicant is seeking for conditional use approval for tractor trailer storage in the Gateway Corridor Overlay district on 5.45± acres. The narrative submitted by the applicant states that the primary use of this parcel is intended to be used as tractor trailer storage on a gravel surface. The property will be leased to a tenant who will use the lot as overflow storage for a transportation business and will not be open to the public. An opaque fence is proposed around the perimeter with a security fence, and lighting will be LED security non-spill lighting. The narrative states that signage will comply with Hall County regulations.

The subject property is located at the corner of Cornelia Highway / State Route 365 and White Sulphur Road. The property has been pre-graded for usable building pads, and the proposed use is consistent with recent industrial growth in the immediate vicinity and with adjacent properties. The narrative claims that the proposed use will correlate well with the nearby future Inland Port and will not have any adverse impacts to the environment, as current stormwater management regulations will be followed.

The applicant is requesting to be exempt from the requirements of the Gateway Corridors Overlay District (GCOD, 17.420) that requires all parking to be paved with asphalt or concrete. The applicant contends that the use of the property is a storage yard as opposed to a parking lot, thus permitting gravel to be used.

Upon written application, the director may grant exemptions from the requirements of this chapter for parcels or portions of a parcel that would otherwise be included in the GCOD if portions of the subject property to be exempted lie more than 300 feet from the centerline of a Gateway Corridor. (17.420.030)

A concurrent application has been filed for a variance related to paving material within the Gateway Corridors Overlay District (GCOD, 17.420).The items may be heard together but will require separate motions and votes. Specifically, all parking areas shall be paved with asphalt, concrete (or pervious materials approved by the director) as found in non-residential property development standard (17.420.050).

Zoning Analysis

When considering a conditional use certain criteria must be considered.

(a) The existing land use pattern. **The subject property is 5.45 acres in side and is zoned Heavy Industrial (I-II, 17.170). Surrounding properties to the north and east are also zoned I-II. Across White Sulphur Road, to the west, are properties zoned Planned Industrial Development (PID, 17.180.090), Agricultural Residential III (AR-III, 17.110), and Agricultural Residential IV (AR-IV, 17.120). Gateway Industrial Centre, an industrial park, is located to the north and east of the property, along Cornelia Highway.**

(b) Whether the proposed use would have an adverse effect on the comprehensive land development plan. **The proposed use would not have an adverse effect on the comprehensive land development plan. The subject property is part of an employment corridor, where the intent is to enhance and maintain well-functioning, attractive corridors that facilitate vehicular traffic flow and pedestrian/bicycle connectivity, serve local needs, and coordinate land use patterns without encroaching on adjacent neighborhoods. This land use classification should also create employment opportunities where a location benefits from interstate access or supports industrial-focused development patterns.**

(c) Whether all proposed structures, equipment or material will be readily accessible for fire and police protection. **The proposed development will be reviewed through the Development Review process, and as such will be required to meet all applicable life safety regulations prior to permit issuance.**

(d) Whether the proposed use will be of such location, size, and character that, in general, it will be in harmony with the appropriate and orderly development of the area in which it is proposed to be situated and will not be detrimental to the orderly development of adjacent properties or a deterrent to the improvement of adjacent properties in accordance with the zoning classification of such properties, the existing land use pattern, or the comprehensive land development plan. **The proposed development is adjacent to industrially zoned properties and is consistent with the recommendations of the Comprehensive Plan.**

(e) Whether, in the case of any use located in, or directly adjacent to, a residential district or area:

i. The nature and intensity of operations will be such that both pedestrian and vehicular traffic to and from the use and the assembly of persons in connection therewith will not be hazardous or inconvenient to, or incongruous with, said residential district or area, or conflict with the normal traffic of the neighborhood; and **The proposed development is not adjacent to a residentially zoned or developed property, so this is not applicable.**

ii. The location and height of buildings, and other structures, and the crosswalks or pedestrian ways are nature and extent of screening, buffering or landscaping on the site will be such that the use will not hinder or discourage the appropriate development and use of adjacent land and buildings in conformance with existing zoning districts and development pattern. **The proposed development is not adjacent to a residentially zoned or developed property, so this is not applicable.**

(f) Whether the proposed use will increase the population density resulting in the increase or overtaxing of the load on public facilities such as schools, utilities, streets, etc.; or approval of the use would encourage adjacent areas to develop at higher densities than provided in the comprehensive plan resulting in the overtaxing of such public facilities. **The proposed development is not residential and thus will not increase the population density resulting in the increase or overtaxing of the load on public facilities such as schools, utilities, streets, etc.; nor will the approval of the use encourage adjacent areas to develop at higher densities than provided in the comprehensive plan resulting in the overtaxing of such public facilities.**

(g) Whether the proposed use will cause a health hazard, a public safety problem, or nuisance created or excessively increasing traffic and associated congestion; creating a drainage problem; generating unnecessary disturbances due to noise, the emittance of smoke or other contaminants, odor, electrical interference or causing pollution to land, air and/or water. **The proposed development will be required to follow the standard Development Review process which will require review by the County Engineer, Traffic Engineer, Fire Department, and other applicable agencies to ensure that the project does not create these issues.**

(h) Whether the proposed change will adversely affect property values in adjacent areas. **Multiple factors impact property value including construction types, proposed uses, and maintenance. Often it is difficult to determine the effect of a development on adjacent properties until the development is complete.**

(i) Whether there are substantial reasons why the property cannot be used for a permitted use in the district where the property is located. **No reason has been provided why the property cannot be used for a use listed in Section 17.170.010. Within the Gateway Corridors Overlay District (GCOD, 17.420) outdoor storage requires conditional use approval from the Board of Commissioners.**

Per Planning Commission and Hall County Commission consideration and decision (17.380.060), the planning commission shall study the need and justification for the change based on a determination of the facts applicable to the particular case, and the following general lines of inquiry shall be considered, to wit:

1. Whether the zoning proposal will permit a use that is suitable in view of the use, development and zoning of adjacent and nearby property; **The current land use pattern is trending to an industrial use adjacent to Cornelia Highway with low density agricultural uses further away from the highway, of secondary streets.**

2. Whether the zoning proposal will adversely affect the existing use or usability of adjacent or nearby property; **The zoning has already been established on the property and the current request is for a conditional use approval. This question is not applicable to this request.**

3. Whether the property to be affected by the zoning proposal has a reasonable economic use as currently zoned; **The zoning has already been established on the property and the current request is for a conditional use approval. This question is not applicable to this request.**

4. Whether the zoning proposal will result in a use which will or could cause an excessive or burdensome use of existing streets, transportation facilities, utilities, schools, police protection, fire protection, public health facilities or emergency medical service; **The proposed development is unlikely to cause an excessive or burdensome use of existing streets, transportation facilities, utilities, schools, police protection, fire protection, public health facilities, or emergency medical services.**

5. Whether the zoning proposal is in conformity with the policy and intent of the future land use plan for the physical development of the area; **The zoning has already been established on the property and the current request is for a conditional use approval. This question is not applicable to this request.**

6. The extent to which property values are diminished by the existing zoning restrictions; **Staff has not identified that the existing property values have been impacted by the existing zoning.**

7. The extent to which the destruction of the subject property's value under the existing zoning promotes the health, safety, morals or general welfare of the public; **Staff is unable to comment on the impact of property values without a full market analysis. Multiple factors impact property value including construction types, proposed uses, and maintenance. Often it is difficult to determine the effect of a development on adjacent properties until the development is completed.**

8. The relative gain to the public as compared to the hardship imposed upon the individual property owner; **Staff has not identified a hardship imposed on the property owner as the property is currently zoned.**

9. The length of time the property has been vacant as zoned considered in the context of land development in the area in the vicinity of the property; **Hall County GIS aerial imagery shows that the property was graded and a building pad established between 2010 and 2015. The property has remained undeveloped since then.**

10. Whether there are other existing or changing conditions affecting the use or development of the property which give supporting grounds for either approval or disapproval of the zoning proposal; **Staff is not aware of any changing conditions that affect the use and development of the property.**

11. Whether the change would create an isolated district unrelated to the surrounding districts; **The zoning has already been established on the property and the current request is for a conditional use approval. This question is not applicable to this request.**

12. Whether the present zoning district boundaries are illogically drawn in relation to existing conditions in the area; **There is no evidence that the present zoning district boundaries are illogically drawn in relation to existing conditions in the area; this is not a rezoning request so this is not applicable.**

13. Whether the change requested is out of scale with the needs of the county as a whole or the immediate neighborhood; **The request does not appear to be out of scale with the needs of the County as a whole as there is a need for parking and storage of industrial vehicles (tractor trailers) along this corridor.**

14. Whether it is impossible to find adequate sites for the proposed use in districts permitting such use and already appropriately zoned; **There are other properties within the County that support industrial uses based on the Future Land Use Map that would not require a conditional use approval or variance from the Gateway Corridors Overlay District (GCOD, 17.420).**

15. Whether the need for rezoning could be handled instead by a variance request to the zoning board of adjustment; **The zoning has already been established on the property and the current request is for a conditional use approval. This question is not applicable to this request.**

16. Whether there would be an ecological or pollution impact resulting from major modifications to the land if the request is granted; **The property will be required to meet all local, state, and federal requirements pertaining to stormwater management as part of the development process.**

17. Whether there is reasonable evidence based upon existing and anticipated land use that would indicate a mistake was made in the original zoning of the property; **This is not a rezoning request so this is not applicable.**

- The property falls within the **Gateway Corridors Overlay District, (**17.420.**)** which provides supplemental design standards for non-residential property development. The subject property will be subject to the standards found within 17.420.050 (non-residential property development standards) which relate to building materials, landscaping, and buffer requirements.
    - Within the **Gateway Corridors Overlay District, (**17.420.**)**, the use of outdoor storage requires conditional use approval from the Board of Commissioners, resulting in this request.
- A companion case requesting to vary the paving material within the **Gateway Corridors Overlay District (GCOD, 17.420)** is being heard concurrent to the conditional use request.
    - Specially, all parking areas shall be paved with asphalt, concrete (or pervious materials approved by the director) as found in **non-residential property development standard (17.420.050)**. The applicant is proposing to use gravel.

Development Support and Constraints –Departmental /agency comments

Hall County Environmental Health
An email dated October 31, 2022 from Emily McGahee states "No comment. Public sewer."

Hall County Fire Services
In an email dated November 2, 2022, Lieutenant John Hornick, NPQ Fire Inspector 1, Plans Review, stated: "The Hall County Fire Marshal's Office has no comments regarding the trailer storage lot as proposed."

Hall County Public Works and Utilities
In a memo dated November 3, 2022, from Srikanth Yamala, Director of Public Works and Utilities, the following comments were provided:

Engineering:
The site may require a stormwater management report, should the site plan indicate the proposed development meets stormwater thresholds for impervious surfaces and/or disturbed acreage.

Traffic:
No comments.

Utilities:
No comments.

Georgia Department of Transportation
Per an email dated November 2, 2022, Parker Niebauer, District 1 Traffic Operations Supervisor confirmed that this project will require GDOT coordination.

- **Excerpts from the minutes of the November 21, 2022 meeting**

Applicant's Presentation:

Randi Doveton, Planning Director, presented a summary of the request.

Lee Hemmer, 3945 Reynolds Road, Gainesville, presented the request. The applicant stated that the reason for a gravel variance would be due to the location not always being utilized for storage. The applicant stated that they would be installing an 8 foot fence to block the view into the property.

Public Forum:

Robert Deleon, 4139 Cagle Road, Lula, spoke in opposition. Concerns were traffic and safety.

Planning Commission Comments:

Mr. Braswell stated that the application would be heard as a conditional use to county commission approval as well as a variance request that would be voted on separately. Mr. Braswell pointed out that if any portion of the property lays on the Gateway Overlay, it applies to all the property. The applicant stated that with the way the area is developing it is inevitable to increase semi-truck presence. Mr. Hunt stated a PVC would be preferable fencing.

Motion: A motion to approve, with conditions was made by Mr. Hunt and seconded by Mr. Bell. Vote: 4-0 (Pilcher absent)

Conditions:

1. *The project shall substantially conform to the submitted site plan and narrative with the following variances and conditions.*
2. *The use shall be limited to overflow truck and trailer storage for a single lease tenant, any use as a commercial parking lot or in a model facility shall be prohibited. No material or containers shall be allowed storage on the premises if not stored in an enclosed trailer or on a flatbed trailer. This shall be approved as a temporary storage facility allowing no trucks or trailers to be stored on the site for more than 30 days. Conditional use shall be valid for 24 months from site approval by the applicable Hall County Building inspections to assure that all conditions of*

zoning have been met. The owner shall not be allowed to operate the facility until all conditions of Board of Commissioners approval have been met.

3. *The only approved signage shall be directional and traffic signs.*
4. *All lighting shall be non-spill type only, LED lighting is approved.*
5. *The applicant shall follow the standard Hall County Development Review process regarding pavement installation and stormwater management requirements.*
6. *All fencing within the Gateway Corridor 300 foot setback as well as fencing along the entirety of White Sulphur Road and Gateway Center Park Place shall be 8 feet in height, PVC opaque type, with a 10 foot planted landscape buffer. Fencing color and buffer requirements shall be approved by the Director of Planning and Development prior to the Land Disturbance Permitting process. All other fencing shall be 8 foot tall black vinyl coated chain-link fence.*
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9. *All conditions of zoning shall be made a part of the final plat for recording.*

HALL COUNTY PLANNING COMMISSION
RECOMMENDATION REPORT

Applicant ..... Reynolds-Hemmer Properties, LP

Request ..... Variance in Gateway Corridor Overlay District (GCOD) standards.

Proposed Use ..... Trailer storage

Size ..... 5.45± acres

Zoning ..... I-II, Heavy Industrial

Location ..... **3519 White Sulphur Road|** Tax Parcel 15020A000030

Commission District ..... Three

Planning Commission Date ..... November 21, 2022

Staff Recommendation ..... **Denial of the requested variance as the application does not meet the criteria 1, 2, 3 and 4 of 2.60.030.K.**

Planning Commission Recommendation.....Approval, with conditions

Vote: 4-0 (Pilcher absent)

1. The project shall substantially conform to the submitted site plan and narrative with the following variances and conditions.
2. The use shall be limited to overflow truck and trailer storage for a single lease tenant, any use as a commercial parking lot or in a model facility shall be prohibited. No material or containers shall be allowed storage on the premises if not stored in an enclosed trailer or on a flatbed trailer. This shall be approved as a temporary storage facility allowing no trucks or trailers to be stored on the site for more than 30 days. Conditional use shall be valid for 24 months from site approval by the applicable Hall County Building inspections to assure that all conditions of zoning have been met. The owner shall not be allowed to operate the facility until all conditions of Board of Commissioners approval have been met.
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Robert Deleon, 4139 Cagle Road, Lula, spoke in opposition. Concerns were traffic and safety.

Summary Analysis

The subject property is located at the corner of Cornelia Highway / State Route 365 and White Sulphur Road. The property has been pre-graded for usable building pads, and the proposed use is consistent with recent industrial growth in the immediate vicinity and with adjacent properties. The narrative claims that the proposed use will correlate well with the nearby future Inland Port and will not have any adverse impacts to the environment, as current stormwater management regulations will be followed.

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A concurrent application has been filed for conditional use approval for outdoor storage within the Gateway Corridors Overlay District (GCOD, 17.420). **The conditional use and variance requests can be heard together but require a separate motion and vote.**

One **variance** related to paving material within the Gateway Corridors Overlay District (GCOD, 17.420) will be required if the site plan, as presented, is approved because the proposal does not meet the requirements.

- All parking areas shall be paved with asphalt, concrete (or pervious materials approved by the director.) as found in non-residential property development standard (17.420.050).

Zoning Analysis

The Planning Commission is herby authorized to grant variances from the strict application of this Resolution upon proof by a preponderance of the evidence that 2.60.030.J provided the request meets the criteria set forth in 2.60.030.K.

1. There are extraordinary and exceptional conditions pertaining to the particular lot in question because of its size, shape or topography (the hardship must relate to the physical character of the lot and not to a personal or economic hardship); **The subject property is 5.42± acres in size and is undeveloped. The property has been previously graded, or padded out, in anticipation of a future commercial or industrial use. There are no extraordinary or exceptional conditions pertaining to the particular lot in question because of its size, shape or topography. The Gateway Corridors Overlay District (GCOD, 17.420) requires all parking areas to be paved with asphalt or concrete.**

2. The application of the requirements of this Title 17 to this particular piece of property would create an unusual hardship; **The property can be developed in accordance with the Gateway Corridors Overlay District (GCOD, 17.420) standards.**

3. Such conditions are peculiar to the particular piece of property involved and are not common to other properties in the neighborhood; **The requirements of the Gateway Corridors Overlay District (GCOD, 17.420) is required for non-residential developments along Cornelia Highway / SR 365.** and

4. Such conditions are not the result of any actions of the property owner; **There are no extraordinary conditions related to lot size, configuration, or topography that prevent the owner from adhering to GCOD development standards.**

5. Relief, if granted, would not cause substantial detriment to the public good or impair the purposes and intent of Title 17; provided, however, that no variance may be granted for a use of land or building or structure that is prohibited by Title 17 or for a conditional use which has been denied by the county planning commission. **Relief, if granted, should not cause substantial detriment to the public good. The development will be required to meet all local, state, and federal requirements pertaining to stormwater management and other applicable standards.**

Development Support and Constraints –Departmental /agency comments

Hall County Environmental Health
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Public Forum:

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Planning Commission Comments:

Mr. Braswell stated that the application would be heard as a conditional use to county commission approval as well as a variance request that would be voted on separately. Mr. Braswell pointed out that if any portion of the property lays on the Gateway Overlay, it applies to all the property. The applicant stated that with the way the area is developing it is inevitable to increase semi-truck presence. Mr. Hunt stated a PVC would be preferable fencing

Motion: A motion to approve, with conditions was made by Mr. Hunt and seconded by Mr. Bell. Vote: 4-0 (Pilcher absent)

Conditions:

10. *The project shall substantially conform to the submitted site plan and narrative with the following variances and conditions.*
11. *The use shall be limited to overflow truck and trailer storage for a single lease tenant, any use as a commercial parking lot or in a model facility shall be prohibited. No material or containers shall be allowed storage on the premises if not stored in an enclosed trailer or on a flatbed trailer. This shall be approved as a temporary storage facility allowing no trucks or trailers to be stored on the site for more than 30 days. Conditional use shall be valid for 24 months from site approval by the applicable Hall County Building inspections to assure that all conditions of zoning have been met. The owner shall not be allowed to operate the facility until all conditions of Board of Commissioners approval have been met.*
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18. *All conditions of zoning shall be made a part of the final plat for recording.*

***Motion:* A motion to approve all variances with the following conditions was made by Mr. Hunt and seconded by Mr. Bell. Vote: 4-0 (Pilcher absent)**

Conditions:

1. *The project shall substantially conform to the submitted site plan and narrative with the following variances and conditions.*
2. *The use shall be limited to overflow truck and trailer storage for a single lease tenant, any use as a commercial parking lot or in a model facility shall be prohibited. No material or containers shall be allowed storage on the premises if not stored in an enclosed trailer or on a flatbed trailer. This shall be approved as a temporary storage facility allowing no trucks or trailers to be stored on the site for more than 30 days. Conditional use shall be valid for 24 months from site approval by the applicable Hall County Building inspections to assure that all conditions of zoning have been met. The owner shall not be allowed to operate the facility until all conditions of Board of Commissioners approval have been met.*

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PLANNING AND DEVELOPMENT DEPARTMENT
2875 BROWNS BRIDGE ROAD, GAINESVILLE, GA, 30504
MAILING ADDRESS: PO BOX 1435, GAINESVILLE, GA 30503
t: 770-531-6809 | f: 770-531-3902

HALL COUNTY
GEORGIA
We have it all in Hall

CONDITIONAL USE APPLICATION

Applicant (Name & Mailing Address)

REYNOLDS-HEMMER PROPERTIES, LP
3645 WHITE SULPHUR RD
GAINESVILLE, GA 30507
Phone 770-530-3646
Email Address hemmerproperties@gmail.com

Property Owner (Name & Mailing Address)

REYNOLDS-HEMMER PROPERTIES, LP
3645 WHITE SULPHUR RD
GAINESVILLE, GA 30527
Phone 770-530-3646
Email Address hemmerproperties@gmail.com

Proposed Use TRAILER STORAGE

Contact Person (Name & Mailing Address)

LEE HEMMER
3945 REYNOLDS ROAD
GAINESVILLE, GA 30507
Phone 770-530-3646
Email Address hemmerproperties@gmail.com

Status of Applicant

☒ Owner
☐ Option to Purchase
☐ Area Resident
☐ Other

Requested Action

Permissive Use:
☐ HCPC ☒ HCC
Fee:$ 450.00
Receipt #: 859046
Check #: 3870

Tax Parcel Number 15020A 000030 Acreage 5.45
Location Address 3519 WHITE SULPHUR RD, GAINESVILLE, GA 30507

I hereby certify that the above information and all attached information are true and correct.

Sign _____ Date: 9-19-2022

Applicant must complete all information above. Failure to complete this section will result in the refusal of the application. The Planning Department has 15 days to review all applications and will set the dates for each application. If the application is found insufficient, an agenda date will not be set until the required information is submitted. Please note that the Planning Commission and County Commission dates are tentative.

Application Withdrawal: I hereby **withdraw** the application.

Sign _____ Date: _____

Staff Use Only

Application Date: _____ Taken by: _____

Tentative Planning Commission Date: ~~11/07~~ 11/21/22 Tentative County Commission Date: ~~12/08~~ 01/12/23

County Commission District: 3

Revised December 2019

ZON2022-00089

PLANNING AND DEVELOPMENT DEPARTMENT
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t: 770-531-6809 I f: 770-531-3902

HALL COUNTY
GEORGIA
We have it all in Hall

AUTHORIZATION OF PROPERTY OWNERS

Note: If the applicant is the property owner, please disregard this form.

Name of owner(s) REYNOLDS-HEMMER PROPERTIES, LP

Address 3645 WHITE SULPHUR RD

GAINESVILLE, GA 30507

Phone Number 770-530-3646

Name of Applicant(s): REYNOLDS-HEMMER PROPERTIES, LP

Address 3945 REYNOLDS ROAD

GAINESVILLE, GA 30507

Phone Number 770-530-3646

I swear that I am the owner of the property which is the subject matter of the attached applications as shown in the records of Hall County, Georgia.

I authorize the person named above to act as applicant in the pursuit of a rezoning, permissive use, or variance of this property.

Signature of Owner(s)

Personally appeared before me

who swears that the information contained in this authorization is true and correct to the best of his/her knowledge and belief.

Notary Public

SARAH FORD NOTARY PUBLIC MY COMMISSION EXPIRES 1/24/2026 WHITE COUNTY, GEORGIA

9-19-22
Date

PLANNING AND DEVELOPMENT DEPARTMENT
2875 BROWNS BRIDGE ROAD, GAINESVILLE, GA, 30504
MAILING ADDRESS: PO BOX 1435, GAINESVILLE. GA 30503
t: 770-531-6809 I f: 770-531-3902

HALL COUNTY
GEORGIA
We have it all in Hall

CAMPAIGN CONTRIBUTIONS DISCLOSURE FORM

This form must be completed by the applicant and property owner, or person representing the property owner, for all zoning actions.

OCGA § 36-67A-3[C] Disclosure of campaign contributions:

(b) When any applicant for zoning action has made, within two years immediately preceding the filing of the applicant's application for the zoning action, campaign contributions aggregating $250.00 or more to a local government official who will consider the application, it shall be the duty of the applicant to file a disclosure report with the governing authority of the respective local government showing:

(3) The name and official position of the local government official to whom the campaign contribution was made; and

(4) The dollar amount and description of each campaign contribution made by the applicant to the local government official during the two years immediately preceding the filing of the application for the rezoning action and the date of each such contribution.

(b) The disclosures required by subsection (a) of this Code section shall be filed within ten days after the application for the zoning action is first filed. (Code 1981, Section OCGA § 36-67A-3[C], enacted by GA L. 1986, page 1269, Section 1, GA L. 1991, page 1365, Section 1).

I hereby certify that I have read the above and that:

I have**____ I have not ✓____

within the two years immediately preceding this date, made any contribution(s) aggregating $250.00 or more to any local government official involved in the review or consideration of this application.

**If you have made such contributions, you must provide the data required below within ten (10) days of filing this application.

Name of Official(s): _____ Office: _____

Dollar Amount: _____ Date of Contribution: _____

Applicant's/Owner's Signature: _____ **Date:** 9-19-2022

Applicant's/Owner's Name (Printed): Reynolds - Hemmer Properties LP

PLANNING AND DEVELOPMENT DEPARTMENT
2875 BROWNS BRIDGE ROAD, GAINESVILLE, GA, 30504
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Name of Official(s): _____ Office: _____

Dollar Amount: _____ Date of Contribution: _____

Applicant's/Owner's Signature: _____ **Date:** 9-19-22

Applicant's/Owner's Name (Printed): Reynolds - Hemmer Properties, LP

Received 10-16-2022

foothills land design

NARRATIVE REPORT
REQUEST FOR CONDITIONAL USE
HALL COUNTY, GEORGIA

RE: 5.45 acres located on 3519 White Sulphur Road, Gainesville, GA 30507
Parcel ID 15020A 000030

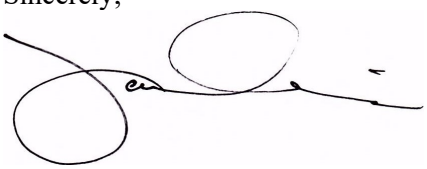
Lee Hemmer (the "Applicant") respectfully submits this Narrative Report to the Hall County Board of Commissioners in support of an application for a conditional use approval for tractor trailer storage in the Gateway Corridor Overlay district.

The primary use of this parcel is planned and intended to be used as tractor trailer storage on a gravel surface. The ordinance is interpreted to state that gravel is allowable for storage areas as this is not considered as parking. The applicant has a potential tenant with a specific company to provide storage for their trailers. This will not be a "pay lot".

The property has been pre-graded for a usable pad and is located at the corner of SR 365 and White Sulphur Road. The proposed storage area is approximately 3 acres. An opaque fence is proposed around the perimeter with a security fence and gate. The property will be unmanned and no office is necessary. Lighting will be LED security non-spill lighting and signage will concur with Hall County regulations. A tree replacement plan will be required and provided by the applicant before any land disturbance occurs.

The proposed use is consistent with recent industrial growth in the immediate vicinity and with adjacent properties. This use will also correlate well with the nearby future inland port. The proposed use will not have any adverse impacts to the environment and the current stormwater management regulations will be followed. The applicant has property across SR 365 from this property and wants to ensure that the trailers will be hidden from the highway and the site will be aesthetically pleasing.

Sincerely,



James Irvin, PE
Engineer for Applicant
Foothills Land Design, LLC

Foothills Land Design, LLC
164 Professional Drive
Baldwin, GA 30511

Ph: 706-778-0067
Fax: 706-778-0069
www.foothillsld.com

foothills
land
design

NARRATIVE REPORT
REQUEST FOR CONDITIONAL USE
HALL COUNTY, GEORGIA

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Sincerely,

James Irvin, PE
Engineer for Applicant
Foothills Land Design, LLC

Foothills Land Design, LLC
164 Professional Drive
Baldwin, GA 30511

Ph: 706-778-0067
Fax: 706-778-0069
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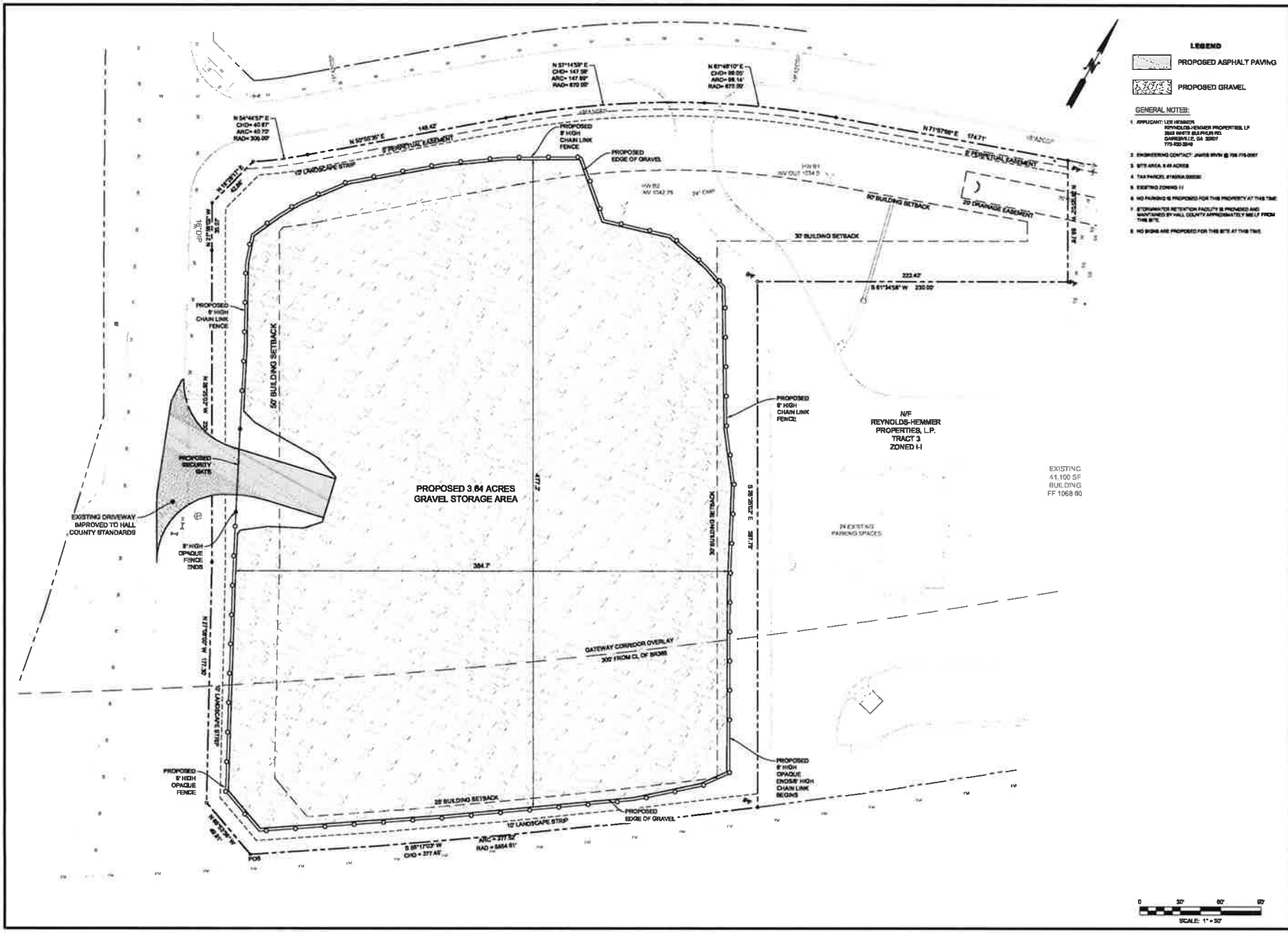


foothills land design

DEVELOPER:
REYNOLDS-HEMMER PROPERTIES, LP
3845 WHITE SULPHUR RD
GAINESVILLE, GA 30507

SITE PLAN
REYNOLDS-HEMMER PROPERTIES - TRACT 1
3519 WHITE SULPHUR ROAD
GMD 411
HALL COUNTY, GA

REVISIONS		
NO.	DESCRIPTION	DATE

GSWCC LEVEL II

DATE: SEPTEMBER 19, 2022

SCALE: 1" = 30'

SHEET:
1

eFiled & eRecorded
DATE: 6/27/2019
TIME: 1:11 PM
PLAT BOOK: 00877
PAGE: 00198
RECORDING FEE: 8.00
PARTICIPANT ID: 9658393969
CLERK: Charles Baker
Hall County, GA
NOTE: by ch

THIS BOX RESERVED FOR THE CLERK OF THE SUPERIOR COURT

AREA SUMMARY
TRACT "1" = 5.420 ACRES
TRACT "2" = 3.440 ACRES
TRACT "3" = 1.553 ACRES
TOTAL AREA = 10.413 ACRES

HALL COUNTY ENGINEERING NOTES

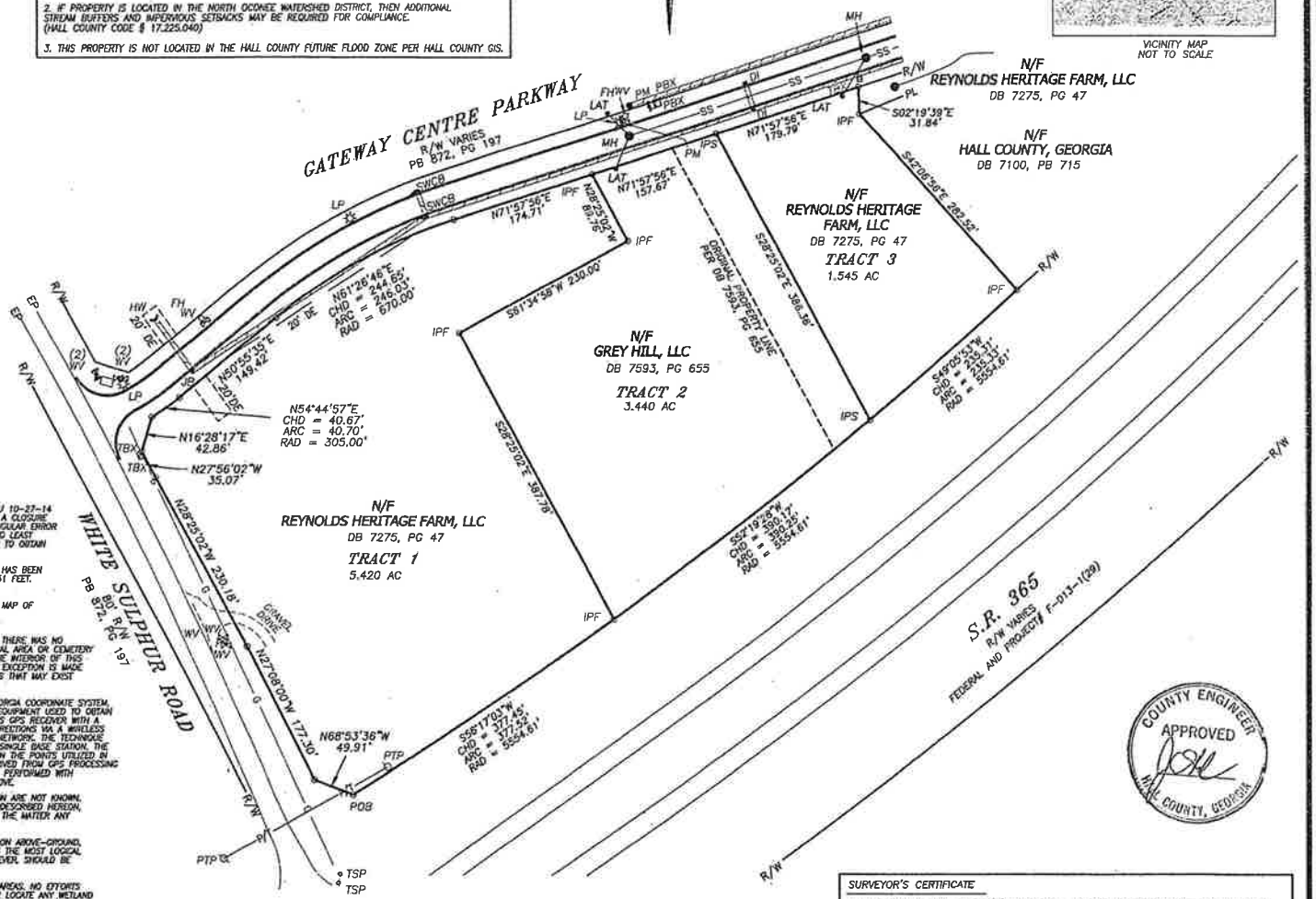
1. ANY STREAM OR STATE WATER LOCATED ON THIS PROPERTY MAY BE SUBJECT TO A 50 FEET UNDISTURBED NATURAL VEGETATIVE BUFFER AND A 75 FEET IMPERVIOUS SURFACE SETBACK. (HALL COUNTY CODE § 6.170.070)
2. IF PROPERTY IS LOCATED IN THE NORTH OCONEE WATERSHED DISTRICT, THEN ADDITIONAL STREAM BUFFERS AND IMPERVIOUS SETBACKS MAY BE REQUIRED FOR COMPLIANCE. (HALL COUNTY CODE § 17.225.040)
3. THIS PROPERTY IS NOT LOCATED IN THE HALL COUNTY FUTURE FLOOD ZONE PER HALL COUNTY GIS.



VICINITY MAP
NOT TO SCALE

LEGEND

AC	-	ACRES
AE	-	ACCESS EASEMENT
C&G	-	CURB & GUTTER
CL	-	CENTERLINE
CLF	-	CHAIN LINK FENCE
CMF	-	CONCRETE MONUMENT FOUND
DB, PG	-	DEED BOOK, PAGE
DI	-	DROP INLET
DE	-	DRAINAGE EASEMENT
DWCB	-	DOUBLE WING CATCH BASIN
EA	-	EDGE OF ASPHALT
FH	-	FIRE HYDRANT
EP	-	EDGE OF PAVEMENT
-G-	-	GAS LINE
GW	-	GUY WIRE
HW	-	HEADWALL
IPF	-	IRON PIN FOUND
IPS	-	IRON PIN SET (1/2" R/B)
JB	-	JUNCTION BOX
LAT	-	LATERAL
LP	-	LIGHT POLE
MH	-	MANHOLE
N/F	-	NOW OR FORMERLY
-P-	-	POWER LINE
-P/T-	-	POWER & TELEPHONE LINE
PB, PG	-	PLAT BOOK, PAGE
PBX	-	POWER BOX
PL	-	PROPERTY LINE
PM	-	POWER METER
POB	-	POINT OF BEGINNING
PTP	-	POWER & TELEPHONE POLE
R/B	-	REBAR
R/W	-	RIGHT OF WAY
SF	-	SQUARE FEET
SWCB	-	SINGLE WING CATCH BASIN
-SS-	-	SANITARY SEWER LINE
TBX	-	TELEPHONE BOX
TPOB	-	TRUE POINT OF BEGINNING
TSP	-	TRAFFIC SIGNAL POLE
-W-	-	WATER LINE
WV	-	WATER VALVE



RECORDING PERMIT

BY [signature] 6/25/19
Hall County Planning Commission

REFERENCE PLATS

1. RETRACEMENT SURVEY FOR REYNOLDS--HEMMER PROPERTIES, LP., PREPARED BY ROCHESTER & ASSOCIATES, INC., DATED 11/28/14 AND LAST REVISED 2/27/15.

LEGEND

1. THE FIELD DATA, COLLECTED BETWEEN 09/09/14 THRU 10-27-14 & 6/12/19 UPON WHICH THIS PLAT IS BASED HAS A CLOSURE PRECISION OF ONE FOOT IN 22,206 FEET AND AN ANGULAR ERROR OF 01 SECOND PER ANGLE AND WAS ADJUSTED USING LEAST SQUARES. A 5600 TRIMBLE TOTAL STATION WAS USED TO OBTAIN LINEAR & ANGULAR MEASUREMENTS.
2. THIS PLAT HAS BEEN CALCULATED FOR CLOSURE AND HAS BEEN FOUND TO BE ACCURATE WITHIN ONE FOOT IN 348,551 FEET.
3. THIS PROPERTY IS NOT LOCATED WITHIN A FLOOD HAZARD AREA AS PER FEMA FLOOD INSURANCE RATE MAP OF HALL COUNTY, GEORGIA AS SHOWN ON MAPS NO. 13139C0210G, REVISED APRIL 4, 2018.
4. DURING THE FIELD SURVEY PERFORMED ON THIS SITE THERE WAS NO VISIBLE, ABOVE GROUND EVIDENCE OF A HUMAN BURIAL AREA OR CEMETERY OBSERVED. HOWEVER A THOROUGH INSPECTION OF THE INTERIOR OF THIS SITE WAS NOT DONE BY THIS SURVEYOR. THEREFORE EXCEPTION IS MADE HEREON TO ANY HUMAN BURIAL AREAS OR CEMETERIES THAT MAY EXIST WITHIN THE BOUNDARIES OF THIS SITE.
5. THE HORIZONTAL DATUM FOR THIS SURVEY IS THE GEORGIA COORDINATE SYSTEM, WEST ZONE AS DETERMINED BY UTILIZING GPS. THE EQUIPMENT USED TO OBTAIN THIS DATA WAS A DUAL FREQUENCY TRIMBLE R8 GNSS GPS RECEIVER WITH A TRIMBLE TSC2 DATA COLLECTOR RECEIVING RTK CORRECTIONS VIA A WIRELESS NETWORK FROM AN ADJUSTED REAL TIME KINEMATIC NETWORK. THE TECHNIQUE USED WAS RTK CORRECTED MEASUREMENTS FROM A SINGLE BASE STATION. THE AVERAGE RELATIVE POSITIONAL ACCURACY OBTAINED ON THE POINTS UTILIZED IN THIS SURVEY WAS 0.04 FT. THESE VALUES WERE DERIVED FROM GPS PROCESSING SOFTWARE. THE REMAINDER OF THE FIELD WORK WAS PERFORMED WITH CONVENTIONAL SURVEY EQUIPMENT AS DESCRIBED ABOVE.
6. EASEMENTS, IF ANY, ALONG UTILITIES DEPICTED HEREON ARE NOT KNOWN, NO RECORDED DOCUMENTATION, OTHER THAN THOSE DESCRIBED HEREON, COULD BE OBTAINED BY THIS SURVEYOR TO CLARIFY THE MATTER ANY FURTHER THAN SHOWN HEREON.
7. UNDERGROUND UTILITIES SHOWN HEREON ARE BASED ON ABOVE-GROUND, VISIBLE STRUCTURES BEING CONNECTED TOGETHER IN THE MOST LOGICAL MEANS POSSIBLE. ALL UNDERGROUND UTILITIES, HOWEVER, SHOULD BE REFERENCED AS APPROXIMATE IN LOCATION.
8. THIS PROPERTY MAY OR MAY NOT CONTAIN WETLAND AREAS. NO EFFORTS HAVE BEEN MADE BY THE SURVEYOR TO IDENTIFY OR LOCATE ANY WETLAND AREAS ON THIS PROPERTY. WETLAND IDENTIFICATION AND DELINEATION SHOULD BE PERFORMED BY A QUALIFIED WETLAND SPECIALIST PRIOR TO ANY LAND DISTURBANCE.
9. THIS PLAT IS FOR THE EXCLUSIVE USE OF THE ENTITIES SHOWN HEREON. ANY USE BY THIRD PARTIES IS AT THEIR OWN RISK.
10. ALL PROPERTY CORNERS REFERENCED AS IPF OR IPS INDICATES A 1/2" REBAR WITH A YELLOW PLASTIC CAP STAMPED "ROCHESTER-LSF000484", UNLESS OTHERWISE NOTED.
11. THERE ARE INTERIOR IMPROVEMENTS TO THIS SITE WHICH HAVE NOT BEEN FIELD LOCATED AND ARE NOT SHOWN HEREON AT THE REQUEST OF THE CLIENT.
12. THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A CURRENT TITLE COMMITMENT; THEREFORE EXCEPTION IS TAKEN HEREON TO ANY EASEMENTS, RESERVATIONS, RIGHTS OF WAY AND RESTRICTIONS OF RECORD WHICH MAY EXIST. FURTHERMORE, THIS PROPERTY MAY BE SUBJECT TO EASEMENTS, RESERVATIONS, RIGHTS OF WAY, OR RESTRICTIONS WHICH ARE NOT RECORDED OR NOT DISCLOSED BY THE TITLE COMMITMENT OR OTHERWISE UNKNOWN TO THE SURVEYOR; THEREFORE EXCEPTION IS TAKEN TO ANY SUCH ITEMS.
13. ALL DISTANCES AS SHOWN ARE HORIZONTAL GROUND DISTANCES IN U.S. SURVEY FEET. (39.37 INCHES = 1 METER)

COUNTY ENGINEER APPROVED HALL COUNTY, GEORGIA

GEORGIA REGISTERED LAND SURVEYOR RICHARD E. MILLARD

SURVEYOR'S CERTIFICATE

As required by subsection (d) of O.C.G.A. Section 15-6-67, this plat has been prepared by a land surveyor and approved by all applicable local jurisdictions for recording as evidenced by approval certificates, signatures, stamps, or statements hereon. Such approvals or affirmations should be confirmed with the appropriate governmental bodies by any purchaser or user of this plat as to intended use of any parcel. Furthermore, the undersigned land surveyor certifies that this plat complies with the minimum technical standards for property surveys in Georgia as set forth in the rules and regulations of the Georgia Board of Registration for Professional Engineers and Land Surveyors and as set forth in O.C.G.A. Section 15-6-67.

[signature] 6/20/19

REGISTERED GEORGIA LAND SURVEYOR — DATE
Richard E. Millard, GA RLS# 3044
ROCHESTER & ASSOCIATES, INC.
CERTIFICATE OF AUTHORIZATION NO. - LSF000484
Email: remillard@rochester-assoc.com

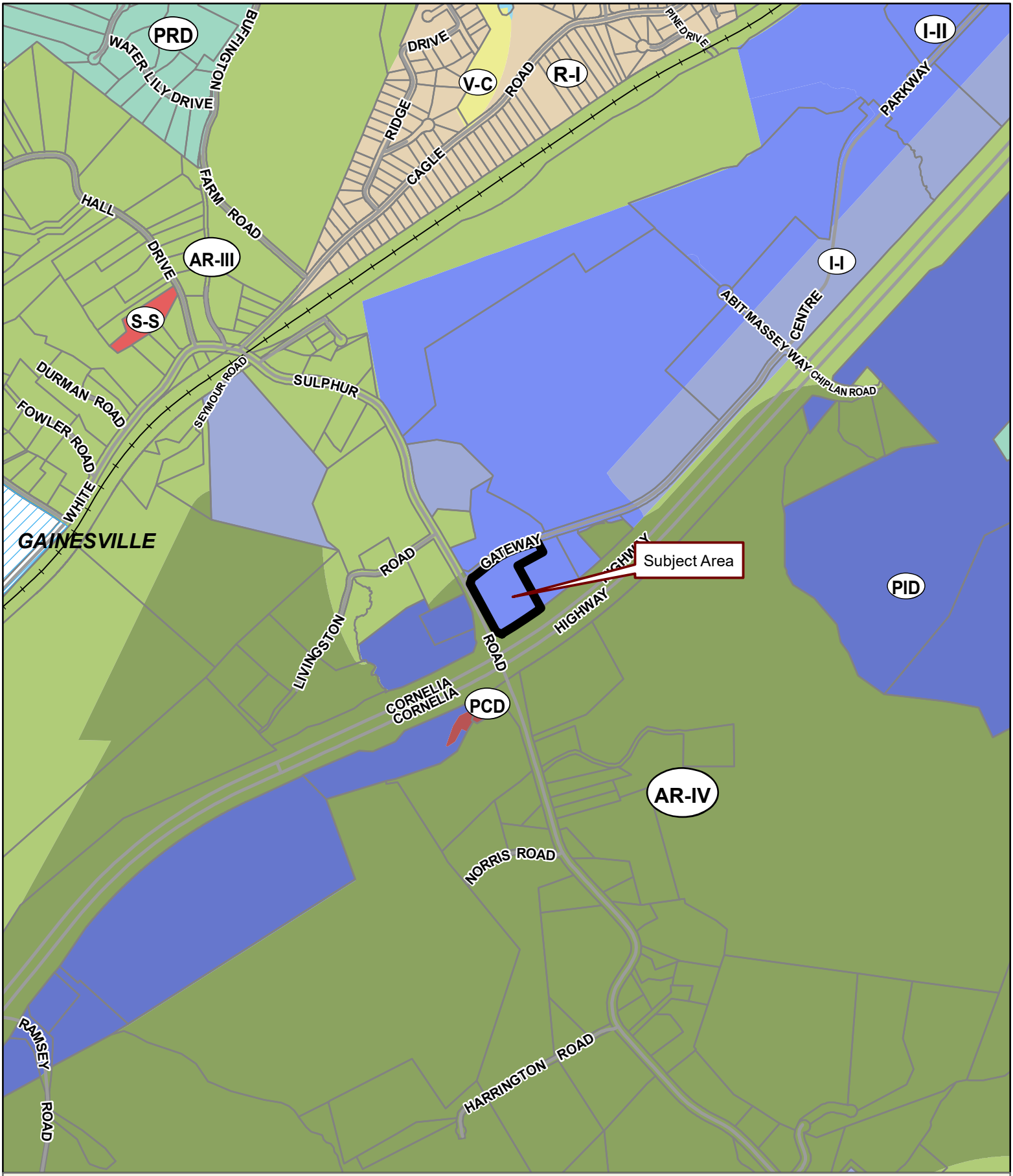
Rochester & Associates, Inc.
425 Oak Street N.W. • Gainesville, Georgia 30501
(770)718.0600 (770)718.9950 Fax • www.rochester-assoc.com

BOUNDARY LINE AGREEMENT SURVEY FOR:
GREY HILL, LLC
&
REYNOLDS HERITAGE FARM, LLC
LOCATED IN G.M.D. 403
HALL COUNTY, GEORGIA

NO.	DATE	DESCRIPTION
1	6/20/19	ADDRESSED COUNTY COMMENTS
		REVISIONS

GRAPHIC SCALE 0' 50' 100' 200'

SHEET 1 OF 1
DATE: 6/6/19
SCALE: 1" = 100'
FILE: BDY703
JOB NO. 2214.00 AND
DRAWN BY WDC



Applicant: REYNOLDS-HEMMER PROPERTIES, LP
Tax Parcel #: 15020A000030
Location: 3519 WHITE SULPHUR ROAD, GAINESVILLE, GA 30501
Commission District 3 **PC Mtg. Date:** 11/21/2022

0 300 600 1,200
Feet

Zoning Boundary
City Limits
Subject Area
Structure

N



Applicant: REYNOLDS-HEMMER PROPERTIES, LP
Tax Parcel #: 15020A000030
Location: 3519 WHITE SULPHUR ROAD, GAINESVILLE, GA 30501
Commission District 3 **PC Mtg. Date:** 11/21/2022

0 50 100 200
Feet

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City Limits
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Structure

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Tax Parcel #: 15020A000030

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Commission District 3 **PC Mtg. Date:** 11/21/2022

0 50 100 200
Feet

Zoning Boundary
City Limits
Subject Area

N

Anael Dominguez (Planning)

From: Emily McGahee (Environmental Health)
Sent: Monday, October 31, 2022 4:22 PM
To: Anael Dominguez (Planning); Randi Doveton (Planning)
Cc: Kelly Hairston (Environmental Health); Chad Harper (Environmental Health)
Subject: HCPC Tentative Agenda 11.21.22

Please find Environmental Health comments below:

Item 1, 2363 Whippoorwill Lane, Beddingfield: Must meet all Environmental Health residential septic system permitting requirements. Existing system evaluation and/or septic system modification may be required for system serving existing home on property. Level 3 Soil Evaluation will be required prior to application if existing septic system will not be used.

Item 2, 5385 Winder Hwy, Dell Group: All proposed lots must meet Hall County Board of Health Lot Size Resolution requirements.

Item 3, 4336 Cornelia Hwy, Le Tily: No comment.

Item 4, 3519 White Sulphur Rd, Reynolds-Hemmer: No comment. Public sewer.

Item 5, 4139 Cagle Road, DeLeon: All proposed lots must meet Hall County Board of Health Lot Size Resolution requirements.

Item 6, 3055 Tumbling Creek Road, Rochester: No comment. Public sewer.

Item 7, 4053 Cleveland Hwy, Crayton: Non-domestic wastewater treatment and disposal must be permitted by EPD.

Emily McGahee
Hall County Environmental Health
Hall County Government Center
2875 Browns Bridge Road
Mailing: PO Box 5901
Gainesville, GA 30504
(770) 531-3973
(770) 531-6767 (fax)

http://dph.georgia.gov/environmental-health (State Website)
http://www.phdistrict2.org/HallCounty.htm (District Website)
http://www.hallcounty.org/devserv/environmental.asp (County Website & Forms)

Anael Dominguez (Planning)

From: Niebauer, Parker J <PNiebauer@dot.ga.gov>
Sent: Wednesday, November 2, 2022 10:05 AM
To: Anael Dominguez (Planning); Randi Doveton (Planning)
Subject: RE: Tentative Planning Agenda for November 21, 2022

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Please see GDOT responses in red below

Parker Niebauer
D1TO Traffic Operations Supervisor

GDOT Georgia Department of Transportation

District 1 Division of Field Services
1475 Jesse Jewell Pkwy
Suite 100
Gainesville, GA, 30501
770.533.8275 office
770.519.3223 cell

From: Anael Dominguez (Planning) <adominguez@hallcounty.org>
Sent: Thursday, October 27, 2022 10:44 AM
To: Becky Ruffner (Parks & Leisure) <bruffner@hallcounty.org>; Bill Nash (Public Works) <bnash@hallcounty.org>; Brandi Smith (Business License) <bsmith@hallcounty.org>; Bryan Cash (Fire Services) <bcash@hallcounty.org>; Chad Harper (Environmental Health) <charper@hallcounty.org>; Chris Braswell (Planning) <cbraswell@hallcounty.org>; Christopher Armstrong (Fire Services) <carmstrong@hallcounty.org>; Dan Barnes <Daniel.C.Barnes@usace.army.mi>; Ellis Still (Planning) <estill@hallcounty.org>; Emily McGahee (Environmental Health) <emcgahee@hallcounty.org>; Frank Miller (Engineering) <fmiller@hallcounty.org>; Dykes, Jason <jdykes@dot.ga.gov>; Jason Skarda (Engineering) <jskarda@hallcounty.org>; Jeremy Wills <jeremy.wills@gainesville.org>; John Hornick (Fire Services) <jhornick@hallcounty.org>; Peevy, Jonathan <jpeevy@dot.ga.gov>; Kelly Hairston (Environmental Health) <khairston@hallcounty.org>; Matt Cox <matt.cox@hallco.org>; Michael Vieira (Fire Services) <mvieira@hallcounty.org>; Nicole Griffin (Tax Assessors) <nicole.griffin@hallcounty.org>; nswafford <nswafford@gainesville.org>; Pam Cravero <Pam.Cravero@hallco.org>; Niebauer, Parker J <PNiebauer@dot.ga.gov>; Randi Doveton (Planning) <rdoveton@hallcounty.org>; rich <rich@flowerybranchga.org>; Scott Puckett <spuckett@hallcounty.org>; Srikanth Yamala (Public Works) <syamala@hallcounty.org>; Stephen Cain <troy.s.cain@usace.army.mil>; Steve Watson (Real Property) <rswatson@hallcounty.org>; Tammie Croy (Engineering) <tcroy@hallcounty.org>; Tracy Gilreath (Tax Assessors) <tgilreath@hallcounty.org>; Wanda Moreno (Engineering) <wmoreno@hallcounty.org>; Wanda Sutton (Engineering) <wsutton@hallcounty.org>; will schofield <will.schofield@hallco.org>
Subject: Tentative Planning Agenda for November 21, 2022

Good morning –

Here is the Tentative Agenda and Maps for the **Monday, November 21, 2022** Hall County Planning Commission Meeting.

Please use the links to review the documents and respond with comments to Hall County Planning and Development. Failure to provide comments in a timely manner may result in the information not being included in the staff report.

When submitting comments, please include the name of the applicant along with the address of the property with the corresponding comment.

Comments are due by **Thursday, November 3rd.** Email comments to Randi (rdoveton@hallcounty.org) and Ana (adominguez@hallcounty.org).

CALL TO ORDER

AGENDA REVIEW

APPROVAL OF MINUTES - November 7, 2022

OLD BUSINESS

1. **2363 Whippoorwill Lane | Variance** | for a front yard setback variance from 55 feet to 35 feet, right side yard setback variance from 10 feet to 3 feet, and a left side yard setback variance from 10 feet to 9 feet on a .14± acre tract located on the west side of Whippoorwill Lane approximately 848 feet from its intersection with Sportsman Club Road | Zoned R-I; Tax Parcel 00109A000029 | Proposed use: single-family residence | * Commission District 4 | **Thomas Ryan & Vicki Beddingfield, applicant.**

2. **5385 Winder Highway | Amend Conditions |** of a Planned Commercial Development (PCD) on a 21.20± acre tract located on the north side of Winder Highway at its intersection with Benefield Road | Zoned PCD; Tax Parcel 15028B000015 **| Proposed use: car condos, storage, commercial uses, and retail |** ** Commission District 1 | **The Dell Group, LLC, applicant.**

NEW BUSINESS

3. **4336 Cornelia Highway | Variance |** for a sign variance on sign design and dimensions with an Amended to Planned Commercial Development conditions on a 14.09± acre tract located on the south side of Cornelia Highway approximately 1,497 feet from its intersection with Lula Road | Zoned PCD; Tax Parcel 09085 000008 | **Proposed use: new monument sign** | ** Commission District 3 | **Sophie Le Tily (Big Mouth Signs), applicant.**
   GDOT coordination required to verify no work being performed in GDOT R/W

4. **3519 White Sulphur Road | Use subject to County Commission Approval |** on a 5.45± acre tract located on the east side of White Sulphur Road at its intersection with Cornelia Highway | Zoned I-II; Tax Parcel 15020A000030 | **Proposed use: trailer storage** | ** Commission District 3 | **Reynolds-Hemmer Properties, LP, applicant.**
   GDOT Coordination required

5. **4139 Cagle Road | Use subject to County Commission Approval |** on a 7.43± acre tract located on the north side of Cagle Road approximately 1,637 feet from its intersection with Eli Jackson Road | Zoned AR-III & V-C; Tax Parcel 09099 000008 | **Proposed use: 2-lot subdivision |** ** Commission District 3 | **Robert & Valerie DeLeon, applicant.**
   None

6. **3055 Tumbling Creek Road | Amend conditions |** of a Planned Residential Development (PRD) on a 5.1± acre tract located on the west side of Tumbling Creek Road at approximately 30 feet from its intersection with Campus Pointe Circle | Zoned PRD; Tax Parcel 08026 000005 (pt.) | **Proposed use: 38-unit residential rental community** | ** Commission District 2 | **Rochester/DCCM, applicant.**
   None

7. **4053 Cleveland Highway | Rezone |** from Agriculture-Residential-III (AR-III) to Suburban-Shopping (SS) on a 6.34± acre tract located on the west side of Cleveland Highway at its intersection with Jim Hood Road | Zoned AR-III; Tax Parcel 12025 000036 | **Proposed use: grocery store, convenience store with gas & restaurant |** ** Commission District 3 | **Reginald Crayton, P.E., applicant.**
   GDOT Coordination Required

HALL COUNTY
GEORGIA

POST OFFICE DRAWER 1435
GAINESVILLE, GA 30503

t: 770.531.6800 | f: 770.531.3945

SRIKANTH YAMALA
Director

BILL NASH, P.E.
Assistant Director

FRANKLIN P. MILLER, P.E.
County Engineer

Hall County Government

PUBLIC WORKS AND UTILITIES
ENGINEERING DIVISION

M E M O R A N D U M

To: Randi Doveton, Director of Planning and Development

From: Srikanth Yamala, Director of Public Works and Utilities

Date: November 3, 2022

Subject: November 21, 2022 - Hall County Planning Commission Agenda

Please be advised that our office has reviewed the Hall County Planning Commission agenda for the November 21, 2022 meeting. Upon review, we provide the following comments.

OLD BUSINESS

1. **2363 Whippoorwill Lane | Variance** | for a front yard setback variance from 55 feet to 35 feet, right side yard setback variance from 10 feet to 3 feet, and a left side yard setback variance from 10 feet to 9 feet on a .14± acre tract located on the west side of Whippoorwill Lane approximately 848 feet from its intersection with Sportsman Club Road | Zoned R-I; Tax Parcel 00109A000029 | Proposed use: single-family residence | * Commission District 4 | **Thomas Ryan & Vicki Beddingfield, applicant.**

   a) **Engineering:** Show flood Hall County studied and FEMA.
   b) **Traffic:** No comments.
   c) **Utilities:** No comments.

2. **5385 Winder Highway | Amend Conditions |** of a Planned Commercial Development (PCD) on a 21.20± acre tract located on the north side of Winder Highway at its intersection with Benefield Road | Zoned PCD; Tax Parcel 15028B000015 **| Proposed use: car condos, storage, commercial uses, and retail |** ** Commission District 1 | **The Dell Group, LLC, applicant.**

   a) **Engineering:** The site may require a stormwater management report should the site plan indicate the proposed development meets stormwater thresholds for impervious surfaces and/or disturbed acreage.
   Show stream buffers and impervious setback from wrested vegetation not centerline of stream.
   b) **Traffic:** No comments.
   c) **Utilities:** No sewer in the area of project; septic proposed requires Health Department Approval.

HALL COUNTY
GEORGIA

POST OFFICE DRAWER 1435
GAINESVILLE, GA 30503

t: 770.531.6800 | f: 770.531.3945

SRIKANTH YAMALA
Director

BILL NASH, P.E.
Assistant Director

FRANKLIN P. MILLER, P.E.
County Engineer

Hall County Government

PUBLIC WORKS AND UTILITIES
ENGINEERING DIVISION

NEW BUSINESS

3. **4336 Cornelia Highway | Variance |** for a sign variance on sign design and dimensions with an Amended to Planned Commercial Development conditions on a 14.09± acre tract located on the south side of Cornelia Highway approximately 1,497 feet from its intersection with Lula Road | Zoned PCD; Tax Parcel 09085 000008 | **Proposed use: new monument sign** | ** Commission District 3 | **Sophie Le Tily (Big Mouth Signs), applicant.**

   a) **Engineering:** No comments.
   b) **Traffic**: No comments.
   c) **Utilities**: No comments.

4. **3519 White Sulphur Road | Use subject to County Commission Approval |** on a 5.45± acre tract located on the east side of White Sulphur Road at its intersection with Cornelia Highway | Zoned I-II; Tax Parcel 15020A000030 | **Proposed use: trailer storage** | ** Commission District 3 | **Reynolds-Hemmer Properties, LP, applicant.**

   a) **Engineering:** The site may require a stormwater management report, should the site plan indicate the proposed development meets stormwater thresholds for impervious surfaces and/or disturbed acreage.
   b) **Traffic:** No comments.
   c) **Utilities:** No comments.

5. **4139 Cagle Road | Use subject to County Commission Approval |** on a 7.43± acre tract located on the north side of Cagle Road approximately 1,637 feet from its intersection with Eli Jackson Road | Zoned AR-III & V-C; Tax Parcel 09099 000008 | **Proposed use: 2-lot subdivision |** ** Commission District 3 | **Robert & Valerie DeLeon, applicant.**

   a) **Engineering:** Further subdivisions of these lots will result in the necessity of a stormwater management plan, if the total number of lots reaches more than 6.
   b) **Traffic:** No comments.
   c) **Utilities:** No comments.

6. **3055 Tumbling Creek Road | Amend conditions |** of a Planned Residential Development (PRD) on a 5.1± acre tract located on the west side of Tumbling Creek Road at approximately 30 feet from its intersection with Campus Pointe Circle | Zoned PRD; Tax Parcel 08026 000005 (pt.) | **Proposed use: 38-unit residential rental community** | ** Commission District 2 | **Rochester/DCCM, applicant.**

   a) **Engineering:** The site may require a stormwater management report, should the site plan indicate the proposed development meets stormwater thresholds for impervious surfaces and/or disturbed acreage.
   Show buffer and impervious setback from wrested vegetation, not centerline of creek.

HALL COUNTY
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SRIKANTH YAMALA
Director

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Assistant Director

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County Engineer

Hall County Government

PUBLIC WORKS AND UTILITIES
ENGINEERING DIVISION

There seems to be a "Tumbling Creek Preserve Trail" through proposed development. Need to verify ownership and/or easements.

b) **Traffic:** No comments.

c) **Utilities:** City of Gainesville sewer district.

7. **4053 Cleveland Highway | Rezone |** from Agriculture-Residential-III (AR-III) to Suburban-Shopping (SS) on a 6.34± acre tract located on the west side of Cleveland Highway at its intersection with Jim Hood Road | Zoned AR-III; Tax Parcel 12025 000036 | **Proposed use: grocery store, convenience store with gas & restaurant** | ** Commission District 3 | **Reginald Crayton, P.E., applicant.**

a) **Engineering:** The site may require a stormwater management report, should the site plan indicate the proposed development meets stormwater thresholds for impervious surfaces and/or disturbed acreage.
Show buffer and impervious setback from wrested vegetation, not centerline of creek.

b) **Traffic:** GDOT permit required.

c) **Utilities:** Gainesville/Hall County sewer district.
No sewer available. On-site septic system proposed for wastewater, therefore Health Department approval required.

Anael Dominguez (Planning)

From: John Hornick (Fire Services)
Sent: Wednesday, November 2, 2022 1:11 PM
To: Randi Doveton (Planning); Anael Dominguez (Planning)
Subject: Agenda Review #4

4. **3519 White Sulphur Road | Use subject to County Commission Approval |** on a 5.45± acre tract located on the east side of White Sulphur Road at its intersection with Cornelia Highway | Zoned I-II; Tax Parcel 15020A000030 | **Proposed use: trailer storage** | ** Commission District 3 | **Reynolds-Hemmer Properties, LP, applicant.**

   The Hall County Fire Marshal's Office has no comments regarding the trailer storage lot as proposed.

Regards,

John Hornick, NPQ Fire Inspector 1, Plans Review
Lieutenant, Hall County Fire Rescue
Hall County Government
Main: 770-531-6838 | Cell: 404-597-0083
Website: www.Hallcounty.org




ZONING NOTICE


ZONING NOTICE
REYNOLDS HEMMER PROPERTIES, LP
TO COUNTY COMMISSION
TRAILER STORAGE
AND
Date: JAN. 17, 2023
Time: 6:00 PM

ZONING NOTICE

AN APPLICATION HAS BEEN FILED WITH HALL COUNTY IN REGARD TO THE ZONING REGULATIONS AS THEY APPLY TO THIS PROPERTY

APPLICANT: REYNOLDS-HEMMER PROPERTIES, LP

REQUEST: USE SUBJECT TO COUNTY COMMISSION APPROVAL- TRAILER STORAGE

PUBLIC HEARINGS WILL BE HELD ON:

PLANNING COMMISSION
Date: NOV. 21, 2022
Time: 5:15 PM

AND

COUNTY COMMISSION
Date: JAN. 17, 2023
Time: 6:00 PM

HALL COUNTY GOVERNMENT CENTER, 2875 BROWNS BRIDGE ROAD, GAINESVILLE, GA

FOR MORE INFORMATION CALL: (770) 531-6809

AGENDA ITEM

Planning and Development

REPORT TO: **Work Session (01/09/23)**

REPORT TO: **Voting Meeting (01/12/23)**

ITEM NO: 731/2022

SUBJECT: **4053 Cleveland Highway | Rezone** | from Agriculture-Residential-III (AR-III) to Suburban-Shopping (SS) on a 6.34± acre tract located on the west side of Cleveland Highway at its intersection with Jim Hood Road | Zoned AR-III; Tax Parcel 12025 000036 | **Proposed use: grocery store, convenience store with gas & restaurant** | Commission District 3 | **Reginald Crayton, P.E., applicant.**

Meetings:

Work Session Date: 01/09/23 **Voting Meeting Date:** 01/12/23

Executive Summary:

Presenter: RD

Recommendation:

Approval, with conditions: 1. The proposed use shall substantially conform with the proposed narrative and site plan. The proposed development shall be allowed to have up to 20,000 sq. ft. total in the two buildings. No further action by the Hall County Planning Commission and the Board of Commission shall be required for the proposed use as submitted by the applicant. 2. The project building elevations, materials, and colors shall be submitted to the Director of Planning and Development during the design review process for approval. 3. The development shall conform to Gateway Corridor Standards with the following exception: Standing seam roof panels shall be allowed if chosen with the color being approved by the Director of Planning and Development. 4. Driveway design and location shall be approved by Hall County Engineering and GDOT prior to the design review process. 5. All conditions of zoning shall be included on the final plat prior to recording. 6. The following statement regarding the potential impacts of agricultural operations in the area shall be made a part of any plat recorded on the property: "Owners, occupants, and users of property shown on this plat are hereby informed of the impacts associated with normal farming practices which may take place on adjacent and nearby property including, but not limited to, noise, odors, dust, the operation of machinery of any kind, the storage and disposal of manure, and the application of fertilizers, herbicides, and pesticides. Therefore, owners, occupants, and users of the property shown on this plat should be prepared to expect the effects of such practices." 7. The project shall meet all requirements of the Hall County Engineering Department.

Purpose of Request: **History:**

4053 Cleveland Highway | Rezone | from Agriculture-Residential-III (AR-III) to Suburban-Shopping (SS) on a 6.34± acre tract located on the west side of Cleveland Highway at its intersection with Jim Hood Road | Zoned AR-III; Tax Parcel 12025 000036 | Proposed use: grocery store, convenience store with gas & restaurant | Commission District 3 | Reginald Crayton, P.E., applicant.

Facts and Issues: **Options:**

Funding Requested	$ 0.00
Are funds within current budget?	No
Source of Funds	
Does the action involve a Resolution, Ordinance, Contract, Agreement, etc.?	No
Has it been reviewed by the County Attorney?	Yes
Is there a deadline for this item?	

Approvals:

Submit	Approve	Budget	Finance
AD	RD	TS	WG

Attorney	Administration	Clerk
WLI	CR	JR

Attachments:
Board Memo
Recommendation Report
Application
Narrative
Site Plan
Maps
Environmental Health Comments
GDOT Comments
Public Works Comments
Fire Comments
Public Comments
Public Comment - Opposition - Robbie Westbrooks
Notice Sign Photos

HALL COUNTY
GEORGIA
We have it all in Hall

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GAINESVILLE, GA 30503

t: 770.531.6809 | f: 770.531.3902

DIRECTOR
Randi Doveton

Hall County Government
PLANNING & DEVELOPMENT

To: Richard Higgins, Chairman
Kathy Cooper, District 1
Billy Powell, District 2
Gregg Poole, District 3
Jeff Stowe, District 4

From: Randi Doveton, Director

Date: December 5, 2022

Subject: **4053 Cleveland Highway | Rezone |** from Agriculture-Residential-III (AR-III) to Suburban-Shopping (SS) to allow a grocery store, convenience store with gas & restaurant | Reginald Crayton, P.E., applicant.

The request before you is the rezoning application of Reginald Crayton, P.E., to allow a grocery store, convenience store with gas & restaurant on 6.34± acres. This item is located within Commission District 3.

The proposed use (a shopping center) is a use requiring County Commission approval but no concurrent application was submitted for review or approval. This is not unusual since applicants often want assurance of the appropriate zoning classification prior to investing in more detailed plans for a conditional use application. **The Planning Commission voted to approve the use along with the rezoning. The use shall require a separate legal ad and sign posting before the Board of Commissioners can approve it. Should you approve the rezoning request, the use will be on your January 26, 2023 voting meeting agenda.**

At their November 21, 2022 meeting, the Hall County Planning Commission voted to recommend approval of the Rezoning request (and use of a shopping center) with seven (7) conditions **(4-0, Pilcher absent).**

There were no written comments submitted in advance of the Planning Commission meeting and no one spoke during the public forum.

There have been no changes to the request since the Planning Commission took action.

Planning Commission Approval Conditions:

1. The proposed use shall substantially conform with the proposed narrative and site plan. The proposed development shall be allowed to have up to 20,000 sq. ft. total in the two buildings. No further action by

the Hall County Planning Commission and the Board of Commission shall be required for the proposed use as submitted by the applicant.

2. The project building elevations, materials, and colors shall be submitted to the Director of Planning and Development during the design review process for approval.
3. The development shall conform to Gateway Corridor Standards with the following exception: Standing seam roof panels shall be allowed if chosen with the color being approved by the Director of Planning and Development.
4. Driveway design and location shall be approved by Hall County Engineering and GDOT prior to the design review process.
5. All conditions of zoning shall be included on the final plat prior to recording.
6. The following statement regarding the potential impacts of agricultural operations in the area shall be made a part of any plat recorded on the property:

"Owners, occupants, and users of property shown on this plat are hereby informed of the impacts associated with normal farming practices which may take place on adjacent and nearby property including, but not limited to, noise, odors, dust, the operation of machinery of any kind, the storage and disposal of manure, and the application of fertilizers, herbicides, and pesticides. Therefore, owners, occupants, and users of the property shown on this plat should be prepared to expect the effects of such practices."

7. The project shall meet all requirements of the Hall County Engineering Department.

HALL COUNTY PLANNING COMMISSION
RECOMMENDATION REPORT

Applicant ..... Reginald Crayton, P.E.

Request ..... Rezone from Agricultural Residential III (AR-III, 17.110) to Suburban Shopping (S-S, 17.140)

Proposed Use ..... Grocery store, convenience store with gas & restaurant

Size ..... 6.35± acres

Zoning ..... Current AR-III | Proposed SS

Location ..... **4053 Cleveland Highway** | Tax Parcel 12025 000036

Commission District ..... Three

Planning Commission Date ..... November 21, 2022

Staff Recommendation ..... **Approval with conditions, based on the findings that this request is consistent with the Comprehensive Plan and that it meets the criteria outlined in 17.380.060.**

Planning Commission Recommendation.....Approval, with conditions

Vote: 4-0 (Pilcher absent)

1. *The proposed use shall substantially conform with the proposed narrative and site plan. The proposed development shall be allowed to have up to 20,000 sq. ft. total in the two buildings. No further action by the Hall County Planning Commission and the Board of Commission shall be required for the proposed use as submitted by the applicant.*
2. *The project building elevations, materials, and colors shall be submitted to the Director of Planning and Development during the design review process for approval.*
3. *The development shall conform to Gateway Corridor Standards with the following exception: Standing seam roof panels shall be allowed if chosen with the color being approved by the Director of Planning and Development.*
4. *Driveway design and location shall be approved by Hall County Engineering and GDOT prior to the design review process.*
5. *All conditions of zoning shall be included on the final plat prior to recording.*

6. The following statement regarding the potential impacts of agricultural operations in the area shall be made a part of any plat recorded on the property:

   "Owners, occupants, and users of property shown on this plat are hereby informed of the impacts associated with normal farming practices which may take place on adjacent and nearby property including, but not limited to, noise, odors, dust, the operation of machinery of any kind, the storage and disposal of manure, and the application of fertilizers, herbicides, and pesticides. Therefore, owners, occupants, and users of the property shown on this plat should be prepared to expect the effects of such practices."

7. The project shall meet all requirements of the Hall County Engineering Department.

Public Forum:

There were no comments in support or opposition.

Summary Analysis

The applicant is requesting approval to rezone 6.35± acres from Agricultural Residential III (AR-III, 17.110) to Suburban Shopping (S-S, 17.140) to develop the tract for retail purposes. The narrative submitted by the applicant states that the proposed rezoning will allow for the three proposed uses consisting of an 11,000 square foot grocery store, 4,000 square foot restaurant, and a 3,250 square foot convenience store with a gas station. The site is currently developed with a single-family residence.

The subject property is located on the west side of Cleveland Highway / US Highway 129, bounded by Jim Hood Road to the north and residential properties to the west and south of the property. The hours of operation for said establishments have not yet been determined, neither has the signage. However, the narrative states that the signage will be in compliance with the Zoning Regulations (Title 17) and will be no more than the maximum monument sign dimensions for nonresidential uses (48 square feet for the grocery store and 32 square feet for the restaurant and convenience store). The property also lies within the Gateway Corridor Overlay District (GCOD, Chapter 17.420).

The narrative states that according to the Zoning Regulations (Title 17), the minimum area and setback requirements are as follows: minimum lot size is 15,000 square feet, minimum frontage is 100 feet, front yard setback is 30 feet from the property line, minimum side yard setback is 20 feet, and the minimum rear yard setback is 10 feet, as shown on the conceptual site plan.

Water will be provided to the property by the City of Gainesville and sewage will be handled by an on-site septic system on the property. The property will maintain a minimum 10 feet landscape stripe along Cleveland Highway and Jim Hood Road and a 25 foot transitional property where it adjoins residential parcels.

Based on the future land-use plan, staff finds the *requested zoning designation* is consistent with the future land use map designation of a Community Crossroad within a Mixed Use Corridor; it should be noted that the use of a shopping center within the Suburban Shopping (S-S, 17.140) zoning district requires

Planning Commission approval. A subsequent application will be required if the rezoning request is approved. Although listed as several different uses in this application, the proposal meets the definition of a shopping center (17.20.1010).

Zoning Analysis

- The proposed use of a grocery store, convenience store with gas & restaurant is consistent with the future land use map designation of a Community Crossroad within a Mixed Use Corridor.

When considering a zoning amendment to the zoning maps, the following items must be considered:

1. Whether the zoning proposal will permit a use that is suitable in view of the use and development of adjacent and nearby property; **The proposed zoning classification of Suburban Shopping (S-S, 17.140) is suitable in view of the use and development of adjacent and nearby property. The intersection of Cleveland Highway and Jim Hood Road has been identified as a Community Crossroad in the Comprehensive Plan.**

2. Whether the zoning proposal will adversely affect the existing use or usability of adjacent or nearby property; **The zoning proposal should not have an adverse effect on the existing use or usability of adjacent or nearby property. The property abuts a divided 4-lane highway, (Hwy 129), and the nearest residential structure from the proposed shopping center is located at 4127 Jim Hood Road.**

3. Whether the property to be affected by the zoning proposal has reasonable economic use as currently zoned. **The subject parcel has reasonable economic use as currently zoned. The property is developed with a single-family residence and can continue to be utilized as such.**

4. Whether the zoning proposal will result in a use which will or could cause an excessive or burdensome use of existing streets, transportation facilities, or utilities; **The proposed use of a grocery store, restaurant, & convenience store with a fueling station has the potential to increase traffic on the existing streets, but will likely attract customers who already travel the along Cleveland Highway rather than attracting new trips.**

5. Whether the zoning proposal is in conformity with the policy and intent of the land use plan; **The proposed use of a grocery store, convenience store with gas & restaurant is consistent with the future land use map designation of a Community Crossroad within a Mixed Use Corridor.**

6. The extent to which property values are diminished by the existing zoning restrictions; **Staff has not identified that the existing property values have been impacted by the existing zoning.**

7. The extent to which the destruction of the subject property's value under the existing zoning promotes the health, safety, morals or general welfare of the public; **Staff is unable to comment on the impact of property values without a full market analysis. Multiple factors impact property value including construction types, proposed uses, and maintenance. Often it is difficult to determine the effect of a development on adjacent properties until the development is completed.**

8. The relative gain to the public as compared to the hardship imposed upon the individual property owner; **Staff has not identified a hardship imposed on the property owner as the property is currently zoned. The property contains a single-family residential structure which could continue to be used as such under the existing zoning designation.**

9. The length of time the property has been vacant as zoned considered in the context of land development in the area in the vicinity of the property; **This criteria is not applicable to the application since the subject property is currently developed with a single-family residence. While it is unknown if the residence is occupied, there is nothing regulatory preventing it from being utilized in this manner.**

10. Whether there are other existing or changing conditions affecting the use or development of the property which give supporting grounds for either approval or disapproval of the zoning proposal; **Staff is not aware of any changing conditions that affect the use and development of the property.**

11. Whether the change would create an isolated district unrelated to the surrounding districts; **The proposed Suburban Shopping (S-S, 17.140) zoning classification would introduce a non-residential classification to this corner of the intersection of Jim Hood Road and Cleveland Highway. That being said, the properties to the north of Jim Hood Road are already zoned Suburban Shopping (S-S, 17.140).**

12. Whether the present zoning district boundaries are illogically drawn in relation to existing conditions in the area; **There is no indication that the present zoning district boundaries are illogically drawn.**

13. Whether the change requested is out of scale with the needs of the county as a whole or the immediate neighborhood; **The proposed use of a grocery store, convenience store with gas & restaurant would likely attract nearby residents and does not appear to be out of scale with the needs of the immediate neighborhood.**

14. Whether it is impossible to find adequate sites for the proposed use in districts permitting such use and already appropriately zoned; **There are other properties within the County that support the type of retail uses proposed and are already appropriately zoned.**

15. Whether the need for rezoning could be handled instead by a variance request to the [Planning Commission]; **The request could not be handled alternatively as a variance since the proposed use is neither permitted nor conditional in the AR-III district (17.110).**

16. Whether there would be an ecological or pollution impact resulting from major modifications to the land if the request is granted; **Any land disturbance activities on the property shall be required to go through the land development permitting process and as a result are subject to local, state, and federal regulations. As a result there should not be an ecological or pollution impact resulting from any modification to the land if the request is granted. If the rezoning is approved, the proposed use requires a separate conditional use approval from the Hall County Planning Commission.**

17. Whether there is reasonable evidence based upon existing and anticipated land use that would indicate a mistake was made in the original zoning of the property; **There is no indication that a mistake was made in the original zoning of the property.**

Suburban Shopping (S-S) standards are found in chapter 17.140 which include the permitted and conditional uses allowed within the S-S district.

17.380.050. - Submission requirements for a rezoning request

A. Any person or persons requesting a change in the official zoning map or use subject to approval of the county commission shall file an application with a plat or map of the property attached thereto, together with payment of such fees set forth in chapter 17.30 to cover administrative and advertising costs, in the planning department office. Such person or persons or their authorized

agent shall appear in person at the public hearing held to consider the district change. **Proposal meets the requirement. Applicant has paid the appropriate fees and understands that someone must be present at both the Hall County Planning Commission meeting and the voting meeting of the Hall County Board of Commissioners.**

B. All applications for a change of zoning classification or use subject to approval of the county commission shall include:

1. A narrative statement identifying the existing and proposed use of the property and addressing each of the criteria set forth in section 17.380.060.C of this section [chapter]. **The applicant has submitted a narrative and constitutional objections but did not specifically address the criteria listed in** 17.380.060.C.

2. A site plan drawn to scale designating the area covered by the application and identifying existing and proposed buildings and uses, adjacent existing land uses, zoning on contiguous parcels, including those across an abutting public right-of-way, and any other significant site improvements proposed to accommodate the proposed use or buffer adjacent uses, etc., or a plat of the subject property where no specific land use is proposed. In cases where only a plat or map is provided and no land use is proposed, the planning commission and county commission shall evaluate the application based on the most intense possible land use permitted in the proposed district**. Proposal meets this requirement.**

C. For any application for a slow rate land treatment system (see chapter 17.20), the following additional requirements apply. **The development proposes to utilize an on-site septic system and as such this requirement is not applicable.**

D. For any application proposing the development of 100 or more residential dwelling units, a traffic impact study shall be submitted prior to consideration of the application by the planning commission. At the applicant's expense, the traffic impact study shall be prepared by a professional engineer in accordance with requirements established by the Hall County Engineering Department. The engineering department shall review the traffic impact study and forward any comments to the Hall County Planning Commission. **The proposed development is commercial and as a result this requirement is not applicable.**

Development Support and Constraints –Departmental /agency comments

Hall County Environmental Health
An email dated October 31, 2022 from Emily McGahee states “Non-domestic wastewater treatment and disposal must be permitted by EPD.”

Hall County Fire Rescue
In an email dated November 2, 2022, Lieutenant John Hornick, NPQ Fire Inspector 1, Plans Review, states “The Hall County Fire Marshal’s Office has no comments regarding the planned commercial development as proposed.”

Hall County Public Works and Utilities
In a memo dated November 3, 2022, from Srikanth Yamala, Director of Public Works and Utilities, the following comments were provided:

Engineering:
The site may require a stormwater management report, should the site plan indicate the proposed development meets stormwater thresholds for impervious surfaces and/or disturbed acreage. Show buffer and impervious setback from wrested vegetation, not centerline of creek.

Traffic:
GDOT permit required

Utilities:
Gainesville/Hall county sewer district. No sewer available. On-site septic system proposed for wastewater, therefore Health Department approval required.

Georgia Department of Transportation
Per an email dated November 2, 2022, Parker Niebauer, District 1 Traffic Operations Supervisor, confirmed that this project **will** require GDOT coordination.

- **Excerpts from the minutes of the November 21, 2022 meeting**

Applicant's Presentation:

Randi Doveton, Planning Director, presented a summary of the request. Ms. Doveton stated that a conditional use would need to be considered for the shopping center.

Raj Umani, 195 Antler Trail, Alpharetta, presented the request. The applicant stated that the grocery store would roughly be about 11,000 sq. ft., restaurant 4,000 sq. ft. and convenience store with gas 3,000 sq. ft.

Public Forum:

There were no comments in support or opposition.

Planning Commission Comments:

Mr. Bell questioned if the grocery store would be independent. The applicant stated it was. Mr. Bell questioned if the restaurant would also be independent. The applicant stated that as of right not they have not identified that. Mr. Braswell wanted to make sure that the applicant understood that Gateway Standards were applicable to the property.

Motion: A motion to approve, with conditions was made by Mr. Hunt and seconded by Mr. Bell. Vote: 4-0 (Pilcher absent)

Conditions:

1. *The proposed use shall substantially conform with the proposed narrative and site plan. The proposed development shall be allowed to have up to 20,000 sq. ft. total in the two buildings. No further action by the Hall County Planning Commission and the Board of Commission shall be required for the proposed use as submitted by the applicant.*
2. *The project building elevations, materials, and colors shall be submitted to the Director of Planning and Development during the design review process for approval.*
3. *The development shall conform to Gateway Corridor Standards with the following exception: Standing seam roof panels shall be allowed if chosen with the color being approved by the Director of Planning and Development.*
4. *Driveway design and location shall be approved by Hall County Engineering and GDOT prior to the design review process.*
5. *All conditions of zoning shall be included on the final plat prior to recording.*

6. The following statement regarding the potential impacts of agricultural operations in the area shall be made a part of any plat recorded on the property:
   "Owners, occupants, and users of property shown on this plat are hereby informed of the impacts associated with normal farming practices which may take place on adjacent and nearby property including, but not limited to, noise, odors, dust, the operation of machinery of any kind, the storage and disposal of manure, and the application of fertilizers, herbicides, and pesticides. Therefore, owners, occupants, and users of the property shown on this plat should be prepared to expect the effects of such practices."
7. The project shall meet all requirements of the Hall County Engineering Department.

***Motion:* A motion to approve a Conditional Use to County Commission approval, with conditions was made by Mr. Hunt and seconded by Mr. Bell. Vote: 4-0 (Pilcher absent)**

Conditions:

1. *The proposed use shall substantially conform with the proposed narrative and site plan. The proposed development shall be allowed to have up to 20,000 sq. ft. total in the two buildings. No further action by the Hall County Planning Commission and the Board of Commission shall be required for the proposed use as submitted by the applicant.*
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7. The project shall meet all requirements of the Hall County Engineering Department.

PLANNING AND DEVELOPMENT DEPARTMENT
2875 BROWNS BRIDGE ROAD, GAINESVILLE, GA, 30504
MAILING ADDRESS: PO BOX 1435, GAINESVILLE. GA 30503
t: 770-531-6809 I f: 770-531-3902

HALL COUNTY
GEORGIA
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ZONING APPLICATION

Applicant (Name & Mailing Address)

Reginald Crayton, PE
6075 Barfield Rd
Sandy Springs, GA 30328
Phone 404-428-3445
Email Address reggie@getpland.net

Property Owner (Name & Mailing Address)

Jang Cho
3723 Wickford Lane
Peachtree Corners, 30096
Phone
Email Address jncho@gmail.com

Proposed Use Grocery Store, Convenience Store w/gas, restaurant

Contact Person (Name & Mailing Address)

Reginald Crayton, PE
6075 Barfield Rd
Sandy Springs, GA 30328
Phone 404-428-3445
Email Address reggie@getpland.net

Status of Applicant

- ☐ Owner
- ☐ Option to Purchase
- ☐ Area Resident
- ☒ Other

Requested Action

Existing Zoning: AR-III
Rezone to: S-S
Fee:$
Receipt #:
Check #:

Tax Parcel Number 12025 000036
Acreage 6.35
Location Address 4053 Cleveland Hwy, Gainesville, GA 30506

I hereby certify that the above information and all attached information are true and correct.

Sign Reginald Crayton, PE Date: 9/12/22

Applicant must complete all information above. Failure to complete this section will result in the refusal of the application. The Planning Department has 15 days to review all applications and will set the dates for each application. If the application is found insufficient, an agenda date will not be set until the required information is submitted. Please note that the Planning Commission and County Commission dates are tentative.

Application Withdrawal: I hereby **withdraw** the application.

Sign _____ Date: _____

Staff Use Only

Application Date: _____ Taken by: _____

Tentative Planning Commission Date: _____ Tentative County Commission Date: _____

County Commission District: _____

PLANNING AND DEVELOPMENT DEPARTMENT
2875 BROWNS BRIDGE ROAD, GAINESVILLE, GA, 30504
MAILING ADDRESS: PO BOX 1435, GAINESVILLE. GA 30503
t: 770-531-6809 I f: 770-531-3902

HALL COUNTY
GEORGIA
We have it all in Hall

CAMPAIGN CONTRIBUTIONS DISCLOSURE FORM

This form must be completed by the applicant and property owner, or person representing the property owner, for all zoning actions.

OCGA § 36-67A-3[C] Disclosure of campaign contributions:

(b) When any applicant for zoning action has made, within two years immediately preceding the filing of the applicant's application for the zoning action, campaign contributions aggregating $250.00 or more to a local government official who will consider the application, it shall be the duty of the applicant to file a disclosure report with the governing authority of the respective local government showing:

(3) The name and official position of the local government official to whom the campaign contribution was made; and

(4) The dollar amount and description of each campaign contribution made by the applicant to the local government official during the two years immediately preceding the filing of the application for the rezoning action and the date of each such contribution.

(b) The disclosures required by subsection (a) of this Code section shall be filed within ten days after the application for the zoning action is first filed. (Code 1981, Section OCGA § 36-67A-3[C], enacted by GA L. 1986, page 1269, Section 1, GA L. 1991, page 1365, Section 1).

I hereby certify that I have read the above and that:

I have**____I have not_X___

within the two years immediately preceding this date, made any contribution(s) aggregating $250.00 or more to any local government official involved in the review or consideration of this application.

**If you have made such contributions, you must provide the data required below within ten (10) days of filing this application.

Name of Official(s): _____ Office: _____

Dollar Amount: _____ Date of Contribution: _____

Applicant's/Owner's Signature: _____ **Date:** 10/11/2022

Applicant's/Owner's Name (Printed): Muradali Umani

PLANNING AND DEVELOPMENT DEPARTMENT
2875 BROWNS BRIDGE ROAD, GAINESVILLE, GA, 30504
MAILING ADDRESS: PO BOX 1435, GAINESVILLE. GA 30503
t: 770-531-6809 I f: 770-531-3902

HALL COUNTY
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CAMPAIGN CONTRIBUTIONS DISCLOSURE FORM

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(3) The name and official position of the local government official to whom the campaign contribution was made; and

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(b) The disclosures required by subsection (a) of this Code section shall be filed within ten days after the application for the zoning action is first filed. (Code 1981, Section OCGA § 36-67A-3[C], enacted by GA L. 1986, page 1269, Section 1, GA L. 1991, page 1365, Section 1).

I hereby certify that I have read the above and that:

I have** X I have not____

within the two years immediately preceding this date, made any contribution(s) aggregating $250.00 or more to any local government official involved in the review or consideration of this application.

**If you have made such contributions, you must provide the data required below within ten (10) days of filing this application.

Name of Official(s): _____ Office: _____

Dollar Amount: _____ Date of Contribution: _____

Applicant's/Owner's Signature: Reginald Crayton, PE **Date:** 9/22/22

Applicant's/Owner's Name (Printed): Reginald Crayton

pland
ENGINEERING & ARCHITECTURE

Reginald Crayton, PE
6075 Barfield Rd
Sandy Springs, GA 30328

September 12, 2022

Re: Application for 4053 Cleveland Highway
Gainesville, GA 30506

The Applicant, Reginald Crayton, Agent for the Owner, hereby submits a Zoning Application for approximately a 6.35-acre tract, herein after referred to as "Property", located at 4053 Cleveland Highway, Gainesville, GA 30506 (Parcel Number 12025 000036). The request to rezone from AR-III (Agricultural Residential) to SS (Suburban Shopping), to develop the tract for retail uses.

As stated in the paragraph above, the property currently is zoned AR III, Agriculture Residential, and currently has an existing residential home located onsite. The property is bounded by Jim Hood Road to the north, Cleveland Highway to the east, residential properties to the west and south of the property. The proposed rezoning to SS, Suburban Shopping, will only allow for the three proposed uses of a 11,000-sf grocery store, 4,000 sf restaurant and 3,250 sf convenience store with gas station. At this moment the hours of operation have not been determined. All the proposed developments will have associated utilities, parking and stormwater.

According to Hall County zoning ordinance the minimum area and set back requirements are as follows: minimum lot size is 15,000 sf, minimum frontage is 100 ft, front yard set back 30 ft from the property line, minimum side yard setback 20 ft, and the minimum rear yard set is 10 ft, as shown on the conceptual site plan.

Signage has not been determined but will be in compliance with the Hall County Unified Code and will be no more than the maximum monument sign dimensions for nonresidential uses, 48 sf for the grocery store and 32 sf for the restaurant and Convenience store.

Water will be provided to the "Property" by the City of Gainesville, and Sewage will be handled by a septic tank located on the property.

pland
ENGINEERING & ARCHITECTURE

The subject "Property" will maintain a minimum of a 10 ft landscape stripe around the property to maintain the buffer requirements.

The proposed development will be consistent with the intent of the zoning ordinance for the use will have no adverse impact on the surrounding properties.
The Applicant requests that based upon the factors mentioned above that this Application be approved for the rezoning of the subject Property.

4053 Cleveland Highway
Gainesville, GA 30506

GENERAL NOTES:

OWNER: RAJ UMANI
PHONE:

DEVELOPER: VANTAGE COMMERCIAL CONTRACTORS LLC
3060 OAK DRIVE
LAWRENCEVILLE, GA 30044
CONTACT: VIRAL PAREKH
PHONE: 404-884-3834

ENGINEER: PLAND ENGINEERING AND ARCHITECHURE
CONTACT: REGINALD CRAYTON, P.E
PHONE: 404-428-3445

SITE ADDRESS: 4053 CLEVELAND HWY
GAINESVILLE, GA 30506

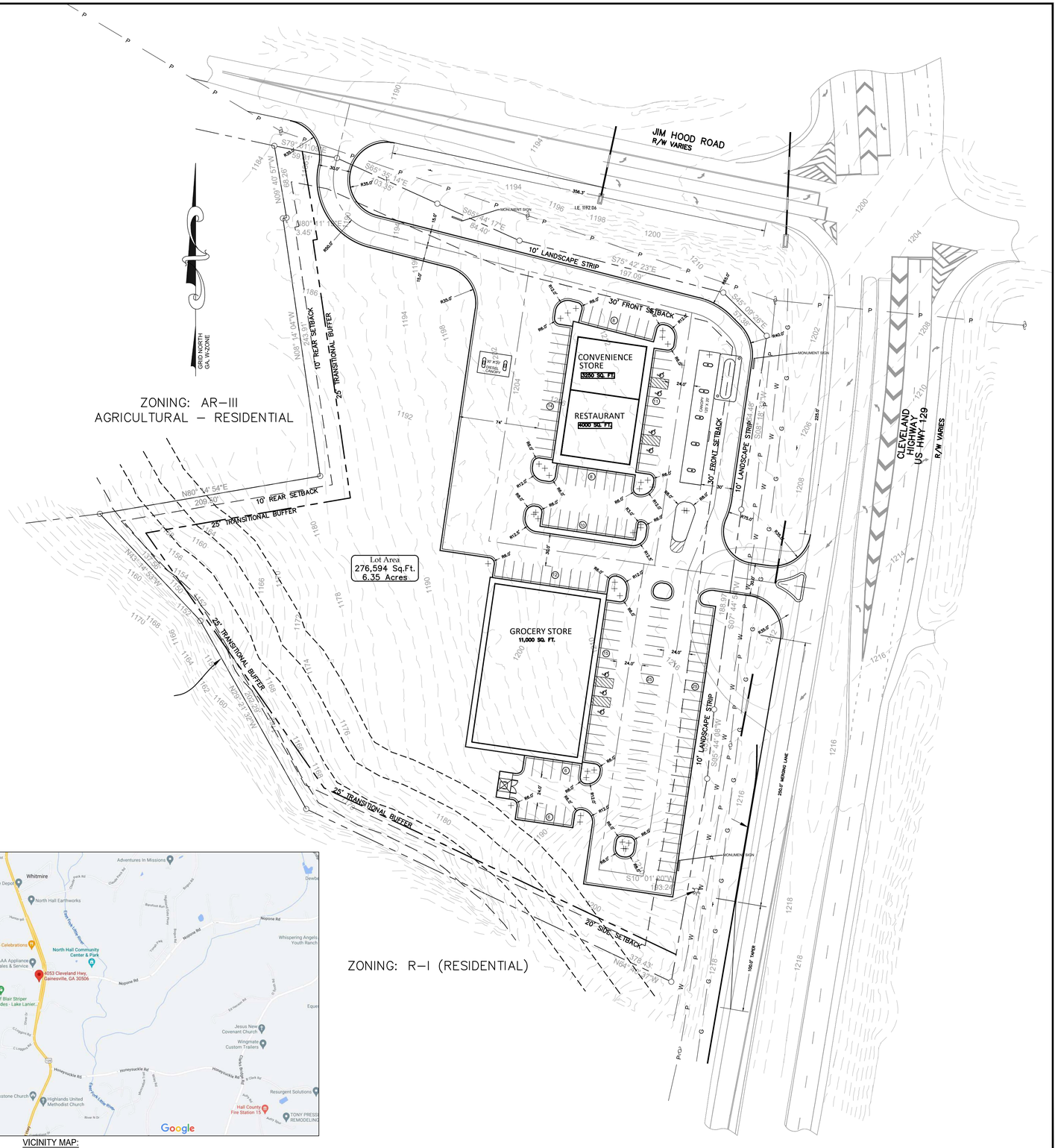
1. PARCEL NUMBER: 12025 000036
2. PARCEL AREA: 6.35 ACRES, 276,594 SF
3. CURRENT ZONING: AR-III (AGRICULTURAL RESIDENTIAL - III)
   PROPOSED ZOIING: S-S (SUBURBAN SHOPPING DISTRICT)
4. DISTRICT: 12TH
5. LAND LOT: 25
6. SURVEY OBTAINED FROM W.L.B ASSOCIATES, INC
   349 CHERYL COURT, JONESBORO, GA 30238
7. ALL CONTRACTORS UTILIZING THIS PLAN SET AND THE INFORMATION CONTAINED THEREON SHOULD
8. CALL 1800-282-7411 3 DAYS BEFORE BEGINNING CONSTRUCTION.
9. PROPOSED BUILDINGS USE:
   CONVENIENCE STORE WITH FUELING STATION
   NUMBER OF STORIES: 1
   PROPOSED BUILDING AREA = 3250 SF

   RESTAURANT
   NUMBER OF STORIES:1
   PROPOSED BUILDING AREA = 4,000 SF

   GROCERY STORE
   NUMBER OF STORIES:1
   PROPOSED BUILDING AREA = 11,000 SF
10. MIN LOT AREA: 15,000 SF
11. MIN LOT FRONTAGE: 100
12. MINIMUM FRONT YARD SET BACK: 30 FEET
13. MINIMUM SIDE YARD SETBACK: 20 FEET
14. MINIMUM REAR YARD SETBACK: 10 FEET
15. PARKING REQUIREMENT:

	MINIMUM REQUIRED	SPACES PROVIDED
CONVENIENCE STORE WITH FUELING STATION:	1 SPACE PER 200 SF 16 SPACES REQUIRED	16 SPACES
RESTAURANT:	9.5 SPACES PER 1,000 SF 38 SPACES REQUIRED	43 SPACES PROVIDED
GROCERY STORE:	1 SPACE PER 200 SF 55 SPACES REQUIRED	79 SPACES PROVIDED

16. PUBLIC WATER SERVICE WILL BE PROVIDED TO THE PROPERTY BY THE CITY OF GAINESVILLE.
17. SEWER/SEWAGE WILL BE HANDLED ON SITE BY A SEPTIC SYSTEM.



VICINITY MAP:

GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 inch = 50 ft.

811 Know what's below. Call before you dig.

E-SEAL AND SIGNATURE
E-SEALED: E-SEALED-DATE

pland
ENGINEERING & ARCHITECTURE
6075 BARFILED ROAD
SANDY SPRINGS, GA 30328
DIRECT: 404-644-2457
reggie@getpland.net
www.getpland.net

#	DATE	REVISION DESCRIPTION	BY

COPYRIGHT NOTE:
THESE DRAWINGS, COPIES, AND ALL RELATED DOCUMENTS ARE THE PROPERTY OF THE DESIGN TEAM & MAY NOT BE REPRODUCED OR USED IN ANY MANNER WHATSOEVER WITHOUT THE EXPRESS WRITTEN PERMISSION OF THE DESIGN TEAM. ALL RIGHTS RESERVED. THESE DRAWINGS ARE NOT TO BE USED FOR ANY PROJECT OTHER THAN THE SPECIFIC PROJECT AND LOCATION OTHER THAN THIS SPECIFIC PROJECT WITH OUT THE EXPRESS WRITTEN CONSENT OF THE DESIGN TEAM.

ALL IDEAS, DESIGNS, ARRANGEMENTS AND PLANS INDICATED OR REPRESENTED BY THIS DRAWING ARE OWNED BY AND THE PROPERTY OF PLAND, INC. AND WERE CREATED, EVOLVED AND DEVELOPED FOR USE ON AND IN CONNECTION WITH THE SPECIFIED PROJECT. NONE OF SUCH IDEAS, DESIGNS, ARRANGEMENTS OR PLANS SHALL BE USED BY OR DISCLOSED TO ANY PERSON, FIRM, OR CORPORATION FOR ANY PURPOSE WHATSOEVER WITHOUT THE WRITTEN PERMISSION OF PLAND, INC.

SCOPE OF DOCUMENT:
THE CONTRACTOR SHALL EXECUTE THE GENERAL SCOPE OF THE PROJECT IN TERMS OF ARCHITECTURAL DESIGN CONCEPTS, THE DIMENSIONS OF THE BUILDING, THE MAJOR ARCHITECTURAL ELEMENTS AND THE TYPE OF STRUCTURAL, MECHANICAL, ELECTRICAL AND PLUMBING SYSTEMS AS INDICATED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FULL PERFORMANCE AND COMPLETION OF THE REQUIREMENTS OF THE CONTRACT ON THE BASIS OF THE GENERAL SCOPE OF THE PROJECT AS DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, EQUIPMENT, EXECUTION AND COMPLETION OF THE WORK. TRADE CONTRACTORS RESPONSIBLE FOR ANY SHOP DRAWINGS REQUIRED FOR THE COMPLETION OF WORK AS NECESSARY.

NOT RELEASED FOR CONSTRUCTION

SHEET DESCRIPTION:
PRELIMINARY SITE PLAN

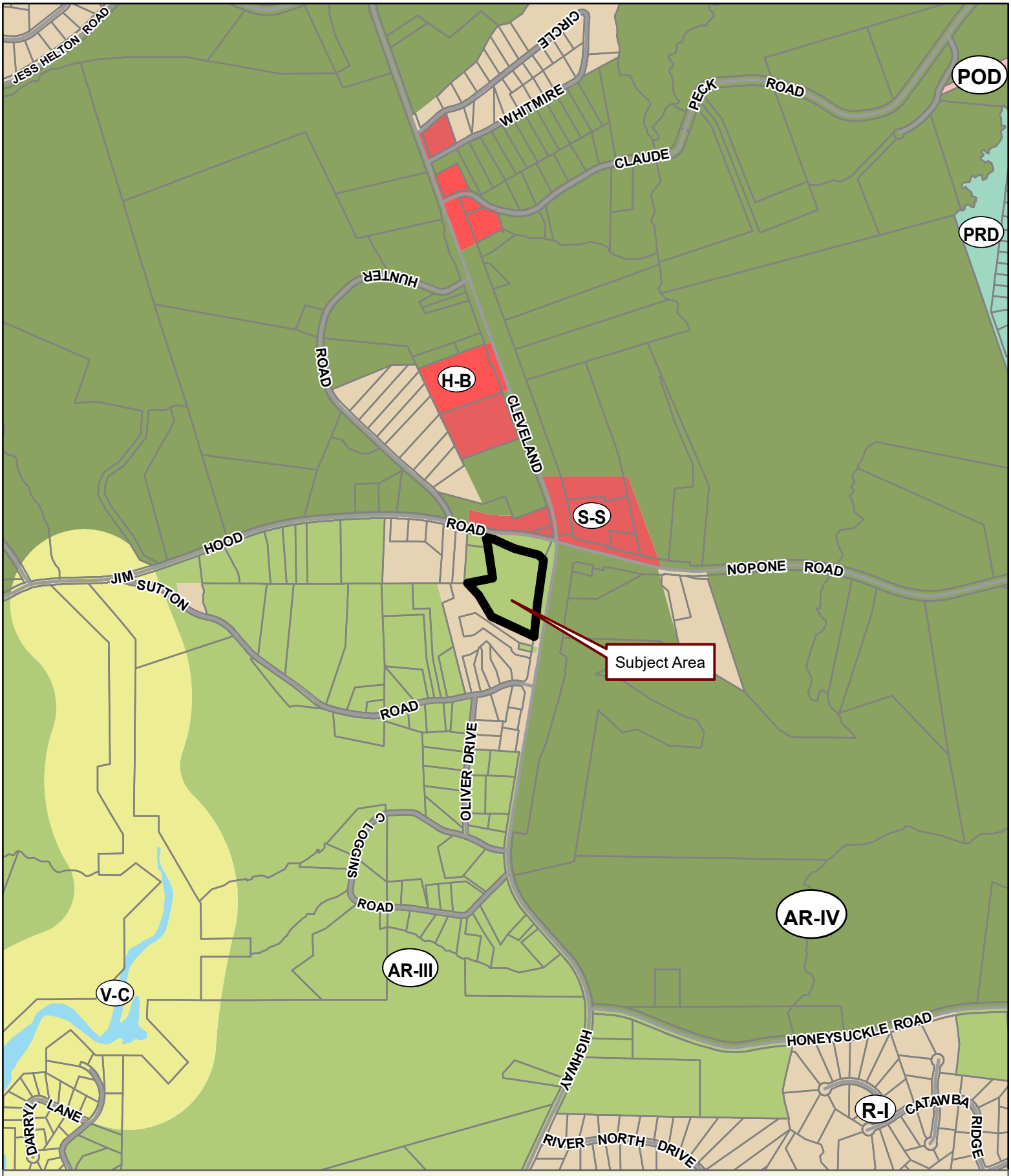
LOCATION:
4053 CLEVELAND HWY
GAINESVILLE, GA 30506

CHECKED BY:
RC

DRAWN BY:
RC

CIVIL

JOB NO:	SHEET
#######	C.1
DATE: 3/6/2022	

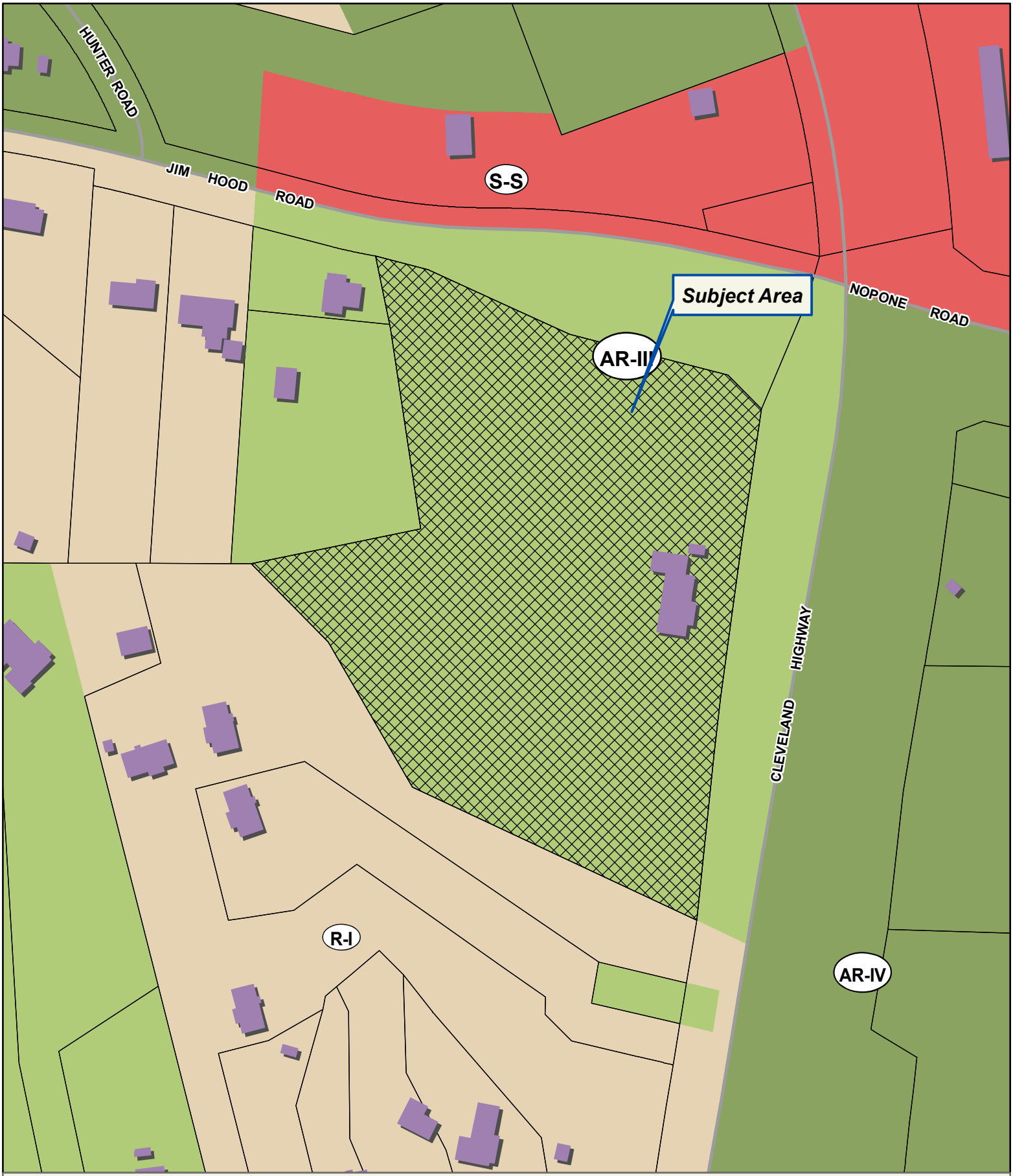


Applicant: REGINALD CRAYTON, PE
Tax Parcel #: 12025 000036
Location: 4053 CLEVELAND HIGHWAY, GAINESVILLE, GA 30506
Commission District 3 **PC Mtg. Date:** 11/21/2022

0 300 600 1,200
Feet

Zoning Boundary
City Limits
Subject Area
Structure

N



Applicant: REGINALD CRAYTON, PE
Tax Parcel #: 12025 000036
Location: 4053 CLEVELAND HIGHWAY, GAINESVILLE, GA 30506
Commission District 3 **PC Mtg. Date:** 11/21/2022

0 25 50 100
Feet

Zoning Boundary
City Limits
Subject Area
Structure

N



Applicant: REGINALD CRAYTON, PE
Tax Parcel #: 12025 000036
Location: 4053 CLEVELAND HIGHWAY, GAINESVILLE, GA 30506
Commission District 3 **PC Mtg. Date:** 11/21/2022

0 50 100 200
Feet

Zoning Boundary
City Limits
Subject Area

N

Anael Dominguez (Planning)

From: Emily McGahee (Environmental Health)
Sent: Monday, October 31, 2022 4:22 PM
To: Anael Dominguez (Planning); Randi Doveton (Planning)
Cc: Kelly Hairston (Environmental Health); Chad Harper (Environmental Health)
Subject: HCPC Tentative Agenda 11.21.22

Please find Environmental Health comments below:

Item 1, 2363 Whippoorwill Lane, Beddingfield: Must meet all Environmental Health residential septic system permitting requirements. Existing system evaluation and/or septic system modification may be required for system serving existing home on property. Level 3 Soil Evaluation will be required prior to application if existing septic system will not be used.

Item 2, 5385 Winder Hwy, Dell Group: All proposed lots must meet Hall County Board of Health Lot Size Resolution requirements.

Item 3, 4336 Cornelia Hwy, Le Tily: No comment.

Item 4, 3519 White Sulphur Rd, Reynolds-Hemmer: No comment. Public sewer.

Item 5, 4139 Cagle Road, DeLeon: All proposed lots must meet Hall County Board of Health Lot Size Resolution requirements.

Item 6, 3055 Tumbling Creek Road, Rochester: No comment. Public sewer.

Item 7, 4053 Cleveland Hwy, Crayton: Non-domestic wastewater treatment and disposal must be permitted by EPD.

Emily McGahee
Hall County Environmental Health
Hall County Government Center
2875 Browns Bridge Road
Mailing: PO Box 5901
Gainesville, GA 30504
(770) 531-3973
(770) 531-6767 (fax)

http://dph.georgia.gov/environmental-health (State Website)
http://www.phdistrict2.org/HallCounty.htm (District Website)
http://www.hallcounty.org/devserv/environmental.asp (County Website & Forms)

Anael Dominguez (Planning)

From: Niebauer, Parker J <PNiebauer@dot.ga.gov>
Sent: Wednesday, November 2, 2022 10:05 AM
To: Anael Dominguez (Planning); Randi Doveton (Planning)
Subject: RE: Tentative Planning Agenda for November 21, 2022

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Please see GDOT responses in red below

Parker Niebauer
D1TO Traffic Operations Supervisor

GDOT Georgia Department of Transportation

District 1 Division of Field Services
1475 Jesse Jewell Pkwy
Suite 100
Gainesville, GA, 30501
770.533.8275 office
770.519.3223 cell

From: Anael Dominguez (Planning) <adominguez@hallcounty.org>
Sent: Thursday, October 27, 2022 10:44 AM
To: Becky Ruffner (Parks & Leisure) <bruffner@hallcounty.org>; Bill Nash (Public Works) <bnash@hallcounty.org>; Brandi Smith (Business License) <bsmith@hallcounty.org>; Bryan Cash (Fire Services) <bcash@hallcounty.org>; Chad Harper (Environmental Health) <charper@hallcounty.org>; Chris Braswell (Planning) <cbraswell@hallcounty.org>; Christopher Armstrong (Fire Services) <carmstrong@hallcounty.org>; Dan Barnes <Daniel.C.Barnes@usace.army.mi>; Ellis Still (Planning) <estill@hallcounty.org>; Emily McGahee (Environmental Health) <emcgahee@hallcounty.org>; Frank Miller (Engineering) <fmiller@hallcounty.org>; Dykes, Jason <jdykes@dot.ga.gov>; Jason Skarda (Engineering) <jskarda@hallcounty.org>; Jeremy Wills <jeremy.wills@gainesville.org>; John Hornick (Fire Services) <jhornick@hallcounty.org>; Peevy, Jonathan <jpeevy@dot.ga.gov>; Kelly Hairston (Environmental Health) <khairston@hallcounty.org>; Matt Cox <matt.cox@hallco.org>; Michael Vieira (Fire Services) <mvieira@hallcounty.org>; Nicole Griffin (Tax Assessors) <nicole.griffin@hallcounty.org>; nswafford <nswafford@gainesville.org>; Pam Cravero <Pam.Cravero@hallco.org>; Niebauer, Parker J <PNiebauer@dot.ga.gov>; Randi Doveton (Planning) <rdoveton@hallcounty.org>; rich <rich@flowerybranchga.org>; Scott Puckett <spuckett@hallcounty.org>; Srikanth Yamala (Public Works) <syamala@hallcounty.org>; Stephen Cain <troy.s.cain@usace.army.mil>; Steve Watson (Real Property) <rswatson@hallcounty.org>; Tammie Croy (Engineering) <tcroy@hallcounty.org>; Tracy Gilreath (Tax Assessors) <tgilreath@hallcounty.org>; Wanda Moreno (Engineering) <wmoreno@hallcounty.org>; Wanda Sutton (Engineering) <wsutton@hallcounty.org>; will schofield <will.schofield@hallco.org>
Subject: Tentative Planning Agenda for November 21, 2022

Good morning –

Here is the Tentative Agenda and Maps for the **Monday, November 21, 2022** Hall County Planning Commission Meeting.

Please use the links to review the documents and respond with comments to Hall County Planning and Development. Failure to provide comments in a timely manner may result in the information not being included in the staff report.

When submitting comments, please include the name of the applicant along with the address of the property with the corresponding comment.

Comments are due by **Thursday, November 3rd.** Email comments to Randi (rdoveton@hallcounty.org) and Ana (adominguez@hallcounty.org).

CALL TO ORDER

AGENDA REVIEW

APPROVAL OF MINUTES - November 7, 2022

OLD BUSINESS

1. **2363 Whippoorwill Lane | Variance** | for a front yard setback variance from 55 feet to 35 feet, right side yard setback variance from 10 feet to 3 feet, and a left side yard setback variance from 10 feet to 9 feet on a .14± acre tract located on the west side of Whippoorwill Lane approximately 848 feet from its intersection with Sportsman Club Road | Zoned R-I; Tax Parcel 00109A000029 | Proposed use: single-family residence | * Commission District 4 | **Thomas Ryan & Vicki Beddingfield, applicant.**

2. **5385 Winder Highway | Amend Conditions |** of a Planned Commercial Development (PCD) on a 21.20± acre tract located on the north side of Winder Highway at its intersection with Benefield Road | Zoned PCD; Tax Parcel 15028B000015 **| Proposed use: car condos, storage, commercial uses, and retail |** ** Commission District 1 | **The Dell Group, LLC, applicant.**

NEW BUSINESS

3. **4336 Cornelia Highway | Variance |** for a sign variance on sign design and dimensions with an Amended to Planned Commercial Development conditions on a 14.09± acre tract located on the south side of Cornelia Highway approximately 1,497 feet from its intersection with Lula Road | Zoned PCD; Tax Parcel 09085 000008 | **Proposed use: new monument sign** | ** Commission District 3 | **Sophie Le Tily (Big Mouth Signs), applicant.**
   GDOT coordination required to verify no work being performed in GDOT R/W

4. **3519 White Sulphur Road | Use subject to County Commission Approval |** on a 5.45± acre tract located on the east side of White Sulphur Road at its intersection with Cornelia Highway | Zoned I-II; Tax Parcel 15020A000030 | **Proposed use: trailer storage** | ** Commission District 3 | **Reynolds-Hemmer Properties, LP, applicant.**
   GDOT Coordination required

5. **4139 Cagle Road | Use subject to County Commission Approval |** on a 7.43± acre tract located on the north side of Cagle Road approximately 1,637 feet from its intersection with Eli Jackson Road | Zoned AR-III & V-C; Tax Parcel 09099 000008 | **Proposed use: 2-lot subdivision |** ** Commission District 3 | **Robert & Valerie DeLeon, applicant.**
   None

6. **3055 Tumbling Creek Road | Amend conditions |** of a Planned Residential Development (PRD) on a 5.1± acre tract located on the west side of Tumbling Creek Road at approximately 30 feet from its intersection with Campus Pointe Circle | Zoned PRD; Tax Parcel 08026 000005 (pt.) | **Proposed use: 38-unit residential rental community** | ** Commission District 2 | **Rochester/DCCM, applicant.**
   None

7. **4053 Cleveland Highway | Rezone |** from Agriculture-Residential-III (AR-III) to Suburban-Shopping (SS) on a 6.34± acre tract located on the west side of Cleveland Highway at its intersection with Jim Hood Road | Zoned AR-III; Tax Parcel 12025 000036 | **Proposed use: grocery store, convenience store with gas & restaurant |** ** Commission District 3 | **Reginald Crayton, P.E., applicant.**
   GDOT Coordination Required

HALL COUNTY
GEORGIA

POST OFFICE DRAWER 1435
GAINESVILLE, GA 30503

t: 770.531.6800 | f: 770.531.3945

SRIKANTH YAMALA
Director

BILL NASH, P.E.
Assistant Director

FRANKLIN P. MILLER, P.E.
County Engineer

Hall County Government

PUBLIC WORKS AND UTILITIES
ENGINEERING DIVISION

M E M O R A N D U M

To: Randi Doveton, Director of Planning and Development

From: Srikanth Yamala, Director of Public Works and Utilities

Date: November 3, 2022

Subject: November 21, 2022 - Hall County Planning Commission Agenda

Please be advised that our office has reviewed the Hall County Planning Commission agenda for the November 21, 2022 meeting. Upon review, we provide the following comments.

OLD BUSINESS

1. **2363 Whippoorwill Lane | Variance** | for a front yard setback variance from 55 feet to 35 feet, right side yard setback variance from 10 feet to 3 feet, and a left side yard setback variance from 10 feet to 9 feet on a .14± acre tract located on the west side of Whippoorwill Lane approximately 848 feet from its intersection with Sportsman Club Road | Zoned R-I; Tax Parcel 00109A000029 | Proposed use: single-family residence | * Commission District 4 | **Thomas Ryan & Vicki Beddingfield, applicant.**

   a) **Engineering:** Show flood Hall County studied and FEMA.
   b) **Traffic:** No comments.
   c) **Utilities:** No comments.

2. **5385 Winder Highway | Amend Conditions |** of a Planned Commercial Development (PCD) on a 21.20± acre tract located on the north side of Winder Highway at its intersection with Benefield Road | Zoned PCD; Tax Parcel 15028B000015 **| Proposed use: car condos, storage, commercial uses, and retail |** ** Commission District 1 | **The Dell Group, LLC, applicant.**

   a) **Engineering:** The site may require a stormwater management report should the site plan indicate the proposed development meets stormwater thresholds for impervious surfaces and/or disturbed acreage.
   Show stream buffers and impervious setback from wrested vegetation not centerline of stream.
   b) **Traffic:** No comments.
   c) **Utilities:** No sewer in the area of project; septic proposed requires Health Department Approval.

HALL COUNTY
GEORGIA

POST OFFICE DRAWER 1435
GAINESVILLE, GA 30503

t: 770.531.6800 | f: 770.531.3945

SRIKANTH YAMALA
Director

BILL NASH, P.E.
Assistant Director

FRANKLIN P. MILLER, P.E.
County Engineer

Hall County Government

PUBLIC WORKS AND UTILITIES
ENGINEERING DIVISION

NEW BUSINESS

3. **4336 Cornelia Highway | Variance |** for a sign variance on sign design and dimensions with an Amended to Planned Commercial Development conditions on a 14.09± acre tract located on the south side of Cornelia Highway approximately 1,497 feet from its intersection with Lula Road | Zoned PCD; Tax Parcel 09085 000008 | **Proposed use: new monument sign** | ** Commission District 3 | **Sophie Le Tily (Big Mouth Signs), applicant.**

   a) **Engineering:** No comments.
   b) **Traffic**: No comments.
   c) **Utilities**: No comments.

4. **3519 White Sulphur Road | Use subject to County Commission Approval |** on a 5.45± acre tract located on the east side of White Sulphur Road at its intersection with Cornelia Highway | Zoned I-II; Tax Parcel 15020A000030 | **Proposed use: trailer storage** | ** Commission District 3 | **Reynolds-Hemmer Properties, LP, applicant.**

   a) **Engineering:** The site may require a stormwater management report, should the site plan indicate the proposed development meets stormwater thresholds for impervious surfaces and/or disturbed acreage.
   b) **Traffic:** No comments.
   c) **Utilities:** No comments.

5. **4139 Cagle Road | Use subject to County Commission Approval |** on a 7.43± acre tract located on the north side of Cagle Road approximately 1,637 feet from its intersection with Eli Jackson Road | Zoned AR-III & V-C; Tax Parcel 09099 000008 | **Proposed use: 2-lot subdivision |** ** Commission District 3 | **Robert & Valerie DeLeon, applicant.**

   a) **Engineering:** Further subdivisions of these lots will result in the necessity of a stormwater management plan, if the total number of lots reaches more than 6.
   b) **Traffic:** No comments.
   c) **Utilities:** No comments.

6. **3055 Tumbling Creek Road | Amend conditions |** of a Planned Residential Development (PRD) on a 5.1± acre tract located on the west side of Tumbling Creek Road at approximately 30 feet from its intersection with Campus Pointe Circle | Zoned PRD; Tax Parcel 08026 000005 (pt.) | **Proposed use: 38-unit residential rental community** | ** Commission District 2 | **Rochester/DCCM, applicant.**

   a) **Engineering:** The site may require a stormwater management report, should the site plan indicate the proposed development meets stormwater thresholds for impervious surfaces and/or disturbed acreage.
   Show buffer and impervious setback from wrested vegetation, not centerline of creek.

HALL COUNTY
GEORGIA

POST OFFICE DRAWER 1435
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SRIKANTH YAMALA
Director

BILL NASH, P.E.
Assistant Director

FRANKLIN P. MILLER, P.E.
County Engineer

Hall County Government

PUBLIC WORKS AND UTILITIES
ENGINEERING DIVISION

There seems to be a "Tumbling Creek Preserve Trail" through proposed development. Need to verify ownership and/or easements.

b) **Traffic:** No comments.

c) **Utilities:** City of Gainesville sewer district.

7. **4053 Cleveland Highway | Rezone |** from Agriculture-Residential-III (AR-III) to Suburban-Shopping (SS) on a 6.34± acre tract located on the west side of Cleveland Highway at its intersection with Jim Hood Road | Zoned AR-III; Tax Parcel 12025 000036 | **Proposed use: grocery store, convenience store with gas & restaurant** | ** Commission District 3 | **Reginald Crayton, P.E., applicant.**

a) **Engineering:** The site may require a stormwater management report, should the site plan indicate the proposed development meets stormwater thresholds for impervious surfaces and/or disturbed acreage.
Show buffer and impervious setback from wrested vegetation, not centerline of creek.

b) **Traffic:** GDOT permit required.

c) **Utilities:** Gainesville/Hall County sewer district.
No sewer available. On-site septic system proposed for wastewater, therefore Health Department approval required.

Anael Dominguez (Planning)

From: John Hornick (Fire Services)
Sent: Wednesday, November 2, 2022 2:17 PM
To: Randi Doveton (Planning); Anael Dominguez (Planning)
Subject: Agenda Review #7

7. **4053 Cleveland Highway | Rezone |** from Agriculture-Residential-III (AR-III) to Suburban-Shopping (SS) on a 6.34± acre tract located on the west side of Cleveland Highway at its intersection with Jim Hood Road | Zoned AR-III; Tax Parcel 12025 000036 | **Proposed use: grocery store, convenience store with gas & restaurant |** ** Commission District 3 | **Reginald Crayton, P.E., applicant.**

   The Hall County Fire Marshal's Office has no comments regarding the planned commercial development as proposed.

Regards,

John Hornick, NPQ Fire Inspector 1, Plans Review
Lieutenant, Hall County Fire Rescue
Hall County Government
Main: 770-531-6838 | Cell: 404-597-0083
Website: www.Hallcounty.org

Category Planning & Zoning has received a new request.

Here is what we have on file:

All

#1352

View Request

Category:	Planning & Zoning
Priority:	3
Assigned To:	Stewart Brian
Submitted:	12/20/2022 8:27 PM
Source:	Website 172.71.22.13

SUBMITTER

Michelle Ladewig
4098 Sutton road 4098 Sutton road
Gainesville, GA 30506

CONTACT

mladewig4@yahoo.com
7705309444

4053 Cleveland highway
Gainesville , Ga 30506

REQUEST DETAILS

Description

Zoning notice for 4053 Cleveland highway. This should NOT be resigned. That is a residential area. Secondly, Cleveland highway merges from 2 lanes to 1 right there, which is already a traffic issue. Adding a grocery store, gas station, and restaurant there will further cause congestion. The community does NOT want commercial establishments here

Your Information

Name
Michelle Ladewig
Fax Number
Email Address
mladewig4@yahoo.com
Preferred Contact Method
email

Jennifer Rivera (Administration)

From: Robbie Westbrooks <robbie.westbrooks@gmail.com>
Sent: Friday, December 30, 2022 7:50 AM
To: Jennifer Rivera (Administration)
Subject: Letter to Commissioner Poole

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Good morning Jennifer,
Thanks for responding to my email. Could you please make sure Commissioner Poole receives this before the January 12th meeting?
Thanks
Robbie Westbrooks

Dear Commissioner Poole,

First, please let me congratulate you on winning the race for Hall County District 3 Commissioner. I wish you success and hope to be able to support your decisions going forward.

I would like to express my concerns regarding the proposed shopping center development on Cleveland Hwy at Jim Hood Road. This proposed development includes a grocery store, convenience store and a restaurant.

In my opinion, this development is not necessary for the residents in this area of Hall County. Planning commissioner Stan Hunt stated that this project may relieve the traffic flow into Gainesville by giving people a place to shop closer. It should be noted that there are already 4 convenience stores, 5 gas stations, 6 restaurants, one hardware store, and one IGA grocery store all within a 3 mile radius of this property. There is also a Dollar General only .2 of a mile further out. This is more than adequate for the area given the current population and rate of residential growth in the area. Additionally, further development could increase the already high traffic safety hazard at this intersection.

This area of Hall County is largely agricultural. There is even a 50 acre agricultural education center operated by the school system within a mile of this proposed development. I am certain there are underserved areas elsewhere in the county that could benefit from this type of development, I would urge you to consider these points when making your decision and casting your vote regarding this project at the Commissioners meeting on January 12th.

Sincerely,

Robert W. Westbrooks

ZONING NOTICE

REGINALD CRAWFORD, JR.

REZONE FROM AR-1 TO SS FOR

CONVENIENCE STORE WITH GAS & RESTAURANT

Date: NOV 3 2022 AND Date: DEC 12 2022

Time: 5 P.M. Time: 6:00 PM


ZONING NOTICE

ZONING NOTICE

A PUBLIC HEARING ON THE ABOVE MATTER WILL BE HELD BY THE BOARD OF COUNTY COMMISSIONERS IN THE COUNTY COMMISSION CHAMBERS, 2ND FLOOR, COURTHOUSE, 1 COURTHOUSE SQUARE, DALTON, GEORGIA ON THE DATE AND TIME SHOWN BELOW.

APPLICANT: REGINALD GRAYSON, ET

REQUEST: REZONE FROM AR-1 TO RS-150

CONVENIENCE STORE WITH GAS (ESTABLISHED)

Date: NOVEMBER 14, 2022 AND Date: JANUARY 17, 2023

Time: 5:15 PM Time: 6:00 PM

AGENDA ITEM

Planning and Development

REPORT TO:	**Work Session (01/09/23)**
REPORT TO:	**Voting Meeting (01/12/23)**
ITEM NO:	732/2022
SUBJECT:	**5871 McEver Road | Rezone** | from Agricultural-Residential-III (AR-III) to Highway-Business (H-B) on a 9.06± acre tract located on the east side of McEver Road at its intersection with Silverthorn Drive | Zoned AR-III; Tax Parcel 08119 000233 | **Proposed use: RV & boat storage** | Commission District 2 | **Anchor Inn RV & Boat Storage, applicant.**

Meetings:

Work Session Date: 01/09/23 **Voting Meeting Date:** 01/12/23

Executive Summary:

Presenter: RD
Recommendation:

Approval, with conditions: 1. All conditions of the June 25, 2019 approval for the Foster Rd. Inc. rezoning request shall apply to this development. a. The development shall occur as generally described in the narrative and depicted on the concept plan, modified for compliance with regulations at time of development application. b. A 25 foot transitional buffer is required along the common lot line of the Cash property and the buffer shall be buffered per Hall County regulations. c. Where the development boarders the Lights Ferry Landing subdivision there shall be a 25 foot undisturbed buffer and a 10 foot transitional buffer. d. The development shall permit boat and RV storage e. The development shall have decorative steel fencing with stone or brick columns along McEver road. This steel or brick fence shall wrap around the radius of the cul-de-sac and turn back at the Cash property to the back of the building facing McEver Road. All other fencing shall be a 6 foot high black vinyl link fence along all other property lines. f. The only entrance shall be located on Lights Ferry Road, which was on the original plan for phase 1. 2. The applicant shall be required to meet all applicable local, state, and/or federal regulations required as part of the land development process including Gateway Standard 17.420.050. No variances from the Hall County standards shall be granted unless noted in additional conditions. 3. The development shall occur as depicted on the site plan presented. Minor changes shall be approved by the Planning Director provided there is no increase in the number of units or buildings and the changes do not create the need for variances in the Hall County development standards 4. A landscape plan shall be approved by Planning Director prior to LDP. 5. The applicant shall submit architectural elevations of all four sides of the structures for approval by the Planning Director prior to issuance of LDP. The only variances from the Gateway Corridor is to allow metal posts in between the bays and standing seam metal roofs. The project shall adhere to existing conditions of phase 1 with the exception of all buildings along McEver Road to be masonry on the back and sides facing McEver Road. 6. Signage shall require a separate permit and must meet Gateway Corridor Overlay district standards found in 17.40.060. 7. The buffer shall be protected in perpetuity by deed that follows the property, the removal or modifications of this condition shall require action by the Board of Commission. 8. Two amended site plans showing all Planning Commission conditions must be submitted before going in front of the BOC. One site plan shall be topographical and the second shall indicate all building locations without topography. 9. No more than 172 units shall be allowed on this property for phase 2. 10. Before LDP is issued all buffer requirements of phase 1 must be confirmed to meet all requirements of phase 1 rezoning and conditional use. 11. An 8 foot height privacy fence shall be built along the rear of buildings N and O.

Purpose of Request:

5871 McEver Road | Rezone | from Agricultural-Residential-III (AR-III) to Highway-Business (H-B) on a 9.06± acre tract located on the east side of McEver Road at its intersection with Silverthorn Drive | Zoned AR-III; Tax Parcel 08119 000233 | Proposed use: RV & boat storage | Commission District 2 | Anchor Inn RV & Boat Storage, applicant.

History:

Facts and Issues:

Options:

Funding Requested	$ 0.00
Are funds within current budget?	No
Source of Funds	
Does the action involve a Resolution, Ordinance, Contract, Agreement, etc.?	No
Has it been reviewed by the County Attorney?	Yes
Is there a deadline for this item?	

Approvals:

Submit	Approve	Budget	Finance
AD	RD	TS	WG

Attorney	Administration	Clerk
WLI	CR	JR

Attachments:

Board Memo
Recommendation Report
Application
Narrative
Site Plan
Maps
Renderings
Legal Description
Environmental Health Comments
GDOT Comments
Public Works Comments
Fire Comments
Notice Sign Photos

HALL COUNTY
GEORGIA
We have it **all** in Hall

POST OFFICE DRAWER 1435
GAINESVILLE, GA 30503

t: 770.531.6809 | f: 770.531.3902

DIRECTOR
Randi Doveton

Hall County Government
PLANNING & DEVELOPMENT

To: Richard Higgins, Chairman
Kathy Cooper, District 1
Billy Powell, District 2
Gregg Poole, District 3
Jeff Stowe, District 4

From: Randi Doveton, Director

Date: December 13, 2022

Subject: **5871 McEver Road | Rezone |** to allow an RV & boat storage | Anchor Inn RV & Boat Storage, applicant.

The request before you is the application of Anchor Inn RV & Boat Storage to allow RV & boat storage on 9.06± acre. ***It should be noted that a simultaneous conditional use request accompanies this request but has separate reports and memos. Although you may wish to hear all two (2) associated items (rezoning and conditional use) at the same time, please deliberate and vote separately on each.***

This item is located within Commission District 2.

At their December 5, 2022 meeting, the Hall County Planning Commission voted to recommend approval of the Rezoning request with eleven (11) conditions **(5-0).**

There were no written comments submitted in advance of the Planning Commission meeting; **one (1) individual spoke in favor and three (3) individuals spoke in opposition** during the public hearing.

There have been no changes to the request since the Planning Commission took action.

Planning Commission Approval Conditions:

1. All conditions of the June 25, 2019 approval for the Foster Rd. Inc. rezoning request shall apply to this development.
   a. The development shall occur as generally described in the narrative and depicted on the concept plan, modified for compliance with regulations at time of development application.
   b. A 25 foot transitional buffer is required along the common lot line of the Cash property and the buffer shall be buffered per Hall County regulations.

c. Where the development boarders the Lights Ferry Landing subdivision there shall be a 25 foot undisturbed buffer and a 10 foot transitional buffer.
d. The development shall permit boat and RV storage
e. The development shall have decorative steel fencing with stone or brick columns along McEver road. This steel or brick fence shall wrap around the radius of the cul-de-sac and turn back at the Cash property to the back of the building facing McEver Road. All other fencing shall be a 6 foot high black vinyl link fence along all other property lines.
f. The only entrance shall be located on Lights Ferry Road, which was on the original plan for phase 1.

2. The applicant shall be required to meet all applicable local, state, and/or federal regulations required as part of the land development process including Gateway Standard 17.420.050. No variances from the Hall County standards shall be granted unless noted in additional conditions.
3. The development shall occur as depicted on the site plan presented. Minor changes shall be approved by the Planning Director provided there is no increase in the number of units or buildings and the changes do not create the need for variances in the Hall County development standards
4. A landscape plan shall be approved by Planning Director prior to LDP.
5. The applicant shall submit architectural elevations of all four sides of the structures for approval by the Planning Director prior to issuance of LDP. The only variances from the Gateway Corridor is to allow metal posts in between the bays and standing seam metal roofs. The project shall adhere to existing conditions of phase 1 with the exception of all buildings along McEver Road to be masonry on the back and sides facing McEver Road.
6. Signage shall require a separate permit and must meet Gateway Corridor Overlay district standards found in 17.40.060.
7. The buffer shall be protected in perpetuity by deed that follows the property, the removal or modifications of this condition shall require action by the Board of Commission.
8. Two amended site plans showing all Planning Commission conditions must be submitted before going in front of the BOC. One site plan shall be topographical and the second shall indicate all building locations without topography.
9. No more than 172 units shall be allowed on this property for phase 2.
10. Before LDP is issued all buffer requirements of phase 1 must be confirmed to meet all requirements of phase 1 rezoning and conditional use.
11. An 8 foot height privacy fence shall be built along the rear of buildings N and O.

Please note that denial of the rezoning request is an automatic denial of the associated conditional use request but this will need to be stated by the chairman after the rezoning vote, should the rezoning be denied.

HALL COUNTY PLANNING COMMISSION
RECOMMENDATION REPORT

Applicant ..... Anchor Inn RV & Boat Storage

Request ..... Rezone from Agricultural Residential III (AR-III, 17.110) to Highway Business (H-B, 17.150)

Proposed Use ..... RV & boat storage

Size ..... 9.06± acres

Zoning ..... Current AR-III | Proposed H-B

Location ..... **5871 McEver Road** | Tax Parcel 08119 000233

Commission District ..... Two

Planning Commission Date ..... December 5, 2022

Staff Recommendation ..... **Approval with conditions based on the findings that this request meets the criteria outlined in 17.380.060 and that the adjacent property was rezoned to Highway Business (H-B, 17.150) for the same use in 2019.**

Planning Commission Recommendation……Approval, with conditions
Vote: 5-0

Planning Commission Rezoning Conditions:

1. All conditions of the June 25, 2019 approval for the Foster Rd. Inc. rezoning request shall apply to this development.
   a. The development shall occur as generally described in the narrative and depicted on the concept plan, modified for compliance with regulations at time of development application.
   b. A 25 foot transitional buffer is required along the common lot line of the Cash property and the buffer shall be buffered per Hall County regulations.
   c. Where the development boarders the Lights Ferry Landing subdivision there shall be a 25 foot undisturbed buffer and a 10 foot transitional buffer.
   d. The development shall permit boat and RV storage
   e. The development shall have decorative steel fencing with stone or brick columns along McEver road. This steel or brick fence shall wrap around the radius of the cul-de-sac and turn back at the Cash property to the back of the building facing McEver Road. All other fencing shall be a 6 foot high black vinyl link fence along all other property lines.
   f. The only entrance shall be located on Lights Ferry Road, which was on the original plan for phase 1.

2. The applicant shall be required to meet all applicable local, state, and/or federal regulations required as part of the land development process including Gateway Standard 17.420.050. No variances from the Hall County standards shall be granted unless noted in additional conditions.
3. The development shall occur as depicted on the site plan presented. Minor changes shall be approved by the Planning Director provided there is no increase in the number of units or buildings and the changes do not create the need for variances in the Hall County development standards
4. A landscape plan shall be approved by Planning Director prior to LDP.
5. The applicant shall submit architectural elevations of all four sides of the structures for approval by the Planning Director prior to issuance of LDP. The only variances from the Gateway Corridor is to allow metal posts in between the bays and standing seam metal roofs. The project shall adhere to existing conditions of phase 1 with the exception of all buildings along McEver Road to be masonry on the back and sides facing McEver Road.
6. Signage shall require a separate permit and must meet Gateway Corridor Overlay district standards found in 17.40.060.
7. The buffer shall be protected in perpetuity by deed that follows the property, the removal or modifications of this condition shall require action by the Board of Commission.
8. Two amended site plans showing all Planning Commission conditions must be submitted before going in front of the BOC. One site plan shall be topographical and the second shall indicate all building locations without topography.
9. No more than 172 units shall be allowed on this property for phase 2.
10. Before LDP is issued all buffer requirements of phase 1 must be confirmed to meet all requirements of phase 1 rezoning and conditional use.
11. An 8 foot height privacy fence shall be built along the rear of buildings N and O.

There is a concurrent conditional use application; the two items can be heard together but shall require two separate motions and votes.

Public Forum:

Gary McCrowskie, 6218 Yorktown Court, Flowery Branch, spoke in favor. Stated that the buildings were well built but requested there to be a privacy fence to block the view into his house.

Julie Paris, 5919 Nachoochee Trail, Flowery Branch, spoke in opposition. Concerns were the visibility and fencing around the property.

Nathan Day, 5961 Warpath Road, Flowery Branch, spoke in opposition. Concerns were excessive storage units in the county.

Shelly Day, 5961 Warpath Road, Flowery Branch, spoke in opposition. Concerns were approximate distance to residences.

Summary Analysis

The applicant is requesting to rezone the 9.02± acre property from Agricultural Residential III (AR-III, 17.110) to Highway Business (H-B, 17.150) for the purpose of expanding an existing boat & RV storage lot with 172 additional spaces. Access to this new phase will be through the existing entrance on Lights Ferry Road with no access proposed from McEver Road. The hours of operation will remain the same as the current facility, the

office is open Monday – Friday, 9:00am through 5:00pm. Access to the storage facility is the same, Monday – Sunday.

The submitted site plan depicts the two rows of storage buildings parallel to McEver Road. A central access drive bisects the proposed storage buildings. The access drive ends in a cul-de-sac on the western portion of the property. A decorative steel fence with brick columns boarders McEver Road with the remainder of the property using a black vinyl fence. A 35 foot planted buffer follows the rear property line where is it adjacent to residentially zoned parcels.

Within the Gateway Corridors Overlay District (GCOD, 17.420), boat & RV storage requires conditional use approval from the Board of Commissioners, which is being heard concurrent to this request.

No variances were requested nor have any been identified by staff during review.

Based on the future land-use plan, staff finds the *requested zoning designation is inconsistent* with the future land use map designation of Lake Area Residential but the neighboring property was rezoned to Highway-Business in 2019 for the same use.

Zoning Analysis

The proposed boat & RV storage facility is inconsistent with the Comprehensive Plan as the future land use designation is Lake Area Residential. The parcel is not part of the Lake Supportive Corridor, though the neighboring property was rezoned to Highway-Business in 2019 for the same use. This rezoning and concurrent conditional use request is to facilitate an expansion of the use approved in 2019.

When considering a zoning amendment to the zoning maps, the following items must be considered (17.380.060):

1. Whether the zoning proposal will permit a use that is suitable in view of the use, development and zoning of adjacent and nearby property; **The proposed boat & RV storage development is proposed adjacent to a Highway Business (H-B, 17.150) zoned parcel which was recently approved for the same use on June 25, 2019. The current request will allow expansion of the use approved in 2019.**

2. Whether the zoning proposal will adversely affect the existing use or usability of adjacent or nearby property; **The zoning proposal should not have an adverse effect on the existing use or usability of adjacent or nearby property. Boat & RV storage traditionally a low impact use, with those who store their vehicles on the property visiting infrequently.**

3. Whether the property to be affected by the zoning proposal has a reasonable economic use as currently zoned; **The property is currently undeveloped and zoned Agricultural Residential III (AR-III, 17.110). The property has reasonable economic use as currently zoned.**

4. Whether the zoning proposal will result in a use which will or could cause an excessive or burdensome use of existing streets, transportation facilities, utilities, schools, police protection, fire protection, public health facilities or emergency medical service; **The proposed use of a boat & RV storage facility will not result in a use which will or could cause an excessive or burdensome use of existing streets, transportation facilities, utilities, schools, police protection, fire protection, public health facilities or emergency medical service.**

5. Whether the zoning proposal is in conformity with the policy and intent of the future land use plan for the physical development of the area; **The proposed zoning of Highway Business (H-B, 17.150) is inconsistent with the Comprehensive Plan as the future land use designation is Lake Area Residential. The parcel is not part of the Lake Supportive Corridor, though the neighboring property was rezoned to Highway-Business in 2019 for the same use.**

6. The extent to which property values are diminished by the existing zoning restrictions; **Staff has not identified that the existing property values have been impacted by the existing zoning.**

7. The extent to which the destruction of the subject property's value under the existing zoning promotes the health, safety, morals or general welfare of the public; **Staff is unable to comment on the impact of property values without a full market analysis. Multiple factors impact property value including construction types, proposed uses, and maintenance. Often it is difficult to determine the effect of a development on adjacent properties until the development is completed.**

8. The relative gain to the public as compared to the hardship imposed upon the individual property owner; **Staff has not identified a hardship imposed on the property owner as the property is currently zoned.**

9. The length of time the property has been vacant as zoned considered in the context of land development in the area in the vicinity of the property; **The appears to have been vacant as far back as GIS aerial imagery goes.**

10. Whether there are other existing or changing conditions affecting the use or development of the property which give supporting grounds for either approval or disapproval of the zoning proposal; **Staff is not aware of any changing conditions that affect the use and development of the property.**

11. Whether the change would create an isolated district unrelated to the surrounding districts, such as "spot zoning;" **The adjacent parcel has a designation as Highway Business (H-B, 17.150).**

12. Whether the present zoning district boundaries are illogically drawn in relation to existing conditions in the area; **There is no evidence that the present zoning district boundaries are illogically drawn in relation to existing conditions in the area.**

13. Whether the change requested is out of scale with the needs of the county as a whole or the immediate neighborhood; **The request does not appear to be out of scale with the needs of the County as a whole, as there is a need for additional storage facilities in proximity to Lake Lanier.**

14. Whether it is impossible to find adequate sites for the proposed use in districts permitting such use and already appropriately zoned; **There are other properties within the County that support the proposed boat & RV storage without rezoning; however, the current rezoning is requested in order to expand the existing facility.**

15. Whether the need for rezoning could be handled instead by a variance request to the [Planning Commission]; **The proposed use could not be handled alternatively as a variance.**

16. Whether there would be an ecological or pollution impact resulting from major modifications to the land if the request is granted; **The property will be required to meet all local, state, and federal requirements pertaining to stormwater management as part of the development process.**

17. Whether there is reasonable evidence based upon existing and anticipated land use that would indicate a mistake was made in the original zoning of the property; **There is no indication that a mistake was made in the original zoning.**

- **Highway Business (H-B, 17.150):** the Highway Business zoning district allows for a variety of commercial uses both permitted and submitted to either Planning Commission of Board of Commission approval.

- The property falls within the **Gateway Corridors Overlay District, (**17.420.**)** which provides supplemental design standards for non-residential property development. The will be subject to the standards found within 17.420.050 (non-residential property development standards) which relate to building materials, landscaping, and buffer requirements.

The applicant has met the submission requirements for a rezoning request (17.380.050).

Development Support and Constraints – Departmental /agency comments

Hall County Environmental Health
An email dated November 14, 2022 from Emily McGahee states: "Must meet all Environmental Health commercial septic system permitting requirements if plumbing proposed and public sewer not available. A detailed business plan must be submitted to Hall County Environmental Health for review."

Hall County Fire Rescue
In an email dated November 18, 2022, Lieutenant John Hornick, NPQ Fire Inspector 1, Plans Review, states:

1. IFC Section 507.5.1 where a building(s) is constructed and is more than 400' from a fire hydrant on an approved fire access route fire hydrant(s) shall be installed. Fire hydrant(s) may have to be installed to meet fire code.

Hall County Public Works and Utilities

In a memo dated October 20, 2022, from Srikanth Yamala, Director of Public Works and Utilities, the following comments were provided:

Engineering:
This site may require a stormwater management report should the site plan indicate the proposed development meets stormwater thresholds for impervious surfaces and/or disturbed acreage. Stream and impervious setback from wrested vegetation not centerline of stream.

Traffic:
Adequate connection to roadway is not clear. Traffic study will be required that documents/impacts to the McEver Road/Lights Ferry intersection. Improvements that remediate impacts to intersection will be required.

Utilities:
Flowery Branch Sewer District

Georgia Department of Transportation
Per an email dated November 17, 2022, Parker Niebauer, District 1 Traffic Operations Supervisor confirmed that GDOT coordination will be required.

- **Excerpts from the minutes of the December 5, 2022 meeting**

Applicant's Presentation:

Randi Doveton, Planning Director, presented a summary of the request.

Miles Montgomery, 7185 Shady Grove Road, Cumming, presented the request. The applicant stated that the existing entrance off Lights Ferry Road would be utilized, they will not need access off McEver Road. The applicant stated that they would like for the building requirements under Gateway Corridor to only be applied to the portions facing the road.

Rodney Hellemn, 6098 Jim Crow Road, Flowery Branch, presented the request. The applicant addressed that their building was inspected and approved after BOC approval in 2019. The applicant stated that they do not want to be an eye sore to the community.

Public Forum:

Gary McCrowskie, 6218 Yorktown Court, Flowery Branch, spoke in favor. Stated that the buildings were well built but requested there to be a privacy fence to block the view into his house.

Julie Paris, 5919 Nachoochee Trail, Flowery Branch, spoke in opposition. Concerns were the visibility and fencing around the property.

Nathan Day, 5961 Warpath Road, Flowery Branch, spoke in opposition. Concerns were excessive storage units in the county.

Shelly Day, 5961 Warpath Road, Flowery Branch, spoke in opposition. Concerns were approximate distance to residences.

Planning Commission Comments:

Mr. Braswell questioned if the buildings along McEver Road would be open facing the road. Mr. Montgomery stated that they are closed facing the road. Mr. Hunt suggested a 35 foot buffer to the surrounding residences. Mr. Bell questioned if the property is built in compliance to the 2019 approval conditions. Mr. Braswell questioned the width of the driveway between the buildings. Mr. Hellemn stated that it was 60 feet wide. Mr. Hunt questioned the fencing around the property. Mr. Hellemn stated a decorative fence would run along McEver Road and wrap around the cul-de-sac and towards the back of the property connect to a chain-link fence. Mr. Hunt questioned the privacy fence that would be built to accommodate for some property owners towards the back. Mr. Hellemn stated it would be an 8 foot height fence. Mr. Bell stated that his problem with the planted buffers was what type of trees were used and how long they took to mature to meet their purpose. Ms. Pilcher commented that residents would have to endure a lot of grading in a community they have been in. Mr. Braswell stated that it would be ideal if there were an undisturbed buffer at the property line abutting neighboring residence. Ms. Pilcher questioned how many units there would be in total. The applicant stated 166 units. Ms. Doveton stated the narrative requested 172 units. Mr. Bell suggested a 25 foot undisturbed buffer with a 10 foot planted buffer.

***Motion:* A motion to approve, with conditions was made by Mr. Hunt and seconded by Ms. Pilcher. Vote: 5-0**

Conditions:

1. *All conditions of the June 25, 2019 approval for the Foster Rd. Inc. rezoning request shall apply to this development.*
    a. *The development shall occur as generally described in the narrative and depicted on the concept plan, modified for compliance with regulations at time of development application.*
    b. *A 25 foot transitional buffer is required along the common lot line of the Cash property and the buffer shall be buffered per Hall County regulations.*
    c. *Where the development boarders the Lights Ferry Landing subdivision there shall be a 25 foot undisturbed buffer and a 10 foot transitional buffer.*
    d. *The development shall permit boat and RV storage*
    e. *The development shall have decorative steel fencing with stone or brick columns along McEver road. This steel or brick fence shall wrap around the radius of the cul-de-sac and turn back at the Cash property to the back of the building facing McEver Road. All other fencing shall be a 6 foot high black vinyl link fence along all other property lines.*
    f. *The only entrance shall be located on Lights Ferry Road, which was on the original plan for phase 1.*
2. *The applicant shall be required to meet all applicable local, state, and/or federal regulations required as part of the land development process including Gateway Standard 17.420.050. No variances from the Hall County standards shall be granted unless noted in additional conditions.*
3. *The development shall occur as depicted on the site plan presented. Minor changes shall be approved by the Planning Director provided there is no increase in the number of units or buildings and the changes do not create the need for variances in the Hall County development standards*
4. *A landscape plan shall be approved by Planning Director prior to LDP.*
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6. *Signage shall require a separate permit and must meet Gateway Corridor Overlay district standards found in 17.40.060.*
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8. *Two amended site plans showing all Planning Commission conditions must be submitted before going in front of the BOC. One site plan shall be topographical and the second shall indicate all building locations without topography.*
9. *No more than 172 units shall be allowed on this property for phase 2.*
10. *Before LDP is issued all buffer requirements of phase 1 must be confirmed to meet all requirements of phase 1 rezoning and conditional use.*
11. *An 8 foot height privacy fence shall be built along the rear of buildings N and O.*

PLANNING AND DEVELOPMENT DEPARTMENT
2875 BROWNS BRIDGE ROAD, GAINESVILLE, GA, 30504
MAILING ADDRESS: PO BOX 1435, GAINESVILLE. GA 30503
t: 770-531-6809 | f: 770-531-3902

HALL COUNTY
GEORGIA
We have it all in Hall

ZONING APPLICATION

Applicant (Name & Mailing Address)
Anchor Inn RV & Boat Storage
6127 Lights Ferry Rd
Flowery Branch, GA 30542
Phone 770-945-9524
Email Address rgmarine@bellsouth.net

Property Owner (Name & Mailing Address)
Anchor Inn, LLC
6127 Lights Ferry Rd
Flowery Branch, GA 30542
Phone 770-945-9524
Email Address rgmarine@bellsouth.net

Proposed Use RV & Boat Storage

Contact Person (Name & Mailing Address)
Rodney Hellemn
6127 Lights Ferry Rd
Flowery Branch, GA 30542
Phone 770-945-9524
Email Address rgmarine@bellsouth.net

Status of Applicant
- [X] Owner
- [ ] Option to Purchase
- [ ] Area Resident
- [ ] Other

Requested Action
Existing Zoning: AR-III
Rezone to: H-B
Fee:$ ~~55~~ 0.00
Receipt #: 859053
Check #: 5648 (1000.00 for cup and zoning)

Tax Parcel Number 08119 ~~000003~~ 000233
Acreage 9.084 Ac
Location Address ~~5820~~ 5871 McEver Rd

I hereby certify that the above information and all attached information are true and correct.

Sign _____ Date: 10/13/22

Applicant must complete all information above. Failure to complete this section will result in the refusal of the application. The Planning Department has 15 days to review all applications and will set the dates for each application. If the application is found insufficient, an agenda date will not be set until the required information is submitted. Please note that the Planning Commission and County Commission dates are tentative.

Application Withdrawal: I hereby **withdraw** the application.

Sign _____ Date: _____

Staff Use Only

Application Date: 10/14/2022 Taken by: D. Webb

Tentative Planning Commission Date: 12/5 Tentative County Commission Date: 1/12/2023

County Commission District: 2

PLANNING AND DEVELOPMENT DEPARTMENT
2875 BROWNS BRIDGE ROAD, GAINESVILLE, GA, 30504
MAILING ADDRESS: PO BOX 1435, GAINESVILLE, GA 30503
t: 770-531-6809 | f: 770-531-3902

HALL COUNTY
GEORGIA
We have it all in Hall

AUTHORIZATION OF PROPERTY OWNERS

Note: If the applicant is the property owner, please disregard this form.

Name of owner(s) Anchor Inn, LLC

Address 6127 Lights Ferry Rd
Flowery Branch, GA 30542

Phone Number 770-945-9524

Name of applicant(s) Rodney Hellemn

Address 6127 Lights Ferry Rd
Flowery Branch, GA 30542

Phone Number 770-945-9524

I swear that I am the owner of the property which is the subject matter of the attached applications as shown in the records of Hall County, Georgia.

I authorize the person named above to act as applicant in the pursuit of a rezoning, permissive use, or variance of this property.

Signature of Owner(s)

Personally appeared before me
Rodney Hellemn

who swears that the information contained in this authorization is true and correct to the best of his/her knowledge and belief.

Notary Public Exp 11/29/25

ANITA HIGGINS NOTARY PUBLIC GWINNETT COUNTY, GEORGIA EXPIRES NOVEMBER 29, 2025

10/13/22
Date

PLANNING AND DEVELOPMENT DEPARTMENT
2875 BROWNS BRIDGE ROAD, GAINESVILLE, GA, 30504
MAILING ADDRESS: PO BOX 1435, GAINESVILLE. GA 30503
t: 770-531-6809 I f: 770-531-3902

HALL COUNTY
We have it all in Hall

CAMPAIGN CONTRIBUTIONS DISCLOSURE FORM

This form must be completed by the applicant and property owner, or person representing the property owner, for all zoning actions.

OCGA § 36-67A-3[C] Disclosure of campaign contributions:

(b) When any applicant for zoning action has made, within two years immediately preceding the filing of the applicant's application for the zoning action, campaign contributions aggregating $250.00 or more to a local government official who will consider the application, it shall be the duty of the applicant to file a disclosure report with the governing authority of the respective local government showing:

(3) The name and official position of the local government official to whom the campaign contribution was made; and

(4) The dollar amount and description of each campaign contribution made by the applicant to the local government official during the two years immediately preceding the filing of the application for the rezoning action and the date of each such contribution.

(b) The disclosures required by subsection (a) of this Code section shall be filed within ten days after the application for the zoning action is first filed. (Code 1981, Section OCGA § 36-67A-3[C], enacted by GA L. 1986, page 1269, Section 1, GA L. 1991, page 1365, Section 1).

I hereby certify that I have read the above and that:

I have**____ I have not X

within the two years immediately preceding this date, made any contribution(s) aggregating $250.00 or more to any local government official involved in the review or consideration of this application.

**If you have made such contributions, you must provide the data required below within ten (10) days of filing this application.

Name of Official(s): _____ Office: _____

Dollar Amount: _____ Date of Contribution: _____

Applicant's/Owner's Signature: _____ **Date:** 10-13-22

Applicant's/Owner's Name (Printed): Rodney Hellemn

REQUEST FOR
REZONING ACTION & CONDITIONAL USE PERMIT
FROM HALL COUNTY ZONING BOARD

FOR

ANCHOR INN RV & BOAT STORAGE PH. II
5871 McEver Road

NATURE OF REQUEST

To obtain rezoning of subject property and conditional use permit for parked auto storage.

PURPOSE OF REQUEST

To allow for development of a second phase of storage units to an existing RV & Boat storage facility.

NARRATIVE

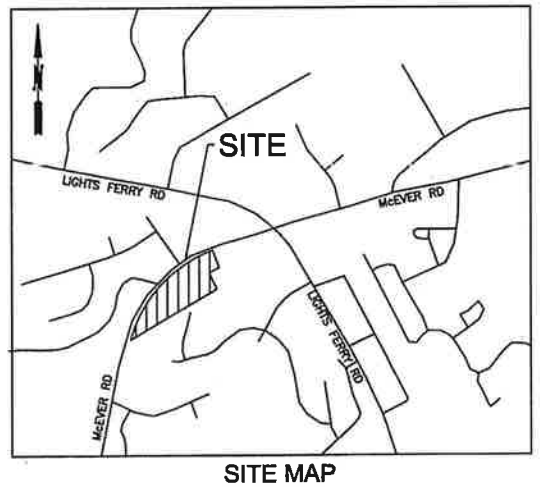
The scope of this project is to provide a second phase to an existing RV & Boat storage facility. Access to the second phase will be through the existing access that serves the existing storage facility located off Lights Ferry Road. No access will be proposed of McEver Road. Hours of operation for the existing office will be that of 9am-5pm Monday-Friday and storage facility access Monday-Sunday will remain the same as the existing storage facility.

This property is a 9.084 ac. tract of land, Tract 3 as shown on the division of the parent parcel and combination survey for Foster Road Inc. The property is currently zoned AR-III and requesting rezoning to H-B to match existing storage facility. The existing storage facility consist of Tract 1 and Tract 2 as shown on the stated parcel and combination survey.

To the north is McEver Road. The property to the south is the existing Lights Ferry Landing residential subdivision. To the east is the existing Anchor Inn RV & Boat Storage facility. To the west is a residential single-family property.

Both potable water and sanitary sewer are available to this tract, but no new service is proposed for this phase of development. Two proposed stormwater detention facilities are proposed for this phase of development and will meet all current stormwater design manual requirements.

We feel that the requested rezoning and conditional use permit for an extension to the existing Anchor Inn RV & Boat storage facility would not create problems for any of the neighbors due to there is an existing current facility operating at this location. We do not believe that allowing this rezoning of this property would in any way devalue or pose hardships on any of the surrounding properties.

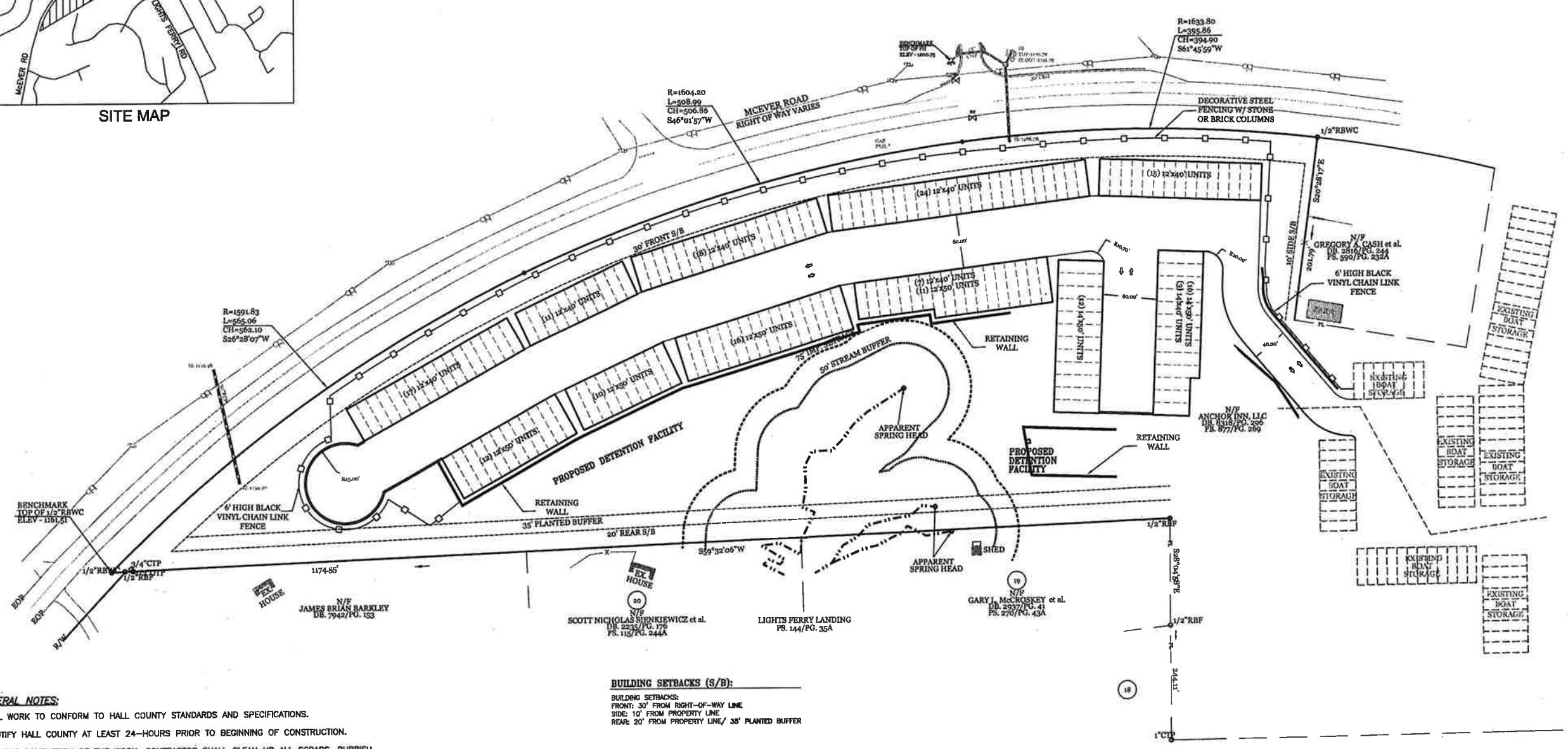


SITE MAP

EXISTING ZONING: AR-III
PROPOSED ZONING: H-B
TAX ID # 08119 000003
CURRENT ADDRESS: 5820 MCEVER ROAD
HALL COUNTY, GEORGIA
TOTAL AREA: 7.06 ACRES

811
Know what's below.
Call before you dig.

GRID NORTH


R=1604.20
L=508.99
CH=506.86
S46°01'57"W
MCEVER ROAD
RIGHT OF WAY VARIES
R=1633.80
L=395.86
CH=394.90
S61°45'59"W
DECORATIVE STEEL FENCING W/ STONE OR BRICK COLUMNS
1/2"RBWC
S30°28'17"E
N/F
GREGORY A. CASH et al.
DB. 2516/PG. 244
PB. 590/PG. 232A
6' HIGH BLACK VINYL CHAIN LINK FENCE
EXISTING BOAT STORAGE
EXISTING BOAT STORAGE
EXISTING BOAT STORAG

A DIVISION OF A PARENT PARCEL AND COMBINATION SURVEY

LOCATED IN LAND LOTS 111 AND 119 OF THE 8TH LAND DISTRICT
HALL COUNTY, GEORGIA
REFERENCE DEEDS: D.B. 932, PG. 98 AND D.B. 7484, PG. 289

eFiled & eRecorded
DATE: 8/13/2019
TIME: 11:53 AM
PLAT BOOK: 00877
PAGE: 00269
RECORDING FEES: $8.00
PARTICIPANT ID: 9651848499
CLERK: Charles Baker
Hall County, GA
NOTE: by ch

THIS BLOCK RESERVED FOR THE CLERK OF THE SUPERIOR COURT

SURVEYOR CERTIFICATION

AS REQUIRED BY SUBSECTION (d) OF O.C.G.A. SECTION 15-6-67, THIS PLAT HAS BEEN PREPARED BY A LAND SURVEYOR AND APPROVED BY ALL APPLICABLE LOCAL JURISDICTIONS FOR RECORDING AS EVIDENCED BY APPROVAL CERTIFICATES, SIGNATURES, STAMPS, OR STATEMENTS HEREON. SUCH APPROVALS OR AFFIRMATIONS SHOULD BE CONFIRMED WITH THE APPROPRIATE GOVERNMENTAL BODIES BY ANY PURCHASER OR USER OF THIS PLAT AS TO THE INTENDED USE OF ANY PARCEL. FURTHERMORE, THE UNDERSIGNED LAND SURVEYOR CERTIFIES THAT THIS PLAT COMPLIES WITH THE MINIMUM TECHNICAL STANDARDS FOR PROPERTY SURVEYS IN GEORGIA AS SET FORTH IN THE RULES AND REGULATIONS OF THE GEORGIA BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS AND AS SET FORTH IN O.C.G.A. SECTION 15-6-67.

Joseph P. Brewer Ga. RLS #3209 — 7-16-2019

HALL COUNTY GEORGIA

Hall County Government
BOARD OF COMMISSIONERS

July 2, 2019

Forest Pond Inc
6504 Flat Creek Road
Flowery Branch, GA 30542

RE: Application to Rezone

To Whom It May Concern:

Please be advised that at its Special Called Voting Meeting of June 25, 2019, the Hall County Board of Commissioners voted, unanimously, to approve the following zone with the Board conditions, along with an added 25ft setback:

- Application of Foster Rd Inc, to rezone from Agricultural-Residential (AR) to Industrial (I) Property Described: (9.064) +/- 12.134 acres located at the intersection of Lights Ferry Road and McEver Road; & (2.147) Lights Ferry Road and 5677 McEver Road, Gainesville, GA; Part Tract (9.064) 5002222 and (2.147) 5002203 (pt.). Proposed Use: Boat Storage. Conditions Stated Is:

  Conditions:
  1) The development shall occur as generally described in the narrative and depicted on the concept plan, modified for compliance with regulations at time of development application.
  2) Where the development borders the Lights Ferry Landing Subdivision, there shall be a 35 foot vegetated buffer.
  3) The development shall operate both 8AM and 8PM except.
  4) The development shall have decorative steel fencing with stone or brick columns along McEver Road and Lights Ferry Road. There shall be a 6 foot high black vinyl chain link fence along all other property lines.
  5) Entrance shall be located on Lights Ferry Road, which was the original plan.

Please contact me if you have questions or if you require any additional information concerning this matter of the Board.

Lisa A. Stephens
Hall County Commission Clerk

cc: Williams Family
6127 Lights Ferry Road
Flowery Branch, GA 30542

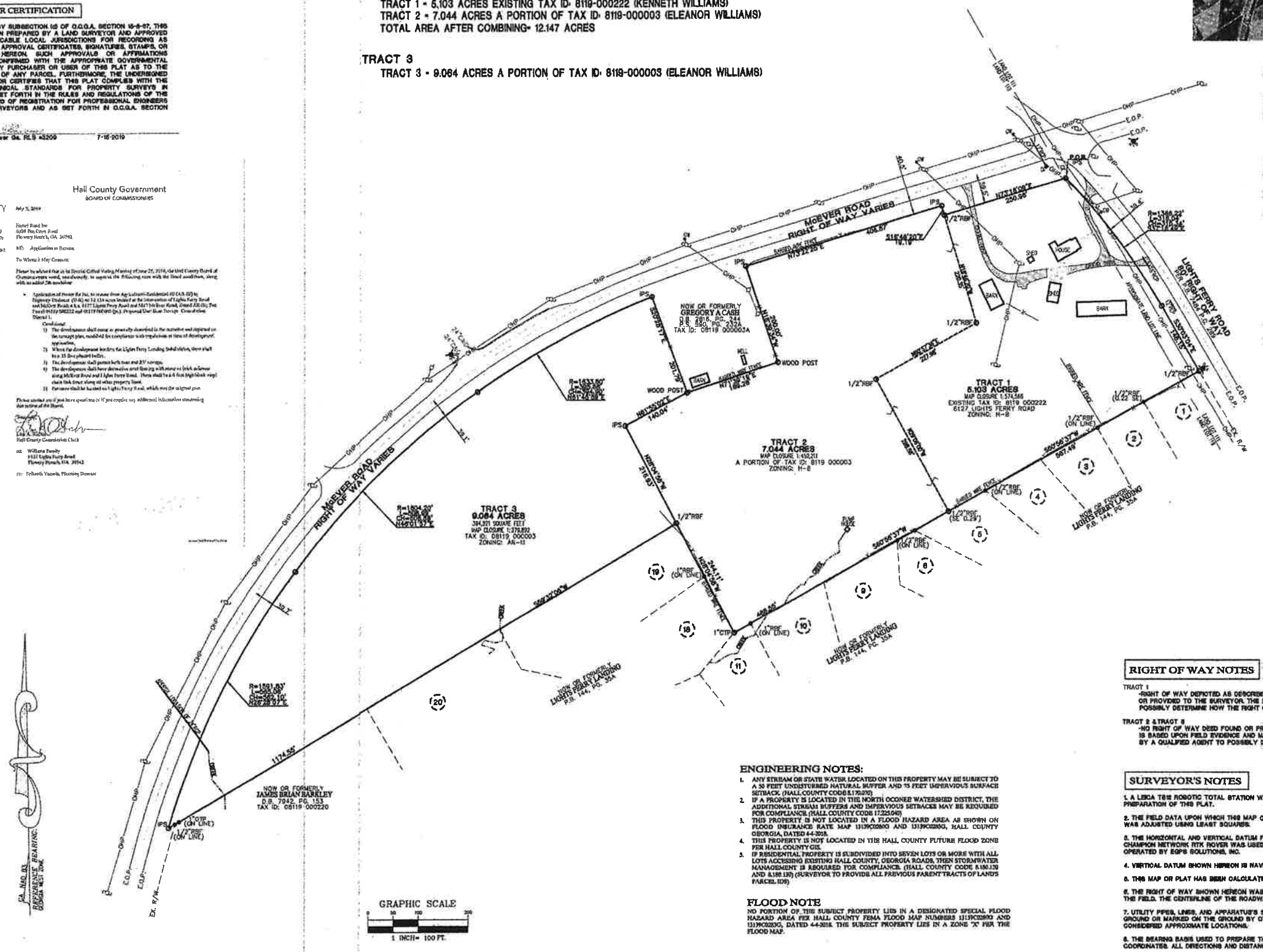
cc: Srikanth Vasavda, Planning Director

AREA SUMMARY

TRACT 1 AND TRACT 2 TO BE COMBINED:
TRACT 1 = 5.103 ACRES EXISTING TAX ID: 8119-000222 (KENNETH WILLIAMS)
TRACT 2 = 7.044 ACRES A PORTION OF TAX ID: 8119-000003 (ELEANOR WILLIAMS)
TOTAL AREA AFTER COMBINING= 12.147 ACRES

TRACT 3
TRACT 3 = 9.064 ACRES A PORTION OF TAX ID: 8119-000003 (ELEANOR WILLIAMS)





UTILITY LEGEND

- W — UNDERGROUND WATERLINES
- TELE / FO — UNDERGROUND TELEPHONE OR COMMUNICATION LINES OR FIBER OPTICS
- UP — UNDERGROUND POWER LINES
- OHP — OVERHEAD POWER LINES
- S — UNDERGROUND SANITARY SEWER LINE
- GAS — UNDERGROUND GAS SEWER LINE

SYMBOL LEGEND

- LIGHT POLE
- POWER POLE
- SANITARY SEWER MANHOLE
- FIRE HYDRANT
- STORM PIPE

TEXT LEGEND

- CL — CENTER LINE
- C&G — CURB & GUTTER
- RCP — REINFORCED CONCRETE PIPE
- CMP — CORRUGATED METAL PIPE
- SCP — SCHEDULE PIPE
- TOB — TOP OF BANK
- FFE — FINISHED FLOOR ELEVATION
- IPF — IRON PIN FOUND
- IPS — IRON PIN SET
- RBF — REBAR FOUND
- RBS — REBAR SET
- N/F — NOW OR FORMERLY
- PL — PROPERTY LINE
- POT — POINT OF TANGENCY
- POB — POINT OF BEGINNING
- POC — POINT OF COMMENCEMENT
- POT — POINT OF TAN
- RW — RIGHT OF WAY
- WM — WATER METER
- WV — WATER VALVE
- DI — DROP INLET STRUCTURE
- SSMH — SANITARY SEWER MANHOLE
- T.B.M. — TEMPORARY BENCH MARK

RECORDING PERMIT

BY S McDaniel 8.12.19
HALL COUNTY PLANNING COMMISSION

ENGINEERING APPROVED
7/30/19
HALL COUNTY, GEORGIA

HALL COUNTY GA DEPT. OF PUBLIC HEALTH 8-12-19

Any abandoned well shall be properly closed as per Water Well Standards Act. Any abandoned septic tank shall be pumped by a State certified pumper/hauler and crushed/filled.

Tract 1 & 2 permit #5999
Tract 3 soils by Dan Arthur

RIGHT OF WAY NOTES

TRACT 1
-RIGHT OF WAY DEPICTED AS DESCRIBED IN DEED BOOK 7484 PAGE 289. NO RIGHT OF WAY DEED FOUND, OR PROVIDED TO THE SURVEYOR. THE SURVEYOR SUGGEST A TITLE SEARCH BY A QUALIFIED AGENT TO POSSIBLY DETERMINE HOW THE RIGHT OF WAY AFFECTS THE PROPERTY.

TRACT 2 & TRACT 3
-NO RIGHT OF WAY DEED FOUND OR PROVIDED TO THE SURVEYOR. THE RIGHT OF WAY DEPICTED HEREON IS BASED UPON FIELD EVIDENCE AND MAINTENANCE BY THE COUNTY. THE SURVEYOR SUGGEST A TITLE SEARCH BY A QUALIFIED AGENT TO POSSIBLY DETERMINE HOW THE RIGHT OF WAY AFFECTS THE PROPERTY.

ENGINEERING NOTES:

1. ANY STREAM OR STATE WATER LOCATED ON THIS PROPERTY MAY BE SUBJECT TO A 50 FEET UNDISTURBED NATURAL BUFFER AND 75 FEET IMPERVIOUS SURFACE SETBACK. (HALL COUNTY CODE § 170.070)
2. IF A PROPERTY IS LOCATED IN THE NORTH OCONEE WATERSHED DISTRICT, THE ADDITIONAL STREAM BUFFERS AND IMPERVIOUS SETBACKS MAY BE REQUIRED FOR COMPLIANCE. (HALL COUNTY CODE 17.225.040)
3. THIS PROPERTY IS NOT LOCATED IN A FLOOD HAZARD AREA AS SHOWN ON FLOOD INSURANCE RATE MAP 13139C0200G AND 13139C0202G, HALL COUNTY GEORGIA, DATED 4-4-2018.
4. THIS PROPERTY IS NOT LOCATED IN THE HALL COUNTY FUTURE FLOOD ZONE PER HALL COUNTY GIS.
5. IF RESIDENTIAL PROPERTY IS SUBDIVIDED INTO SEVEN LOTS OR MORE WITH ALL LOTS ACCESSING EXISTING HALL COUNTY, GEORGIA ROADS, THEN STORMWATER MANAGEMENT IS REQUIRED FOR COMPLIANCE. (HALL COUNTY CODE § 150.120 AND § 150.130) (SURVEYOR TO PROVIDE ALL PREVIOUS PARENT TRACTS OF LANDS PARCEL ID'S)

FLOOD NOTE

NO PORTION OF THE SUBJECT PROPERTY LIES IN A DESIGNATED SPECIAL FLOOD HAZARD AREA PER HALL COUNTY FEMA FLOOD MAP NUMBERS 13139C0200G AND 13139C0202G, DATED 4-4-2018. THE SUBJECT PROPERTY LIES IN A ZONE "X" PER THE FLOOD MAP.

SURVEYOR'S NOTES

1. A LEICA TS12 ROBOTIC TOTAL STATION WAS USED TO OBTAIN THE LINEAR AND ANGULAR MEASUREMENTS USED IN THE PREPARATION OF THIS PLAT.
2. THE FIELD DATA UPON WHICH THIS MAP OR PLAT IS BASED HAS A CLOSURE PRECISION OF 1 FOOT IN 76,698 FEET AND WAS ADJUSTED USING LEAST SQUARES.
3. THE HORIZONTAL AND VERTICAL DATUM FOR WHICH THIS SURVEY IS BASED WAS OBTAINED BY THE USE OF GPS. A CHAMPION NETWORK RTK ROVER WAS USED TO COLLECT CORRECTED MEASUREMENTS REPORTED BY A REAL TIME NETWORK OPERATED BY EGPS SOLUTIONS, INC.
4. VERTICAL DATUM SHOWN HEREON IS NAVD 88 AND AS REPORTED BY THE RTN OPERATED BY EGPS SOLUTIONS, INC.
5. THIS MAP OR PLAT HAS BEEN CALCULATED FOR CLOSURE AND CAN BE FOUND ON EACH TRACT.
6. THE RIGHT OF WAY SHOWN HEREON WAS CALCULATED FROM DEEDS AND PLATS OF RECORD AND MONUMENTS FOUND IN THE FIELD. THE CENTERLINE OF THE ROADWAY DOES NOT REPRESENT THE CENTERLINE OF THE RIGHT OF WAY.
7. UTILITY PIPES, LINES, AND APPARATUS'S SHOWN ARE FROM OBSERVED EVIDENCE ONLY BY WHAT WAS VISIBLE ABOVE GROUND OR MARKED ON THE GROUND BY OTHERS. ALL BELOW GROUND UTILITIES SHOWN ON THIS MAP SHOULD BE CONSIDERED APPROXIMATE LOCATIONS.
8. THE BEARING BASIS USED TO PREPARE THIS PLAT IS BASED UPON NAD-83, GEORGIA STATE PLANE, WEST ZONE COORDINATES. ALL DIRECTIONS AND DISTANCES SHOWN HEREON ARE A GROUND LEVEL PROJECTION OF THE SYSTEM.

PREPARED BY: A GEORGIA LAND SURVEYING FIRM: LSF# 001105
acre
PROFESSIONAL SURVEYORS
LAND DEVELOPMENT SURVEYING AND MAPPING
ACRE GROUP, INC.
P.O. BOX 54 | LOGANVILLE | GEORGIA, 30052 | 770.290.0059

REVISION:

NO.	DATE:

SURVEY INFORMATION:
DATE: 7/15/2019 LAND LOTS: 111 & 119 DISTRICT: 8TH COUNTY: HALL
CITY: N/A SCALE: 1"=100 DRAWN BY: D. J. BENNETT
JOB NUMBER: 19-177 DATE OF FIELD WORK: 3/7/2019

A DIVISION OF A PARENT PARCEL AND COMBINATION SURVEY:

FOSTER ROAD INC.

SHEET:
1 OF 1

IN THE DRAWINGS BEFORE PROCEEDING WITH WORK. WHILE GRADES AND ELEVATIONS WILL IN GENERAL CONFORM TO THOSE TO MAKE MINOR MODIFICATIONS BY REASONABLE FIELD ADJUSTMENTS PRIOR TO COMPLETION OF SUBGRADE WORK.

HER WHEN SUBGRADE IS SUFFICIENTLY STABLE TO BE PROPERLY COMPACTED. GROUND MOISTURE SHALL NOT BE SEALED ANCE WITH APPLICABLE SECTIONS OF THE REFERENCE STANDARDS.

TOR COMPACTION.

ITH REQUIREMENTS OF OSHA CONSTRUCTION STANDARDS, PART 1926, SUBPART P, EXCAVATIONS, TRENCHING, AND SHORING. UIPMENT, AND MARINE OPERATIONS, AND SHALL BE CONDUCTED IN A MANNER ACCEPTABLE TO THE ENGINEER.

, FREE OF ORGANIC OR DELETERIOUS MATERIALS, ROCK, OR BROKEN PIECES OF CONCRETE LARGER THAN 3 INCHES IN SIZE, OR LOSE THE COMPACTION RESULTS.

F THE CONTRACTOR.

H INTERIOR PIPE. PREAPPROVED PIPES INCLUDE ADS N-12, HANCOR H-Q, AND SOUTHEAST CULVERT N-TUFLOW.

PROVISIONS SECTION 550 – STORM DRAIN PIPE, PIPE-ARCH CULVERTS AND SIDE DRAIN PIPE.

STORMS BEFORE ANY MAJOR GRADING OR IMPERVIOUS SURFACES ARE CONSTRUCTED.

AZARD AREA PER F.I.R.M. PANEL NO. 13133C0228 G, DATED APRIL 4, 2018.

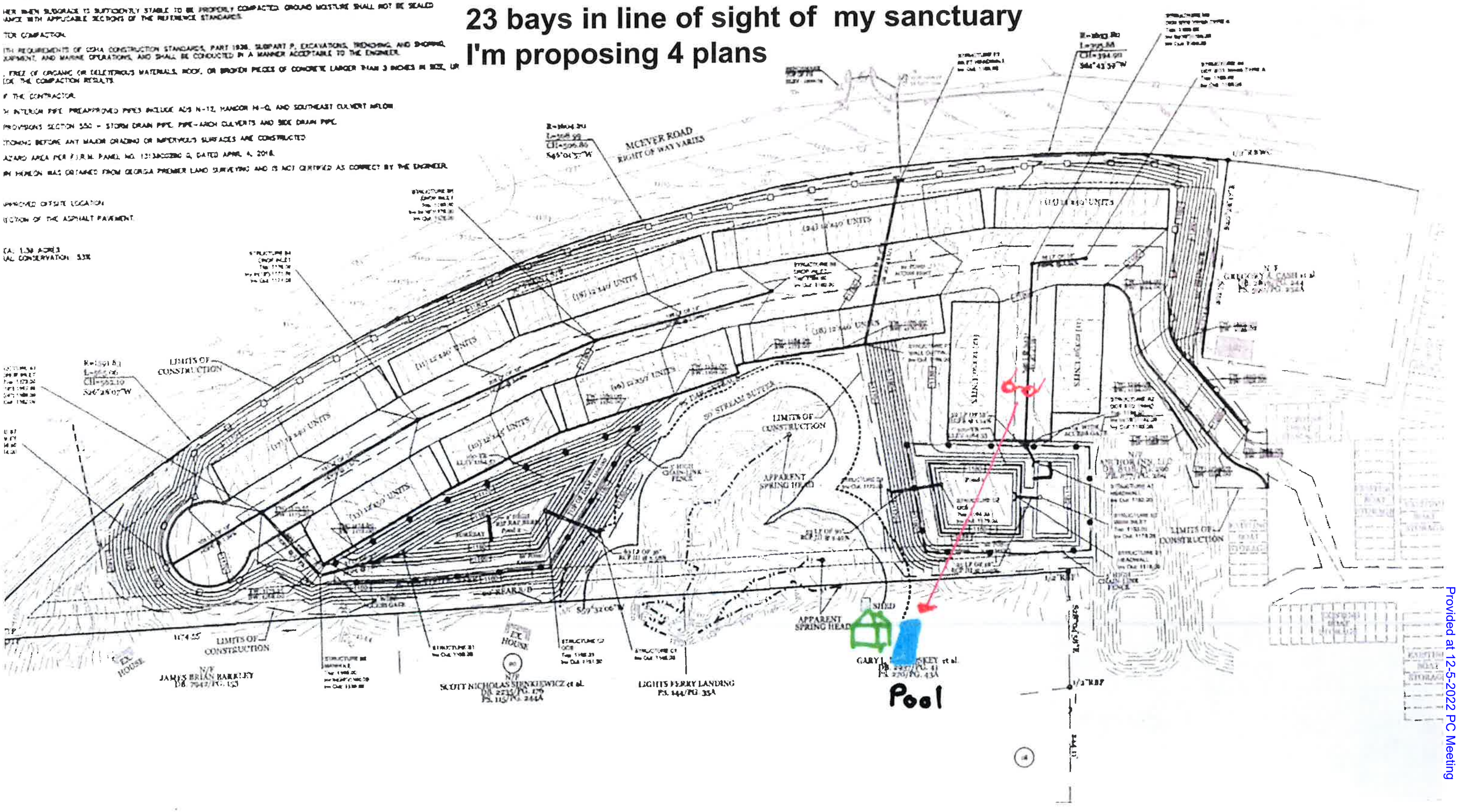
M HAZELON WAS OBTAINED FROM GEORGIA PREMIER LAND SURVEYING AND IS NOT CERTIFIED AS CORRECT BY THE ENGINEER.

APPROVED OFFSITE LOCATION

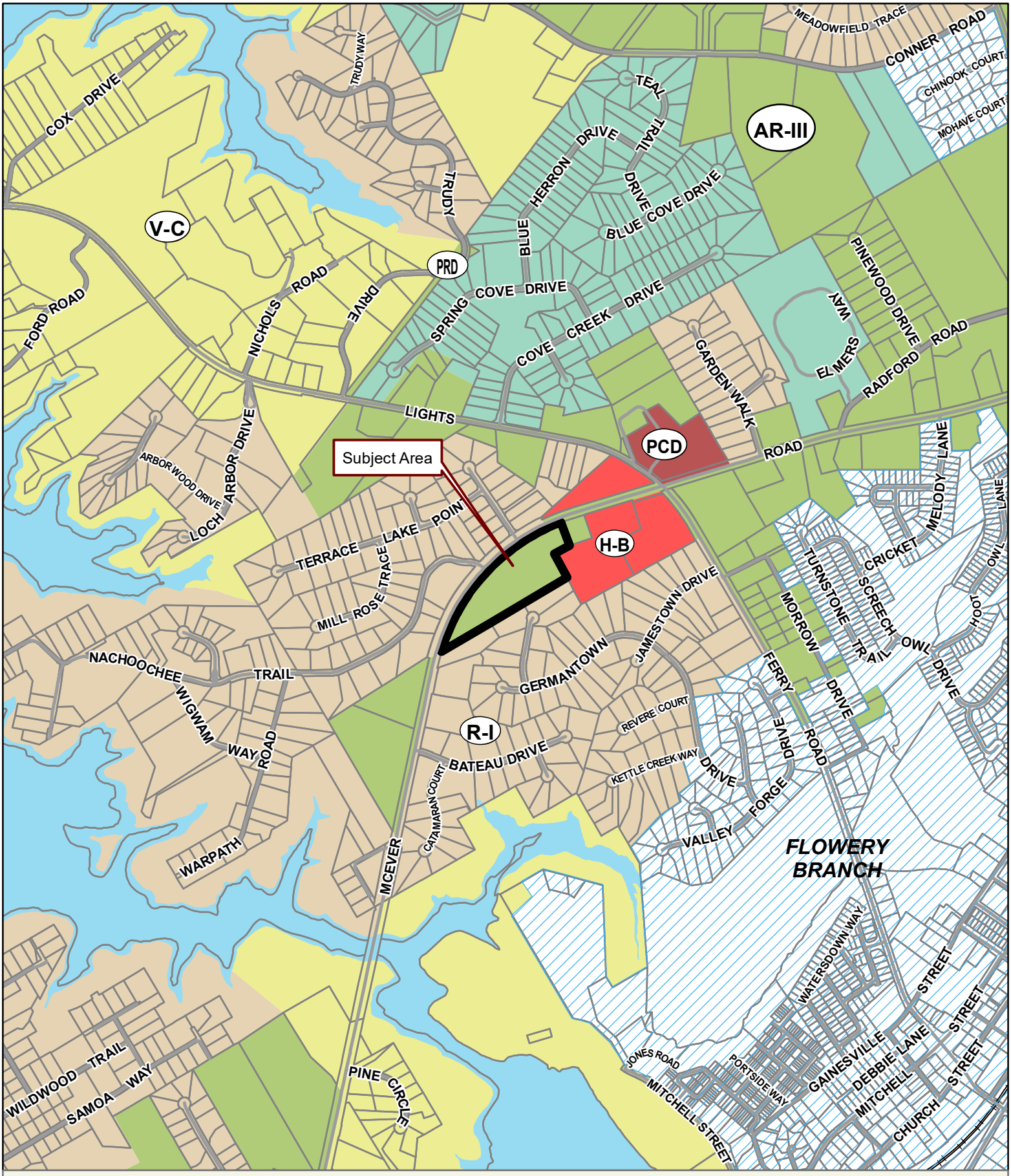
LECTION OF THE ASPHALT PAVEMENT.

CA: 1.38 ACRES
IAL CONSERVATION: 5.3%

23 bays in line of sight of my sanctuary
I'm proposing 4 plans



Provided at 12-5-2022 PC Meeting

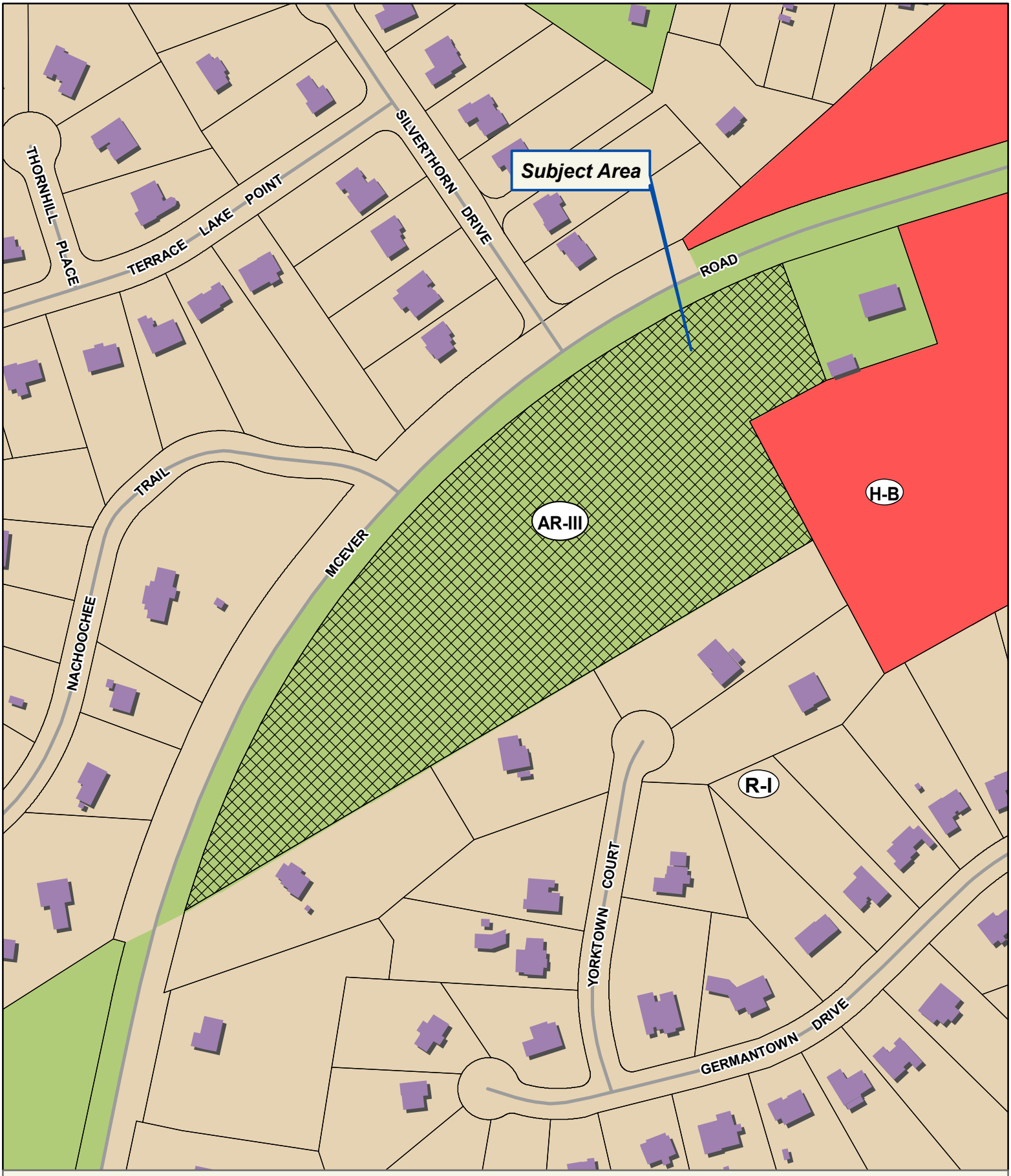


Applicant: ANCHOR INN RV & BOAT STORAGE
Tax Parcel #: 08119 000233
Location: 5871 MCEVER ROAD, FLOWERY BRANCH, GA 30542
Commission District 2 **PC Mtg. Date:** 12/05/2022

0 300 600 1,200
Feet

Zoning Boundary
City Limits
Subject Area
Structure

N



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Commission District 2 **PC Mtg. Date:** 12/05/2022

0 50 100 200
Feet

Zoning Boundary
City Limits
Subject Area
Structure

N



Applicant: ANCHOR INN RV & BOAT STORAGE
Tax Parcel #: 08119 000233
Location: 5871 MCEVER ROAD, FLOWERY BRANCH, GA 30542
Commission District 2 **PC Mtg. Date:** 12/05/2022

0 50 100 200
Feet

Zoning Boundary
City Limits
Subject Area

N

Boat storage Birds Eye View

From: Andrew Eubanks (eubanks02475@gmail.com)

To: rwh@bellsouth.net

Date: Monday, December 5, 2022 at 03:51 PM EST



Provided at 12-5-2022 PC Meeting

5871 McEver Road

All that tract or parcel of land lying and being in the Land Lot 119 of the 8th Land District, Hall County, Georgia and being more particularly described as follows;

To find the True Point of Beginning, commence at the intersection of the southwest right of way of Lights Ferry Road (80' right of way) and the southeast right of way of McEver Road (right of way varies), said point marked by an iron pin set; THENCE traveling on said southeast right of way of McEver Road South 73 Degrees 18 Minutes 09 Seconds West for a distance of 250.96 feet to a point, said point marked by a ½ inch rebar pin found; THENCE continuing North 16 Degrees 46 Minutes 20 Seconds West for a distance of 19.19 feet to a point, said point marked by an iron pin set; THENCE on said right of way South 73 Degrees 22 Minutes 25 Seconds West for a distance of 406.87 feet to a point, said point marked by an iron pin set; THENCE leaving said right of way South 18 Degrees 39 Minutes 34 Seconds East for a distance of 200.00 feet to a point, said point marked by a wood post; THENCE South 71 Degrees 39 Minutes 19 Seconds West for a distance of 189.28 feet to a point, said point marked by an iron pin set, said point being, THE TRUE POINT OF BEGINNING.

THENCE from said point as thus established, traveling South 61 Degrees 55 Minutes 02 Seconds West for a distance of 140.04 feet to a point, said point marked by an iron pin set; THENCE South 28 Degrees 04 Minutes 58 Seconds East for a distance of 216.93 feet to a point, said point marked by a ½ inch rebar pin found; THENCE South 59 Degrees 32 Minutes 06 Seconds West for a distance of 1174.55 feet to a point on the southeast right of way of McEver Road (right of way varies), said point marked by an iron pin set; THENCE on said right of way along a curve to the right having a radius of 1591.83 feet and an arc length of 565.06 feet being subtended by a chord bearing of North 26 Degrees 28 Minutes 07 Seconds East and a chord distance of 562.10 feet to a point; THENCE along a curve to the right having a radius of 1604.20 feet and an arc length of 508.99 feet being subtended by a chord bearing of North 46 Degrees 01 Minutes 57 Seconds East and a chord distance of 506.86 feet to a point; THENCE on said right of way along a curve to the right having a radius of 1633.80 feet and an arc length of 395.86 feet being subtended by a chord bearing of North 61 Degrees 45 Minutes 59 Seconds East and a chord distance of 394.90 feet to a point, said point marked by an iron pin set; THENCE leaving said right of way South 20 Degrees 28 Minutes 17 Seconds East for a distance of 201.79 feet to a point, said point marked by a wood post, said point being THE TRUE POINT OF BEGINNING.

Said property contains 9.064 Acres and shown as Tract 3 on survey entitled "A Division of a Parent Parcel and Combination Survey for Foster Road Inc., recorded in Plat Book 877, page 269, Hall County records.

Anael Dominguez (Planning)

From: Emily McGahee (Environmental Health)
Sent: Monday, November 14, 2022 12:09 PM
To: Anael Dominguez (Planning); Randi Doveton (Planning)
Cc: Chad Harper (Environmental Health); Kelly Hairston (Environmental Health)
Subject: HCPC Tentative Agenda 12.5.22

Please find Environmental Health comments below:

Items 1 & 2, 4745 Cagle Mill Rd, Boling: Public sewer. Any abandoned well shall be properly closed as per Water Well Standards Act. Any abandoned septic tank shall be pumped by a State certified pumper/hauler and crushed/filled.

Item 3, 2124 Imperial Drive, Maynard: An existing system evaluation will be required.

Item 4, 3252/3264 Poplar Springs Road, Lykins: This plat is currently under review by the Hall County Plat Review Team and Environmental Health can approve the subdivision plat as the lots are considered lots of record.

Item 5, 5625/5633 Bogus Road, Mejia: This plat is currently under review by the Hall County Plat Review Team and Environmental Health can approve the subdivision plat.

Items 6 & 7, 5871 McEver Road, Anchor Inn: Must meet all Environmental Health commercial septic system permitting requirements if plumbing proposed and public sewer not available. A detailed business plan must be submitted to Hall County Environmental Health for review.

Item 8, 6541 Henry Smith, Crawford: Environmental Health issued a septic permit (OSC 7294) for storage building/barn (sink/toilet) in May 2022. The system has not been installed as of this date.

Item 9, Text Amendment: No comment

Emily McGahee
Hall County Environmental Health
Hall County Government Center
2875 Browns Bridge Road
Mailing: PO Box 5901
Gainesville, GA 30504
(770) 531-3973
(770) 531-6767 (fax)

http://dph.georgia.gov/environmental-health (State Website)
http://www.phdistrict2.org/HallCounty.htm (District Website)
http://www.hallcounty.org/devserv/environmental.asp (County Website & Forms)

Anael Dominguez (Planning)

From: Niebauer, Parker J <PNiebauer@dot.ga.gov>
Sent: Thursday, November 17, 2022 2:20 PM
To: Anael Dominguez (Planning); Randi Doveton (Planning)
Cc: Chavers, Veronica E; Peevy, Jonathan
Subject: RE: Tentative Planning Agenda for December 5, 2022

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Please see our comments in red below

#4 (Lynkin) – is the proposal just to move the property line? If so, disregard comment below about GDOT coordination being required.

Thank you,

Parker Niebauer
D1TO Traffic Operations Supervisor

GDOT Georgia Department of Transportation

District 1 Division of Field Services
1475 Jesse Jewell Pkwy
Suite 100
Gainesville, GA, 30501
770.533.8275 office
770.519.3223 cell

From: Anael Dominguez (Planning) <adominguez@hallcounty.org>
Sent: Friday, November 11, 2022 11:14 AM
To: Becky Ruffner (Parks & Leisure) <bruffner@hallcounty.org>; Bill Nash (Public Works) <bnash@hallcounty.org>; Bill Schmid <weschmid@rochester-assoc.com>; Brandi Smith (Business License) <bsmith@hallcounty.org>; Bryan Cash (Fire Services) <bcash@hallcounty.org>; Chad Harper (Environmental Health) <charper@hallcounty.org>; Chris Braswell (Planning) <cbraswell@hallcounty.org>; Christopher Armstrong (Fire Services) <carmstrong@hallcounty.org>; Dan Barnes <Daniel.C.Barnes@usace.army.mi>; Ellis Still (Planning) <estill@hallcounty.org>; Emily McGahee (Environmental Health) <emcgahee@hallcounty.org>; Frank Miller (Engineering) <fmiller@hallcounty.org>; Dykes, Jason <jdykes@dot.ga.gov>; Jason Skarda (Engineering) <jskarda@hallcounty.org>; Jeremy Wills <jeremy.wills@gainesville.org>; John Hornick (Fire Services) <jhornick@hallcounty.org>; Peevy, Jonathan <jpeevy@dot.ga.gov>; Kelly Hairston (Environmental Health) <khairston@hallcounty.org>; Matt Cox <matt.cox@hallco.org>; Michael Vieira (Fire Services) <mvieira@hallcounty.org>; Nicole Griffin (Tax Assessors) <nicole.griffin@hallcounty.org>; nswafford (nswafford@gainesvillega.org) <nswafford@gainesvillega.org>; Pam Cravero <Pam.Cravero@hallco.org>; Niebauer, Parker J <PNiebauer@dot.ga.gov>; Randi Doveton (Planning) <rdoveton@hallcounty.org>; rich <rich@flowerybranchga.org>; Scott Puckett <spuckett@hallcounty.org>; Srikanth Yamala (Public Works) <syamala@hallcounty.org>; Stephen Cain <troy.s.cain@usace.army.mil>; Steve Watson (Real Property) <rswatson@hallcounty.org>; Tammie Croy (Engineering) <tcroy@hallcounty.org>; Tracy Gilreath (Tax Assessors) <tgilreath@hallcounty.org>; Wanda Moreno (Engineering) <wmoreno@hallcounty.org>; Wanda Sutton

(Engineering) <wsutton@hallcounty.org>; will schofield <will.schofield@hallco.org>
Subject: Tentative Planning Agenda for December 5, 2022

Good afternoon –

Here is the Tentative Agenda and Maps for the **Monday, December 5, 2022** Hall County Planning Commission Meeting.

Please use the links to review the documents and respond with comments to Hall County Planning and Development. Failure to provide comments in a timely manner may result in the information not being included in the staff report.

When submitting comments, please include the name of the applicant along with the address of the property with the corresponding comment.

Comments are due by **Friday, November 18th**. Email comments to Randi (rdoveton@hallcounty.org) and Ana (adominguez@hallcounty.org).

CALL TO ORDER

AGENDA REVIEW

APPROVAL OF MINUTES - November 21, 2022

OLD BUSINESS

1. **4745 Cagle Mill Road | Rezone |** from Agricultural Residential-III (AR-III) and Agricultural Residential-IV (AR-IV) to Planned Residential Development (PRD) on a 69.50± acre tract located on the west side of Cagle Mill Road approximately 429 feet from Noah Martin Drive | Zoned AR-III & AR-IV; Tax Parcel 15007 000254 (pt.) | **Proposed use: single family, townhome, & cluster home development, 225 residential units** | ** Commission District 3 | **Josh Boling, applicant.**

2. **4745 Cagle Mill Road | Rezone |** from Agricultural Residential-III (AR-III) to Light Industrial (I-I) on a 5.30± acre tract located on the east side of Cornelia Highway approximately 4,970 feet from Cagle Road | Zoned AR-III; Tax Parcel 15007 000254 (pt.) | **Proposed use: 2 commercial outparcels** | ** Commission District 3 | **Josh Boling, applicant.**

NEW BUSINESS

3. **2124 Imperial Drive | Variance |** for a left side yard setback variance from 10 feet to 3 feet on a .93± acre tract located on the east side of Imperial Drive approximately 72 feet from its intersection with Elysian Circle | Zoned R-I ; Tax Parcel 00094 000006H **| Proposed use: above ground pool |** * Commission District 4 **| Jeff Maynard & Vanessa Schaeffer , applicant.**
   None

4. **3264 & 3252 Poplar Springs Road | Variance |** for a road frontage variance from 150 to 109 feet on a 1.91± acre tract located on the south side of Poplar Springs Road approximately 736 feet from its intersection with Hawthorne Drive | Zoned R-I & AR-III; Tax Parcel 15036C000008 (pt.) & 000009A | **Proposed use: reconfiguration plat** | * Commission District 1 | **Brian Lykins, applicant.**
   GDOT coordination required.

5. **5625 & 5633 Bogus Road | Variance |** for a variance on road frontages and required lot widths from 150 feet to 80 feet for two proposed lots on a 3± acre tract located on the east side of Bogus Road approximately 1,345 feet from its intersection with Wellspring Trail | Zoned AR-IV ; Tax Parcel 12050 000042 & 000043 **| Proposed use: 2-lot subdivision |** * Commission District 3 | **Francisco Mejia, applicant.**
   None

6. **5871 McEver Road | Rezone |** from Agricultural-Residential-III (AR-III) to Highway-Business (H-B) on a 9.06± acre tract located on the east side of McEver Road at its intersection with Silverthorn Drive | Zoned AR-III; Tax

Parcel 08119 000233 | **Proposed use: RV & boat storage |** ** Commission District 2 | **Anchor Inn RV & Boat Storage, applicant.**
None

7. **5871 McEver Road | Use Subject to County Commission Approval |** on a 9.06± acre tract located on the east side of McEver Road at its intersection with Silverthorn Drive | Zoned AR-III; Tax Parcel 08119 000233 | **Proposed use: RV & boat storage |** ** Commission District 2 | **Anchor Inn RV & Boat Storage, applicant.**
None

8. **6541 Henry Smith Road | Appeal an Administrative Decision |** for a Use Subject to Planning Commission approval on a 5.65± acre tract located on the west side of Henry Smith Road at its intersection with Edwards Road | Zoned AR-IV; Tax Parcel 11023 000024 |**Proposed use: rural business |** * Commission District 3 | **Tyler Crawford, applicant.**
None

9. **Section 17.20.300 | Text Amendment, Official Code of Hall County, GA | Amend the Definition of Community Residence |** 17.20.300, ("pregnant or parenting youth who are displaced and /or in State custody.") by amending the definition of a Community Residence. The intent of the proposed change is to expand the type of care facility allowed as a Community Residence. | ** All Districts | **Crystal F. Toombs, applicant.**
None

*The Planning Commission's decision will be the final action taken unless appealed to the Board of Commissioners. To do so, file an application with the Planning Department within five working days of the Planning Commission's decision.

The Hall County Board of Commissioners will hear appeals at a public hearing Thursday, January 12, 2023 at 6:00 p.m. at the Hall County Government Center, 2nd Floor Meeting Room, 2875 Browns Bridge Road, Gainesville, Georgia.

**The Planning Commission's recommendation will be forwarded to the Board of Commissioners for final action at a public hearing on Thursday, January 12, 2023. The Board will meet at 6:00 p.m. at the Hall County Government Center, 2nd Floor Meeting Room, 2875 Browns Bridge Road, Gainesville, Georgia.

Thank you,
Ana Dominguez
Planning Commission Clerk
Hall County Government
2875 Browns Bridge Road, Gainesville, GA 30504
www.hallcounty.org | 770-531-6810

HALL COUNTY
GEORGIA
We have it all in Hall

Georgia is a state of natural beauty. And it's a state that spends millions each year cleaning up litter that not only mars that beauty, but also affects road safety, the environment and the economy. Do your part – don't litter. How can you play an active role in protecting the splendor of the Peach State? Find out at http://keepgaclean.com/.

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GAINESVILLE, GA 30503

t: 770.531.6800 | f: 770.531.3945

SRIKANTH YAMALA
Director

BILL NASH, P.E.
Assistant Director

FRANKLIN P. MILLER, P.E.
County Engineer

Hall County Government

PUBLIC WORKS AND UTILITIES
ENGINEERING DIVISION

M E M O R A N D U M

To: Randi Doveton, Director of Planning and Development

From: Srikanth Yamala, Director of Public Works and Utilities

Date: November 17, 2022

Subject: December 5, 2022 - Hall County Planning Commission Agenda

Please be advised that our office has reviewed the Hall County Planning Commission agenda for the December 5, 2022 meeting. Upon review, we provide the following comments.

OLD BUSINESS

1. **4745 Cagle Mill Road | Rezone |** from Agricultural Residential-III (AR-III) and Agricultural Residential-IV (AR-IV) to Planned Residential Development (PRD) on a 69.50± acre tract located on the west side of Cagle Mill Road approximately 429 feet from Noah Martin Drive | Zoned AR-III & AR-IV; Tax Parcel 15007 000254 (pt.) **| Proposed use: single family, townhome, & cluster home development, 225 residential units |** ** Commission District 3 | **Josh Boling, applicant.**

   a) **Engineering:** The site may require a stormwater management report should the site plan indicate the proposed development meets stormwater threshold for impervious surfaces and/or disturbed acreage
   Show FEMA and Hall County studied flood plain
   Part of North Oconee Water Protection District.
   Hall County will not maintain a bridge over river.
   b) **Traffic:** 1. Access onto Cornelia Hwy (SR365) must be approved and permitted by GDOT.
   2. Internal roadways are proposed to be private; however, they still need to meet Hall County Code Title 16 (subdivision regulations). Any proposed variances to Title 16 must be specific, justified and approved through the rezoning process. In addition, there is a proposed bridge shown near the Cornelia Hwy (SR365) entrance and it should be noted that Hall County does not accept bridges into County maintenance. A cul-de sac will be required at the end of the proposed County maintained section. Current site plan does not meet Hall County requirements.
   3. Recommend that the gravel section of Cagle Mill Road from existing end of pavement to White Hall Road (approximately 1,400 feet) be improved and paved to Hall County standards to provide safe and efficient access to and from the site via Old Cornelia Highway/White Hall Road.
   4. Recommend that all necessary improvements be the financial responsibility of the developer and constructed concurrently with the development.
   c) **Utilities:** Hall County Sewer district.
   Sewer lift station @ 365.

HALL COUNTY
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SRIKANTH YAMALA
Director

BILL NASH, P.E.
Assistant Director

FRANKLIN P. MILLER, P.E.
County Engineer

Hall County Government

PUBLIC WORKS AND UTILITIES
ENGINEERING DIVISION

2. **4745 Cagle Mill Road | Rezone |** from Agricultural Residential-III (AR-III) to Light Industrial (I-I) on a 5.30± acre tract located on the east side of Cornelia Highway approximately 4,970 feet from Cagle Road | Zoned AR-III; Tax Parcel 15007 000254 (pt.) | **Proposed use: 2 commercial outparcels** | ** Commission District 3 | **Josh Boling, applicant.**

   a) **Engineering:** The site may require a stormwater management report should the site plan indicate the proposed development meets stormwater threshold for impervious surfaces and/or disturbed acreage.
   Show FEMA and Hall County studied flood plain.
   Part of North Oconee Water Protection District.
   Show buffer and impervious setback from wrested vegetation, not centerline of creek. (150')
   Hall County will not maintain bridge over river.
   b) **Traffic:** 1. Access onto Cornelia Hwy (SR365) must be approved and permitted by GDOT.
   2. Roadway will need to meet Hall County industrial standards.
   3. There is a proposed bridge shown near the Cornelia Hwy (SR365) entrance and it should be noted that Hall County does not accept bridges into County maintenance. A cul-de sac will be required at the end of the proposed County maintained section.
   4. Recommend that all necessary improvements be the financial responsibility of the developer and constructed concurrently with the development.
   c) **Utilities:** Sewer at 365, need sewer availability letter flows?

NEW BUSINESS

3. **2124 Imperial Drive | Variance |** for a left side yard setback variance from 10 feet to 3 feet on a .93± acre tract located on the east side of Imperial Drive approximately 72 feet from its intersection with Elysian Circle | Zoned R-I ; Tax Parcel 00094 000006H **| Proposed use: above ground pool |** * Commission District 4 **| Jeff Maynard & Vanessa Schaeffer , applicant.**

   a) **Engineering:** No Comments
   b) **Traffic**: No Comments
   c) **Utilities**: No Comments

4. **3264 & 3252 Poplar Springs Road | Variance |** for a road frontage variance from 150 to 109 feet on a 1.91± acre tract located on the south side of Poplar Springs Road approximately 736 feet from its intersection with Hawthorne Drive | Zoned R-I & AR-III; Tax Parcel 15036C000008 (pt.) & 000009A | **Proposed use: reconfiguration plat** | * Commission District 1 | **Brian Lykins, applicant.**

   a) **Engineering:** No Comments
   b) **Traffic:** Need authorization from the GDOT for new or modifications to existing driveways.
   c) Utilities: City of Oakwood Sewer District

HALL COUNTY
GEORGIA

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Hall County Government

PUBLIC WORKS AND UTILITIES
ENGINEERING DIVISION

5. **5625 & 5633 Bogus Road | Variance |** for a variance on road frontages and required lot widths from 150 feet to 80 feet for two proposed lots on a 3± acre tract located on the east side of Bogus Road approximately 1,345 feet from its intersection with Wellspring Trail | Zoned AR-IV ; Tax Parcel 12050 000042 & 000043 **| Proposed use: 2-lot subdivision |** * Commission District 3 | **Francisco Mejia, applicant.**

a) **Engineering:** No Comments
b) **Traffic:** No Comments
c) **Utilities:** No Comments

6. **5871 McEver Road | Rezone |** from Agricultural-Residential-III (AR-III) to Highway-Business (H-B) on a 9.06± acre tract located on the east side of McEver Road at its intersection with Silverthorn Drive | Zoned AR-III; Tax Parcel 08119 000233 **| Proposed use: RV & boat storage |** ** Commission District 2 | **Anchor Inn RV & Boat Storage, applicant.**

a) **Engineering:** This site may require a stormwater management report should the site plan indicate the proposed development meets stormwater thresholds for impervious surfaces and/or disturbed acreage. Stream and impervious setback from wrested vegetation not centerline of stream.
b) **Traffic:** Adequate connection to roadway is not clear. Traffic study will be required that documents/impacts to the McEver Road/Lights Ferry intersection. Improvements that remediate impacts to intersection will be required.
c) **Utilities:** Flowery Branch Sewer District

7. **5871 McEver Road | Use Subject to County Commission Approval |** on a 9.06± acre tract located on the east side of McEver Road at its intersection with Silverthorn Drive | Zoned AR-III; Tax Parcel 08119 000233 **| Proposed use: RV & boat storage |** ** Commission District 2 **| Anchor Inn RV & Boat Storage, applicant.**

a) **Engineering:** This site may require a stormwater management report should the site plan indicate the proposed development meets stormwater thresholds for impervious surfaces and/or disturbed acreage.
b) **Traffic:** Adequate connection to roadway is not clear. Traffic study will be required that documents/impacts to the McEver Road/Lights Ferry intersection. Improvements that remediate impacts to intersection will be required.
c) **Utilities:** No Comments

8. **6541 Henry Smith Road | Appeal an Administrative Decision |** for a Use Subject to Planning Commission approval on a 5.65± acre tract located on the west side of Henry Smith Road at its intersection with Edwards Road | Zoned AR-IV; Tax Parcel 11023 000024 **|Proposed use: rural business |** * Commission District 3 | **Tyler Crawford, applicant.**

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County Engineer

Hall County Government

PUBLIC WORKS AND UTILITIES
ENGINEERING DIVISION

a) **Engineering:** This site may require a stormwater management report should the site plan indicate the proposed development meets stormwater thresholds for impervious surfaces and/or disturbed acreage.
b) **Traffic:** No Comments
c) **Utilities:** No Comments

9. **Section 17.20.300 | Text Amendment, Official Code of Hall County, GA | Amend the Definition of Community Residence** | 17.20.300, ("pregnant or parenting youth who are displaced and /or in State custody.") by amending the definition of a Community Residence. The intent of the proposed change is to expand the type of care facility allowed as a Community Residence. | ** All Districts | **Crystal F. Toombs, applicant.**

a) **Engineering:** No Comments
b) **Traffic:** No Comments
c) **Utilities:** No Comments

Anael Dominguez (Planning)

From: John Hornick (Fire Services)
Sent: Friday, November 18, 2022 12:28 PM
To: Randi Doveton (Planning); Anael Dominguez (Planning)
Cc: Michael Vieira (Fire Services)
Subject: Planning Commission Fire Comments

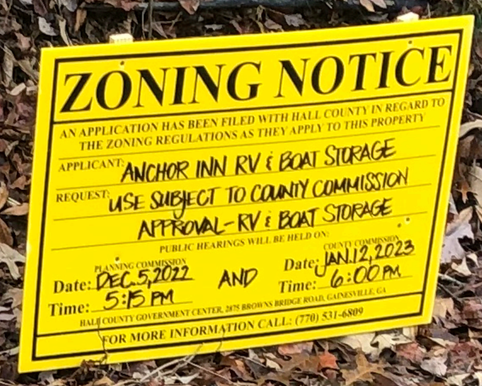
1. **5871 McEver Road | Rezone |** from Agricultural-Residential-III (AR-III) to Highway-Business (H-B) on a 9.06± acre tract located on the east side of McEver Road at its intersection with Silverthorn Drive | Zoned AR-III; Tax Parcel 08119 000233 **| Proposed use: RV & boat storage |** ** Commission District 2 | **Anchor Inn RV & Boat Storage, applicant.**
   IFC Section 507.5.1 where a building(s) is constructed and is more than 400' from a fire hydrant on an approved fire access route fire hydrant(s) shall be installed. Fire hydrant(s) may have to be installed to meet fire code.

2. **5871 McEver Road | Use Subject to County Commission Approval |** on a 9.06± acre tract located on the east side of McEver Road at its intersection with Silverthorn Drive | Zoned AR-III; Tax Parcel 08119 000233 **| Proposed use: RV & boat storage |** ** Commission District 2 | **Anchor Inn RV & Boat Storage, applicant.**
   IFC Section 507.5.1 where a building(s) is constructed and is more than 400' from a fire hydrant on an approved fire access route fire hydrant(s) shall be installed. Fire hydrant(s) may have to be installed to meet fire code.

Regards,

John Hornick, NPQ Fire Inspector 1, Plans Review
Lieutenant, Hall County Fire Rescue
Hall County Government
Main: 770-531-6838 | Cell: 404-597-0083
Website: www.Hallcounty.org


ZONING NOTICE
AN APPLICATION HAS BEEN FILED WITH HALL COUNTY IN REGARD TO THE ZONING REGULATIONS AS THEY APPLY TO THIS PROPERTY
APPLICANT: ANCHOR INN RV & BOAT STORAGE
REQUEST: REZONE FROM AR-III TO H-B FOR RV & BOAT STORAGE
PUBLIC HEARINGS WILL BE HELD ON:
PLANNING COMMISSION Date: DEC. 5, 2022 Time: 5:15 PM
AND
COUNTY COMMISSION Date: JAN. 12, 2023 Time: 6:00 PM.
HALL COUNTY GOVERNMENT CENTER, 2875 BROWNS BRIDGE ROAD, GAINESVILLE, GA
FOR MORE INFORMATION CALL: (770) 531-6809


ZONING NOTICE
AN APPLICATION HAS BEEN FILED WITH HALL COUNTY IN REGARD TO THE ZONING REGULATIONS AS THEY APPLY TO THIS PROPERTY
APPLICANT: ANCHOR INN RV & BOAT STORAGE
REQUEST: USE SUBJECT TO COUNTY COMMISSION APPROVAL - RV & BOAT STORAGE
PUBLIC HEARINGS WILL BE HELD ON:
PLANNING COMMISSION Date: DEC. 5, 2022 Time: 5:15 PM
AND
COUNTY COMMISSION Date: JAN. 12, 2023 Time: 6:00 PM.
HALL COUNTY GOVERNMENT CENTER, 2875 BROWNS BRIDGE ROAD, GAINESVILLE, GA
FOR MORE INFORMATION CALL: (770) 531-6809

ZONING NOTICE

ANCHOR INN RV & BOAT STORAGE
REQUEST FROM R1 TO HC FOR
RV & BOAT STORAGE

Date: JAN 10 2023 AND Date: JAN 12 2023
Time: 5:30 PM Time: 6:00 PM

ZONING NOTICE

AN APPLICATION WAS BEEN FILED WITH HALL COUNTY IN REGARD TO THE ZONING REGULATIONS AS THEY APPLY TO THIS PROPERTY

APPLICANT: ANCHOR INN RV & BOAT STORAGE

REQUEST: USE SUBJECT TO COUNTY COMMISSION APPROVAL - RV & BOAT STORAGE

Date: DEC. 5 2022 AND Date: JAN 12 2023
Time: 5:30 PM Time: 6:00 PM.

FOR MORE INFORMATION CALL: (770) 531-6809

AGENDA ITEM

Planning and Development

REPORT TO:	**Work Session (01/09/23)**
REPORT TO:	**Voting Meeting (01/12/23)**
ITEM NO:	733/2022
SUBJECT:	**5871 McEver Road | Use Subject to County Commission Approval** | on a 9.06± acre tract located on the east side of McEver Road at its intersection with Silverthorn Drive | Zoned AR-III; Tax Parcel 08119 000233 | **Proposed use: RV & boat storage** | Commission District 2 | **Anchor Inn RV & Boat Storage, applicant.**

Meetings:

Work Session Date: 01/09/23 **Voting Meeting Date:** 01/12/23

Executive Summary:

Presenter: RD
Recommendation:

Approval, with conditions: 1. All conditions of the June 25, 2019 approval for the Foster Rd. Inc. rezoning request shall apply to this development. a. The development shall occur as generally described in the narrative and depicted on the concept plan, modified for compliance with regulations at time of development application. b. A 25 foot transitional buffer is required along the common lot line of the Cash property and the buffer shall be buffered per Hall County regulations. c. Where the development boarders the Lights Ferry Landing subdivision there shall be a 25 foot undisturbed buffer and a 10 foot transitional buffer. d. The development shall permit boat and RV storage e. The development shall have decorative steel fencing with stone or brick columns along McEver road. This steel or brick fence shall wrap around the radius of the cul-de-sac and turn back at the Cash property to the back of the building facing McEver Road. All other fencing shall be a 6 foot high black vinyl link fence along all other property lines. f. The only entrance shall be located on Lights Ferry Road, which was on the original plan for phase 1. 2. The applicant shall be required to meet all applicable local, state, and/or federal regulations required as part of the land development process including Gateway Standard 17.420.050. No variances from the Hall County standards shall be granted unless noted in additional conditions. 3. The dev shall occur as depicted on the site plan presented. Minor changes shall be approved by the Planning Director provided there is no increase in the number of units or buildings and the changes do not create the need for variances in the Hall Co dev standards 4. A landscape plan shall be approved by Planning Director prior to LDP. 5. The applicant shall submit architectural elevations of all four sides of the structure for approval by the Planning Director prior to issuance of LDP. The only variances from the Gateway Corridor is to allow metal posts in between the bays and standing seam metal roofs. The project shall adhere to existing conditions of phase 1 with the exception of all buildings along McEver Road to be masonry on the back and sides facing McEver Road. 6. Signage shall require a separate permit and must meet Gateway Corridor overlay district standards found in 17.40.060. 7. The buffer shall be protected in perpetuity by deed that follows the property, the removal or modifications of this condition shall require action by the Board of Commission. 8. Two amended site plans showing all Planning Commission conditions must be submitted before going in front of the BOC. One site plan shall be topographical and the second shall indicate all building locations without topography. 9. No more than 172 units shall be allowed on this property for phase 2. 10. Before LDP is issued all buffer requirements of phase 1 must be confirmed to meet all requirements of phase 1 rezoning and conditional use. 11. An 8 foot height privacy fence shall be built along the rear of buildings N and O.

Purpose of Request:

5871 McEver Road | Use Subject to County Commission Approval | on a 9.06± acre tract located on the east side of McEver Road at its intersection with Silverthorn Drive | Zoned AR-III; Tax Parcel 08119 000233 | Proposed use: RV & boat storage | Commission District 2 | Anchor Inn RV & Boat Storage, applicant.

History:

Facts and Issues:

Options:

Funding Requested	$ 0.00
Are funds within current budget?	No
Source of Funds	
Does the action involve a Resolution, Ordinance, Contract, Agreement, etc.?	No
Has it been reviewed by the County Attorney?	Yes
Is there a deadline for this item?	

Approvals:

Submit	Approve	Budget	Finance
AD	RD	TS	WG

Attorney	Administration	Clerk
WLI	CR	JR

Attachments:

Board Memo
Recommendation Report

Application
Narrative
Site Plan
Maps
Renderings
Legal Description
Environmental Health Comments
GDOT Comments
Public Works Comments
Fire Comments
Notice Sign Photos

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DIRECTOR
Randi Doveton

Hall County Government
PLANNING & DEVELOPMENT

To: Richard Higgins, Chairman
Kathy Cooper, District 1
Billy Powell, District 2
Gregg Poole, District 3
Jeff Stowe, District 4

From: Randi Doveton, Director

Date: December 13, 2022

Subject: **5871 McEver Road | Use Subject to County Commission Approval |** to allow an RV & boat storage | Anchor Inn RV & Boat Storage, applicant.

The request before you is the application of Anchor Inn RV & Boat Storage to allow RV & boat storage on 9.06± acre. ***It should be noted that a simultaneous rezone request accompanies this request but has separate reports and memos Although you may wish to hear all two (2) associated items (rezoning and conditional use) at the same time, please deliberate and vote separately on each.*** This item is located within Commission District 2.

At their December 5, 2022 meeting, the Hall County Planning Commission voted to recommend approval of the Rezoning request with eleven (11) conditions **(5-0).**

There were no written comments submitted in advance of the Planning Commission meeting and **one (1) individual spoke in favor and three (3) individuals spoke in opposition** during the public hearing.

There have been no changes to the request since the Planning Commission took action.

The Planning Commission imposed the same conditions on both the rezoning request and conditional use request.

Planning Commission Approval Conditions:

1. All conditions of the June 25, 2019 approval for the Foster Rd. Inc. rezoning request shall apply to this development.
   a. The development shall occur as generally described in the narrative and depicted on the concept plan, modified for compliance with regulations at time of development application.
   b. A 25 foot transitional buffer is required along the common lot line of the Cash property and the buffer shall be buffered per Hall County regulations.

c. Where the development boarders the Lights Ferry Landing subdivision there shall be a 25 foot undisturbed buffer and a 10 foot transitional buffer.
d. The development shall permit boat and RV storage
e. The development shall have decorative steel fencing with stone or brick columns along McEver road. This steel or brick fence shall wrap around the radius of the cul-de-sac and turn back at the Cash property to the back of the building facing McEver Road. All other fencing shall be a 6 foot high black vinyl link fence along all other property lines.
f. The only entrance shall be located on Lights Ferry Road, which was on the original plan for phase 1.

2. The applicant shall be required to meet all applicable local, state, and/or federal regulations required as part of the land development process including Gateway Standard 17.420.050. No variances from the Hall County standards shall be granted unless noted in additional conditions.
3. The development shall occur as depicted on the site plan presented. Minor changes shall be approved by the Planning Director provided there is no increase in the number of units or buildings and the changes do not create the need for variances in the Hall County development standards
4. A landscape plan shall be approved by Planning Director prior to LDP.
5. The applicant shall submit architectural elevations of all four sides of the structures for approval by the Planning Director prior to issuance of LDP. The only variances from the Gateway Corridor is to allow metal posts in between the bays and standing seam metal roofs. The project shall adhere to existing conditions of phase 1 with the exception of all buildings along McEver Road to be masonry on the back and sides facing McEver Road.
6. Signage shall require a separate permit and must meet Gateway Corridor Overlay district standards found in 17.40.060.
7. The buffer shall be protected in perpetuity by deed that follows the property, the removal or modifications of this condition shall require action by the Board of Commission.
8. Two amended site plans showing all Planning Commission conditions must be submitted before going in front of the BOC. One site plan shall be topographical and the second shall indicate all building locations without topography.
9. No more than 172 units shall be allowed on this property for phase 2.
10. Before LDP is issued all buffer requirements of phase 1 must be confirmed to meet all requirements of phase 1 rezoning and conditional use.
11. An 8 foot height privacy fence shall be built along the rear of buildings N and O.

Please note that denial of the rezoning request is an automatic denial of the associated conditional use requests but this will need to be stated by the chairman after the rezoning vote.

HALL COUNTY PLANNING COMMISSION
RECOMMENDATION REPORT

Applicant ..... Anchor Inn RV & Boat Storage

Request ..... Conditional use to allow boat & RV storage

Proposed Use ..... RV & boat storage

Size ..... 9.06± acres

Zoning ..... Current Agricultural Residential III (AR-III, 17.110) | Planned Highway Business (H-B, 17.150)

Location ..... **5871 McEver Road** | Tax Parcel 08119 000233

Commission District ..... Two

Planning Commission Date ..... December 5, 2022

Staff Recommendation ..... **Approval with conditions based on the findings that this request meets the criteria outlined in 17.380.060 and that the adjacent property was rezoned to Highway Business (H-B, 17.150) for the same use in 2019.**

Planning Commission Recommendation.....**Approval, with conditions**
Vote: 5-0

Planning Commission Conditional Use Conditions:

1. All conditions of the June 25, 2019 approval for the Foster Rd. Inc. rezoning request shall apply to this development.
   a. The development shall occur as generally described in the narrative and depicted on the concept plan, modified for compliance with regulations at time of development application.
   b. A 25 foot transitional buffer is required along the common lot line of the Cash property and the buffer shall be buffered per Hall County regulations.
   c. Where the development boarders the Lights Ferry Landing subdivision there shall be a 25 foot undisturbed buffer and a 10 foot transitional buffer.
   d. The development shall permit boat and RV storage
   e. The development shall have decorative steel fencing with stone or brick columns along McEver road. This steel or brick fence shall wrap around the radius of the cul-de-sac and turn back at the Cash property to the back of the building facing McEver Road. All other fencing shall be a 6 foot high black vinyl link fence along all other property lines.
   f. The only entrance shall be located on Lights Ferry Road, which was on the original plan for phase 1.

2. The applicant shall be required to meet all applicable local, state, and/or federal regulations required as part of the land development process including Gateway Standard 17.420.050. No variances from the Hall County standards shall be granted unless noted in additional conditions.
3. The development shall occur as depicted on the site plan presented. Minor changes shall be approved by the Planning Director provided there is no increase in the number of units or buildings and the changes do not create the need for variances in the Hall County development standards
4. A landscape plan shall be approved by Planning Director prior to LDP.
5. The applicant shall submit architectural elevations of all four sides of the structures for approval by the Planning Director prior to issuance of LDP. The only variances from the Gateway Corridor is to allow metal posts in between the bays and standing seam metal roofs. The project shall adhere to existing conditions of phase 1 with the exception of all buildings along McEver Road to be masonry on the back and sides facing McEver Road.
6. Signage shall require a separate permit and must meet Gateway Corridor Overlay district standards found in 17.40.060.
7. The buffer shall be protected in perpetuity by deed that follows the property, the removal or modifications of this condition shall require action by the Board of Commission.
8. Two amended site plans showing all Planning Commission conditions must be submitted before going in front of the BOC. One site plan shall be topographical and the second shall indicate all building locations without topography.
9. No more than 172 units shall be allowed on this property for phase 2.
10. Before LDP is issued all buffer requirements of phase 1 must be confirmed to meet all requirements of phase 1 rezoning and conditional use.
11. An 8 foot height privacy fence shall be built along the rear of buildings N and O.

There is a concurrent rezoning request on this agenda. The Planning Commission can hear the rezoning and conditional use items simultaneously but must vote on them separately.

The following report is being written under the assumption the rezoning is approved. Should the Planning Commission deny the rezoning request, the conditional use subject to County Commission is automatically denied since boat & RV storage are not allowed in the AR-III zoning district.

Public Forum:

Gary McCrowskie, 6218 Yorktown Court, Flowery Branch, spoke in favor. Stated that the buildings were well built but requested there to be a privacy fence to block the view into his house.

Julie Paris, 5919 Nachoochee Trail, Flowery Branch, spoke in opposition. Concerns were the visibility and fencing around the property.

Nathan Day, 5961 Warpath Road, Flowery Branch, spoke in opposition. Concerns were excessive storage units in the county.

Shelly Day, 5961 Warpath Road, Flowery Branch, spoke in opposition. Concerns were approximate distance to residences.

Summary Analysis

The applicant is requesting conditional use approval on a 9.02± acre tract of land zoned currently zoned Agricultural Residential III (AR-III, 17.110) for the purpose of expanding an existing boat & RV storage lot with an additional 172 parking spaces. The property lies within the Gateway Corridors Overlay District (GCOD). **Within the Gateway Corridors Overlay District (GCOD, 17.420), boat & RV storage requires conditional use approval from the Board of Commissioners.**

Access to this new phase will be through the existing entrance on Lights Ferry Road with no access proposed from McEver Road. The hours of operation will remain the same as the current facility, the office is open Monday – Friday, 9:00am through 5:00pm. Access to the storage facility is the same, Monday – Sunday.

The submitted site plan depicts two rows of storage buildings parallel to McEver Road. A central access drive bisects the proposed storage buildings. The access drive ends in a cul-de-sac on the western portion of the property. A decorative steel fence with brick columns boarders McEver Road with the remainder of the property using a black vinyl fence. A 35 foot planted buffer follows the rear property line where is it adjacent to residentially zoned parcels.

No variances were requested as part of this application and none have been identified by staff during review.

Based on the future land-use plan, staff finds the *requested zoning designation is inconsistent* with the future land use map designation of Lake Area Residential but the neighboring property was rezoned to Highway-Business in 2019 for the same use. The current request is to facilitate expansion of the use approved in 2019.

Zoning Analysis

Per Planning Commission and Hall County Commission consideration and decision (17.380.060) the planning commission shall study the need and justification for the change based on a determination of the facts applicable to the particular case, and the following general lines of inquiry shall be considered, to wit:

1. Whether the zoning proposal will permit a use that is suitable in view of the use, development and zoning of adjacent and nearby property; **The proposed boat & RV storage development is proposed adjacent to a Highway Business (H-B, 17.150) zoned parcel which was recently approved for the same use on June 25, 2019.**

2. Whether the zoning proposal will adversely affect the existing use or usability of adjacent or nearby property; **The zoning proposal should not have an adverse effect on the existing use or usability of adjacent or nearby property. Boat & RV storage traditionally a low impact use, with those who store their vehicles on the property visiting infrequently.**

3. Whether the zoning proposal will result in a use which will or could cause an excessive or burdensome use of existing streets, transportation facilities, utilities, schools, police protection, fire protection, public health facilities or emergency medical service; **The proposed use of a boat & RV storage facility will not result in a use which will or could cause an excessive or burdensome use of existing streets, transportation facilities, utilities, schools, police protection, fire protection, public health facilities or emergency medical service.**

4. Whether the zoning proposal is in conformity with the policy and intent of the future land use plan for the physical development of the area; **The proposed use is inconsistent with the Comprehensive Plan as the future land use designation is Lake Area Residential. The parcel is not part of the Lake Supportive Corridor which does support the proposed use. Even though the proposal is inconsistent with the Comprehensive Plan, the neighboring property was rezoned to Highway-Business in 2019 for the same use. The current request seeks approval to expand the use approved in 2019.**

5. Whether the change requested is out of scale with the needs of the county as a whole or the immediate neighborhood; **The request does not appear to be out of scale with the needs of the County as a whole, as there is a need for additional storage facilities in proximity to Lake Lanier.**

6. Whether there would be an ecological or pollution impact resulting from major modifications to the land if the request is granted; **The property will be required to meet all local, state, and federal requirements pertaining to stormwater management as part of the development process.**

- **Highway Business (H-B, 17.150):** the Highway Business zoning district allows for a variety of commercial uses both permitted and submitted to either Planning Commission of Board of Commission approval.

- The property falls within the **Gateway Corridors Overlay District, (**17.420.**)** which provides supplemental design standards for non-residential property development. The will be subject to the standards found within 17.420.050 (non-residential property development standards) which relate to building materials, landscaping, and buffer requirements.

Development Support and Constraints

Hall County Environmental Health

An email dated November 14, 2022 from Emily McGahee states: "Must meet all Environmental Health commercial septic system permitting requirements if plumbing proposed and public sewer not available. A detailed business plan must be submitted to Hall County Environmental Health for review."

Hall County Fire Rescue

In an email dated November 18, 2022, Lieutenant John Hornick, NPQ Fire Inspector 1, Plans Review, states:

1. IFC Section 507.5.1 where a building(s) is constructed and is more than 400' from a fire hydrant on an approved fire access route fire hydrant(s) shall be installed. Fire hydrant(s) may have to be installed to meet fire code.

Hall County Public Works and Utilities

In a memo dated October 20, 2022, from Srikanth Yamala, Director of Public Works and Utilities, the following comments were provided:

Engineering:

This site may require a stormwater management report should the site plan indicate the proposed development meets stormwater thresholds for impervious surfaces and/or disturbed acreage. Stream and impervious setback from wrested vegetation not centerline of stream.

Traffic:
Adequate connection to roadway is not clear. Traffic study will be required that documents/impacts to the McEver Road/Lights Ferry intersection. Improvements that remediate impacts to intersection will be required.

Utilities:
Flowery Branch Sewer District

Georgia Department of Transportation
Per an email dated November 17, 2022, Parker Niebauer, District 1 Traffic Operations Supervisor confirmed that GDOT coordination will be required.

- **Excerpts from the minutes of the December 5, 2022 meeting**

Applicant's Presentation:

Randi Doveton, Planning Director, presented a summary of the request.

Miles Montgomery, 7185 Shady Grove Road, Cumming, presented the request. The applicant stated that the existing entrance off Lights Ferry Road would be utilized, they will not need access off McEver Road. The applicant stated that they would like for the building requirements under Gateway Corridor to only be applied to the portions facing the road.

Rodney Hellemn, 6098 Jim Crow Road, Flowery Branch, presented the request. The applicant addressed that their building was inspected and approved after BOC approval in 2019. The applicant stated that they do not want to be an eye sore to the community.

Public Forum:

Gary McCrowskie, 6218 Yorktown Court, Flowery Branch, spoke in favor. Stated that the buildings were well built but requested there to be a privacy fence to block the view into his house.

Julie Paris, 5919 Nachoochee Trail, Flowery Branch, spoke in opposition. Concerns were the visibility and fencing around the property.

Nathan Day, 5961 Warpath Road, Flowery Branch, spoke in opposition. Concerns were excessive storage units in the county.

Shelly Day, 5961 Warpath Road, Flowery Branch, spoke in opposition. Concerns were approximate distance to residences.

Planning Commission Comments:

Mr. Braswell questioned if the buildings along McEver Road would be open facing the road. Mr. Montgomery stated that they are closed facing the road. Mr. Hunt suggested a 35 foot buffer to the surrounding residences. Mr. Bell questioned if the property is built in compliance to the 2019 approval conditions. Mr. Braswell questioned the width of the driveway between the buildings. Mr. Hellemn stated that it was 60 feet wide. Mr. Hunt questioned the fencing around the property. Mr. Hellemn stated a decorative fence would run along McEver Road and wrap around the cul-de-sac and towards the back of the property connect to a chain-link fence. Mr. Hunt questioned the privacy fence that would be built to accommodate for some

property owners towards the back. Mr. Hellemn stated it would be an 8 foot height fence. Mr. Bell stated that his problem with the planted buffers was what type of trees were used and how long they took to mature to meet their purpose. Ms. Pilcher commented that residents would have to endure a lot of grading in a community they have been in. Mr. Braswell stated that it would be ideal if there were an undisturbed buffer at the property line abutting neighboring residence. Ms. Pilcher questioned how many units there would be in total. The applicant stated 166 units. Ms. Doveton stated the narrative requested 172 units. Mr. Bell suggested a 25 foot undisturbed buffer with a 10 foot planted buffer.

Motion: ***A motion to approve, with conditions was made by Mr. Hunt and seconded by Mr. Varner. Vote: 5-0***

Conditions:

1. *All conditions of the June 25, 2019 approval for the Foster Rd. Inc. rezoning request shall apply to this development.*
    a. *The development shall occur as generally described in the narrative and depicted on the concept plan, modified for compliance with regulations at time of development application.*
    b. *A 25 foot transitional buffer is required along the common lot line of the Cash property and the buffer shall be buffered per Hall County regulations.*
    c. *Where the development boarders the Lights Ferry Landing subdivision there shall be a 25 foot undisturbed buffer and a 10 foot transitional buffer.*
    d. *The development shall permit boat and RV storage*
    e. *The development shall have decorative steel fencing with stone or brick columns along McEver road. This steel or brick fence shall wrap around the radius of the cul-de-sac and turn back at the Cash property to the back of the building facing McEver Road. All other fencing shall be a 6 foot high black vinyl link fence along all other property lines.*
    f. *The only entrance shall be located on Lights Ferry Road, which was on the original plan for phase 1.*
2. *The applicant shall be required to meet all applicable local, state, and/or federal regulations required as part of the land development process including Gateway Standard 17.420.050. No variances from the Hall County standards shall be granted unless noted in additional conditions.*
3. *The development shall occur as depicted on the site plan presented. Minor changes shall be approved by the Planning Director provided there is no increase in the number of units or buildings and the changes do not create the need for variances in the Hall County development standards*
4. *A landscape plan shall be approved by Planning Director prior to LDP.*
5. *The applicant shall submit architectural elevations of all four sides of the structures for approval by the Planning Director prior to issuance of LDP. The only variances from the Gateway Corridor is to allow metal posts in between the bays and standing seam metal roofs. The project shall adhere to existing conditions of phase 1 with the exception of all buildings along McEver Road to be masonry on the back and sides facing McEver Road.*
6. *Signage shall require a separate permit and must meet Gateway Corridor Overlay district standards found in 17.40.060.*
7. *The buffer shall be protected in perpetuity by deed that follows the property, the removal or modifications of this condition shall require action by the Board of Commission.*
8. *Two amended site plans showing all Planning Commission conditions must be submitted before going in front of the BOC. One site plan shall be topographical and the second shall indicate all building locations without topography.*

9. *No more than 172 units shall be allowed on this property for phase 2.*
10. *Before LDP is issued all buffer requirements of phase 1 must be confirmed to meet all requirements of phase 1 rezoning and conditional use.*
11. *An 8 foot height privacy fence shall be built along the rear of buildings N and O.*

PLANNING AND DEVELOPMENT DEPARTMENT
2875 BROWNS BRIDGE ROAD, GAINESVILLE, GA, 30504
MAILING ADDRESS: PO BOX 1435, GAINESVILLE. GA 30503
t: 770-531-6809 | f: 770-531-3902

HALL COUNTY
GEORGIA
We have it all in Hall

ZONING APPLICATION

Applicant (Name & Mailing Address)
Anchor Inn RV & Boat Storage
6127 Lights Ferry Rd
Flowery Branch, GA 30542
Phone 770-945-9524
Email Address rgmarine@bellsouth.net

Property Owner (Name & Mailing Address)
Anchor Inn, LLC
6127 Lights Ferry Rd
Flowery Branch, GA 30542
Phone 770-945-9524
Email Address rgmarine@bellsouth.net

Proposed Use RV & Boat Storage

Contact Person (Name & Mailing Address)
Rodney Hellemn
6127 Lights Ferry Rd
Flowery Branch, GA 30542
Phone 770-945-9524
Email Address rgmarine@bellsouth.net

Status of Applicant
- [X] Owner
- [ ] Option to Purchase
- [ ] Area Resident
- [ ] Other

Requested Action
Existing Zoning: AR-III
Rezone to: H-B
Fee:$ ~~55~~ 0.00
Receipt #: 859053
Check #: 5648 (1000.00 for cup and zoning)

Tax Parcel Number 08119 ~~000003~~ 000233
Acreage 9.084 Ac
Location Address ~~5820~~ 5871 McEver Rd

I hereby certify that the above information and all attached information are true and correct.

Sign _____ Date: 10/13/22

Applicant must complete all information above. Failure to complete this section will result in the refusal of the application. The Planning Department has 15 days to review all applications and will set the dates for each application. If the application is found insufficient, an agenda date will not be set until the required information is submitted. Please note that the Planning Commission and County Commission dates are tentative.

Application Withdrawal: I hereby **withdraw** the application.

Sign _____ Date: _____

Staff Use Only

Application Date: 10/14/2022 Taken by: D. Webb

Tentative Planning Commission Date: 12/5 Tentative County Commission Date: 1/12/2023

County Commission District: 2

PLANNING AND DEVELOPMENT DEPARTMENT
2875 BROWNS BRIDGE ROAD, GAINESVILLE, GA, 30504
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t: 770-531-6809 | f: 770-531-3902

HALL COUNTY
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AUTHORIZATION OF PROPERTY OWNERS

Note: If the applicant is the property owner, please disregard this form.

Name of owner(s) Anchor Inn, LLC

Address 6127 Lights Ferry Rd
Flowery Branch, GA 30542

Phone Number 770-945-9524

Name of applicant(s) Rodney Hellemn

Address 6127 Lights Ferry Rd
Flowery Branch, GA 30542

Phone Number 770-945-9524

I swear that I am the owner of the property which is the subject matter of the attached applications as shown in the records of Hall County, Georgia.

I authorize the person named above to act as applicant in the pursuit of a rezoning, permissive use, or variance of this property.

Signature of Owner(s)

Personally appeared before me
Rodney Hellemn

who swears that the information contained in this authorization is true and correct to the best of his/her knowledge and belief.

Notary Public Exp 11/29/25

ANITA HIGGINS NOTARY PUBLIC GWINNETT COUNTY, GEORGIA EXPIRES NOVEMBER 29, 2025

10/13/22
Date

PLANNING AND DEVELOPMENT DEPARTMENT
2875 BROWNS BRIDGE ROAD, GAINESVILLE, GA, 30504
MAILING ADDRESS: PO BOX 1435, GAINESVILLE. GA 30503
t: 770-531-6809 I f: 770-531-3902

HALL COUNTY
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CAMPAIGN CONTRIBUTIONS DISCLOSURE FORM

This form must be completed by the applicant and property owner, or person representing the property owner, for all zoning actions.

OCGA § 36-67A-3[C] Disclosure of campaign contributions:

(b) When any applicant for zoning action has made, within two years immediately preceding the filing of the applicant's application for the zoning action, campaign contributions aggregating $250.00 or more to a local government official who will consider the application, it shall be the duty of the applicant to file a disclosure report with the governing authority of the respective local government showing:

(3) The name and official position of the local government official to whom the campaign contribution was made; and

(4) The dollar amount and description of each campaign contribution made by the applicant to the local government official during the two years immediately preceding the filing of the application for the rezoning action and the date of each such contribution.

(b) The disclosures required by subsection (a) of this Code section shall be filed within ten days after the application for the zoning action is first filed. (Code 1981, Section OCGA § 36-67A-3[C], enacted by GA L. 1986, page 1269, Section 1, GA L. 1991, page 1365, Section 1).

I hereby certify that I have read the above and that:

I have**____ I have not X

within the two years immediately preceding this date, made any contribution(s) aggregating $250.00 or more to any local government official involved in the review or consideration of this application.

**If you have made such contributions, you must provide the data required below within ten (10) days of filing this application.

Name of Official(s): _____ Office: _____

Dollar Amount: _____ Date of Contribution: _____

Applicant's/Owner's Signature: _____ **Date:** 10-13-22

Applicant's/Owner's Name (Printed): Rodney Hellemn

REQUEST FOR
REZONING ACTION & CONDITIONAL USE PERMIT
FROM HALL COUNTY ZONING BOARD

FOR

ANCHOR INN RV & BOAT STORAGE PH. II
5871 McEver Road

NATURE OF REQUEST

To obtain rezoning of subject property and conditional use permit for parked auto storage.

PURPOSE OF REQUEST

To allow for development of a second phase of storage units to an existing RV & Boat storage facility.

NARRATIVE

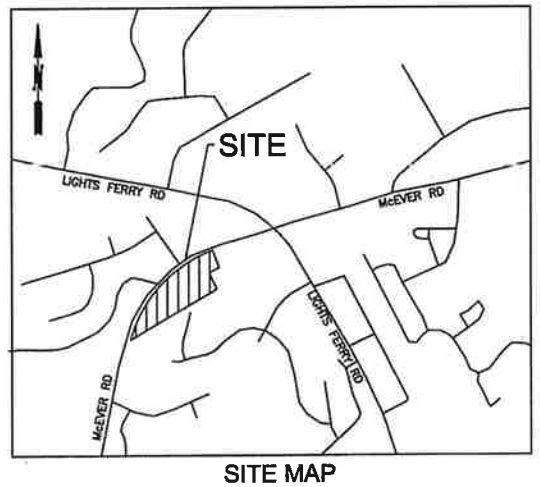
The scope of this project is to provide a second phase to an existing RV & Boat storage facility. Access to the second phase will be through the existing access that serves the existing storage facility located off Lights Ferry Road. No access will be proposed of McEver Road. Hours of operation for the existing office will be that of 9am-5pm Monday-Friday and storage facility access Monday-Sunday will remain the same as the existing storage facility.

This property is a 9.084 ac. tract of land, Tract 3 as shown on the division of the parent parcel and combination survey for Foster Road Inc. The property is currently zoned AR-III and requesting rezoning to H-B to match existing storage facility. The existing storage facility consist of Tract 1 and Tract 2 as shown on the stated parcel and combination survey.

To the north is McEver Road. The property to the south is the existing Lights Ferry Landing residential subdivision. To the east is the existing Anchor Inn RV & Boat Storage facility. To the west is a residential single-family property.

Both potable water and sanitary sewer are available to this tract, but no new service is proposed for this phase of development. Two proposed stormwater detention facilities are proposed for this phase of development and will meet all current stormwater design manual requirements.

We feel that the requested rezoning and conditional use permit for an extension to the existing Anchor Inn RV & Boat storage facility would not create problems for any of the neighbors due to there is an existing current facility operating at this location. We do not believe that allowing this rezoning of this property would in any way devalue or pose hardships on any of the surrounding properties.

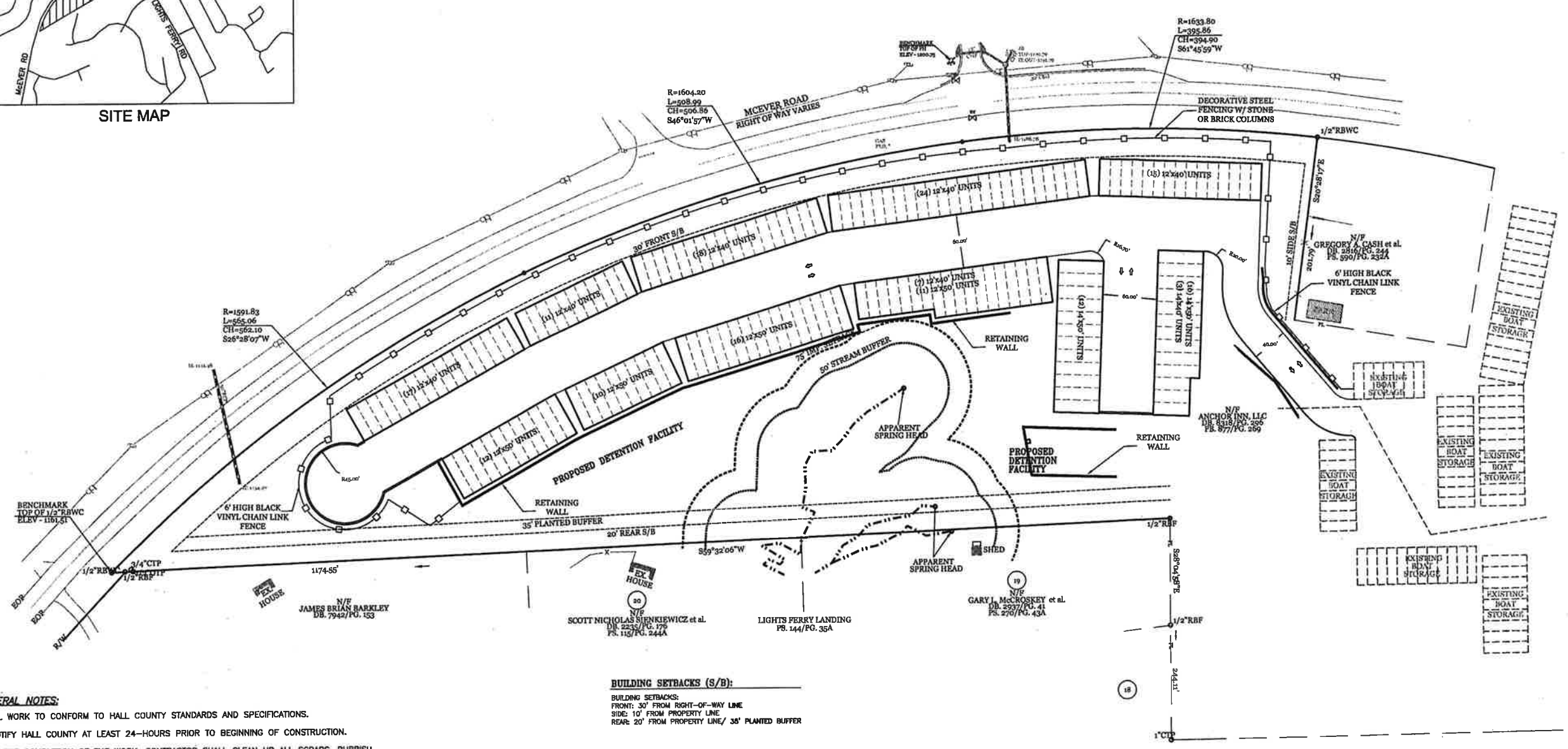


SITE MAP

EXISTING ZONING: AR-III
PROPOSED ZONING: H-B
TAX ID # 08119 000003
CURRENT ADDRESS: 5820 MCEVER ROAD
HALL COUNTY, GEORGIA
TOTAL AREA: 7.06 ACRES

811
Know what's below.
Call before you dig.

GRID NORTH


R=1604.20
L=508.99
CH=506.86
S46°01'57"W
MCEVER ROAD
RIGHT OF WAY VARIES
R=1633.80
L=395.86
CH=394.90
S61°45'59"W
DECORATIVE STEEL FENCING W/ STONE OR BRICK COLUMNS
1/2"RBWC
S30°28'17"E
N/F
GREGORY A. CASH et al.
DB. 2516/PG. 244
PB. 590/PG. 232A
6' HIGH BLACK VINYL CHAIN LINK FENCE
EXISTING BOAT STORAGE
EXISTING BOAT STORAGE
EXISTING BOAT STORAG

A DIVISION OF A PARENT PARCEL AND COMBINATION SURVEY

LOCATED IN LAND LOTS 111 AND 119 OF THE 8TH LAND DISTRICT
HALL COUNTY, GEORGIA
REFERENCE DEEDS: D.B. 932, PG. 98 AND D.B. 7484, PG. 289

eFiled & eRecorded
DATE: 8/13/2019
TIME: 11:53 AM
PLAT BOOK: 00877
PAGE: 00269
RECORDING FEES: $8.00
PARTICIPANT ID: 9651848499
CLERK: Charles Baker
Hall County, GA
NOTE: by ch

THIS BLOCK RESERVED FOR THE CLERK OF THE SUPERIOR COURT

SURVEYOR CERTIFICATION

AS REQUIRED BY SUBSECTION (d) OF O.C.G.A. SECTION 15-6-67, THIS PLAT HAS BEEN PREPARED BY A LAND SURVEYOR AND APPROVED BY ALL APPLICABLE LOCAL JURISDICTIONS FOR RECORDING AS EVIDENCED BY APPROVAL CERTIFICATES, SIGNATURES, STAMPS, OR STATEMENTS HEREON. SUCH APPROVALS OR AFFIRMATIONS SHOULD BE CONFIRMED WITH THE APPROPRIATE GOVERNMENTAL BODIES BY ANY PURCHASER OR USER OF THIS PLAT AS TO THE INTENDED USE OF ANY PARCEL. FURTHERMORE, THE UNDERSIGNED LAND SURVEYOR CERTIFIES THAT THIS PLAT COMPLIES WITH THE MINIMUM TECHNICAL STANDARDS FOR PROPERTY SURVEYS IN GEORGIA AS SET FORTH IN THE RULES AND REGULATIONS OF THE GEORGIA BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS AND AS SET FORTH IN O.C.G.A. SECTION 15-6-67.

Joseph P. Brewer Ga. RLS #3209 — 7-16-2019

HALL COUNTY GEORGIA

Hall County Government
BOARD OF COMMISSIONERS

July 2, 2019

Forest Pond Inc
6504 Flat Creek Road
Flowery Branch, GA 30542

RE: Application to Rezone

To Whom It May Concern:

Please be advised that at its Special Called Voting Meeting of June 25, 2019, the Hall County Board of Commissioners voted, unanimously, to approve the following zone with the Board conditions, along with an added 25ft setback:

- Application of Foster Rd Inc, to rezone from Agricultural-Residential (AR) to Industrial (I) Property Described: (9.064) +/- 12.134 acres located at the intersection of Lights Ferry Road and McEver Road; & (2.147) Lights Ferry Road and 5677 McEver Road, Gainesville, GA; Part Tract (9.064) 5002222 and (2.147) 5002203 (pt.). Proposed Use: Boat Storage. Conditions Stated Is:

  Conditions:
  1) The development shall occur as generally described in the narrative and depicted on the concept plan, modified for compliance with regulations at time of development application.
  2) Where the development borders the Lights Ferry Landing Subdivision, there shall be a 35 foot vegetated buffer.
  3) The development shall operate both 8AM and 8PM except.
  4) The development shall have decorative steel fencing with stone or brick columns along McEver Road and Lights Ferry Road. There shall be a 6 foot high black vinyl chain link fence along all other property lines.
  5) Entrance shall be located on Lights Ferry Road, which was the original plan.

Please contact me if you have questions or if you require any additional information concerning this matter of the Board.

Lisa A. Stephens
Hall County Commission Clerk

cc: Williams Family
6127 Lights Ferry Road
Flowery Branch, GA 30542

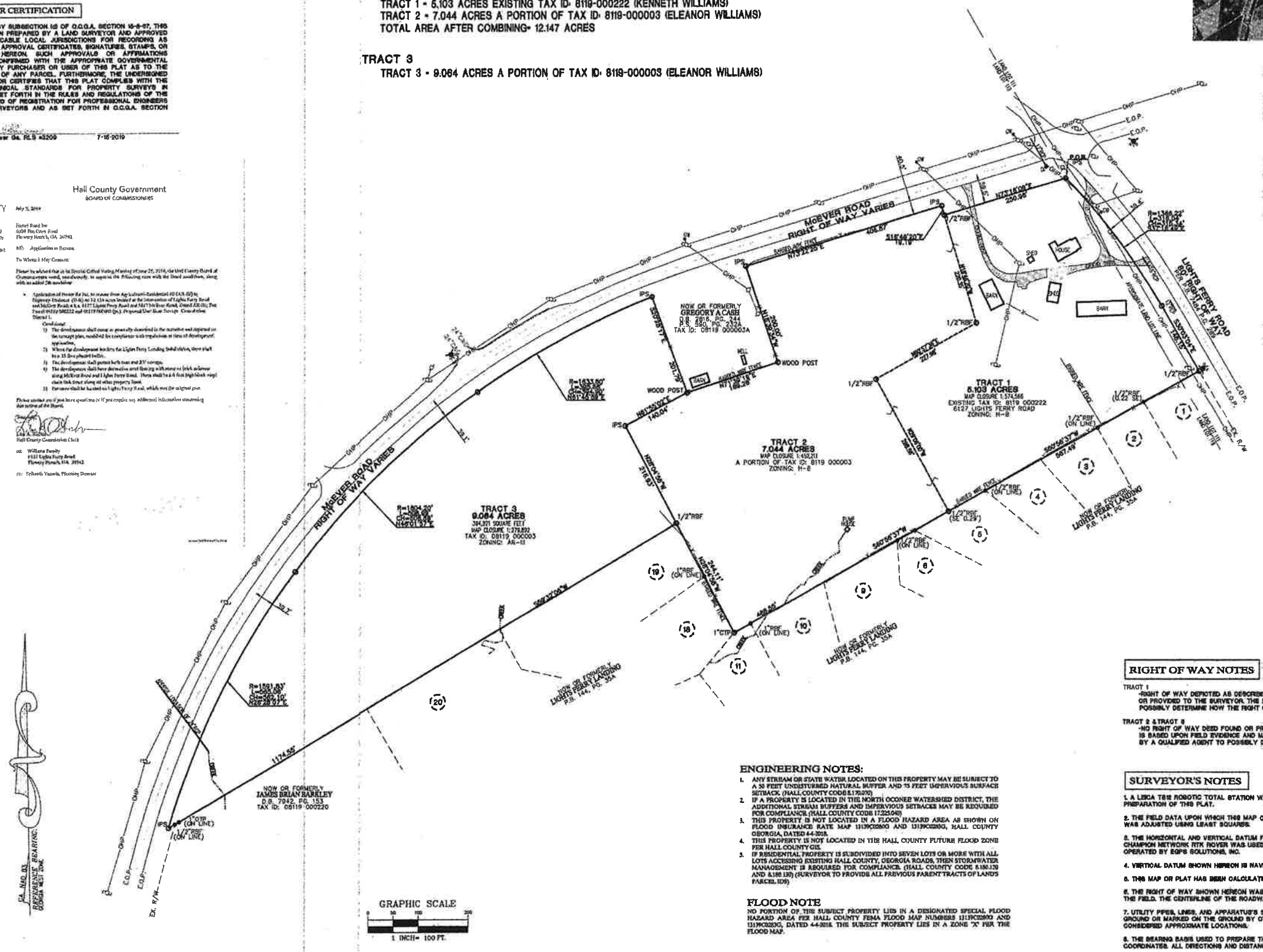
cc: Srikanth Vasavda, Planning Director

AREA SUMMARY

TRACT 1 AND TRACT 2 TO BE COMBINED:
TRACT 1 = 5.103 ACRES EXISTING TAX ID: 8119-000222 (KENNETH WILLIAMS)
TRACT 2 = 7.044 ACRES A PORTION OF TAX ID: 8119-000003 (ELEANOR WILLIAMS)
TOTAL AREA AFTER COMBINING= 12.147 ACRES

TRACT 3
TRACT 3 = 9.064 ACRES A PORTION OF TAX ID: 8119-000003 (ELEANOR WILLIAMS)





UTILITY LEGEND

- W — UNDERGROUND WATERLINES
- TELE / FO — UNDERGROUND TELEPHONE OR COMMUNICATION LINES OR FIBER OPTICS
- UP — UNDERGROUND POWER LINES
- OHP — OVERHEAD POWER LINES
- S — UNDERGROUND SANITARY SEWER LINE
- GAS — UNDERGROUND GAS SEWER LINE

SYMBOL LEGEND

- LIGHT POLE
- POWER POLE
- SANITARY SEWER MANHOLE
- FIRE HYDRANT
- STORM PIPE

TEXT LEGEND

- CL — CENTER LINE
- C&G — CURB & GUTTER
- RCP — REINFORCED CONCRETE PIPE
- CMP — CORRUGATED METAL PIPE
- SCP — SCHEDULE PIPE
- TOB — TOP OF BANK
- FFE — FINISHED FLOOR ELEVATION
- IPF — IRON PIN FOUND
- IPS — IRON PIN SET
- RBF — REBAR FOUND
- RBS — REBAR SET
- N/F — NOW OR FORMERLY
- PL — PROPERTY LINE
- POT — POINT OF TANGENCY
- POB — POINT OF BEGINNING
- POC — POINT OF COMMENCEMENT
- POT — POINT OF TAN
- RW — RIGHT OF WAY
- WM — WATER METER
- WV — WATER VALVE
- DI — DROP INLET STRUCTURE
- SSMH — SANITARY SEWER MANHOLE
- T.B.M. — TEMPORARY BENCH MARK

RECORDING PERMIT

BY S McDaniel 8.12.19
HALL COUNTY PLANNING COMMISSION

ENGINEERING APPROVED
7/30/19
HALL COUNTY, GEORGIA

HALL COUNTY GA DEPT. OF PUBLIC HEALTH 8-12-19

Any abandoned well shall be properly closed as per Water Well Standards Act. Any abandoned septic tank shall be pumped by a State certified pumper/hauler and crushed/filled.

Tract 1 & 2 permit #5999
Tract 3 soils by Dan Arthur

RIGHT OF WAY NOTES

TRACT 1
-RIGHT OF WAY DEPICTED AS DESCRIBED IN DEED BOOK 7484 PAGE 289. NO RIGHT OF WAY DEED FOUND, OR PROVIDED TO THE SURVEYOR. THE SURVEYOR SUGGEST A TITLE SEARCH BY A QUALIFIED AGENT TO POSSIBLY DETERMINE HOW THE RIGHT OF WAY AFFECTS THE PROPERTY.

TRACT 2 & TRACT 3
-NO RIGHT OF WAY DEED FOUND OR PROVIDED TO THE SURVEYOR. THE RIGHT OF WAY DEPICTED HEREON IS BASED UPON FIELD EVIDENCE AND MAINTENANCE BY THE COUNTY. THE SURVEYOR SUGGEST A TITLE SEARCH BY A QUALIFIED AGENT TO POSSIBLY DETERMINE HOW THE RIGHT OF WAY AFFECTS THE PROPERTY.

ENGINEERING NOTES:

1. ANY STREAM OR STATE WATER LOCATED ON THIS PROPERTY MAY BE SUBJECT TO A 50 FEET UNDISTURBED NATURAL BUFFER AND 75 FEET IMPERVIOUS SURFACE SETBACK. (HALL COUNTY CODE § 170.070)
2. IF A PROPERTY IS LOCATED IN THE NORTH OCONEE WATERSHED DISTRICT, THE ADDITIONAL STREAM BUFFERS AND IMPERVIOUS SETBACKS MAY BE REQUIRED FOR COMPLIANCE. (HALL COUNTY CODE 17.225.040)
3. THIS PROPERTY IS NOT LOCATED IN A FLOOD HAZARD AREA AS SHOWN ON FLOOD INSURANCE RATE MAP 13139C0200G AND 13139C0202G, HALL COUNTY GEORGIA, DATED 4-4-2018.
4. THIS PROPERTY IS NOT LOCATED IN THE HALL COUNTY FUTURE FLOOD ZONE PER HALL COUNTY GIS.
5. IF RESIDENTIAL PROPERTY IS SUBDIVIDED INTO SEVEN LOTS OR MORE WITH ALL LOTS ACCESSING EXISTING HALL COUNTY, GEORGIA ROADS, THEN STORMWATER MANAGEMENT IS REQUIRED FOR COMPLIANCE. (HALL COUNTY CODE § 150.120 AND § 150.130) (SURVEYOR TO PROVIDE ALL PREVIOUS PARENT TRACTS OF LANDS PARCEL ID'S)

FLOOD NOTE

NO PORTION OF THE SUBJECT PROPERTY LIES IN A DESIGNATED SPECIAL FLOOD HAZARD AREA PER HALL COUNTY FEMA FLOOD MAP NUMBERS 13139C0200G AND 13139C0202G, DATED 4-4-2018. THE SUBJECT PROPERTY LIES IN A ZONE "X" PER THE FLOOD MAP.

SURVEYOR'S NOTES

1. A LEICA TS12 ROBOTIC TOTAL STATION WAS USED TO OBTAIN THE LINEAR AND ANGULAR MEASUREMENTS USED IN THE PREPARATION OF THIS PLAT.
2. THE FIELD DATA UPON WHICH THIS MAP OR PLAT IS BASED HAS A CLOSURE PRECISION OF 1 FOOT IN 76,698 FEET AND WAS ADJUSTED USING LEAST SQUARES.
3. THE HORIZONTAL AND VERTICAL DATUM FOR WHICH THIS SURVEY IS BASED WAS OBTAINED BY THE USE OF GPS. A CHAMPION NETWORK RTK ROVER WAS USED TO COLLECT CORRECTED MEASUREMENTS REPORTED BY A REAL TIME NETWORK OPERATED BY EGPS SOLUTIONS, INC.
4. VERTICAL DATUM SHOWN HEREON IS NAVD 88 AND AS REPORTED BY THE RTN OPERATED BY EGPS SOLUTIONS, INC.
5. THIS MAP OR PLAT HAS BEEN CALCULATED FOR CLOSURE AND CAN BE FOUND ON EACH TRACT.
6. THE RIGHT OF WAY SHOWN HEREON WAS CALCULATED FROM DEEDS AND PLATS OF RECORD AND MONUMENTS FOUND IN THE FIELD. THE CENTERLINE OF THE ROADWAY DOES NOT REPRESENT THE CENTERLINE OF THE RIGHT OF WAY.
7. UTILITY PIPES, LINES, AND APPARATUS'S SHOWN ARE FROM OBSERVED EVIDENCE ONLY BY WHAT WAS VISIBLE ABOVE GROUND OR MARKED ON THE GROUND BY OTHERS. ALL BELOW GROUND UTILITIES SHOWN ON THIS MAP SHOULD BE CONSIDERED APPROXIMATE LOCATIONS.
8. THE BEARING BASIS USED TO PREPARE THIS PLAT IS BASED UPON NAD-83, GEORGIA STATE PLANE, WEST ZONE COORDINATES. ALL DIRECTIONS AND DISTANCES SHOWN HEREON ARE A GROUND LEVEL PROJECTION OF THE SYSTEM.

PREPARED BY: A GEORGIA LAND SURVEYING FIRM: LSF# 001105
acre
PROFESSIONAL SURVEYORS
LAND DEVELOPMENT SURVEYING AND MAPPING
ACRE GROUP, INC.
P.O. BOX 54 | LOGANVILLE | GEORGIA, 30052 | 770.290.0059

REVISION:

NO.	DATE:

SURVEY INFORMATION:
DATE: 7/15/2019 LAND LOTS: 111 & 119 DISTRICT: 8TH COUNTY: HALL
CITY: N/A SCALE: 1"=100 DRAWN BY: D. J. BENNETT
JOB NUMBER: 19-177 DATE OF FIELD WORK: 3/7/2019

A DIVISION OF A PARENT PARCEL AND COMBINATION SURVEY:

FOSTER ROAD INC.

SHEET:
1 OF 1

IN THE DRAWINGS BEFORE PROCEEDING WITH WORK. WHILE GRADES AND ELEVATIONS WILL IN GENERAL CONFORM TO THOSE TO MAKE MINOR MODIFICATIONS BY REASONABLE FIELD ADJUSTMENTS PRIOR TO COMPLETION OF SUBGRADE WORK.

HER WHEN SUBGRADE IS SUFFICIENTLY STABLE TO BE PROPERLY COMPACTED. GROUND MOISTURE SHALL NOT BE SEALED ANCE WITH APPLICABLE SECTIONS OF THE REFERENCE STANDARDS.

TOR COMPACTION.

ITH REQUIREMENTS OF OSHA CONSTRUCTION STANDARDS, PART 1926, SUBPART P, EXCAVATIONS, TRENCHING, AND SHORING. UIPMENT, AND MARINE OPERATIONS, AND SHALL BE CONDUCTED IN A MANNER ACCEPTABLE TO THE ENGINEER.

, FREE OF ORGANIC OR DELETERIOUS MATERIALS, ROCK, OR BROKEN PIECES OF CONCRETE LARGER THAN 3 INCHES IN SIZE, OR LOSE THE COMPACTION RESULTS.

F THE CONTRACTOR.

H INTERIOR PIPE. PREAPPROVED PIPES INCLUDE ADS N-12, HANCOR H-Q, AND SOUTHEAST CULVERT N-TUFLOW.

PROVISIONS SECTION 550 – STORM DRAIN PIPE, PIPE-ARCH CULVERTS AND SIDE DRAIN PIPE.

STORMS BEFORE ANY MAJOR GRADING OR IMPERVIOUS SURFACES ARE CONSTRUCTED.

AZARD AREA PER F.I.R.M. PANEL NO. 13133C0228 G, DATED APRIL 4, 2018.

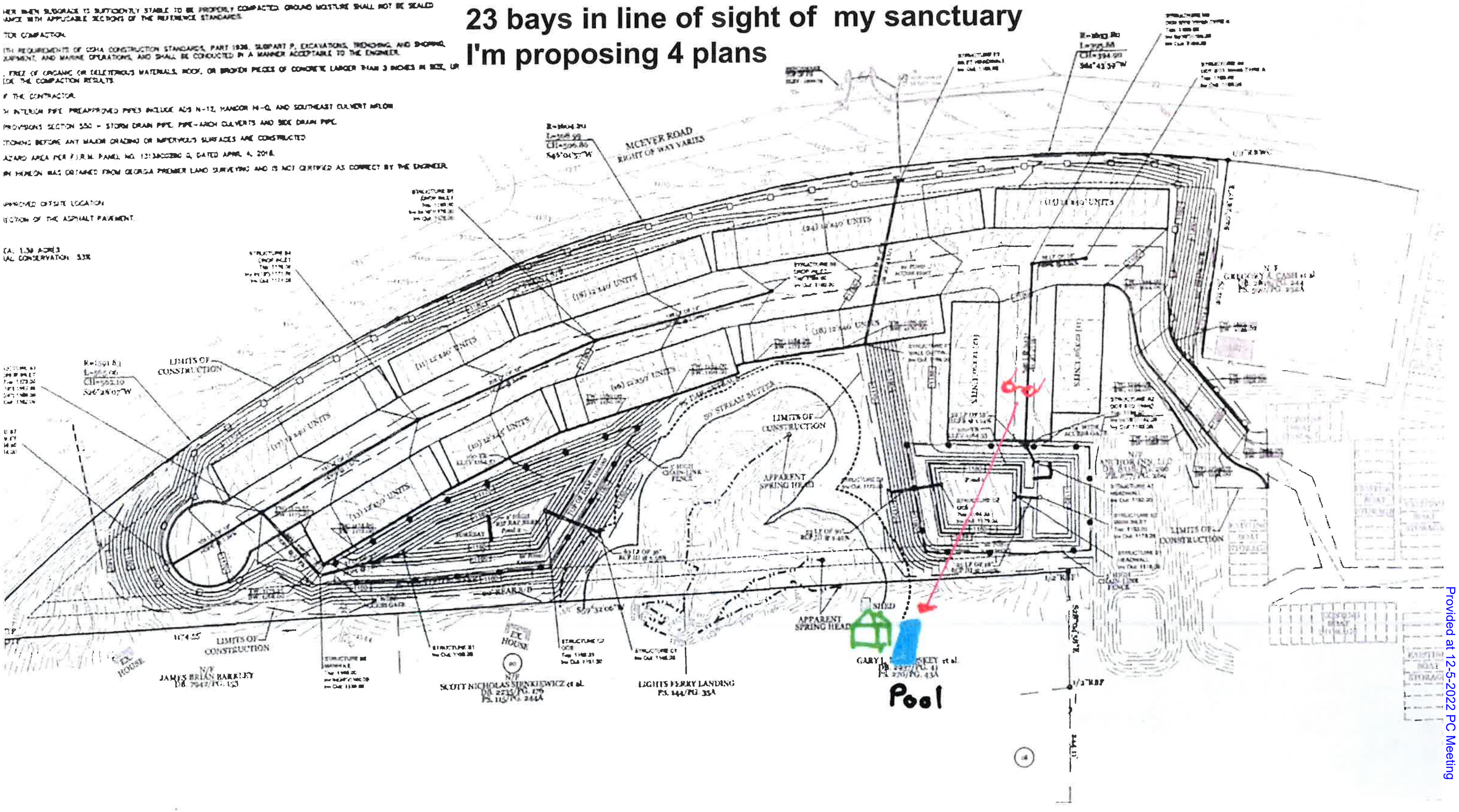
M HAZELON WAS OBTAINED FROM GEORGIA PREMIER LAND SURVEYING AND IS NOT CERTIFIED AS CORRECT BY THE ENGINEER.

APPROVED OFFSITE LOCATION

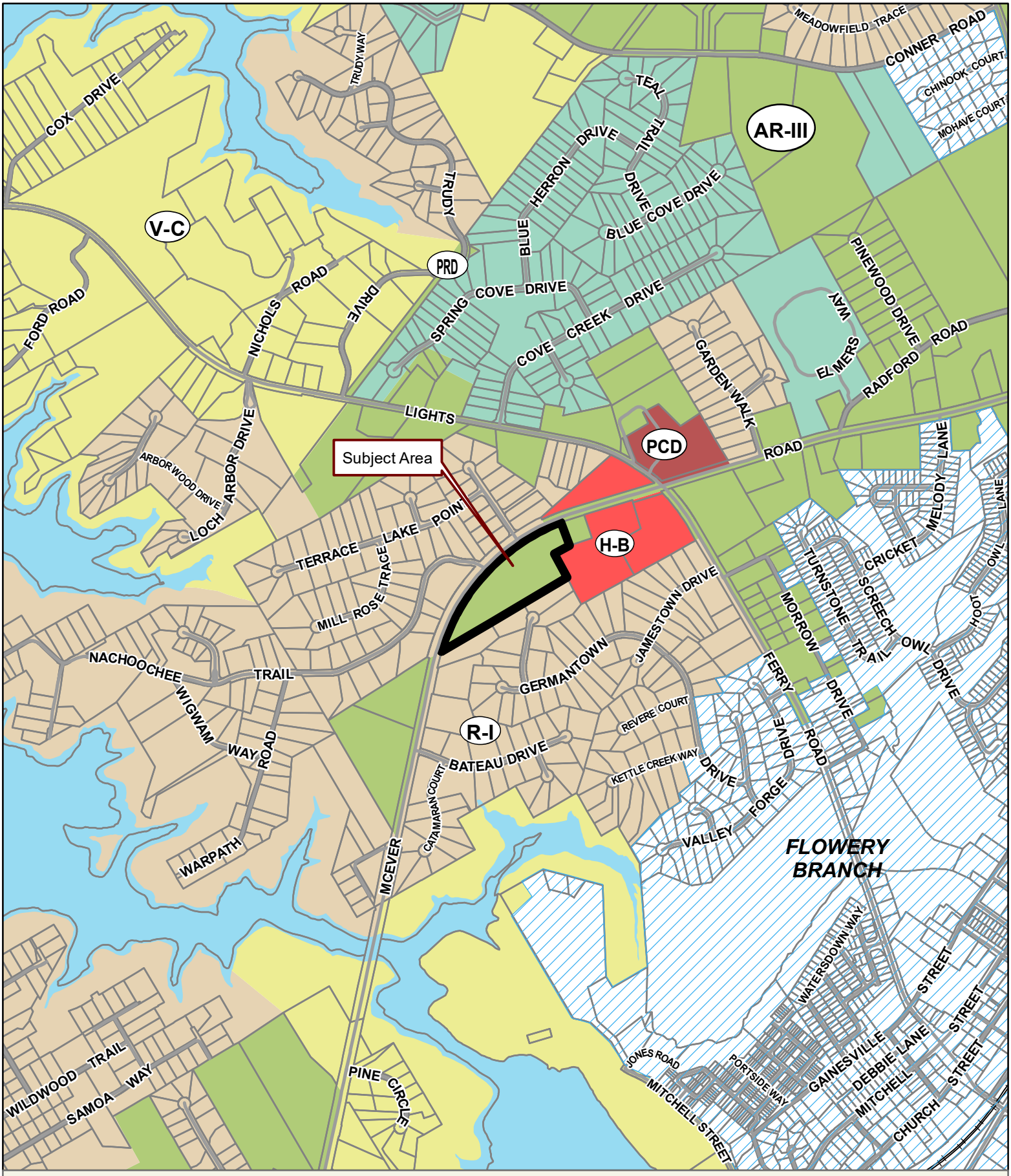
LECTION OF THE ASPHALT PAVEMENT.

CA: 1.38 ACRES
IAL CONSERVATION: 5.3%

23 bays in line of sight of my sanctuary
I'm proposing 4 plans



Provided at 12-5-2022 PC Meeting

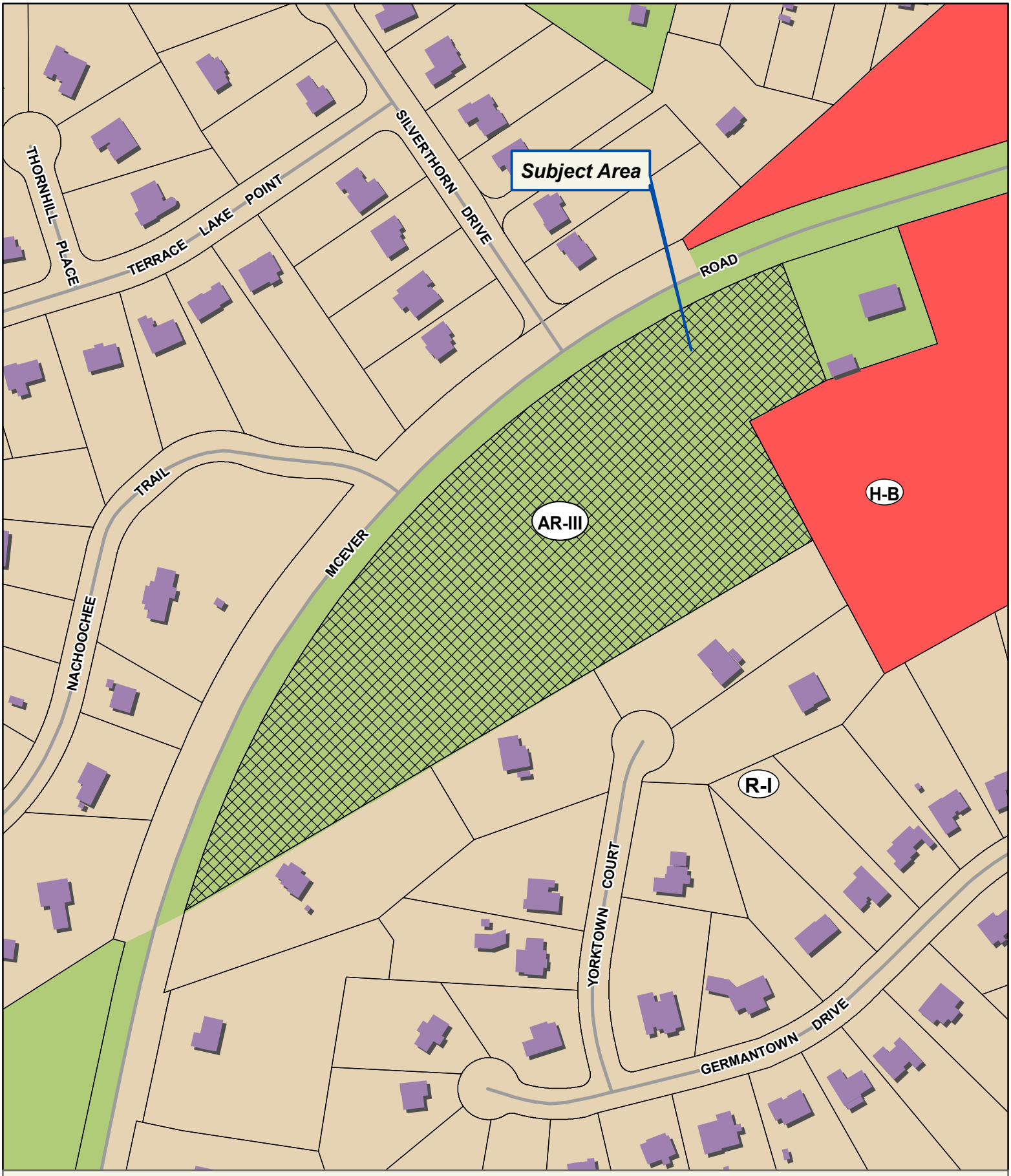


Applicant: ANCHOR INN RV & BOAT STORAGE
Tax Parcel #: 08119 000233
Location: 5871 MCEVER ROAD, FLOWERY BRANCH, GA 30542
Commission District 2 **PC Mtg. Date:** 12/05/2022

0 300 600 1,200
Feet

Zoning Boundary
City Limits
Subject Area
Structure

N



Applicant: ANCHOR INN RV & BOAT STORAGE
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Commission District 2 **PC Mtg. Date:** 12/05/2022

0 50 100 200
Feet

Zoning Boundary
City Limits
Subject Area
Structure

N



Applicant: ANCHOR INN RV & BOAT STORAGE
Tax Parcel #: 08119 000233
Location: 5871 MCEVER ROAD, FLOWERY BRANCH, GA 30542
Commission District 2 **PC Mtg. Date:** 12/05/2022

0 50 100 200
Feet

Zoning Boundary
City Limits
Subject Area

N

Boat storage Birds Eye View

From: Andrew Eubanks (eubanks02475@gmail.com)

To: rwh@bellsouth.net

Date: Monday, December 5, 2022 at 03:51 PM EST



Provided at 12-5-2022 PC Meeting

5871 McEver Road

All that tract or parcel of land lying and being in the Land Lot 119 of the 8th Land District, Hall County, Georgia and being more particularly described as follows;

To find the True Point of Beginning, commence at the intersection of the southwest right of way of Lights Ferry Road (80' right of way) and the southeast right of way of McEver Road (right of way varies), said point marked by an iron pin set; THENCE traveling on said southeast right of way of McEver Road South 73 Degrees 18 Minutes 09 Seconds West for a distance of 250.96 feet to a point, said point marked by a ½ inch rebar pin found; THENCE continuing North 16 Degrees 46 Minutes 20 Seconds West for a distance of 19.19 feet to a point, said point marked by an iron pin set; THENCE on said right of way South 73 Degrees 22 Minutes 25 Seconds West for a distance of 406.87 feet to a point, said point marked by an iron pin set; THENCE leaving said right of way South 18 Degrees 39 Minutes 34 Seconds East for a distance of 200.00 feet to a point, said point marked by a wood post; THENCE South 71 Degrees 39 Minutes 19 Seconds West for a distance of 189.28 feet to a point, said point marked by an iron pin set, said point being, THE TRUE POINT OF BEGINNING.

THENCE from said point as thus established, traveling South 61 Degrees 55 Minutes 02 Seconds West for a distance of 140.04 feet to a point, said point marked by an iron pin set; THENCE South 28 Degrees 04 Minutes 58 Seconds East for a distance of 216.93 feet to a point, said point marked by a ½ inch rebar pin found; THENCE South 59 Degrees 32 Minutes 06 Seconds West for a distance of 1174.55 feet to a point on the southeast right of way of McEver Road (right of way varies), said point marked by an iron pin set; THENCE on said right of way along a curve to the right having a radius of 1591.83 feet and an arc length of 565.06 feet being subtended by a chord bearing of North 26 Degrees 28 Minutes 07 Seconds East and a chord distance of 562.10 feet to a point; THENCE along a curve to the right having a radius of 1604.20 feet and an arc length of 508.99 feet being subtended by a chord bearing of North 46 Degrees 01 Minutes 57 Seconds East and a chord distance of 506.86 feet to a point; THENCE on said right of way along a curve to the right having a radius of 1633.80 feet and an arc length of 395.86 feet being subtended by a chord bearing of North 61 Degrees 45 Minutes 59 Seconds East and a chord distance of 394.90 feet to a point, said point marked by an iron pin set; THENCE leaving said right of way South 20 Degrees 28 Minutes 17 Seconds East for a distance of 201.79 feet to a point, said point marked by a wood post, said point being THE TRUE POINT OF BEGINNING.

Said property contains 9.064 Acres and shown as Tract 3 on survey entitled "A Division of a Parent Parcel and Combination Survey for Foster Road Inc., recorded in Plat Book 877, page 269, Hall County records.

Anael Dominguez (Planning)

From: Emily McGahee (Environmental Health)
Sent: Monday, November 14, 2022 12:09 PM
To: Anael Dominguez (Planning); Randi Doveton (Planning)
Cc: Chad Harper (Environmental Health); Kelly Hairston (Environmental Health)
Subject: HCPC Tentative Agenda 12.5.22

Please find Environmental Health comments below:

Items 1 & 2, 4745 Cagle Mill Rd, Boling: Public sewer. Any abandoned well shall be properly closed as per Water Well Standards Act. Any abandoned septic tank shall be pumped by a State certified pumper/hauler and crushed/filled.

Item 3, 2124 Imperial Drive, Maynard: An existing system evaluation will be required.

Item 4, 3252/3264 Poplar Springs Road, Lykins: This plat is currently under review by the Hall County Plat Review Team and Environmental Health can approve the subdivision plat as the lots are considered lots of record.

Item 5, 5625/5633 Bogus Road, Mejia: This plat is currently under review by the Hall County Plat Review Team and Environmental Health can approve the subdivision plat.

Items 6 & 7, 5871 McEver Road, Anchor Inn: Must meet all Environmental Health commercial septic system permitting requirements if plumbing proposed and public sewer not available. A detailed business plan must be submitted to Hall County Environmental Health for review.

Item 8, 6541 Henry Smith, Crawford: Environmental Health issued a septic permit (OSC 7294) for storage building/barn (sink/toilet) in May 2022. The system has not been installed as of this date.

Item 9, Text Amendment: No comment

Emily McGahee
Hall County Environmental Health
Hall County Government Center
2875 Browns Bridge Road
Mailing: PO Box 5901
Gainesville, GA 30504
(770) 531-3973
(770) 531-6767 (fax)

http://dph.georgia.gov/environmental-health (State Website)
http://www.phdistrict2.org/HallCounty.htm (District Website)
http://www.hallcounty.org/devserv/environmental.asp (County Website & Forms)

Anael Dominguez (Planning)

From: Niebauer, Parker J <PNiebauer@dot.ga.gov>
Sent: Thursday, November 17, 2022 2:20 PM
To: Anael Dominguez (Planning); Randi Doveton (Planning)
Cc: Chavers, Veronica E; Peevy, Jonathan
Subject: RE: Tentative Planning Agenda for December 5, 2022

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Please see our comments in red below

#4 (Lynkin) – is the proposal just to move the property line? If so, disregard comment below about GDOT coordination being required.

Thank you,

Parker Niebauer
D1TO Traffic Operations Supervisor

GDOT Georgia Department of Transportation

District 1 Division of Field Services
1475 Jesse Jewell Pkwy
Suite 100
Gainesville, GA, 30501
770.533.8275 office
770.519.3223 cell

From: Anael Dominguez (Planning) <adominguez@hallcounty.org>
Sent: Friday, November 11, 2022 11:14 AM
To: Becky Ruffner (Parks & Leisure) <bruffner@hallcounty.org>; Bill Nash (Public Works) <bnash@hallcounty.org>; Bill Schmid <weschmid@rochester-assoc.com>; Brandi Smith (Business License) <bsmith@hallcounty.org>; Bryan Cash (Fire Services) <bcash@hallcounty.org>; Chad Harper (Environmental Health) <charper@hallcounty.org>; Chris Braswell (Planning) <cbraswell@hallcounty.org>; Christopher Armstrong (Fire Services) <carmstrong@hallcounty.org>; Dan Barnes <Daniel.C.Barnes@usace.army.mi>; Ellis Still (Planning) <estill@hallcounty.org>; Emily McGahee (Environmental Health) <emcgahee@hallcounty.org>; Frank Miller (Engineering) <fmiller@hallcounty.org>; Dykes, Jason <jdykes@dot.ga.gov>; Jason Skarda (Engineering) <jskarda@hallcounty.org>; Jeremy Wills <jeremy.wills@gainesville.org>; John Hornick (Fire Services) <jhornick@hallcounty.org>; Peevy, Jonathan <jpeevy@dot.ga.gov>; Kelly Hairston (Environmental Health) <khairston@hallcounty.org>; Matt Cox <matt.cox@hallco.org>; Michael Vieira (Fire Services) <mvieira@hallcounty.org>; Nicole Griffin (Tax Assessors) <nicole.griffin@hallcounty.org>; nswafford (nswafford@gainesvillega.org) <nswafford@gainesvillega.org>; Pam Cravero <Pam.Cravero@hallco.org>; Niebauer, Parker J <PNiebauer@dot.ga.gov>; Randi Doveton (Planning) <rdoveton@hallcounty.org>; rich <rich@flowerybranchga.org>; Scott Puckett <spuckett@hallcounty.org>; Srikanth Yamala (Public Works) <syamala@hallcounty.org>; Stephen Cain <troy.s.cain@usace.army.mil>; Steve Watson (Real Property) <rswatson@hallcounty.org>; Tammie Croy (Engineering) <tcroy@hallcounty.org>; Tracy Gilreath (Tax Assessors) <tgilreath@hallcounty.org>; Wanda Moreno (Engineering) <wmoreno@hallcounty.org>; Wanda Sutton

(Engineering) <wsutton@hallcounty.org>; will schofield <will.schofield@hallco.org>
Subject: Tentative Planning Agenda for December 5, 2022

Good afternoon –

Here is the Tentative Agenda and Maps for the **Monday, December 5, 2022** Hall County Planning Commission Meeting.

Please use the links to review the documents and respond with comments to Hall County Planning and Development. Failure to provide comments in a timely manner may result in the information not being included in the staff report.

When submitting comments, please include the name of the applicant along with the address of the property with the corresponding comment.

Comments are due by **Friday, November 18th**. Email comments to Randi (rdoveton@hallcounty.org) and Ana (adominguez@hallcounty.org).

CALL TO ORDER

AGENDA REVIEW

APPROVAL OF MINUTES - November 21, 2022

OLD BUSINESS

1. **4745 Cagle Mill Road | Rezone |** from Agricultural Residential-III (AR-III) and Agricultural Residential-IV (AR-IV) to Planned Residential Development (PRD) on a 69.50± acre tract located on the west side of Cagle Mill Road approximately 429 feet from Noah Martin Drive | Zoned AR-III & AR-IV; Tax Parcel 15007 000254 (pt.) | **Proposed use: single family, townhome, & cluster home development, 225 residential units** | ** Commission District 3 | **Josh Boling, applicant.**

2. **4745 Cagle Mill Road | Rezone |** from Agricultural Residential-III (AR-III) to Light Industrial (I-I) on a 5.30± acre tract located on the east side of Cornelia Highway approximately 4,970 feet from Cagle Road | Zoned AR-III; Tax Parcel 15007 000254 (pt.) | **Proposed use: 2 commercial outparcels** | ** Commission District 3 | **Josh Boling, applicant.**

NEW BUSINESS

3. **2124 Imperial Drive | Variance |** for a left side yard setback variance from 10 feet to 3 feet on a .93± acre tract located on the east side of Imperial Drive approximately 72 feet from its intersection with Elysian Circle | Zoned R-I ; Tax Parcel 00094 000006H **| Proposed use: above ground pool |** * Commission District 4 **| Jeff Maynard & Vanessa Schaeffer , applicant.**
   None

4. **3264 & 3252 Poplar Springs Road | Variance |** for a road frontage variance from 150 to 109 feet on a 1.91± acre tract located on the south side of Poplar Springs Road approximately 736 feet from its intersection with Hawthorne Drive | Zoned R-I & AR-III; Tax Parcel 15036C000008 (pt.) & 000009A | **Proposed use: reconfiguration plat** | * Commission District 1 | **Brian Lykins, applicant.**
   GDOT coordination required.

5. **5625 & 5633 Bogus Road | Variance |** for a variance on road frontages and required lot widths from 150 feet to 80 feet for two proposed lots on a 3± acre tract located on the east side of Bogus Road approximately 1,345 feet from its intersection with Wellspring Trail | Zoned AR-IV ; Tax Parcel 12050 000042 & 000043 **| Proposed use: 2-lot subdivision |** * Commission District 3 | **Francisco Mejia, applicant.**
   None

6. **5871 McEver Road | Rezone |** from Agricultural-Residential-III (AR-III) to Highway-Business (H-B) on a 9.06± acre tract located on the east side of McEver Road at its intersection with Silverthorn Drive | Zoned AR-III; Tax

Parcel 08119 000233 | **Proposed use: RV & boat storage |** ** Commission District 2 | **Anchor Inn RV & Boat Storage, applicant.**
None

7. **5871 McEver Road | Use Subject to County Commission Approval |** on a 9.06± acre tract located on the east side of McEver Road at its intersection with Silverthorn Drive | Zoned AR-III; Tax Parcel 08119 000233 | **Proposed use: RV & boat storage |** ** Commission District 2 | **Anchor Inn RV & Boat Storage, applicant.**
None

8. **6541 Henry Smith Road | Appeal an Administrative Decision |** for a Use Subject to Planning Commission approval on a 5.65± acre tract located on the west side of Henry Smith Road at its intersection with Edwards Road | Zoned AR-IV; Tax Parcel 11023 000024 |**Proposed use: rural business |** * Commission District 3 | **Tyler Crawford, applicant.**
None

9. **Section 17.20.300 | Text Amendment, Official Code of Hall County, GA | Amend the Definition of Community Residence |** 17.20.300, ("pregnant or parenting youth who are displaced and /or in State custody.") by amending the definition of a Community Residence. The intent of the proposed change is to expand the type of care facility allowed as a Community Residence. | ** All Districts | **Crystal F. Toombs, applicant.**
None

*The Planning Commission's decision will be the final action taken unless appealed to the Board of Commissioners. To do so, file an application with the Planning Department within five working days of the Planning Commission's decision.

The Hall County Board of Commissioners will hear appeals at a public hearing Thursday, January 12, 2023 at 6:00 p.m. at the Hall County Government Center, 2nd Floor Meeting Room, 2875 Browns Bridge Road, Gainesville, Georgia.

**The Planning Commission's recommendation will be forwarded to the Board of Commissioners for final action at a public hearing on Thursday, January 12, 2023. The Board will meet at 6:00 p.m. at the Hall County Government Center, 2nd Floor Meeting Room, 2875 Browns Bridge Road, Gainesville, Georgia.

Thank you,
Ana Dominguez
Planning Commission Clerk
Hall County Government
2875 Browns Bridge Road, Gainesville, GA 30504
www.hallcounty.org | 770-531-6810

HALL COUNTY
GEORGIA
We have it all in Hall

Georgia is a state of natural beauty. And it's a state that spends millions each year cleaning up litter that not only mars that beauty, but also affects road safety, the environment and the economy. Do your part – don't litter. How can you play an active role in protecting the splendor of the Peach State? Find out at http://keepgaclean.com/.

HALL COUNTY
GEORGIA

POST OFFICE DRAWER 1435
GAINESVILLE, GA 30503

t: 770.531.6800 | f: 770.531.3945

SRIKANTH YAMALA
Director

BILL NASH, P.E.
Assistant Director

FRANKLIN P. MILLER, P.E.
County Engineer

Hall County Government

PUBLIC WORKS AND UTILITIES
ENGINEERING DIVISION

M E M O R A N D U M

To: Randi Doveton, Director of Planning and Development

From: Srikanth Yamala, Director of Public Works and Utilities

Date: November 17, 2022

Subject: December 5, 2022 - Hall County Planning Commission Agenda

Please be advised that our office has reviewed the Hall County Planning Commission agenda for the December 5, 2022 meeting. Upon review, we provide the following comments.

OLD BUSINESS

1. **4745 Cagle Mill Road | Rezone |** from Agricultural Residential-III (AR-III) and Agricultural Residential-IV (AR-IV) to Planned Residential Development (PRD) on a 69.50± acre tract located on the west side of Cagle Mill Road approximately 429 feet from Noah Martin Drive | Zoned AR-III & AR-IV; Tax Parcel 15007 000254 (pt.) **| Proposed use: single family, townhome, & cluster home development, 225 residential units |** ** Commission District 3 | **Josh Boling, applicant.**

   a) **Engineering:** The site may require a stormwater management report should the site plan indicate the proposed development meets stormwater threshold for impervious surfaces and/or disturbed acreage
   Show FEMA and Hall County studied flood plain
   Part of North Oconee Water Protection District.
   Hall County will not maintain a bridge over river.
   b) **Traffic:** 1. Access onto Cornelia Hwy (SR365) must be approved and permitted by GDOT.
   2. Internal roadways are proposed to be private; however, they still need to meet Hall County Code Title 16 (subdivision regulations). Any proposed variances to Title 16 must be specific, justified and approved through the rezoning process. In addition, there is a proposed bridge shown near the Cornelia Hwy (SR365) entrance and it should be noted that Hall County does not accept bridges into County maintenance. A cul-de sac will be required at the end of the proposed County maintained section. Current site plan does not meet Hall County requirements.
   3. Recommend that the gravel section of Cagle Mill Road from existing end of pavement to White Hall Road (approximately 1,400 feet) be improved and paved to Hall County standards to provide safe and efficient access to and from the site via Old Cornelia Highway/White Hall Road.
   4. Recommend that all necessary improvements be the financial responsibility of the developer and constructed concurrently with the development.
   c) **Utilities:** Hall County Sewer district.
   Sewer lift station @ 365.

HALL COUNTY
GEORGIA

POST OFFICE DRAWER 1435
GAINESVILLE, GA 30503

t: 770.531.6800 | f: 770.531.3945

SRIKANTH YAMALA
Director

BILL NASH, P.E.
Assistant Director

FRANKLIN P. MILLER, P.E.
County Engineer

Hall County Government

PUBLIC WORKS AND UTILITIES
ENGINEERING DIVISION

2. **4745 Cagle Mill Road | Rezone |** from Agricultural Residential-III (AR-III) to Light Industrial (I-I) on a 5.30± acre tract located on the east side of Cornelia Highway approximately 4,970 feet from Cagle Road | Zoned AR-III; Tax Parcel 15007 000254 (pt.) | **Proposed use: 2 commercial outparcels** | ** Commission District 3 | **Josh Boling, applicant.**

   a) **Engineering:** The site may require a stormwater management report should the site plan indicate the proposed development meets stormwater threshold for impervious surfaces and/or disturbed acreage.
   Show FEMA and Hall County studied flood plain.
   Part of North Oconee Water Protection District.
   Show buffer and impervious setback from wrested vegetation, not centerline of creek. (150')
   Hall County will not maintain bridge over river.
   b) **Traffic:** 1. Access onto Cornelia Hwy (SR365) must be approved and permitted by GDOT.
   2. Roadway will need to meet Hall County industrial standards.
   3. There is a proposed bridge shown near the Cornelia Hwy (SR365) entrance and it should be noted that Hall County does not accept bridges into County maintenance. A cul-de sac will be required at the end of the proposed County maintained section.
   4. Recommend that all necessary improvements be the financial responsibility of the developer and constructed concurrently with the development.
   c) **Utilities:** Sewer at 365, need sewer availability letter flows?

NEW BUSINESS

3. **2124 Imperial Drive | Variance |** for a left side yard setback variance from 10 feet to 3 feet on a .93± acre tract located on the east side of Imperial Drive approximately 72 feet from its intersection with Elysian Circle | Zoned R-I ; Tax Parcel 00094 000006H **| Proposed use: above ground pool |** * Commission District 4 **| Jeff Maynard & Vanessa Schaeffer , applicant.**

   a) **Engineering:** No Comments
   b) **Traffic**: No Comments
   c) **Utilities**: No Comments

4. **3264 & 3252 Poplar Springs Road | Variance |** for a road frontage variance from 150 to 109 feet on a 1.91± acre tract located on the south side of Poplar Springs Road approximately 736 feet from its intersection with Hawthorne Drive | Zoned R-I & AR-III; Tax Parcel 15036C000008 (pt.) & 000009A | **Proposed use: reconfiguration plat** | * Commission District 1 | **Brian Lykins, applicant.**

   a) **Engineering:** No Comments
   b) **Traffic:** Need authorization from the GDOT for new or modifications to existing driveways.
   c) Utilities: City of Oakwood Sewer District

HALL COUNTY
GEORGIA

POST OFFICE DRAWER 1435
GAINESVILLE, GA 30503

t: 770.531.6800 | f: 770.531.3945

SRIKANTH YAMALA
Director

BILL NASH, P.E.
Assistant Director

FRANKLIN P. MILLER, P.E.
County Engineer

Hall County Government

PUBLIC WORKS AND UTILITIES
ENGINEERING DIVISION

5. **5625 & 5633 Bogus Road | Variance |** for a variance on road frontages and required lot widths from 150 feet to 80 feet for two proposed lots on a 3± acre tract located on the east side of Bogus Road approximately 1,345 feet from its intersection with Wellspring Trail | Zoned AR-IV ; Tax Parcel 12050 000042 & 000043 **| Proposed use: 2-lot subdivision |** * Commission District 3 | **Francisco Mejia, applicant.**

a) **Engineering:** No Comments
b) **Traffic:** No Comments
c) **Utilities:** No Comments

6. **5871 McEver Road | Rezone |** from Agricultural-Residential-III (AR-III) to Highway-Business (H-B) on a 9.06± acre tract located on the east side of McEver Road at its intersection with Silverthorn Drive | Zoned AR-III; Tax Parcel 08119 000233 **| Proposed use: RV & boat storage |** ** Commission District 2 | **Anchor Inn RV & Boat Storage, applicant.**

a) **Engineering:** This site may require a stormwater management report should the site plan indicate the proposed development meets stormwater thresholds for impervious surfaces and/or disturbed acreage. Stream and impervious setback from wrested vegetation not centerline of stream.
b) **Traffic:** Adequate connection to roadway is not clear. Traffic study will be required that documents/impacts to the McEver Road/Lights Ferry intersection. Improvements that remediate impacts to intersection will be required.
c) **Utilities:** Flowery Branch Sewer District

7. **5871 McEver Road | Use Subject to County Commission Approval |** on a 9.06± acre tract located on the east side of McEver Road at its intersection with Silverthorn Drive | Zoned AR-III; Tax Parcel 08119 000233 **| Proposed use: RV & boat storage |** ** Commission District 2 **| Anchor Inn RV & Boat Storage, applicant.**

a) **Engineering:** This site may require a stormwater management report should the site plan indicate the proposed development meets stormwater thresholds for impervious surfaces and/or disturbed acreage.
b) **Traffic:** Adequate connection to roadway is not clear. Traffic study will be required that documents/impacts to the McEver Road/Lights Ferry intersection. Improvements that remediate impacts to intersection will be required.
c) **Utilities:** No Comments

8. **6541 Henry Smith Road | Appeal an Administrative Decision |** for a Use Subject to Planning Commission approval on a 5.65± acre tract located on the west side of Henry Smith Road at its intersection with Edwards Road | Zoned AR-IV; Tax Parcel 11023 000024 **|Proposed use: rural business |** * Commission District 3 | **Tyler Crawford, applicant.**

HALL COUNTY
GEORGIA

POST OFFICE DRAWER 1435
GAINESVILLE, GA 30503

t: 770.531.6800 | f: 770.531.3945

SRIKANTH YAMALA
Director

BILL NASH, P.E.
Assistant Director

FRANKLIN P. MILLER, P.E.
County Engineer

Hall County Government

PUBLIC WORKS AND UTILITIES
ENGINEERING DIVISION

a) **Engineering:** This site may require a stormwater management report should the site plan indicate the proposed development meets stormwater thresholds for impervious surfaces and/or disturbed acreage.
b) **Traffic:** No Comments
c) **Utilities:** No Comments

9. **Section 17.20.300 | Text Amendment, Official Code of Hall County, GA | Amend the Definition of Community Residence** | 17.20.300, ("pregnant or parenting youth who are displaced and /or in State custody.") by amending the definition of a Community Residence. The intent of the proposed change is to expand the type of care facility allowed as a Community Residence. | ** All Districts | **Crystal F. Toombs, applicant.**

a) **Engineering:** No Comments
b) **Traffic:** No Comments
c) **Utilities:** No Comments

Anael Dominguez (Planning)

From: John Hornick (Fire Services)
Sent: Friday, November 18, 2022 12:28 PM
To: Randi Doveton (Planning); Anael Dominguez (Planning)
Cc: Michael Vieira (Fire Services)
Subject: Planning Commission Fire Comments

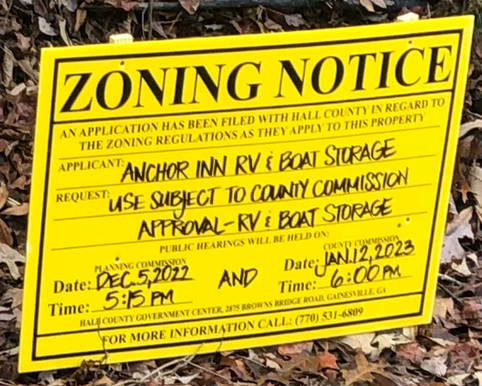
1. **5871 McEver Road | Rezone |** from Agricultural-Residential-III (AR-III) to Highway-Business (H-B) on a 9.06± acre tract located on the east side of McEver Road at its intersection with Silverthorn Drive | Zoned AR-III; Tax Parcel 08119 000233 **| Proposed use: RV & boat storage |** ** Commission District 2 | **Anchor Inn RV & Boat Storage, applicant.**
   IFC Section 507.5.1 where a building(s) is constructed and is more than 400' from a fire hydrant on an approved fire access route fire hydrant(s) shall be installed. Fire hydrant(s) may have to be installed to meet fire code.

2. **5871 McEver Road | Use Subject to County Commission Approval |** on a 9.06± acre tract located on the east side of McEver Road at its intersection with Silverthorn Drive | Zoned AR-III; Tax Parcel 08119 000233 **| Proposed use: RV & boat storage |** ** Commission District 2 | **Anchor Inn RV & Boat Storage, applicant.**
   IFC Section 507.5.1 where a building(s) is constructed and is more than 400' from a fire hydrant on an approved fire access route fire hydrant(s) shall be installed. Fire hydrant(s) may have to be installed to meet fire code.

Regards,

John Hornick, NPQ Fire Inspector 1, Plans Review
Lieutenant, Hall County Fire Rescue
Hall County Government
Main: 770-531-6838 | Cell: 404-597-0083
Website: www.Hallcounty.org


ZONING NOTICE
AN APPLICATION HAS BEEN FILED WITH HALL COUNTY IN REGARD TO THE ZONING REGULATIONS AS THEY APPLY TO THIS PROPERTY
APPLICANT: ANCHOR INN RV & BOAT STORAGE
REQUEST: REZONE FROM AR-III TO H-B FOR RV & BOAT STORAGE
PUBLIC HEARINGS WILL BE HELD ON:
PLANNING COMMISSION Date: DEC. 5, 2022 Time: 5:15 PM
AND
COUNTY COMMISSION Date: JAN. 12, 2023 Time: 6:00 PM.
HALL COUNTY GOVERNMENT CENTER, 2875 BROWNS BRIDGE ROAD, GAINESVILLE, GA
FOR MORE INFORMATION CALL: (770) 531-6809


ZONING NOTICE
AN APPLICATION HAS BEEN FILED WITH HALL COUNTY IN REGARD TO THE ZONING REGULATIONS AS THEY APPLY TO THIS PROPERTY
APPLICANT: ANCHOR INN RV & BOAT STORAGE
REQUEST: USE SUBJECT TO COUNTY COMMISSION APPROVAL - RV & BOAT STORAGE
PUBLIC HEARINGS WILL BE HELD ON:
PLANNING COMMISSION Date: DEC. 5, 2022 Time: 5:15 PM
AND
COUNTY COMMISSION Date: JAN. 12, 2023 Time: 6:00 PM.
HALL COUNTY GOVERNMENT CENTER, 2875 BROWNS BRIDGE ROAD, GAINESVILLE, GA
FOR MORE INFORMATION CALL: (770) 531-6809

ZONING NOTICE

ANCHOR INN RV & BOAT STORAGE
REQUEST FROM R1 TO HC FOR
RV & BOAT STORAGE

Date: JAN 10 2023 AND Date: JAN 12 2023
Time: 5:30 PM Time: 6:00 PM

ZONING NOTICE

AN APPLICATION WAS BEEN FILED WITH HALL COUNTY IN REGARD TO THE ZONING REGULATIONS AS THEY APPLY TO THIS PROPERTY

APPLICANT: ANCHOR INN RV & BOAT STORAGE

REQUEST: USE SUBJECT TO COUNTY COMMISSION APPROVAL - RV & BOAT STORAGE

Date: DEC. 5 2022 AND Date: JAN 12 2023
Time: 5:30 PM Time: 6:00 PM.

FOR MORE INFORMATION CALL: (770) 531-6809

AGENDA ITEM

Planning and Development

REPORT TO: **Work Session (01/09/23)**

REPORT TO: **Voting Meeting (01/12/23)**

ITEM NO: 734/2022

SUBJECT: **6541 Henry Smith Road | Appeal a Planning Commission Decision** | for a Use Subject to Planning Commission approval on a 5.65± acre tract located on the west side of Henry Smith Road at its intersection with Edwards Road | Zoned AR-IV; Tax Parcel 11023 000024 | **Proposed use: rural business** | Commission District 3 | **Gary Copeland, applicant.**

Meetings:

Work Session Date: 01/09/23 **Voting Meeting Date:** 01/12/23

Executive Summary:

Presenter: RD

Recommendation:

Approval, with conditions: 1. The interior shop area is limited to no more than 1,000 sq. ft. and a divider wall shall be installed between the 1,000 sq. ft. and the remaining 4,000 sq. ft. of the building, per Hall County Code requirements. No storage of materials, finished products and no signage for the business can be outside the 5,000 sq. ft. building (unless required by Code, e.g., ADA Handicap Parking Sign). All aspects related to the operation of the business must be contained within 1,000 sq. ft. of the interior of the building. 2. The applicant shall comply with requirements from the Hall County Fire Marshal. 3. All materials for set business must be stored inside, no materials shall be allowed to be stored outside. 4. The applicant must have the 1,000 sq. ft. shop area permitted and inspected by Hall County Building Inspection to assure that applicable codes are met. 5. Only one (1) employee other than family members residing on the premises shall be permitted. 6. No signage shall be allowed on the property. 7. No more than two (2) parking spaces shall be allowed on the site. 8. The only entrance to the building shall be from Henry Smith Road and no traffic is allowed from the business onto Edwards Road. 9. No clients shall be allowed to pick up manufactured merchandise, only shipped. 10. This conditional use is approved for two (2) years only, starting from the day a final certificate of occupancy from Hall County is received. In two years the applicant shall come back to Hall County and apply for an additional conditional use to assure zoning compliance. 11. The site shall adhere to all Hall County Engineering and stormwater management requirements.

Purpose of Request: **History:**

6541 Henry Smith Road | Appeal a Planning Commission Decision | for a Use Subject to Planning Commission approval on a 5.65± acre tract located on the west side of Henry Smith Road at its intersection with Edwards Road | Zoned AR-IV; Tax Parcel 11023 000024 | Proposed use: rural business | Commission District 3 | Gary Copeland, applicant.

Facts and Issues: **Options:**

Funding Requested	$ 0.00
Are funds within current budget?	No
Source of Funds	
Does the action involve a Resolution, Ordinance, Contract, Agreement, etc.?	No
Has it been reviewed by the County Attorney?	Yes
Is there a deadline for this item?	

Approvals:

Submit	Approve	Budget	Finance
AD	RD	TS	WG

Attorney	Administration	Clerk
WLI	CR	JR

Attachments:
Board Memo
Recommendation Report
Application
Site Plan
Maps
Renderings
Docs provided at PC
Environmental Health Comments
GDOT Comments
Public Works Comments
Fire Rescue Comment - 1/4/2023
Fire Comments
Notice Sign Photos

HALL COUNTY
GEORGIA
We have it all in Hall

POST OFFICE DRAWER 1435
GAINESVILLE, GA 30503

t: 770.531.6809 | f: 770.531.3902

DIRECTOR
Randi Doveton

Hall County Government
PLANNING & DEVELOPMENT

To: Richard Higgins, Chairman
Kathy Cooper, District 1
Billy Powell, District 2
Gregg Poole, District 3
Jeff Stowe, District 4

From: Randi Doveton, Director

Date: December 13, 2022

Subject: **6541 Henry Smith Road | Appeal a Planning Commission Approval |** for a Use Subject to Planning Commission approval on a 5.65± acre tract to allow a rural business | Gary Copeland, applicant.

The request before you is the application of Gary Copeland to appeal a 12-05-2022 Planning Commission decision to approve the appeal of a staff decision to allow a rural business. The applicant is appealing the Planning Commission decision to the Board of Commissioners. This item is located within Commission District 3.

At their December 5, 2022 meeting, the Hall County Planning Commission voted to approve an appeal to an administrative decision which determined that the proposed machine shop did not meet the definition of a Rural Business per sections 17.20.960 and 17.350.140. The Planning Commission approved the Tyler Crawford's appeal to allow a machine shop as a rural business with eleven (11) conditions. **(4-1, Braswell opposed).**

There were no written comments submitted in advance of the Planning Commission meeting and **three (3) individuals spoke in favor and four (4) individuals spoke in opposition** during the public hearing. Mr. Copeland, the appellant, was one.

Mr. Crawford has made no changes to his proposal since the Planning Commission meeting.

Planning Commission Approval Conditions:

1. The interior shop area is limited to no more than 1,000 sq. ft. and a divider wall shall be installed between the 1,000 sq. ft. and the remaining 4,000 sq. ft. of the building, per Hall County Code requirements. No storage of materials, finished products and no signage for the business can be outside the 5,000 sq. ft. building (unless required by Code, e.g., ADA Handicap Parking Sign). All aspects related

to the operation of the business must be contained within 1,000 sq. ft. of the interior of the building.

2. The applicant shall comply with requirements from the Hall County Fire Marshal.
3. All materials for set business must be stored inside, no materials shall be allowed to be stored outside.
4. The applicant must have the 1,000 sq. ft. shop area permitted and inspected by Hall County Building Inspection to assure that applicable codes are met.
5. Only one (1) employee other than family members residing on the premises shall be permitted.
6. No signage shall be allowed on the property.
7. No more than two (2) parking spaces shall be allowed on the site.
8. The only entrance to the building shall be from Henry Smith Road and no traffic is allowed from the business onto Edwards Road.
9. No clients shall be allowed to pick up manufactured merchandise, only shipped.
10. This conditional use is approved for two (2) years only, starting from the day a final certificate of occupancy from Hall County is received. In two years the applicant shall come back to Hall County and apply for an additional conditional use to assure zoning compliance.
11. The site shall adhere to all Hall County Engineering and stormwater management requirements.

HALL COUNTY PLANNING COMMISSION
RECOMMENDATION REPORT

Applicant ..... Tyler Crawford

Request ..... Appeal of administrative decision

Proposed Use ..... Fabrication Business as a Rural Business

Size ..... ±5.74 acres

Zoning ..... AR-IV

Location ..... **6541 Henry Smith Road** | Tax Parcel 11023 000024

Commission District ..... Three

Planning Commission Date ..... December 05, 2022

Staff Recommendation ..... **Staff does not make recommendations for appeals of staff decisions**

Planning Commission Recommendation…… Approval, with conditions
Vote: 4-1 (Braswell opposed)

Planning Commission Conditions:

1. The interior shop area is limited to no more than 1,000 sq. ft. and a divider wall shall be installed between the 1,000 sq. ft. and the remaining 4,000 sq. ft. of the building, per Hall County Code requirements. No storage of materials, finished products and no signage for the business can be outside the 5,000 sq. ft. building (unless required by Code, e.g., ADA Handicap Parking Sign). All aspects related to the operation of the business must be contained within 1,000 sq. ft. of the interior of the building.
2. The applicant shall comply with requirements from the Hall County Fire Marshal.
3. All materials for set business must be stored inside, no materials shall be allowed to be stored outside.
4. The applicant must have the 1,000 sq. ft. shop area permitted and inspected by Hall County Building Inspection to assure that applicable codes are met.
5. Only one (1) employee other than family members residing on the premises shall be permitted.
6. No signage shall be allowed on the property.
7. No more than two (2) parking spaces shall be allowed on the site.
8. The only entrance to the building shall be from Henry Smith Road and no traffic is allowed from the business onto Edwards Road.
9. No clients shall be allowed to pick up manufactured merchandise, only shipped.

10. This conditional use is approved for two (2) years only, starting from the day a final certificate of occupancy from Hall County is received. In two years the applicant shall come back to Hall County and apply for an additional conditional use to assure zoning compliance.
11. The site shall adhere to all Hall County Engineering and stormwater management requirements.

Public Forum:

Marty Crouch, 6631 Edwards Road, Murrayville, spoke in favor. Stated he supported the proposal.

Jimmy Day, 6641 Edwards Road, Murrayville, spoke in favor. Stated he does not have any problems with the building or business.

Sherry Day, 6641 Edwards Road, Murrayville, spoke in favor. Stated she supports the applicants business.

David Herring, 6451 Arrowhead Road, Murrayville, spoke in opposition. Concerns were machinery use, building permits, and barn use.

Gary Copeland, 6685 Henry Smith Road, Murrayville, spoke in opposition. Concerns were uses, machinery, and line of sight.

Jacob Shultz, 6457 Arrowhead Road, Murrayville, spoke in opposition. Concerns were industrial uses in agricultural zoning and masking.

Tasha Franklin, 6680 Henry Smith Road, Murrayville, spoke in opposition. Concerns were future neighboring uses.

Summary Analysis

- The subject property is an approximate 5.74-acre tract with an AR-IV zoning designation and containing a single-family dwelling constructed in 2004, a 13FT x 26FT storage shed (HPZ2022-01283, RES2022-01174), and a 50FT x 100FT storage building/barn (HPZ2022-00932,MIS2022-00243). All adjacent and surrounding properties also have a designation of AR-IV and are either vacant properties or contain single-family dwellings and associated accessory structures.
- In 2021 the applicant submitted a request to rezone a portion of the property at the intersection of Henry Smith Road and Edwards Road to Planned Industrial Development (PID) to allow a fabrication business. On December 20, 2021, the Planning Commission recommended approval with 11 conditions. Seven (7) people spoke in opposition at the December 20th hearing.
- On January 27, 2022, The Hall County Board of Commissioners voted to deny the request.
- On May 2, 2022 the applicant submitted an application for the 50FT x 100FT barn (HPZ2022-00932,MIS2022-00243).
- On June 14, 2022, the applicant submitted an application for the 13FT x 26FT shed (HPZ2022-01283, RES2022-01174).

- The applicant later submitted an application for a conditional use for a rural business as a metal fabricator within the 50FT x 100FT barn (HPZ2022-00932,MIS2022-00243). During agenda review, the Planning Director determined that the proposal, as presented, did not meet, the criteria for rural business (17.350.140). Section 17.350.140.E.3 prohibits "industrial or manufacturing uses which require specialized equipment not ordinarily associated with agricultural or residential uses, i.e., forges, large milling machinery…". Section 17.350.140.F.12 states that "no equipment which would not ordinarily be found in agricultural or residential use may be used in the rural business". Based on the application submitted for the rural business, the Planning Director did not believe it met the requirements.
- The current application is an appeal of staff decision regarding an application for a rural business. Section 17.20.960 defines a rural business as "an occupation or profession conducted within a dwelling, an accessory structure or outside and which is carried on by a resident of that property and which is clearly incidental and secondary to the use of the property for residential dwelling purposes. The rural business is designed to be less restrictive than a home office, home occupation or residential business in regard to access by the public, size, visibility, number of employees and types of business. Planning commission approval is required for a rural business in accordance with the conditions outlined in section 17.350.140.
- The Director based her decision on the word "ordinarily". Forges, plasma cutters or presses are not ordinarily used in agricultural practices. Most farmers will have parts repared or fabricated at a machine shop and then have their mechanic repair the equipment. Equipment ordinarily used in agricultural practices includes plows, tractors, seeders, harrows, threshers, balers, irrigation equipment, feeders, combines, etcetera.
- When evaluating the appeal, the Planning Commisison shall determine:
    - what type of equipment is considered specialized and not ordinarily associated with agricultural or residential uses;
    - what equipment is ordinarily associated with agricultural or residential uses;
    - what makes a fabrication or manufacturing process acceptable- is it the number of machines, the size of the machine(s), or the volume in decibels of the machine(s)?
- It should be noted that the 50FT x 100FT structure to be used was permitted and inspected as a farm use only structure not a commercial building. The applicant shall have to obtain a Certificate of Occupancy (CO) from Building Inspections prior to obtaining a business license.

Development Support and Constraints – Departmental /agency comments

Hall County Environmental Health

An email dated November 14, 2022 from Emily McGahee states: "Environmental Health issued a septic permit (OSC 7294) for storage building/barn (sink/toilet) in May 2022. The system has not been installed as of this date."

Hall County Fire Rescue

In an email dated November 18, 2022, Lieutenant John Hornick, NPQ Fire Inspector 1, Plans Review, states:

"The closest fire hydrant to the proposed rural business site is located 9,496 feet away on Highway 52."

Hall County Public Works and Utilities

In a memo dated November 17, 2022, from Srikanth Yamala, Director of Public Works and Utilities, the following comments were provided:

Engineering:
This site may require a stormwater management report should the site plan indicate the proposed development meets stormwater thresholds for impervious surfaces and/or disturbed acreage..

Traffic:
No comments.

Utilities:
No comments.

Georgia Department of Transportation
Per an email dated November 17, 2022, Parker Niebauer, District 1 Traffic Operations Supervisor stated "none".

- **Excerpts from the minutes of the December 5, 2022 meeting**

Applicant's Presentation:

Randi Doveton, Planning Director, presented a summary of the request.

Tyler Crawford, 6541 Henry Smith Road, presented the request. The applicant stated that the surrounding trees blocked the view into his building. The applicant presented his own traffic study. The applicant presented pictures of the tractor trailers that cross the property. The applicant presented pictures of other mill shops for comparison. The applicant stated that he does have one intern per semester. The applicant presented a model of what his machines produce. The applicant stated that he rarely has customers go to his property, he usually ships merchandise. He mentioned that the fact he lives on the property holds him accountable to what goes on in the property.

Rebuttal

The applicant stated that his business would blend in with agricultural zoning requirements.

Public Forum:

Marty Crouch, 6631 Edwards Road, Murrayville, spoke in favor. Stated he supported the proposal.

Jimmy Day, 6641 Edwards Road, Murrayville, spoke in favor. Stated he does not have any problems with the building or business.

Sherry Day, 6641 Edwards Road, Murrayville, spoke in favor. Stated she supports the applicants business.

David Herring, 6451 Arrowhead Road, Murrayville, spoke in opposition. Concerns were machinery use, building permits, and barn use.

Gary Copeland, 6685 Henry Smith Road, Murrayville, spoke in opposition. Concerns were uses, machinery, and line of sight.

Jacob Shultz, 6457 Arrowhead Road, Murrayville, spoke in opposition. Concerns were industrial uses in agricultural zoning and masking.

Tasha Franklin, 6680 Henry Smith Road, Murrayville, spoke in opposition. Concerns were future neighboring uses.

Planning Commission Comments:

Mr. Hunt questioned if any customers picked up merchandise from the home. The applicant stated that it only happens a couple times a month. Mr. Hunt questioned if any materials would be stored outside. The applicant stated no. Mr. Hunt questioned how many interns were present. The applicant stated it was seasonal so there is only one intern at a time. Mr. Hunt questioned the hours of operation. The applicant stated the hours would be 7am - 6pm. Mr. Hunt questioned if the only driveway access would be on Henry Smith Road. The applicant stated that was correct. Mr. Hunt questioned if the applicant would abide storm water regulations as well as a hydrology study. Mr. Braswell questioned how the applicant would only utilize 900 sq. ft. of the building. The applicant stated he has had a yellow line to separate the areas. Mr. Hunt stated it would require to build a wall barrier to separate the areas. Mr. Hunt questioned the dimensions of the machinery. The applicant stated they were on the floor plan to scale. Mr. Hunt stated that the only way he could support the request would be to approve a conditional use for two years and then have the applicant come back in front of the board for compliance. Ms. Pilcher questioned if there is a fire suppressant in the current building. The applicant stated there was.

***Motion:* A motion to approve, with conditions was made by Mr. Hunt and seconded by Mr. Varner. Vote: 4-1 (Braswell opposed)**

Conditions:

1. *The interior shop area is limited to no more than 1,000 sq. ft. and a divider wall shall be installed between the 1,000 sq. ft. and the remaining 4,000 sq. ft. of the building, per Hall County Code requirements. No storage of materials, finished products and no signage for the business can be outside the 5,000 sq. ft. building (unless required by Code, e.g., ADA Handicap Parking Sign). All aspects related to the operation of the business must be contained within 1,000 sq. ft. of the interior of the building.*
2. *The applicant shall comply with requirements from the Hall County Fire Marshal.*
3. *All materials for set business must be stored inside, no materials shall be allowed to be stored outside.*
4. *The applicant must have the 1,000 sq. ft. shop area permitted and inspected by Hall County Building Inspection to assure that applicable codes are met.*
5. *Only one (1) employee other than family members residing on the premises shall be permitted.*
6. *No signage shall be allowed on the property.*
7. *No more than two (2) parking spaces shall be allowed on the site.*
8. *The only entrance to the building shall be from Henry Smith Road and no traffic is allowed from the business onto Edwards Road.*
9. *No clients shall be allowed to pick up manufactured merchandise, only shipped.*

10. *This conditional use is approved for two (2) years only, starting from the day a final certificate of occupancy from Hall County is received. In two years the applicant shall come back to Hall County and apply for an additional conditional use to assure zoning compliance.*
11. *The site shall adhere to all Hall County Engineering and stormwater management requirements.*

Paid 12/8/22
receipt # 859079

PLANNING AND DEVELOPMENT DEPARTMENT
2875 BROWNS BRIDGE ROAD, GAINESVILLE, GA, 30504
MAILING ADDRESS: PO BOX 1435, GAINESVILLE. GA 30503
t: 770-531-6809 I f: 770-531-3902

RECEIVED
DEC 08 2022
Planning & Zoning Department

HALL COUNTY
GEORGIA
We have it all in Hall

APPLICATION FOR APPEAL

Per §17.370.010, the public shall have the right to appeal a decision made by the Planning Commission before the Board of Commissioners.

In order to file an appeal, the appellant must submit a written notice of appeal within five working days of the Planning Commission decision to the Planning Department. The appellant must submit justification and reasons for the appeal along with a $200 appeal fee (cash or check).

Please fill out the following information:

Name: Gary Copeland

Address: 6685 Henry Smith Road, Murrayville, GA 30564

Phone Number: 770-605-3005

Email: gary@overdrivelogistics.com

Name of original application for which appeal is requested: 6541 HENRY SMITH ROAD|APPEAL AN ADMINISTRATIVE DECISION

Date of original application: Planning Commsion Date 12/05/2022

Justification and reason(s) for filing this appeal (attach additional sheets if necessary):

I disagree with the decison of the planning commission becuase overriding the planning directiors denial would allow a commercial business to exist in a commercial building in land zoned AR-IV.

Signature Gary Copeland Date 12-8-22

For staff use only:

Action _____ Date _____ Tax Parcel Number _____

Conditions: _____

Revised January 2020

24 HOUR CONTACT
TYLER CRAWFORD
404.226.4443
PROPERTY OWNER
TYLER CRAWFORD
6541 HENRY SMITH RD.
MURRAYVILLE, GA 30564
404.226.4443
tl_crawford@ymail.com

811 Know what's below. Call before you dig.

NOTES FOR GRAVITY DISPERSAL WITH UNEQUAL TRENCH LINES:

A. SERIAL LOADING IS PROPOSED FOR THIS SITE PER COUNTY HEALTH DEPARTMENT.

B. UTILIZE A FLOW CONTROL VALVE ON THE FORCE MAIN TO REGULATE THE FLOW OF EFFLUENT AND PREVENT OVERFLOW OF EFFLUENT FROM DROP BOXES.

C. PROVIDE A VENT FOR PUMPED SYSTEMS.

D. SYSTEM TO BE INSTALLED A MINIMUM OF 12" BELOW GRADE AND 12" ABOVE THE MOST HYDRAULICALLY LIMITING SOIL HORIZON.

SYSTEM SIZING CALCULATIONS FOR PRO SERIES FABRICATION:

A. PROPOSED FACILITY TO HAVE ONE BATHROOM AT 100 GPD. PROPOSED SYSTEM TO SERVICE ONE BATHROOM.

B. CHAMBER PRIMARY SYSTEM DESIGNED FOR INSTALLATION WITH MINIMUM 12" COVER IN A 45 MIN/IN SOIL SERIES. SQUARE FOOTAGES PER GALLON TAKEN FROM TABLE JT-1 OF THE GA MANUAL FOR ONSITE SEWER MANAGEMENT SYSTEMS:
1.342 S.F./GAL. x 220 GAL. = 295.2/3' TRENCH = 98.41 L.F. PROVIDED 100 L.F.

LINE A – 52 L.F. (HIGH CAPACITY CHAMBER)
LINE B – 48 L.F.

C. CONVENTIONAL REPAIR SYSTEM DESIGNED FOR 3' TRENCH INSTALLATION WITH MINIMUM 12" COVER IN A 45 MIN/IN SOIL SERIES. SQUARE FOOTAGES PER GALLON TAKEN FROM TABLE JT-1 OF THE GA MANUAL FOR ONSITE SEWER MANAGEMENT SYSTEMS:
1.342 S.F./GAL. x 220 GAL. = 295.2/3' TRENCH = 98.41 L.F. PROVIDED 100 L.F.

LINE A – 52 L.F.
LINE B – 48 L.F.

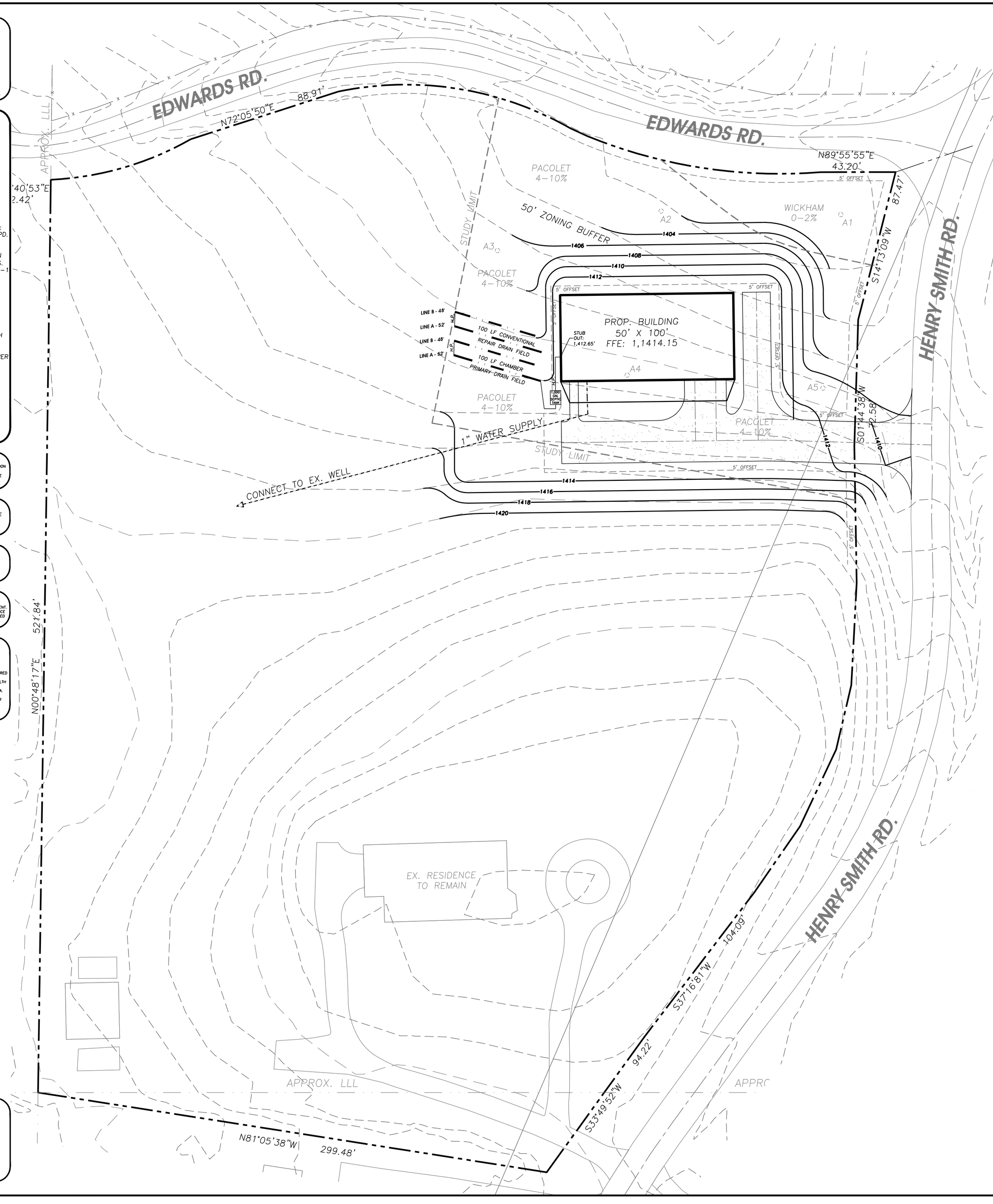
"EROSION & SEDIMENTATION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION AND SEDIMENTATION CONTROL, ADDITIONAL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE." IF THE 24-HOUR CONTACT NUMBER CHANGES, THE SITE OPERATOR MUST NOTIFY THE CODE ENFORCEMENT OFFICE.

ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING.

"THE INSTALLATION OF EROSION AND SEDIMENTATION CONTROL MEASURES AND PRACTICES SHALL OCCUR PRIOR TO EACH CONSTRUCTION PHASE OF LAND DISTURBING ACTIVITIES."

ENGINEER'S STATEMENT:
I CERTIFY THIS ON-SITE SEWAGE MANAGEMENT SYSTEM MEETS THE MINIMUM DESIGN REQUIREMENTS ESTABLISHED BY THE DEPARTMENT OF HUMAN RESOURCES AND THE JACKSON COUNTY HEALTH DEPARTMENT. I HAVE CONDUCTED A SITE VISIT TO VERIFY THE SYSTEM CAN BE INSTALLED AS DESIGNED IN ACCORDANCE WITH THESE REGULATIONS. ALL CALCULATIONS ARE BASED ON SOILS AND SURVEY INFORMATION PROVIDED BY OTHERS. NO WARRANTY, EXPRESSED OR IMPLIED, IS MADE AS TO THE ACCURACY OF THIS DATA.

ENGINEER'S NOTES AND SPECIFICATIONS:
1. ALL PVC TO BE SCHEDULE 40
2. DIVERT ALL SURFACE WATER AWAY FROM AREAS WHERE TANKS AND DRAINFIELDS ARE LOCATED.
3. SITE FEATURES, PROPERTY BOUNDARY, AND SOILS INFORMATION SHOWN WAS TAKEN FROM INFORMATION PROVIDED BY OTHERS AND COMPILED BY THE DESIGNER. EVERY ATTEMPT HAS BEEN MADE TO ENSURE ACCURACY AND COMPLETENESS. ALL DIMENSIONS AND LOCATIONS SHOULD BE CONSIDERED APPROXIMATE. THIS PLAN IS NOT INTENDED FOR USE AS A BOUNDARY SURVEY OR A SOILS REPORT.
4. ALL CONSTRUCTION TECHNIQUES AND MATERIALS FOR SEPTIC SYSTEM TO COMPLY WITH COUNTY HEALTH DEPARTMENT STANDARDS AND ALL LOCAL REQUIREMENTS.
5. CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF ALL UNDERGROUND UTILITIES IN THE WORK AREA.
6. CONTRACTOR SHALL VERIFY ALL ELEVATIONS AND ALL SETBACKS.
7. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES IN THE CONDITION OF THE SITE PRIOR TO STARTING WORK.
8. PUMPED SYSTEMS SHOULD INCLUDE A VENT.



1. PROPOSED IS A CHAMBER PRIMARY SEPTIC SYSTEM WITH A CONVENTIONAL REPAIR SYSTEM.
2. SEPTIC DRAIN FIELD LINES SHALL CONFORM TO MINIMUM SETBACKS LISTED BELOW AND SHOWN ON THE PLAN.
   5' FROM ANY BUILDING FOUNDATION
   10' FROM BASEMENT FOUNDATION
   5' FROM ANY PROPERTY LINE OR DRIVEWAY.
   8' MIN. SEPARATION BETWEEN DRAIN FIELDS.
   20' SETBACK FROM UNSUITABLE SOILS, UNLESS DRIP SYSTEM IS PROPOSED.
3. SEE BOUNDARY SURVEY FOR EXACT BOUNDARY INFORMATION.
4. ANY DRIP SYSTEM SHALL BE DESIGNED BY CIVIL ENGINEER PRIOR TO CONSTRUCTION.

NORTH

GRAPHIC SCALE
0' 15' 30' 60' 90'

RED ROCK DESIGN
·land planning ·engineering
678.227.4545 po box 50 / statham, ga 30666
valiantservices2020@gmail.com

NEW BARN BUILDING

6541 HENRY SMITH RD.
MURRAYVILLE, GA 30564
HALL COUNTY
A 5.743 ACRE TRACT
0.98 ACRES DISTURBED
TAX PARCEL #:
11023 000024

REVISIONS	DATE

ANY CHANGES OR ALTERATIONS MADE TO THESE CONSTRUCTION DRAWINGS WITHOUT THE WRITTEN APPROVAL OF RED ROCK DESIGN, LLC, VOIDS THE SEAL SHOWN HEREON AND ANY LIABILITY ASSOCIATED WITH THIS PROJECT.
THE ORIGINAL DRAWINGS ARE KEPT ON FILE FOR VERIFICATION OF ANY CHANGES.

GEORGIA REGISTERED No. 30460 PROFESSIONAL ENGINEER KELVIN D. WHITE

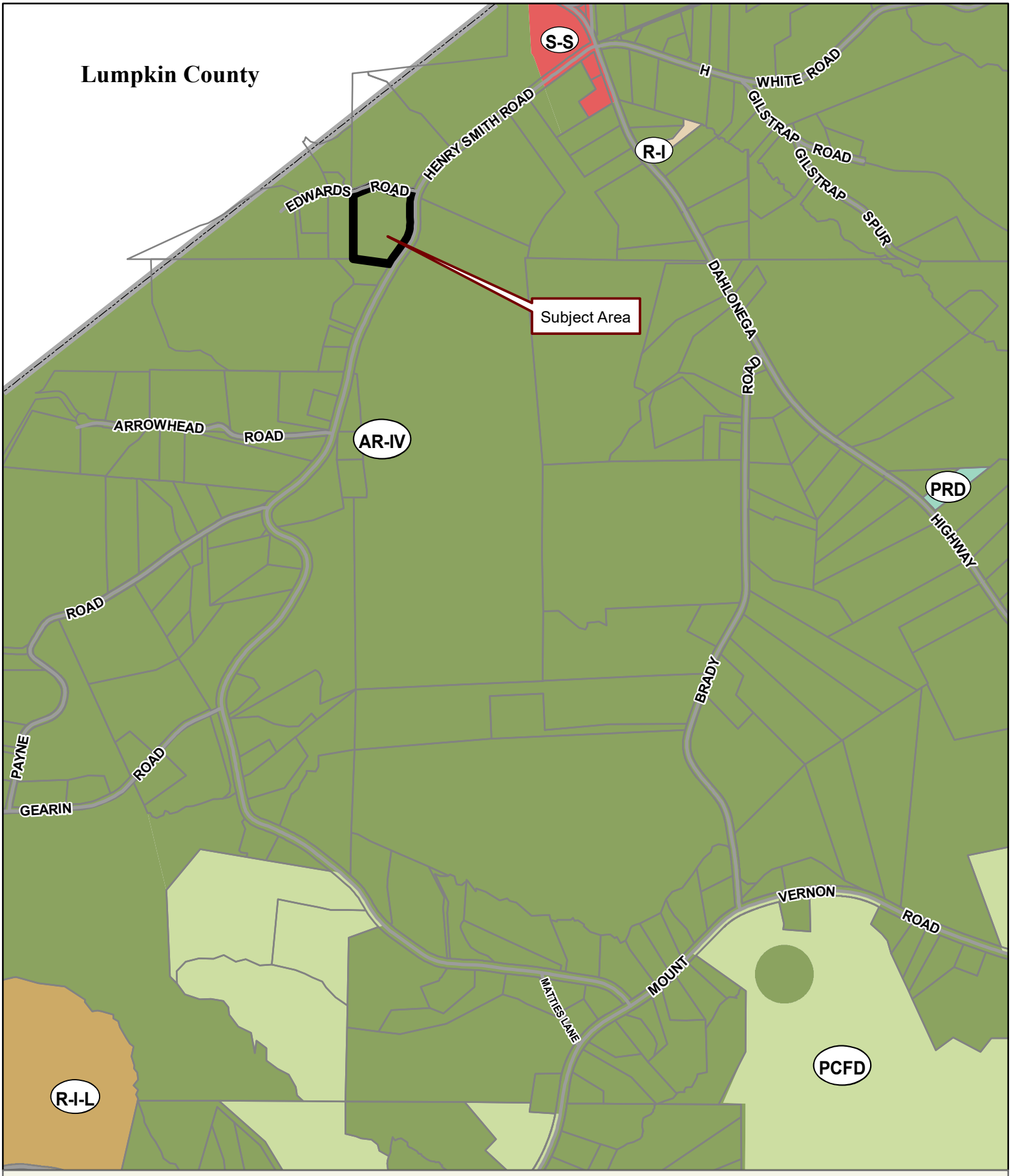
03/21/22

DATE
03/21/22

SEPTIC PLAN

SHEET
1 OF 1

Tractor/Farm Equipment
30.00
1962 Buick Special
1988 Honda CRX
5.00
6.00
1997 Ford Ranger
1930 Duesenberg Indycar
16.00
24.00
2.00
20.00
7.00
4.00
8.00
10.00
50.00
Fadal 3016 Mill
Hurco TM6i Lathe
Material Storage



Applicant: TYLER CRAWFORD
Tax Parcel #: 11023 000024
Location: 6541 HENRY SMITH ROAD, MURRAYVILLE, GA 30564
Commission District 3 **PC Mtg. Date:** 12/05/2022

0 300 600 1,200
Feet

Zoning Boundary
City Limits
Subject Area
Structure

N

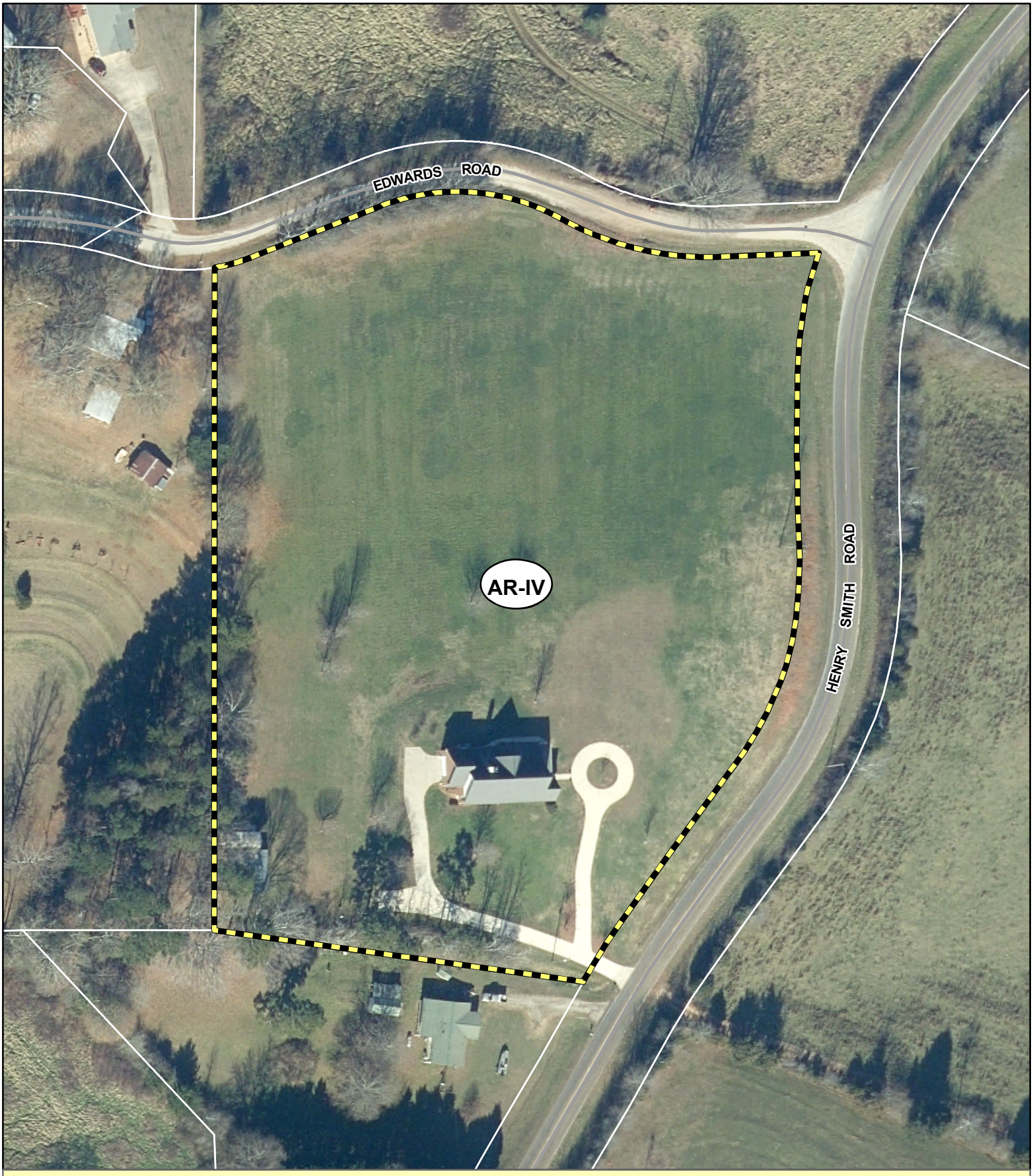


Applicant: TYLER CRAWFORD
Tax Parcel #: 11023 000024
Location: 6541 HENRY SMITH ROAD, MURRAYVILLE, GA 30564
Commission District 3 **PC Mtg. Date:** 12/05/2022

0 25 50 100
Feet

Zoning Boundary
City Limits
Subject Area
Structure

N



Applicant: TYLER CRAWFORD
Tax Parcel #: 11023 000024
Location: 6541 HENRY SMITH ROAD, MURRAYVILLE, GA 30564
Commission District 3 **PC Mtg. Date:** 12/05/2022

0 25 50 100
Feet

Zoning Boundary
City Limits
Subject Area

N

Anael Dominguez (Planning)

From: Tyler Crawford <tl_crawford@ymail.com>
Sent: Wednesday, November 16, 2022 3:17 PM
To: Beth Garmon (Planning)
Subject: Re: 6541 Henry Smith Rd. - Appeal
Attachments: Floorplan.jpg

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

They already have a copy of this floorplan, I gave them that back in July when I applied for the Rural Business the first time around as they made Shane Taylor provide one back in February so I already knew they'd ask me for one.

There's 4 machines. 3 of the tall ones, 1 of the short/wide variety. The only other things in the 1000sq ft are a 4' x 8' table and a bandsaw half the size of the lathe (the short/wide machine).

On Wednesday, November 16, 2022 at 02:26:30 PM EST, Beth Garmon (Planning) <bgarmon@hallcounty.org> wrote:

Thanks, Tyler.

This is helpful. Can you elaborate a little? Are these the only two machines you will have or will there be multiples? Can you provide a floorplan of where the machines are expected to go within the building?

Again, the more detail you can provide, the better.

Thank you,

Beth

Beth Garmon

Planner

Hall County Government

2875 Browns Bridge Road | 3rd Floor | Gainesville, Georgia | 30504

(office)770-531-6809

bgarmon@hallcounty.org

From: Tyler Crawford <tl_crawford@ymail.com>
Sent: Monday, November 14, 2022 10:13 AM
To: Beth Garmon (Planning) <bgarmon@hallcounty.org>
Subject: Re: 6541 Henry Smith Rd. - Appeal

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Beth,

That's great to hear on my end. Obviously why I stopped by several times in the past, you are great at your job and have always been very helpful.

I've attached two pictures of me in front of the machines.

This really centers around the verbiage "LARGE milling machines" which if the county holds themselves to the language in their own municipal code, then it's pretty easy to see these machines aren't large. No one in the industry would define them as large.

I'll stop by a little later today.

Thanks,

Tyler


I Tried Seeing Your Point Of View
THAT FAR UP MY ASS
EXPO
JET
EQUIPMENT & TOOLS
136H
GEARED HEAD BENCH LATHE
INDUCTION HARDENED BEDWAYS


JET
SPEEDS ARE
APPROXIMATE
LOW
HIGH
60-500
500-4200
SERIAL NO.
JET
JET
M
KURT
ACCURACY INTERNATIONAL LTD
ENGLAND

Sent from Yahoo Mail on Android

On Tue, Nov 8, 2022 at 4:31 PM, Beth Garmon (Planning)

<bgarmon@hallcounty.org> wrote:

Hi Tyler,

I have found my way back to Hall County!

During a discussion today of upcoming zoning requests, your appeal came up and it was determined that it might improve your situation if you could provide a couple of things:

1. You mention the machines that you use for your business. Could you send some pictures of the specific machines, preferably with some sort of reference for scale (e.g. a person standing next to them, etc.)

2. Can you list an inventory of the machines you own/use/plan to purchase for your business?

I think that providing some more exact examples of these things will go a long way to putting folks' imaginations to rest as they consider your request.

Please let me know if you have any questions.

Thank you,
Beth Garmon

Beth Garmon
Planner
Hall County Government
2875 Browns Bridge Road | 3rd Floor | Gainesville, Georgia | 30504
(office)770-531-6809
bgarmon@hallcounty.org

HALL COUNTY
GEORGIA
*We have it **all** in Hall*

Original Packet

Provided at 12-5-22 PC Meeting

I, Tyler Crawford, request re-zoning for a partition of the property at 6541 Henry Smith Road, Murrayville, GA 30564 to be considered for a Planned Industrial Development for the purpose of locating a metal building to be constructed and house CNC machinery that belongs to my business Pro-Series Fabrication. The area to be rezoned will be less than 1 acre. This zoning request is for only my business and shall revert back to the original zoning if I close the shop.

I am the sole proprietor of Pro-Series Fabrication and have owned the company for 6 years, currently in Hoschton, GA. Pro-Series Fabrication is in the business of machining aluminum, stainless steel, and plastic machined parts for several businesses in north Georgia as well as sales throughout the US.

I will live in the existing house and work in the proposed shop. All work will be conducted inside the building. No outside storage will be used. I am the only employee of the business and customers do not visit my shop. The shop will be kept up and maintained as it will also be where I live.

The proposed 50'x100' building will exist to house the CNC mills and lathes, required metals, and provide space for our 3d computer modeling services, 3d printing, engraving, and shipping processes. There is not any excessive noises associated with our processes.

Thank you for your consideration.

Tyler Crawford

Provided at 12-5-22 PC Meeting

.com

facebook

Log In



Connect with Pro-Series Fabricatio...

Log In

or

Provided at 12-5-22 PC Meeting

facebook

Log In







Connect with Pro-Series Fabricatio...

Provided at 12-5-22 PC Meeting

facebook

Log In

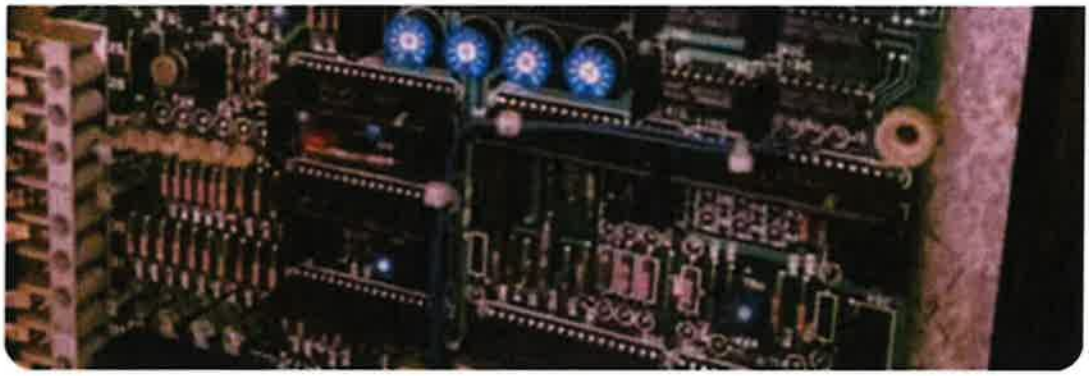


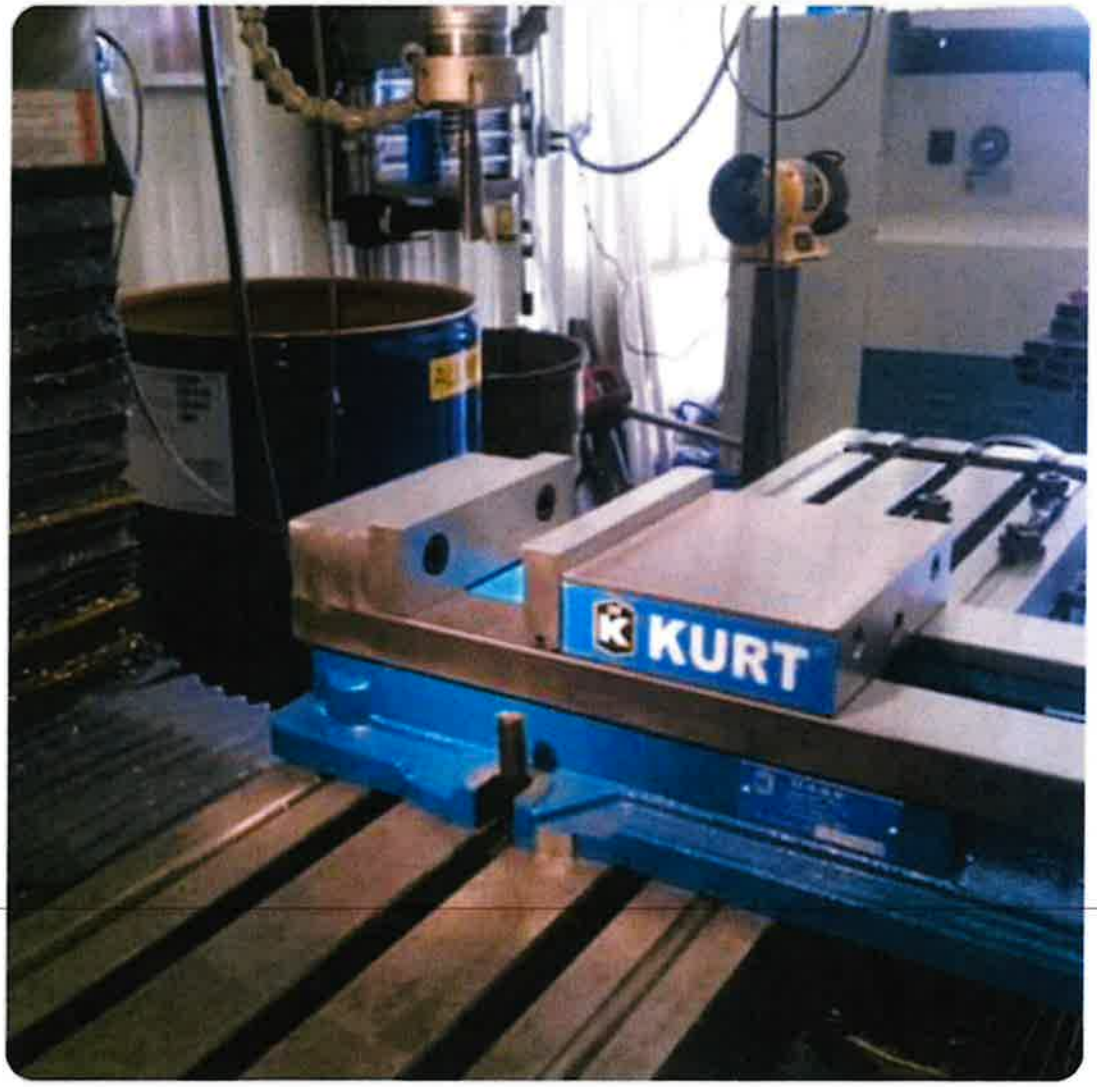




Connect with Pro-Series Fabricatio...

Provided at 12-5-22 PC Meeting







Provided at 12-5-22 PC Meeting



Provided at 12-5-22 PC Meeting



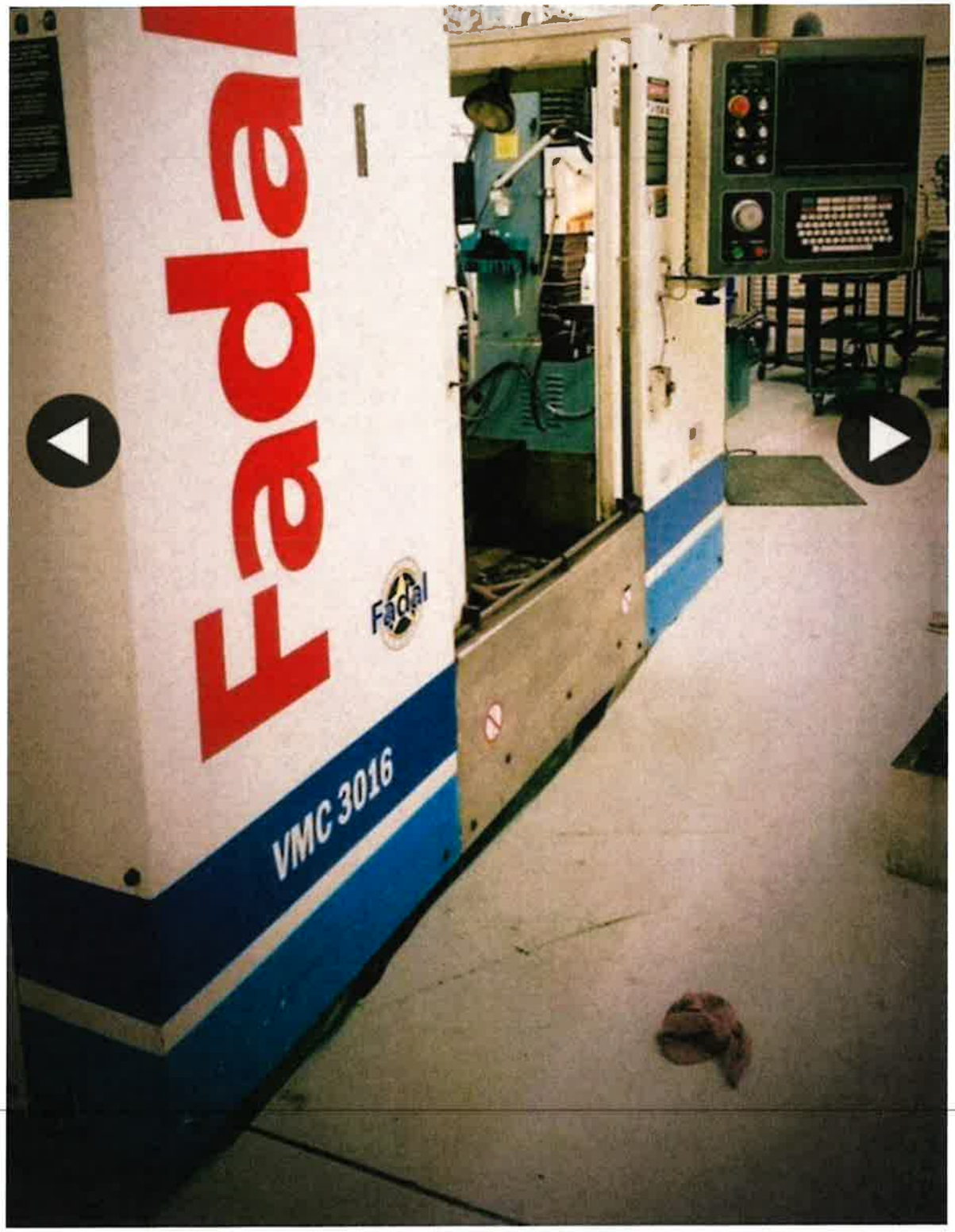
Provided at 12-5-22 PC Meeting

.com





onnect with Pro-Series Fabri



Pro-Series Fabrication

The newest addition to Pro-Series Fabrication, a new (to us) Fadal Engineering, LLC VMC 3016.

Anael Dominguez (Planning)

From: Emily McGahee (Environmental Health)
Sent: Monday, November 14, 2022 12:09 PM
To: Anael Dominguez (Planning); Randi Doveton (Planning)
Cc: Chad Harper (Environmental Health); Kelly Hairston (Environmental Health)
Subject: HCPC Tentative Agenda 12.5.22

Please find Environmental Health comments below:

Items 1 & 2, 4745 Cagle Mill Rd, Boling: Public sewer. Any abandoned well shall be properly closed as per Water Well Standards Act. Any abandoned septic tank shall be pumped by a State certified pumper/hauler and crushed/filled.

Item 3, 2124 Imperial Drive, Maynard: An existing system evaluation will be required.

Item 4, 3252/3264 Poplar Springs Road, Lykins: This plat is currently under review by the Hall County Plat Review Team and Environmental Health can approve the subdivision plat as the lots are considered lots of record.

Item 5, 5625/5633 Bogus Road, Mejia: This plat is currently under review by the Hall County Plat Review Team and Environmental Health can approve the subdivision plat.

Items 6 & 7, 5871 McEver Road, Anchor Inn: Must meet all Environmental Health commercial septic system permitting requirements if plumbing proposed and public sewer not available. A detailed business plan must be submitted to Hall County Environmental Health for review.

Item 8, 6541 Henry Smith, Crawford: Environmental Health issued a septic permit (OSC 7294) for storage building/barn (sink/toilet) in May 2022. The system has not been installed as of this date.

Item 9, Text Amendment: No comment

Emily McGahee
Hall County Environmental Health
Hall County Government Center
2875 Browns Bridge Road
Mailing: PO Box 5901
Gainesville, GA 30504
(770) 531-3973
(770) 531-6767 (fax)

http://dph.georgia.gov/environmental-health (State Website)
http://www.phdistrict2.org/HallCounty.htm (District Website)
http://www.hallcounty.org/devserv/environmental.asp (County Website & Forms)

Anael Dominguez (Planning)

From: Niebauer, Parker J <PNiebauer@dot.ga.gov>
Sent: Thursday, November 17, 2022 2:20 PM
To: Anael Dominguez (Planning); Randi Doveton (Planning)
Cc: Chavers, Veronica E; Peevy, Jonathan
Subject: RE: Tentative Planning Agenda for December 5, 2022

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Please see our comments in red below

#4 (Lynkin) – is the proposal just to move the property line? If so, disregard comment below about GDOT coordination being required.

Thank you,

Parker Niebauer
D1TO Traffic Operations Supervisor

GDOT Georgia Department of Transportation

District 1 Division of Field Services
1475 Jesse Jewell Pkwy
Suite 100
Gainesville, GA, 30501
770.533.8275 office
770.519.3223 cell

From: Anael Dominguez (Planning) <adominguez@hallcounty.org>
Sent: Friday, November 11, 2022 11:14 AM
To: Becky Ruffner (Parks & Leisure) <bruffner@hallcounty.org>; Bill Nash (Public Works) <bnash@hallcounty.org>; Bill Schmid <weschmid@rochester-assoc.com>; Brandi Smith (Business License) <bsmith@hallcounty.org>; Bryan Cash (Fire Services) <bcash@hallcounty.org>; Chad Harper (Environmental Health) <charper@hallcounty.org>; Chris Braswell (Planning) <cbraswell@hallcounty.org>; Christopher Armstrong (Fire Services) <carmstrong@hallcounty.org>; Dan Barnes <Daniel.C.Barnes@usace.army.mi>; Ellis Still (Planning) <estill@hallcounty.org>; Emily McGahee (Environmental Health) <emcgahee@hallcounty.org>; Frank Miller (Engineering) <fmiller@hallcounty.org>; Dykes, Jason <jdykes@dot.ga.gov>; Jason Skarda (Engineering) <jskarda@hallcounty.org>; Jeremy Wills <jeremy.wills@gainesville.org>; John Hornick (Fire Services) <jhornick@hallcounty.org>; Peevy, Jonathan <jpeevy@dot.ga.gov>; Kelly Hairston (Environmental Health) <khairston@hallcounty.org>; Matt Cox <matt.cox@hallco.org>; Michael Vieira (Fire Services) <mvieira@hallcounty.org>; Nicole Griffin (Tax Assessors) <nicole.griffin@hallcounty.org>; nswafford (nswafford@gainesvillega.org) <nswafford@gainesvillega.org>; Pam Cravero <Pam.Cravero@hallco.org>; Niebauer, Parker J <PNiebauer@dot.ga.gov>; Randi Doveton (Planning) <rdoveton@hallcounty.org>; rich <rich@flowerybranchga.org>; Scott Puckett <spuckett@hallcounty.org>; Srikanth Yamala (Public Works) <syamala@hallcounty.org>; Stephen Cain <troy.s.cain@usace.army.mil>; Steve Watson (Real Property) <rswatson@hallcounty.org>; Tammie Croy (Engineering) <tcroy@hallcounty.org>; Tracy Gilreath (Tax Assessors) <tgilreath@hallcounty.org>; Wanda Moreno (Engineering) <wmoreno@hallcounty.org>; Wanda Sutton

(Engineering) <wsutton@hallcounty.org>; will schofield <will.schofield@hallco.org>
Subject: Tentative Planning Agenda for December 5, 2022

Good afternoon –

Here is the Tentative Agenda and Maps for the **Monday, December 5, 2022** Hall County Planning Commission Meeting.

Please use the links to review the documents and respond with comments to Hall County Planning and Development. Failure to provide comments in a timely manner may result in the information not being included in the staff report.

When submitting comments, please include the name of the applicant along with the address of the property with the corresponding comment.

Comments are due by **Friday, November 18th**. Email comments to Randi (rdoveton@hallcounty.org) and Ana (adominguez@hallcounty.org).

CALL TO ORDER

AGENDA REVIEW

APPROVAL OF MINUTES - November 21, 2022

OLD BUSINESS

1. **4745 Cagle Mill Road | Rezone |** from Agricultural Residential-III (AR-III) and Agricultural Residential-IV (AR-IV) to Planned Residential Development (PRD) on a 69.50± acre tract located on the west side of Cagle Mill Road approximately 429 feet from Noah Martin Drive | Zoned AR-III & AR-IV; Tax Parcel 15007 000254 (pt.) | **Proposed use: single family, townhome, & cluster home development, 225 residential units** | ** Commission District 3 | **Josh Boling, applicant.**

2. **4745 Cagle Mill Road | Rezone |** from Agricultural Residential-III (AR-III) to Light Industrial (I-I) on a 5.30± acre tract located on the east side of Cornelia Highway approximately 4,970 feet from Cagle Road | Zoned AR-III; Tax Parcel 15007 000254 (pt.) | **Proposed use: 2 commercial outparcels** | ** Commission District 3 | **Josh Boling, applicant.**

NEW BUSINESS

3. **2124 Imperial Drive | Variance |** for a left side yard setback variance from 10 feet to 3 feet on a .93± acre tract located on the east side of Imperial Drive approximately 72 feet from its intersection with Elysian Circle | Zoned R-I ; Tax Parcel 00094 000006H **| Proposed use: above ground pool |** * Commission District 4 **| Jeff Maynard & Vanessa Schaeffer , applicant.**
   None

4. **3264 & 3252 Poplar Springs Road | Variance |** for a road frontage variance from 150 to 109 feet on a 1.91± acre tract located on the south side of Poplar Springs Road approximately 736 feet from its intersection with Hawthorne Drive | Zoned R-I & AR-III; Tax Parcel 15036C000008 (pt.) & 000009A | **Proposed use: reconfiguration plat** | * Commission District 1 | **Brian Lykins, applicant.**
   GDOT coordination required.

5. **5625 & 5633 Bogus Road | Variance |** for a variance on road frontages and required lot widths from 150 feet to 80 feet for two proposed lots on a 3± acre tract located on the east side of Bogus Road approximately 1,345 feet from its intersection with Wellspring Trail | Zoned AR-IV ; Tax Parcel 12050 000042 & 000043 **| Proposed use: 2-lot subdivision |** * Commission District 3 | **Francisco Mejia, applicant.**
   None

6. **5871 McEver Road | Rezone |** from Agricultural-Residential-III (AR-III) to Highway-Business (H-B) on a 9.06± acre tract located on the east side of McEver Road at its intersection with Silverthorn Drive | Zoned AR-III; Tax

Parcel 08119 000233 | **Proposed use: RV & boat storage |** ** Commission District 2 | **Anchor Inn RV & Boat Storage, applicant.**
None

7. **5871 McEver Road | Use Subject to County Commission Approval |** on a 9.06± acre tract located on the east side of McEver Road at its intersection with Silverthorn Drive | Zoned AR-III; Tax Parcel 08119 000233 | **Proposed use: RV & boat storage |** ** Commission District 2 | **Anchor Inn RV & Boat Storage, applicant.**
None

8. **6541 Henry Smith Road | Appeal an Administrative Decision |** for a Use Subject to Planning Commission approval on a 5.65± acre tract located on the west side of Henry Smith Road at its intersection with Edwards Road | Zoned AR-IV; Tax Parcel 11023 000024 |**Proposed use: rural business |** * Commission District 3 | **Tyler Crawford, applicant.**
None

9. **Section 17.20.300 | Text Amendment, Official Code of Hall County, GA | Amend the Definition of Community Residence |** 17.20.300, ("pregnant or parenting youth who are displaced and /or in State custody.") by amending the definition of a Community Residence. The intent of the proposed change is to expand the type of care facility allowed as a Community Residence. | ** All Districts | **Crystal F. Toombs, applicant.**
None

*The Planning Commission's decision will be the final action taken unless appealed to the Board of Commissioners. To do so, file an application with the Planning Department within five working days of the Planning Commission's decision.

The Hall County Board of Commissioners will hear appeals at a public hearing Thursday, January 12, 2023 at 6:00 p.m. at the Hall County Government Center, 2nd Floor Meeting Room, 2875 Browns Bridge Road, Gainesville, Georgia.

**The Planning Commission's recommendation will be forwarded to the Board of Commissioners for final action at a public hearing on Thursday, January 12, 2023. The Board will meet at 6:00 p.m. at the Hall County Government Center, 2nd Floor Meeting Room, 2875 Browns Bridge Road, Gainesville, Georgia.

Thank you,
Ana Dominguez
Planning Commission Clerk
Hall County Government
2875 Browns Bridge Road, Gainesville, GA 30504
www.hallcounty.org | 770-531-6810

HALL COUNTY
GEORGIA
We have it all in Hall

Georgia is a state of natural beauty. And it's a state that spends millions each year cleaning up litter that not only mars that beauty, but also affects road safety, the environment and the economy. Do your part – don't litter. How can you play an active role in protecting the splendor of the Peach State? Find out at http://keepgaclean.com/.

HALL COUNTY
GEORGIA

POST OFFICE DRAWER 1435
GAINESVILLE, GA 30503

t: 770.531.6800 | f: 770.531.3945

SRIKANTH YAMALA
Director

BILL NASH, P.E.
Assistant Director

FRANKLIN P. MILLER, P.E.
County Engineer

Hall County Government

PUBLIC WORKS AND UTILITIES
ENGINEERING DIVISION

M E M O R A N D U M

To: Randi Doveton, Director of Planning and Development

From: Srikanth Yamala, Director of Public Works and Utilities

Date: November 17, 2022

Subject: December 5, 2022 - Hall County Planning Commission Agenda

Please be advised that our office has reviewed the Hall County Planning Commission agenda for the December 5, 2022 meeting. Upon review, we provide the following comments.

OLD BUSINESS

1. **4745 Cagle Mill Road | Rezone |** from Agricultural Residential-III (AR-III) and Agricultural Residential-IV (AR-IV) to Planned Residential Development (PRD) on a 69.50± acre tract located on the west side of Cagle Mill Road approximately 429 feet from Noah Martin Drive | Zoned AR-III & AR-IV; Tax Parcel 15007 000254 (pt.) **| Proposed use: single family, townhome, & cluster home development, 225 residential units |** ** Commission District 3 | **Josh Boling, applicant.**

   a) **Engineering:** The site may require a stormwater management report should the site plan indicate the proposed development meets stormwater threshold for impervious surfaces and/or disturbed acreage
   Show FEMA and Hall County studied flood plain
   Part of North Oconee Water Protection District.
   Hall County will not maintain a bridge over river.
   b) **Traffic:** 1. Access onto Cornelia Hwy (SR365) must be approved and permitted by GDOT.
   2. Internal roadways are proposed to be private; however, they still need to meet Hall County Code Title 16 (subdivision regulations). Any proposed variances to Title 16 must be specific, justified and approved through the rezoning process. In addition, there is a proposed bridge shown near the Cornelia Hwy (SR365) entrance and it should be noted that Hall County does not accept bridges into County maintenance. A cul-de sac will be required at the end of the proposed County maintained section. Current site plan does not meet Hall County requirements.
   3. Recommend that the gravel section of Cagle Mill Road from existing end of pavement to White Hall Road (approximately 1,400 feet) be improved and paved to Hall County standards to provide safe and efficient access to and from the site via Old Cornelia Highway/White Hall Road.
   4. Recommend that all necessary improvements be the financial responsibility of the developer and constructed concurrently with the development.
   c) **Utilities:** Hall County Sewer district.
   Sewer lift station @ 365.

HALL COUNTY
GEORGIA

POST OFFICE DRAWER 1435
GAINESVILLE, GA 30503

t: 770.531.6800 | f: 770.531.3945

SRIKANTH YAMALA
Director

BILL NASH, P.E.
Assistant Director

FRANKLIN P. MILLER, P.E.
County Engineer

Hall County Government

PUBLIC WORKS AND UTILITIES
ENGINEERING DIVISION

2. **4745 Cagle Mill Road | Rezone |** from Agricultural Residential-III (AR-III) to Light Industrial (I-I) on a 5.30± acre tract located on the east side of Cornelia Highway approximately 4,970 feet from Cagle Road | Zoned AR-III; Tax Parcel 15007 000254 (pt.) | **Proposed use: 2 commercial outparcels** | ** Commission District 3 | **Josh Boling, applicant.**

   a) **Engineering:** The site may require a stormwater management report should the site plan indicate the proposed development meets stormwater threshold for impervious surfaces and/or disturbed acreage.
   Show FEMA and Hall County studied flood plain.
   Part of North Oconee Water Protection District.
   Show buffer and impervious setback from wrested vegetation, not centerline of creek. (150')
   Hall County will not maintain bridge over river.
   b) **Traffic:** 1. Access onto Cornelia Hwy (SR365) must be approved and permitted by GDOT.
   2. Roadway will need to meet Hall County industrial standards.
   3. There is a proposed bridge shown near the Cornelia Hwy (SR365) entrance and it should be noted that Hall County does not accept bridges into County maintenance. A cul-de sac will be required at the end of the proposed County maintained section.
   4. Recommend that all necessary improvements be the financial responsibility of the developer and constructed concurrently with the development.
   c) **Utilities:** Sewer at 365, need sewer availability letter flows?

NEW BUSINESS

3. **2124 Imperial Drive | Variance |** for a left side yard setback variance from 10 feet to 3 feet on a .93± acre tract located on the east side of Imperial Drive approximately 72 feet from its intersection with Elysian Circle | Zoned R-I ; Tax Parcel 00094 000006H **| Proposed use: above ground pool |** * Commission District 4 **| Jeff Maynard & Vanessa Schaeffer , applicant.**

   a) **Engineering:** No Comments
   b) **Traffic**: No Comments
   c) **Utilities**: No Comments

4. **3264 & 3252 Poplar Springs Road | Variance |** for a road frontage variance from 150 to 109 feet on a 1.91± acre tract located on the south side of Poplar Springs Road approximately 736 feet from its intersection with Hawthorne Drive | Zoned R-I & AR-III; Tax Parcel 15036C000008 (pt.) & 000009A | **Proposed use: reconfiguration plat** | * Commission District 1 | **Brian Lykins, applicant.**

   a) **Engineering:** No Comments
   b) **Traffic:** Need authorization from the GDOT for new or modifications to existing driveways.
   c) Utilities: City of Oakwood Sewer District

HALL COUNTY
GEORGIA

POST OFFICE DRAWER 1435
GAINESVILLE, GA 30503

t: 770.531.6800 | f: 770.531.3945

SRIKANTH YAMALA
Director

BILL NASH, P.E.
Assistant Director

FRANKLIN P. MILLER, P.E.
County Engineer

Hall County Government

PUBLIC WORKS AND UTILITIES
ENGINEERING DIVISION

5. **5625 & 5633 Bogus Road | Variance |** for a variance on road frontages and required lot widths from 150 feet to 80 feet for two proposed lots on a 3± acre tract located on the east side of Bogus Road approximately 1,345 feet from its intersection with Wellspring Trail | Zoned AR-IV ; Tax Parcel 12050 000042 & 000043 **| Proposed use: 2-lot subdivision |** * Commission District 3 | **Francisco Mejia, applicant.**

a) **Engineering:** No Comments
b) **Traffic:** No Comments
c) **Utilities:** No Comments

6. **5871 McEver Road | Rezone |** from Agricultural-Residential-III (AR-III) to Highway-Business (H-B) on a 9.06± acre tract located on the east side of McEver Road at its intersection with Silverthorn Drive | Zoned AR-III; Tax Parcel 08119 000233 **| Proposed use: RV & boat storage |** ** Commission District 2 | **Anchor Inn RV & Boat Storage, applicant.**

a) **Engineering:** This site may require a stormwater management report should the site plan indicate the proposed development meets stormwater thresholds for impervious surfaces and/or disturbed acreage. Stream and impervious setback from wrested vegetation not centerline of stream.
b) **Traffic:** Adequate connection to roadway is not clear. Traffic study will be required that documents/impacts to the McEver Road/Lights Ferry intersection. Improvements that remediate impacts to intersection will be required.
c) **Utilities:** Flowery Branch Sewer District

7. **5871 McEver Road | Use Subject to County Commission Approval |** on a 9.06± acre tract located on the east side of McEver Road at its intersection with Silverthorn Drive | Zoned AR-III; Tax Parcel 08119 000233 **| Proposed use: RV & boat storage |** ** Commission District 2 **| Anchor Inn RV & Boat Storage, applicant.**

a) **Engineering:** This site may require a stormwater management report should the site plan indicate the proposed development meets stormwater thresholds for impervious surfaces and/or disturbed acreage.
b) **Traffic:** Adequate connection to roadway is not clear. Traffic study will be required that documents/impacts to the McEver Road/Lights Ferry intersection. Improvements that remediate impacts to intersection will be required.
c) **Utilities:** No Comments

8. **6541 Henry Smith Road | Appeal an Administrative Decision |** for a Use Subject to Planning Commission approval on a 5.65± acre tract located on the west side of Henry Smith Road at its intersection with Edwards Road | Zoned AR-IV; Tax Parcel 11023 000024 **|Proposed use: rural business |** * Commission District 3 | **Tyler Crawford, applicant.**

HALL COUNTY
GEORGIA

POST OFFICE DRAWER 1435
GAINESVILLE, GA 30503

t: 770.531.6800 | f: 770.531.3945

SRIKANTH YAMALA
Director

BILL NASH, P.E.
Assistant Director

FRANKLIN P. MILLER, P.E.
County Engineer

Hall County Government

PUBLIC WORKS AND UTILITIES
ENGINEERING DIVISION

a) **Engineering:** This site may require a stormwater management report should the site plan indicate the proposed development meets stormwater thresholds for impervious surfaces and/or disturbed acreage.
b) **Traffic:** No Comments
c) **Utilities:** No Comments

9. **Section 17.20.300 | Text Amendment, Official Code of Hall County, GA | Amend the Definition of Community Residence** | 17.20.300, ("pregnant or parenting youth who are displaced and /or in State custody.") by amending the definition of a Community Residence. The intent of the proposed change is to expand the type of care facility allowed as a Community Residence. | ** All Districts | **Crystal F. Toombs, applicant.**

a) **Engineering:** No Comments
b) **Traffic:** No Comments
c) **Utilities:** No Comments

Jennifer Rivera (Administration)

From: Anael Dominguez (Planning)
Sent: Wednesday, January 4, 2023 12:08 PM
To: Jennifer Rivera (Administration)
Cc: Abril Olivas (Administration)
Subject: FW: Proposed structure

Hey Jennifer,
Just received this email from the Fire Marshalls office.

Thank you,
Ana Dominguez
Planning Commission Clerk
Hall County Government
2875 Browns Bridge Road, Gainesville, GA 30504
www.hallcounty.org | 770-531-6810

HALL COUNTY
GEORGIA
We have it all in Hall

From: Randi Doveton (Planning) <rdoveton@hallcounty.org>
Sent: Wednesday, January 4, 2023 11:04 AM
To: Anael Dominguez (Planning) <adominguez@hallcounty.org>
Subject: FW: Proposed structure

Ana,
Please add this email to the Tyler Crawford folder

From: John Hornick (Fire Services) <jhornick@hallcounty.org>
Sent: Wednesday, January 4, 2023 10:29 AM
To: Michael Vieira (Fire Services) <mvieira@hallcounty.org>; Randi Doveton (Planning) <rdoveton@hallcounty.org>; David Webb (Planning) <dwebb@hallcounty.org>
Cc: tl_crawford@ymail.com
Subject: RE: Proposed structure

Good Morning,

The proposed location of your commercial building is 9,496 feet away from the closest fire hydrant located on highway 52. For your commercial project to meet fire code you would have to install a fire hydrant no greater than 500 feet from the building as the truck travels. As of right now Gainesville Water has no plans to extend the water line to the area of your proposed project. The cost of extending the water line and fire hydrant would be your responsibility. The code has an exception that allows for the installation of a private water supply for fire protection. The private system would have to be capable of supplying the required fire flow for fire protection and would have to meet NFPA 22 and 24 standards.

Thanks

Lt. John Hornick
Hall County Fire Rescue

From: Michael Vieira (Fire Services) <mvieira@hallcounty.org>
Sent: Wednesday, January 4, 2023 8:31 AM
To: John Hornick (Fire Services) <jhornick@hallcounty.org>
Subject: FW: Proposed structure

See below. Please contact him.

From: Tyler Crawford <tl_crawford@ymail.com>
Sent: Tuesday, January 3, 2023 6:22 PM
To: Michael Vieira (Fire Services) <mvieira@hallcounty.org>
Subject: Proposed structure

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Mr. Vieira,

My name is Tyler Crawford and I am the property owner at 6541 Henry Smith Road, Murrayville, GA 30564.

I was recently passed by the Hall County Planning Commission for a conditional-use variance known as a Rural Business (per 17.350.140) but have been appealed by a neighbor to the Board of Commissioners.

The purpose of my email is to inquire about any concerns or limitations placed by the county fire services for my building.

The Planning Commission's Condition 2 states from their approval:

2. The Applicant shall comply with requirements from the Hall County Fire Marshal

Would you have any insight into this condition?

Seems really vague to me and I would love to have your opinion on the application before my BoC meeting next Thursday, 1/12/23.

The business would be located within a coldform-constructed metal building and would not have any flammable liquids/solids in the building.

If you would like, I am available to meet at the building site at any time but will be there working on final construction 1/5-1/8

Thank you for your time,
Tyler Crawford
(404) 226-4443

Anael Dominguez (Planning)

From: John Hornick (Fire Services)
Sent: Friday, November 18, 2022 12:08 PM
To: Randi Doveton (Planning); Anael Dominguez (Planning)
Cc: Michael Vieira (Fire Services)
Subject: Planning Commission Fire Comments

1. **6541 Henry Smith Road | Appeal an Administrative Decision |** for a Use Subject to Planning Commission approval on a 5.65± acre tract located on the west side of Henry Smith Road at its intersection with Edwards Road | Zoned AR-IV; Tax Parcel 11023 000024 |**Proposed use: rural business |** * Commission District 3 | **Tyler Crawford, applicant.**
   The closest fire hydrant to the proposed rural business site is located 9,496 feet away on Highway 52.

Regards,

John Hornick, NPQ Fire Inspector 1, Plans Review
Lieutenant, Hall County Fire Rescue
Hall County Government
Main: 770-531-6838 | Cell: 404-597-0083
Website: www.Hallcounty.org


ZONING NOTICE
AN APPLICATION HAS BEEN FILED WITH HALL COUNTY IN REGARD TO THE ZONING REGULATIONS AS THEY APPLY TO THIS PROPERTY
APPLICANT: TYLER CRAWFORD
REQUEST: APPEAL OF AN ADMINISTRATIVE DECISION- RURAL BUSINESS
PUBLIC HEARINGS WILL BE HELD ON:
PLANNING COMMISSION
Date: DEC.5,2022
Time: 5:15 PM
IF APPEALED
COUNTY COMMISSION
Date: JAN.12,2023
Time: 6:00 PM
HALL COUNTY GOVERNMENT CENTER, 2875 BROWNS BRIDGE ROAD, GAINESVILLE, GA
FOR MORE INFORMATION CALL: (770) 531-6809
HALL COUNTY BUILDING INSPECTION
NTS2022-00243
Storage Bldg/Barn
6541 Henry Smith Rd
Homeowner
Brad Cochran

AGENDA ITEM

Public Works and Utilities

REPORT TO: **Work Session (01/09/23)**

REPORT TO: **Voting Meeting (01/12/23)**

ITEM NO: 744/2022

SUBJECT: Public Hearing to abandon a section of public road between the cul-de-sac at the end of Kubota Way and the intersection of Kubota Way and Gateway Centre Parkway; and authorize the Chairman to execute any and all documents necessary to convey the property, subject to review and approval by the County Attorney. Commission District 3.

Meetings:

Work Session Date: 01/09/23 **Voting Meeting Date:** 01/12/23

Executive Summary:

Presenter: SY

Recommendation:
Approval

Purpose of Request:
Conduct a public hearing to abandon a section of public road between the cul-de-sac at the end of Kubota Way and the intersection of Kubota Way and Gateway Centre Parkway. Commission District 3.

History:
NA

Facts and Issues:
The Board of Commissioners voted on December 8, 2022 to initiate the abandonment process. A public hearing is required to be conducted on January 12, 2023 to complete the abandonment.

Options:
NA

Funding Requested	$ 0.00
Are funds within current budget?	No
Source of Funds	
Does the action involve a Resolution, Ordinance, Contract, Agreement, etc.?	No
Has it been reviewed by the County Attorney?	Yes
Is there a deadline for this item?	

Approvals:

Submit	Approve	Budget	Finance
SY	SY	TS	WG

Attorney	Administration	Clerk
WLI	CR	JR

Attachments:

Quit Claim Deed
Petition for Road Abandonment
Kubota Way ROW Exhibit

HALL COUNTY BOARD OF COMMISSIONERS
FINANCIAL SUPPLEMENT REPORT

AGENDA ITEM 744/2022

Funds Requested: $ 0.00

Request Budgeted: No

Proposed Source of Funding:

Budget Transfer Requested: No

Funding Source Items:

Budget Transfer Items:

Additional Information/Comments:

Contact for Questions: SY

Phone: 7705316800

QUIT-CLAIM DEED

STATE OF GEORGIA
HALL COUNTY

THIS INDENTURE, made this _____ day of _____ in the year of our Lord Two Thousand and Twenty-Two between **HALL COUNTY**, a political subdivision of the State of Georgia, as party or parties of the first part, and **KUBOTA MANUFACTURING OF AMERICA CORPORATION**, as party or parties of the second part, (the words "party or parties of the first part" and "party or parties of the second part" to include their respective heirs, successors and assigns where the context requires or permits).

WITNESSETH: That the said party of the first part for and in consideration of the sum of One Dollar ($1.00) and other valuable consideration, cash in hand paid, the receipt of which is hereby acknowledged, has bargained, sold and does by these presents bargain, sell, remise, release and forever quit-claim to the said party of the second part, all the right, title, interest, claim or demand which the said party of the first part has or may have had in and to:

> All that tract or parcel of land being 3.218 acres in size and delineated as Kubota Way on that certain plat of survey prepared for the Kubota Way Extension by Rochester & Associates, Inc., dated December 11, 2017, which plat is attached hereto as **Exhibit "A"**, and incorporated herein by reference.

THIS DEED IS GIVEN TO RELEASE THE ABOVE-DESCRIBED PROPERTY FROM ANY CLAIM BY HALL COUNTY FOR USE AS A ROAD. NOTHING HEREIN IS INTENDED TO INTERFERE WITH ANY EXISTING EASEMENTS OR OTHER CLAIMS OF PERSONS NOT A PARTY HERETO.

with all the rights, members and appurtenances to the said described premises in anywise appertaining or belonging.

TO HAVE AND TO HOLD the said described premises unto the said party of the second part, so that neither the said party of the first part nor any person claiming under it shall at any time, claim or demand any right, or interest to the aforesaid described premises or its appurtenances.

IN WITNESS WHEREOF, the said party of the first part has signed this deed the day and year first above written.

Signed, sealed and delivered
in the presence of:

_____
Unofficial Witness

_____
Notary Public
My Commission Expires:_____

(Notary Seal)

HALL COUNTY, GEORGIA

By: _____
Chairman

Attest: _____
Clerk

(Seal)

4885-7961-0949, v. 1

HALL COUNTY

POST OFFICE DRAWER 1435
GAINESVILLE, GA 30503

t: 770.531.6800 | f: 770.531.3945

SRIKANTH YAMALA
Public Works Director

BILL NASH, P.E.
Asst. Public Works Director

FRANKLIN P. MILLER, P.E.
County Engineer

Hall County Government

PUBLIC WORKS & UTILITIES
ENGINEERING

PETITION FOR ROAD ABANDONMENT/CLOSING

We, the undersigned property owners, presently own land which abuts _____

Kubota Way, respectfully request that Kubota Way

_____ be closed and abandoned by Hall County as follows:

(Section or length of road in question)

Beginning at the intersection of Kubota Way and Gateway Centre Parkway and ending at the cul-de-sac at the end of Kubota Way

We are making this request for the following reasons:

1. Kubota Way is surrounded on all sides by facilities owned by Kubota Manufacturing of America Corporation ("Kubota").
2. Kubota would like to restrict access to its facilities by closing Kubota Way to the public since there is no connection to a public road beyond the intersection with Gateway Centre Parkway.

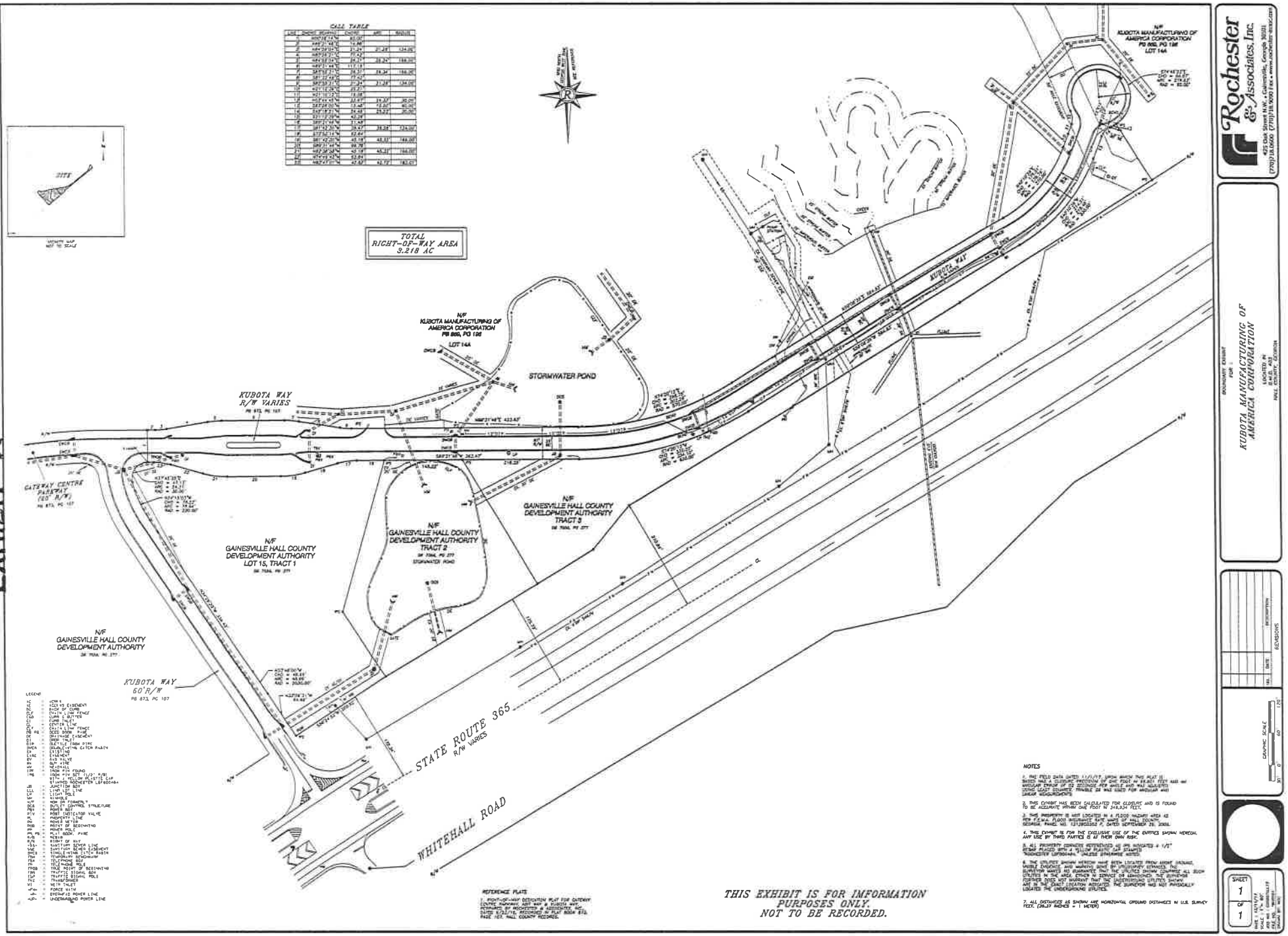
We hereby certify that we represent all of the property owners which abut

and have access to this section of:

Kubota Way
(Road Name)

Name (printed)	Signature	Address	Telephone #
Gainesville and Hall County Development Authority	By: William Bagwell William Bagwell, Chairman	P.O. Box 3280 Gainesville GA 30503	770.536.0101
Kubota Manufacturing of America Corporation	By: Title: VP	2715 Ramsey Rd Gainesville GA 30501	770.532.0038

EXHIBIT "A"



THIS EXHIBIT IS FOR IMFORMATION PURPOSES ONLY. NOT TO BE RECORDED.

NOTES

1. THIS FIELD DATA DATED 11/1/17, UPON WHICH THIS PLAT IS BASED HAS A CLOSURE PRECISION OF ONE FOOT IN 69,801 FEET AND AN ANGULAR ERROR OF 22 SECONDS PER ANGLE AND WAS ADJUSTED USING LEAST SQUARES. TRIMBLE 28 WAS USED FOR ANGULAR AND LINEAR MEASUREMENTS.

2. THIS EXHIBIT HAS BEEN CALCULATED FOR CLOSURE AND IS FOUND TO BE ACCURATE WITHIN ONE FOOT IN 348,934 FEET.

3. THIS PROPERTY IS NOT LOCATED IN A FLOOD HAZARD AREA AS PER F.E.M.A. FLOOD INSURANCE RATE MAPS OF HALL COUNTY, GEORGIA, PANEL NO. 13139C0352 F, DATED SEPTEMBER 29, 2006.

4. THIS EXHIBIT IS FOR THE EXCLUSIVE USE OF THE ENTITIES SHOWN HEREON. ANY USE BY THIRD PARTIES IS AT THEIR OWN RISK.

5. ALL PROPERTY CORNERS REFERENCED AS SPE INDICATES A 1/2" REBAR PLACED WITH A "FLOOR HEATING CAP STAMPED "ROCHESTER LIFEBOARD", UNLESS OTHERWISE NOTED.

6. THE UTILITIES SHOWN HEREON HAVE BEEN LOCATED FROM ABOVE GROUND, VISIBLE EVIDENCE AND MARKING DONE BY UTILITIES/PIPE SERVICES. THE SURVEYOR MAKES NO GUARANTEE THAT THE UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

7. ALL DISTANCES AS SHOWN ARE HORIZONTAL GROUND DISTANCES IN U.S. SURVEY FEET. (39.37 INCHES = 1 METER)

Rochester & Associates, Inc.
425 Oak Street N.W. • Gainesville, Georgia 30501
(770) 718.0600 (770) 718.9090 Fax • www.rochester-inc.com

BOUNDARY EXHIBIT FOR:
KUBOTA MANUFACTURING OF AMERICA CORPORATION
LOCATED IN: B.M.D. 403 HALL COUNTY, GEORGIA

NO.	DATE	DESCRIPTION

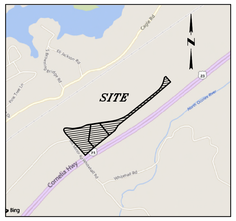
REVISIONS

GRAPHIC SCALE 30' 0' 60' 120'

SHEET 1 OF 1

CALL TABLE

LINE	CHORD BEARING	CHORD	ARC	RADIUS
1	N00°28'14"W	60.00'		
2	N89°31'46"E	14.88'		
3	N84°59'04"E	21.24'	21.26'	134.00'
4	N80°26'21"E	77.42'		
5	N84°59'04"E	26.31'	26.34'	166.00'
6	N89°31'46"E	117.15'		
7	S85°55'31"E	26.31'	26.34'	166.00'
8	S81°22'49"E	77.42'		
9	S85°55'31"E	21.24'	21.26'	134.00'
10	N21°12'39"E	25.21'		
11	N21°10'12"E	19.06'		
12	N03°44'45"W	23.67'	24.33'	30.00'
13	S63°26'00"W	12.48'	12.50'	60.00'
14	S45°18'21"W	24.49'	25.23'	30.00'
15	S21°12'39"W	43.36'		
16	S89°31'46"W	51.48'		
17	S81°42'30"W	36.47'	36.58'	134.00'
18	S73°53'14"W	62.64'		
19	S81°42'30"W	45.18'	45.32'	166.00'
20	S89°31'46"W	99.79'		
21	N82°38'58"W	45.18'	45.32'	166.00'
22	N74°49'42"W	62.64'		
23	N83°47'01"W	42.62'	42.72'	183.01'



VICINITY MAP
NOT TO SCALE

TOTAL
RIGHT-OF-WAY AREA
3.218 AC

N
GRID NORTH
GEORGIA WEST ZONE
SEE REFERENCE

N/F
KUBOTA MANUFACTURING OF
AMERICA CORPORATION
PB 869, PG 196
LOT 14A

N/F
KUBOTA MANUFACTURING OF
AMERICA CORPORATION
PB 869, PG 196
LOT 14A

KUBOTA WAY
R/W VARIES
PB 873, PG 107

GATEWAY CENTRE
PARKWAY
(60' R/W)
PB 873, PG 107

KUBOTA WAY
60'R/W
PB 873, PG 107

STORMWATER POND

N/F
GAINESVILLE HALL COUNTY
DEVELOPMENT AUTHORITY
LOT 15, TRACT 1
DB 7056, PG 377

N/F
GAINESVILLE HALL COUNTY
DEVELOPMENT AUTHORITY
TRACT 2
DB 7056, PG 377
STORMWATER POND

N/F
GAINESVILLE HALL COUNTY
DEVELOPMENT AUTHORITY
TRACT 3
DB 7056, PG 377

N/F
GAINESVILLE HALL COUNTY
DEVELOPMENT AUTHORITY
DB 7056, PG 377

STATE ROUTE 365
R/W VARIES

WHITEHALL ROAD

KUBOTA WAY
R/W VARIES

CREEK
50' STREAM BUFFER
75' IMPERVIOUS BUFFER
25' STREAM BUFFER
50' STREAM BUFFER
75' IMPERVIOUS BUFFER

EX. SANITARY SEWER LINE
30' SSE

PUMP STATION

EX. 6"DIP SAN.FM

EX. 8"DIP SAN.FM

EXISTING 4'x5'
BOX CULVERT

FLUME

N89°31'46"E 423.63'

S89°31'46"W 363.47'

N74°20'12"E
CHD = 298.75'
ARC = 302.28'
RAD = 570.00'

S74°20'12"W
CHD = 330.20'
ARC = 334.10'
RAD = 630.00'

N59°08'39"E 594.63'

S29°08'39"W 594.63'

N40°10'39"E
CHD = 178.36'
ARC = 178.45'
RAD = 270.00'

S40°10'39"W
CHD = 214.45'
ARC = 220.80'
RAD = 250.00'

S74°45'23"E
CHD = 88.87'
ARC = 276.93'
RAD = 60.00'

N37°45'35"E
CHD = 47.13'
ARC = 54.21'
RAD = 30.00'

N24°15'03"W
CHD = 78.22'
ARC = 78.64'
RAD = 220.00'

N24°29'29"W 344.43'

N33°48'00"W
CHD = 48.99'
ARC = 48.99'
RAD = 2030.00'

N33°06'31"W
94.96'

S56°24'52"W 200.92'

145.22'

218.25'

210.84'

175.72'

172.34'

LEGEND

AC	-	ACRES
AE	-	ACCESS EASEMENT
BC	-	BACK OF CURB
CLF	-	CHAIN LINK FENCE
C&G	-	CURB & GUTTER
CI	-	CURB INLET
CL	-	CENTER LINE
CLF	-	CHAIN LINK FENCE
DB, PG	-	DEED BOOK, PAGE
DE	-	DRAINAGE EASEMENT
DI	-	DROP INLET
DIP	-	DUCTILE IRON PIPE
DWCB	-	DOUBLE-WING CATCH BASIN
EX	-	EXISTING
EASE	-	EASEMENT
GV	-	GAS VALVE
GW	-	GUY WIRE
HW	-	HEADWALL
IPF	-	IRON PIN FOUND
IPS	-	IRON PIN SET (1/2" R/B) WITH A YELLOW PLASTIC CAP STAMPED ROCHESTER LSF000484
JB	-	JUNCTION BOX
LLL	-	LAND LOT LINE
LP	-	LIGHT POLE
MH	-	MANHOLE
N/F	-	NOW OR FORMERLY
OCS	-	OUTLET CONTROL STRUCTURE
PBX	-	POWER BOX
PIV	-	POST INDICATOR VALVE
PL	-	PROPERTY LINE
PM	-	POWER METER
POB	-	POINT OF BEGINNING
PP	-	POWER POLE
PB, PG	-	PLAT BOOK, PAGE
R/B	-	REBAR
R/W	-	RIGHT OF WAY
-SS-	-	SANITARY SEWER LINE
SSE	-	SANITARY SEWER EASEMENT
SNCB	-	SINGLE-WING CATCH BASIN
TBM	-	TEMPORARY BENCHMARK
TBX	-	TELEPHONE BOX
TP	-	TELEPHONE POLE
TPOB	-	TRUE POINT OF BEGINNING
TSB	-	TRAFFIC SIGNAL BOX
TSP	-	TRAFFIC SIGNAL POLE
TNZ	-	TRANSFORMER
WI	-	WEIR INLET
-FM-	-	FORCE MAIN
-P-	-	OVERHEAD POWER LINE
-UP-	-	UNDERGROUND POWER LINE

REFERENCE PLATS

1. RIGHT-OF-WAY DEDICATION PLAT FOR GATEWAY CENTRE PARKWAY, ABIT WAY & KUBOTA WAY, PREPARED BY ROCHESTER & ASSOCIATES, INC., DATED 6/23/16, RECORDED IN PLAT BOOK 873, PAGE 107, HALL COUNTY RECORDS.

NOTES

1. THE FIELD DATA DATED 11/1/17, UPON WHICH THIS PLAT IS BASED HAS A CLOSURE PRECISION OF ONE FOOT IN 56,901 FEET AND AN ANGULAR ERROR OF 02 SECONDS PER ANGLE AND WAS ADJUSTED USING LEAST SQUARES. TRIMBLE S6 WAS USED FOR ANGULAR AND LINEAR MEASUREMENTS.

2. THIS EXHIBIT HAS BEEN CALCULATED FOR CLOSURE AND IS FOUND TO BE ACCURATE WITHIN ONE FOOT IN 349,934 FEET.

3. THIS PROPERTY IS NOT LOCATED IN A FLOOD HAZARD AREA AS PER F.E.M.A. FLOOD INSURANCE RATE MAPS OF HALL COUNTY, GEORGIA, PANEL NO. 131,39C0302 F, DATED SEPTEMBER 29, 2006.

4. THIS EXHIBIT IS FOR THE EXCLUSIVE USE OF THE ENTITIES SHOWN HEREON, ANY USE BY THIRD PARTIES IS AT THEIR OWN RISK.

5. ALL PROPERTY CORNERS REFERENCED AS IPS INDICATES A 1/2" REBAR PLACED WITH A YELLOW PLASTIC CAP STAMPED "ROCHESTER LSF000484," UNLESS OTHERWISE NOTED.

6. THE UTILITIES SHOWN HEREON HAVE BEEN LOCATED FROM ABOVE GROUND, VISIBLE EVIDENCE, AND MARKING DONE BY UTILISURVEY SERVICES. THE SURVEYOR MAKES NO GUARANTEE THAT THE UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

7. ALL DISTANCES AS SHOWN ARE HORIZONTAL GROUND DISTANCES IN U.S. SURVEY FEET. (39.37 INCHES = 1 METER)

THIS EXHIBIT IS FOR IMFORMATION PURPOSES ONLY. NOT TO BE RECORDED.

Rochester & Associates, Inc.
425 Oak Street N.W. • Gainesville, Georgia 30501
(770)718.0600 (770)718.9090 Fax • www.rochester-assoc.com

BOUNDARY EXHIBIT
FOR :

KUBOTA WAY EXTENSION

LOCATED IN
G.M.D. 403
HALL COUNTY, GEORGIA

NO.	DATE	REVISIONS

GRAPHIC SCALE
30' 0' 60' 120'

SHEET 1 OF 1

DATE : 12/11/17
SCALE : 1" = 60'
JOB NO. : G20907DJ115
FILE NO. : 42DRY01
DRAWN BY: WDC

AGENDA ITEM

Public Works and Utilities

REPORT TO: **Work Session (01/09/23)**

REPORT TO: **Voting Meeting (01/12/23)**

ITEM NO: 745/2022

SUBJECT: Public Hearing to abandon +/- 573' of public road on Old Cornelia Highway formerly known as Old Sulphur Spring Road and authorize the Chairman to execute any and all documents necessary to convey the property, subject to review and approval by the County Attorney. Commission District 3.

Meetings:

Work Session Date: 01/09/23 **Voting Meeting Date:** 01/12/23

Executive Summary:

Presenter: SY

Recommendation:
Approval

Purpose of Request:
Conduct a public hearing to abandon +/- 573' of public road on Old Cornelia Highway. Commission District 3.

History:
NA

Facts and Issues:
The abandonment section of the roadway for the properties is under contract to be purchased for a mixed-use site development project. A section of the roadway is gravel and is not maintained by Hall County. This roadway only provides driveway access to two single-family rental homes and one abandoned structure. The Board of Commissioners voted on December 8, 2022 to initiate the abandonment process. A public hearing is required to be conducted on January 12, 2023 to complete the abandonment.

Options:
NA

Funding Requested $ 0.00

Are funds within current budget? No

Source of Funds

Does the action involve a Resolution, Ordinance, Contract, Agreement, etc.?	No
Has it been reviewed by the County Attorney?	Yes
Is there a deadline for this item?	

Approvals:

Submit	Approve	Budget	Finance
SY	SY	TS	WG

Attorney	Administration	Clerk
WLI	CR	JR

Attachments:

Abandonment Petition
Site Plan

HALL COUNTY BOARD OF COMMISSIONERS
FINANCIAL SUPPLEMENT REPORT

AGENDA ITEM 745/2022

Funds Requested: $ 0.00

Request Budgeted: No

Proposed Source of Funding:

Budget Transfer Requested: No

Funding Source Items:

Budget Transfer Items:

Additional Information/Comments:

Contact for Questions: SY

Phone: 7705316800

Authentisign ID: 58998717-C311-ED11-BD6E-501AC56BB54D

HALL COUNTY
GEORGIA

POST OFFICE DRAWER 1435
GAINESVILLE, GA 30503

t: 770.531.6800 | f: 770.531.3945

SRIKANTH YAMALA
Public Works Director

BILL NASH, P.E.
Asst. Public Works Director

FRANKLIN P. MILLER, P.E.
County Engineer

Hall County Government
PUBLIC WORKS & UTILITIES
ENGINEERING

PETITION FOR ROAD ABANDONMENT/CLOSING

We, the undersigned property owners, presently own land which abuts Old Cornelia Highway respectfully request that Old Cornelia Highway/Old Sulphur Spring Road be closed and abandoned by Hall County as follows:

(Section or length of road in question)

+/- 573' of Old Cornelia Highway, formerly known as Old Sulphur Spring Road
(reference attached exhibits)

We are making this request for the following reasons:

1. Gravel road is not maintained by County and only provides driveway access to two single-family rental homes and one abandoned structure. Existing road and intersections do not conform to current design standards.
2. Aforementioned properties are under contract to be purchased for a larger-mixed use project that takes into account access to both Old Cornelia Highway and Jesse Jewell Parkway.

We hereby certify that we represent all of the property owners which abut and have access to this section of:

Old Cornelia Highway/Old Sulphur Spring Road
(Road Name)

Name (printed)	Signature	Address	Telephone #
Nancy Jean Martin, Trustee of the Nancy Jean Martin Revocable Living Trust	Reggie Martin 08/01/22	2191 Old Cornelia Highway	770.540.2903
49 Street Properties LP	T. J. Lihanna	2211 Old Cornelia Highway	404 895 6652

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POINT "A"
N37°55'28"W
21.84'
1" SQUARE ROD
POINT "B"
N72°39'26"E
116.97'
RWM
N53°08'28"E
85.49'
POINT "C"
N20°19'41"E
443.67'
TIE-IN LINE
CREEK CENTERLINE
N/F
EUGENE GARNER
TAX PARCEL ID: 15033C000020
DB 1651 PG 139
522'± ALONG CENTERLINE OF THE BRANCH.
THE CENTERLINE OF BRANCH AS LOCATED IN JULY 2022 IS SUBJECT TO CHANGE DUE TO NATURAL CAUSES AND MAY OR MAY NOT REPRESENT THE ACTUAL LIMITS OF TITLE.
N/F
3 S REAL ESTATE, LLC
TAX PARCEL ID: 15033C000060
DB 8386 PG 221
PB 119 PG 31A
N/F
3 S REAL ESTATE, LLC
TAX PARCEL ID: 15033C000075
DB 4381 PG 128
PB 822 PG 230A
N/F
GARY C. GRIFFIN
TAX PARCEL ID: 15033C000074
DB 4224 PG 662
PB 828 PG 185A
S58°50'54"E 790.28'
IPF 1/2" REBAR
12"CMP (APP.D.)
952'± ALONG CENTERLINE OF THE BRANCH.
THE CENTERLINE OF BRANCH AS LOCATED IN JULY 2022 IS SUBJECT TO CHANGE DUE TO NATURAL CAUSES AND MAY OR MAY NOT REPRESENT THE ACTUAL LIMITS OF TITLE.
N/F
3 S REAL ESTATE, LLC
TAX PARCEL ID: 15033C000076
DB 4381 PG 128
PB 822 PG 229A
N/F
THE NANCY JEAN MARTIN REVOCABLE LIVING TRUST
TAX PARCEL ID: 15033C000055
DB 7682 PG 667
TRACT 3
19.144± ACRES
(833,894± SQ.FT.)
N0°58'17"W 289.70'
POINT "D"
IPF 1/2" REBAR
SPRING HEAD
N80°50'53"E 189.53'
N83°35'40"W 571.09'
S10°37'44"E 252.09'
S20°24'39"E 173.09'
N/F
49TH STREET PROPERTIES, LP
TAX PARCEL ID: 15033C000058
DB 8570 PG 353
(TRACT 18)
PB 43 PG 79
TRACT 1
4.381 ACRES
(190,815 SQ.FT.)
JESSE JEWELL PARKWAY
(a.k.a. U.S. HWY 23) (a.k.a. S.R. 13)
(VARIABLE RIGHT OF WAY)
S54°17'56"E 533.21'
S44°54'25"E 328.11'
N/F
49TH STREET PROPERTIES, LP
TAX PARCEL ID: 15033C000057
DB 6678 PG 730
PB 72 PG 125
DB 8570 PG 353
(TRACT 1)
TRACT 2
3.890 ACRES
(169,470 SQ.FT.)
N08°30'33"E 239.57'
1" OTP
N/F
NORA ONEDA PHAGAN
TAX PARCEL ID: 15033C000053
DB 7511 PG 676
N43°39'14"W 996.11'
S49°49'11"W 35.69'
S49°49'59"W 90.78'
S49°44'57"W 110.44'
S49°59'44"W 79.10'
APPROXIMATE LOCATION OF OLD CORNELIA HIGHWAY (GRAVEL) 30' RIGHT OF WAY. PLAT IS NOT LEGIBLE ENOUGH TO PLOT EXACT DIMENSIONS. TO BE ABANDONED.
P.O.B. TRACT 2
N86°47'17"E 144.65'
P.O.B. TRACT 3
IPF 1/2" REBAR
ARC=33.79'
R=584.22'
S62°22'45"W
CH=33.78'
ARC=140.09'
R=1250.19'
S57°40'56"W
CH=140.01'
ARC=217.98'
R=2785.93'
S51°40'54"W
CH=217.92'
OLD CORNELIA HWY
(60' RIGHT OF WAY)
ARC=299.20'
R=1250.23'
S70°10'29"W
CH=298.48'
S77°29'25"W 20.06'
S11°31'59"E 13.28'
S85°53'16"W 130.30'
S33°13'32"W 57.51'
S89°30'30"W 115.34'
IPS 1/2" REBAR
N: 1,569,922.9
E: 2,413,167.2
P.O.C. TRACT 2 TRACT 3 P.O.B. TRACT 1
BFE=1223.74
FFE=1241.97
FFE=1244.12
FFE=1240.66
FFE=1235.70
GFE=1235.24
FFE=1238.45
GFE=1238.61
FFE=1239.61
GFE=1239.48
FFE=1236.92
FFE=1223.74
SSMH
8"PVC
RIP-RAP
EDGE OF PAVEMENT
FLUME
18"RCP
30"CMP
WVMRK
ASPHALT APERTURE
CONCRETE PAD
ASPHALT DRIVEWAY
CONCRETE DRIVEWAY
GARAGE
BARN
HOUSE
WALL
6"RCPD
GATE
SIGN
FH
PP
OW
GW
WM
EM
NO
AC
CLF
SCALE: 1" = 60'
0 30 60 120
GEORGIA WEST ZONE

ABBREVIATIONS

APPROX.	Approximate	I.E.	Invert Elevation
#4	1/2" Rebar	IPF	Iron Pin Found
C&G	Curb and Gutter	IPS	Iron Pin Set
CLF	Chain Link Fence	LP	Light Pole
CMP	Corrugated Metal Pipe	MW	Monitoring Well
CO	Clean Out	N/F	Now or Formerly
CPP	Corrugated Plastic Pipe	OTP	Open Top Pipe
DB	Deed Book	PB	Plat Book
DI	Drop Inlet	PG	Page
DE	Drainage Easement	PKF	PK Nail Found
EOP	Edge of Pavement	PKS	PK Nail Set
EPP	Electric Power Pole	POB	Point of Beginning
EPAN	Electric Panel	POC	Point of Commencement
ESMT	Easement	PVC	Polyvinyl Chloride Pipe
FES	Flared End Section	RBC	Rebar Capped
FFE	Finish Floor Elevation	RCP	Reinforced Concrete Pipe
FH	Fire Hydrant	RWM	Right of Way Monument
FLGP	Flag Pole	SSE	Sanitary Sewer Easement
GA	Georgia	SSMH	Sanitary Sewer Manhole
GM	Gas Meter	TRAN	Transformer
GW	Guy Wire	VCP	Vitrified Clay Pipe
HDR	Hand Rail	W.D.F.	Wood Fence
H.W.	Hard Wood	WM	Water Meter
HW	Headwall	WV	Water Valve
ICV	Irrigation Control Valve		

LINETYPES

PROPERTY
Adjacent Property
Property Line
Center of Creek

FENCE LINES
Barb Wire Fence
Chain link fence
Wood Fence
Woven Wire Fence

SITE / TOPOGRAPHIC FEATURES
Guardrail

EXISTING OVERHEAD
OW Overhead Wires

EXISTING UNDERGROUND
C Cable
E Electric
FO Fiber Optic
G Gas
T Telecommunications
W Water
TV Television
Storm Drainage Line
S Sanitary Sewer

Know what's below. Call before you dig.

SHEET 1 OF 3
DRAWN BY: MS
CHECKED BY: JWH
FILE NO.: 220211.00
DATE: 07/15/2022
SCALE: 1" = 60'
DATE OF FIELD WORK: 7/1/22

ALTA/NSPS LAND TITLE SURVEY
FOR
INLINE COMMUNITIES
AND

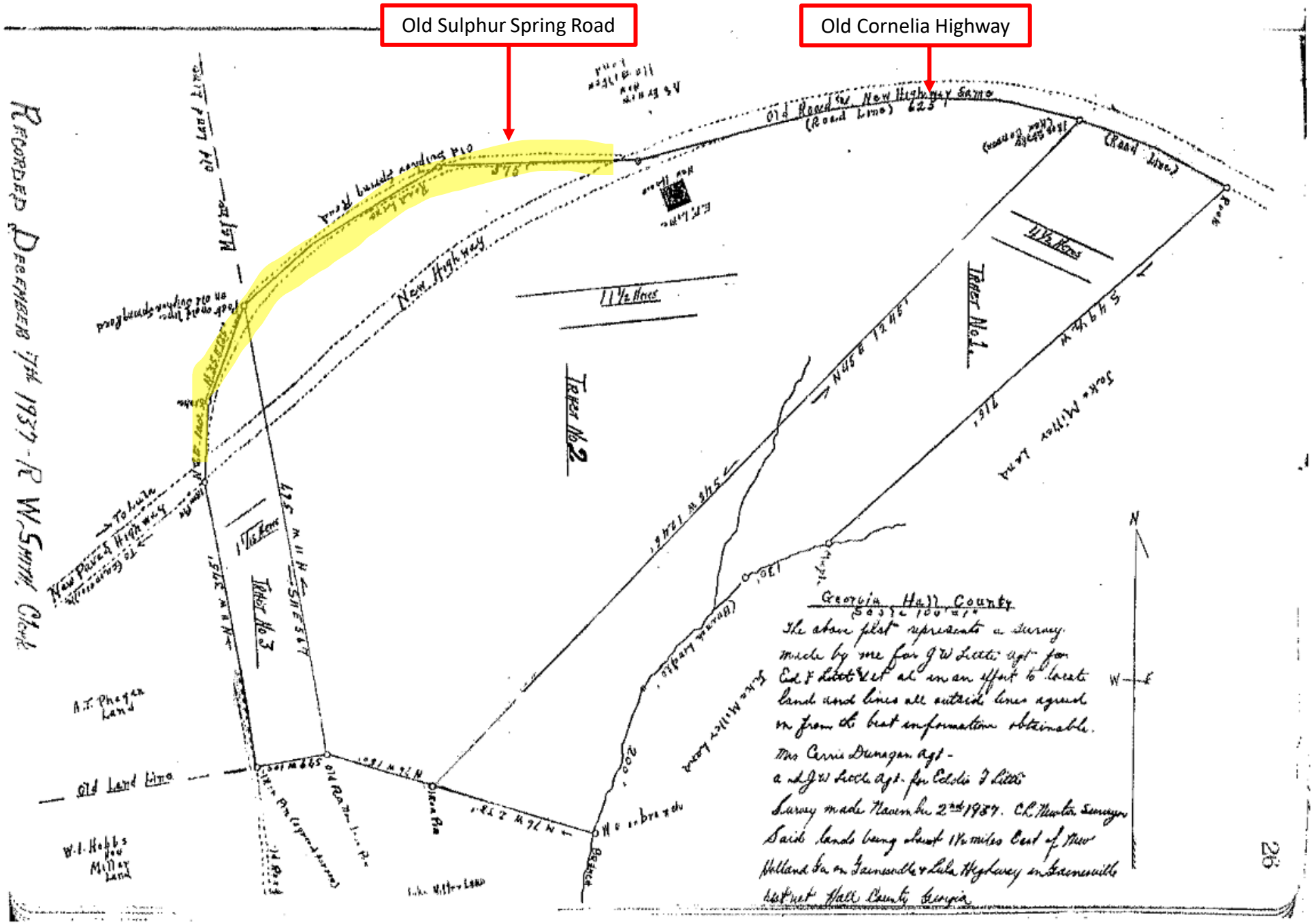
HALL COUNTY
GEORGIA

LAND LOT(S) G.M.D. 311
DISTRICT GAINESVILLE

REV	DATE	DESCRIPTION	BY
5			
4			
3			
2			
1			

REVISIONS

Planners & Engineers Collaborative+
LAND PLANNING + LANDSCAPE ARCHITECTURE + CIVIL ENGINEERING
ARBORISTS + SURVEYING & CONSTRUCTION + WATER RESOURCES
350 RESEARCH COURT PEACHTREE CORNERS, GEORGIA 30092
(770)451-2741 WWW.PEC.PLUS
C.O.A.-LSF000004


Old Sulphur Spring Road
Old Cornelia Highway
Old Road & New Highway Same
(Road Line) 625
(Road Line)
Old Sulphur Spring Road
New Highway
11½ Acres
Tract No 2
Tract No 1
Tract No 3
Old Land Line
Georgia Hall County
The above plat represents a survey made by me for J W Little agt for Ed F Little & et al in an effort to locate land and lines all outside lines agreed on from the best information obtainable.
Mrs Carrie Dunagan agt -
and J W Little agt. for Eddie F Little
Survey made November 2nd 1937. C.L. Newton Surveyor
Said lands being about 1½ miles East of New Holland Ga on Gainesville & Lula Highway in Gainesville
Hall County Georgia
Recorded December 7th 1937 - R W Smith, Clerk
26

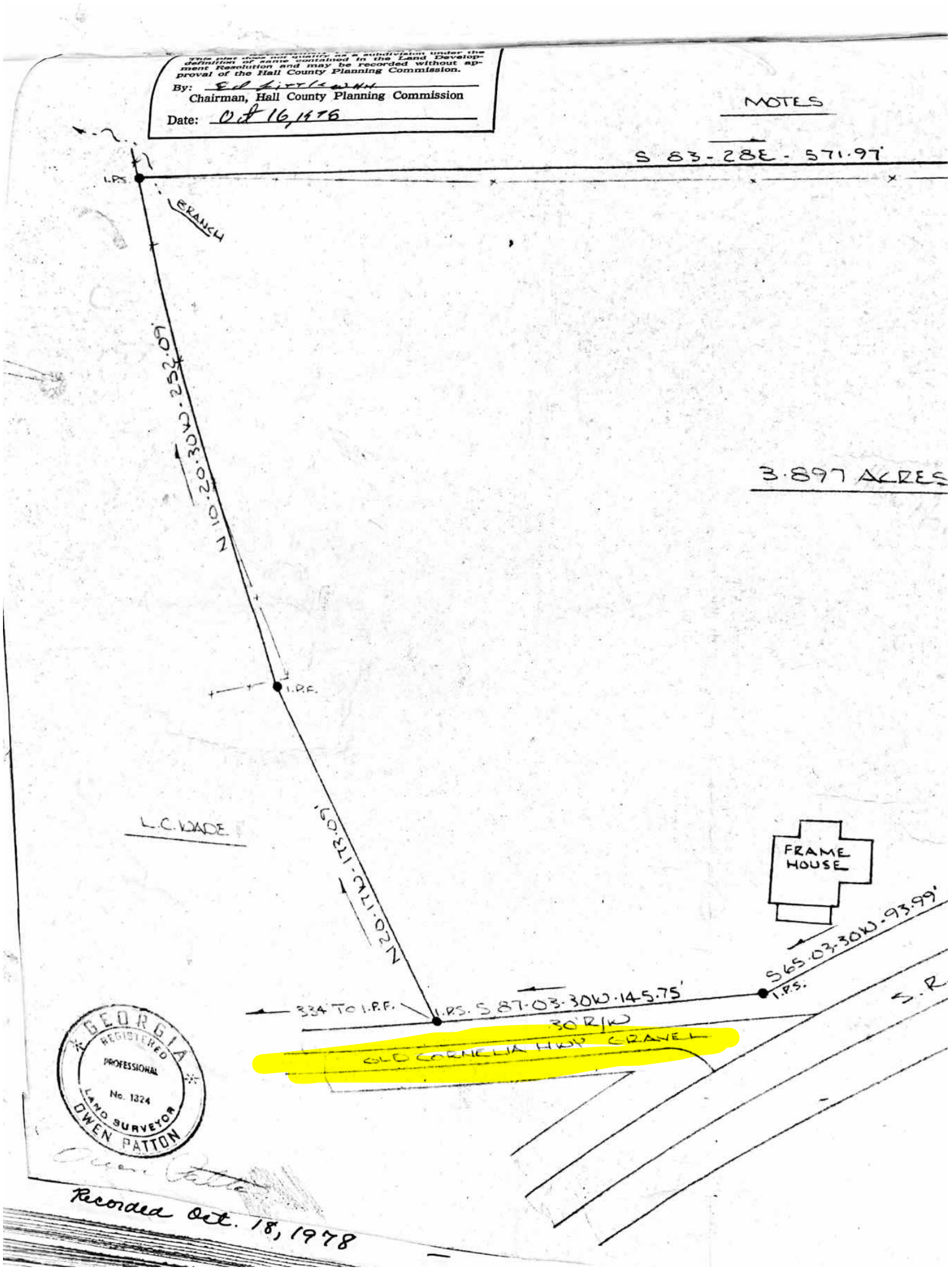
This plat does not qualify as a subdivision under the definition of same contained in the Land Development Regulation and may be recorded without approval of the Hall County Planning Commission.

By: Ed Little

Chairman, Hall County Planning Commission

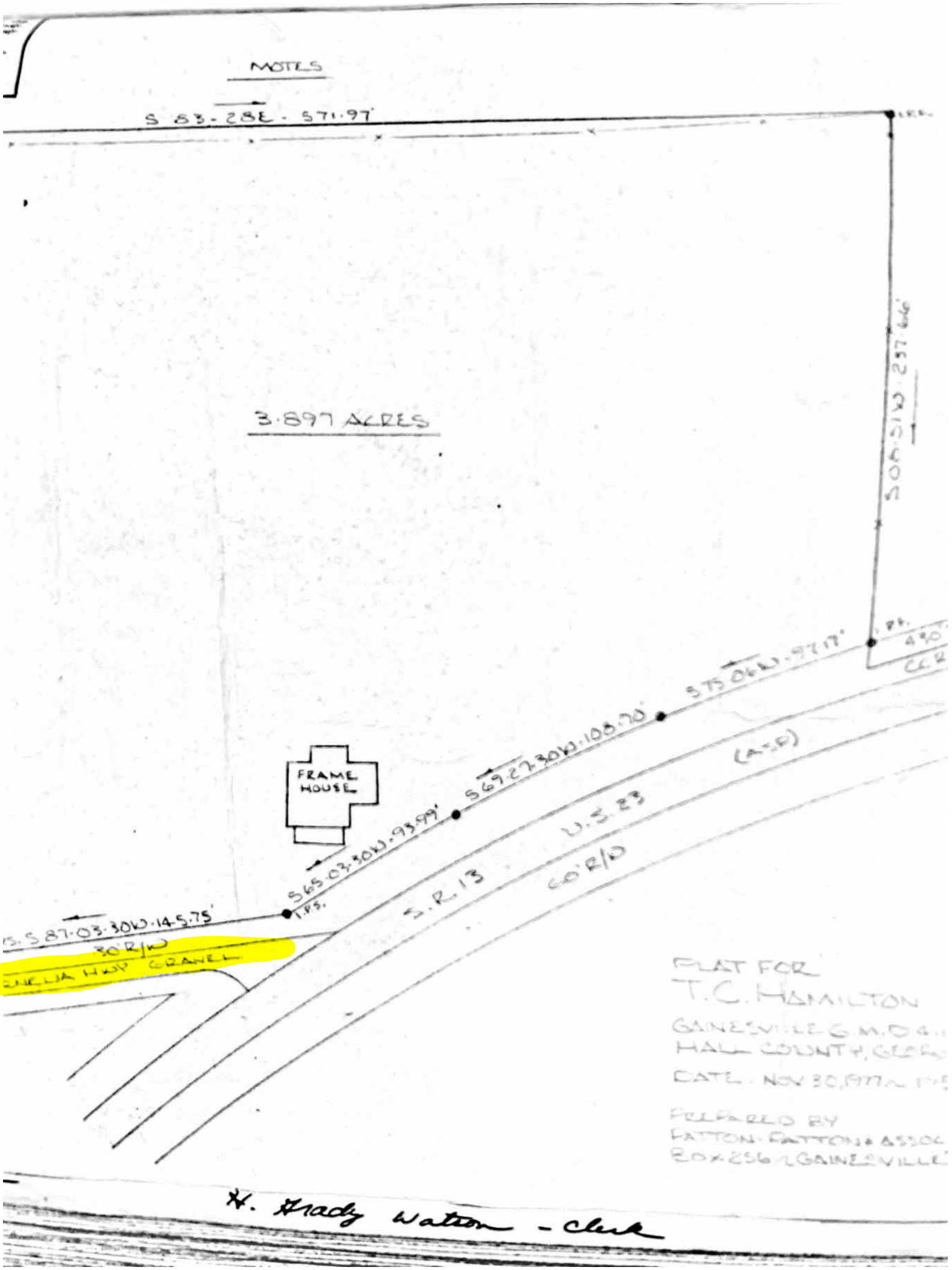
Date: Oct 16, 1978

NOTES



GEORGIA REGISTERED PROFESSIONAL No. 1324 LAND SURVEYOR OWEN PATTON

Recorded Oct. 18, 1978


NOTES
S 83-28E - 571.97'
3.897 ACRES
S 04-51W - 257.66'
S 75-06W - 97.17'
S 69-27-30W - 108.70'
S 65-03-30W - 93.99'
FRAME HOUSE
I.P.S.
S 87-03-30W - 145.75'
30 R/W
GRAVEL
S.R. 13
U.S. 23 (A.R.)
60' R/D
PLAT FOR
T.C. HAMILTON
GAINESVILLE G.M.D.
HALL COUNTY, GEORGIA
DATE: NOV 30, 1977
PREPARED BY
PATTON, PATTON & ASSOC.
P.O. BOX 256 GAINESVILLE
H. Grady Watson - Clerk

NOTES

E - 571.97'

I.P.F.

MAG.

NOTES

3.897 ACRES

S08-51W-237.66'

I.P.F.

430' TO ℄ CORNELIA HWY EXT.

S75-06W-97.17'

S69-27-30W-108.70'

FRAME HOUSE

S65-03-30W-93.99'

I.P.S.

S.R. 13

U.S. 23 (ASP)

60' R/D

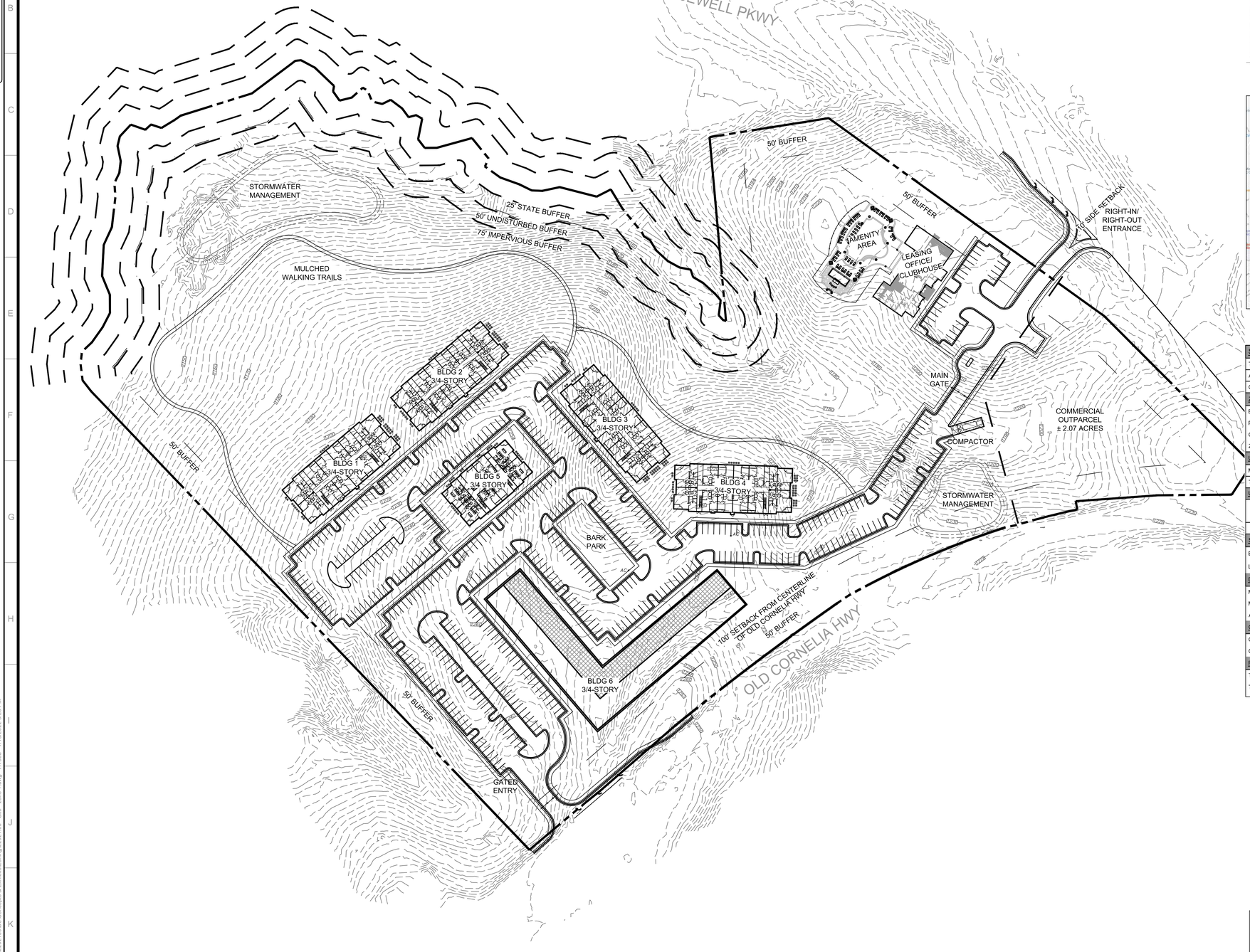
PLAT FOR
T.C. HAMILTON

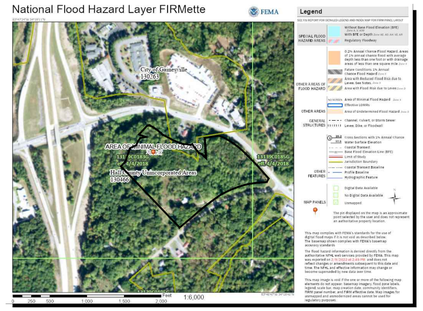
GAINESVILLE G.M.D. 411
HALL COUNTY, GEORGIA

DATE: NOV. 30, 1977 ~ 1"=50'

PREPARED BY
PATTON-PATTON & ASSOC.
BOX 256 / GAINESVILLE, GA.

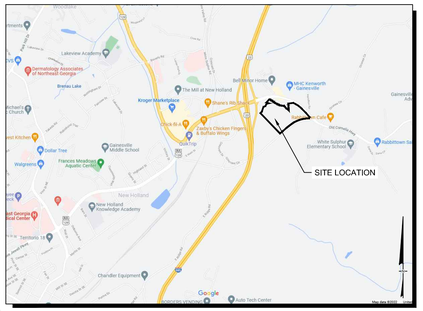
M. Brady Watson - Clerk





FEMA FIRM MAP

NOT TO SCALE



SITE LOCATION MAP

NOT TO SCALE

SITE DATA:	
TOTAL SITE AREA	± 27.415 ACRES
APARTMENT SITE AREA	± 25.345 ACRES
COMMERCIAL OUTPARCEL AREA	± 2.07 ACRES
ZONING	
EXISTING ZONING	R-II (RESI - II) & HB (HIGHWAY BUISNESS)
PROPOSED ZONING	PRD (PLANNED RESIDENTIAL DISTRICT)
OVERLAY DISTRICT	NORTH OCONEE WATER SUPPLY WATERSHED
ZONING JURISDICTION	HALL CO.
USE CALCULATIONS	
MAXIMUM ALLOWABLE DENSITY	N/A
TOTAL PROPOSED DENSITY	320 UNITS (11.67 UPA)
UNIT BREAKDOWN	
1-BEDROOMS	45%
2-BEDROOMS	45%
3-BEDROOMS	10%
SETBACK REQUIREMENTS	
BUFFERS	50 FEET FROM ALL PROPERTY BOUNDARIES
LANDSCAPE REQUIREMENTS	A MINIMUM OF TWO TREES PER LOT
DEVELOPMENT STANDARDS	
MIN LOT AREA	35,000 SF
MIN LOT FRONTAGE	50 FEET
APARTMENT BUILDING SEPARATION	20 FEET
OPEN SPACE CALCULATIONS	
OPEN SPACE REQUIRED	30% (7.6 ACRES)
OPEN SPACE PROPOSED	48% (12 ACRES)
PARKING REQUIREMENTS	
TOTAL PARKING REQUIRED	1.5 SPACES PER UNIT (480 SPACES)
TOTAL PARKING PROVIDED	1.63 SPACES PER UNIT (522 SPACES)

24 HOUR CONTACT:
BRIAN EHRSAM

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ARBORISTS + SURVEYING & CONSTRUCTION + WATER RESOURCES

350 RESEARCH COURT STE 200
PEACHTREE CORNERS, GA 30092

PROJECT

OLD CORNELIA HWY @ JESSE JEWELL PKWY

A MASTER PLANNED RESIDENTIAL DEVELOPMENT

AT

2191, 2211, 2233
OLD CORNELIA HWY
GAINESVILLE GA, 30507

HALL COUNTY JURISDICTION

FOR

INLINE COMMUNITIES

MUNICIPALITY PROJECT #

REVISIONS

NO.	DATE	BY	DESCRIPTION

THIS SEAL IS ONLY VALID IF COUNTER SIGNED AND DATED WITH AN ORIGINAL SIGNATURE.

PRELIMINARY

NOT TO BE RELEASED FOR CONSTRUCTION

REZONING MASTER PLAN

0 40 80 160 240

SCALE: 1" = 80'
DATE: 07/18/2022
PROJECT: 22021.00

Z1

SHEET

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AGENDA ITEM

Public Works and Utilities

REPORT TO: **Work Session (01/09/23)**

REPORT TO: **Voting Meeting (01/12/23)**

ITEM NO: 725/2022

SUBJECT: Approval and authorization for the Chairman to execute a Notice of Intent for Phase II Municipal Separate Storm Sewer Systems (MS4), subject to the review and approval by County Attorney.

Meetings:

Work Session Date: 01/09/23

Voting Meeting Date: 01/12/23

Executive Summary:

Presenter: SY

Recommendation:
Approve

Purpose of Request:
Approve the Notice of Intent for General NPDES Permit No. GAG610000 for Phase II Municipal Separate Storm Sewer Systems (MS4) and authorize the Chairman to execute the Notice of Intent, subject to the review and approval of the County Attorney.

History:
Georgia is a fully authorized State and administers its own NPDES program. NPDES Permit No. GAG61000 was first issued as a general permit in 2002 and reissued in 2007, 2012, and 2017 The previous Notice of Intent was executed by Hall County Chairman in October 2017.

Facts and Issues:
The Federal Phase II Stormwater regulations, 40 CFR Part 122.33, require an operator of a small municipal separate storm sewer system (MS4) to apply for coverage under an NPDES permit for discharges from its storm sewer system. A Notice of Intent is required as part of the National Pollutant Discharge Elimination System (NPDES). These permits are issued by EPA or authorized agencies such as Georgia EPD. The permit is to regulate construction activities to the waters of the state. This permit requires an annual report and an audit for every permit. This permit lasts for five (5) years,

Options:

Funding Requested	$ 0.00
Are funds within current budget?	No
Source of Funds	
Does the action involve a Resolution, Ordinance, Contract, Agreement, etc.?	Yes
Has it been reviewed by the County Attorney?	Yes
Is there a deadline for this item?	

Approvals:

Submit	Approve	Budget	Finance
BN	BN	EW	WG

Attorney	Administration	Clerk
WLI	CR	JR

Attachments:

Notice of Intent Phase II MS4

HALL COUNTY BOARD OF COMMISSIONERS
FINANCIAL SUPPLEMENT REPORT

AGENDA ITEM 725/2022

Funds Requested: $ 0.00

Request Budgeted: No

Proposed Source of Funding:

Budget Transfer Requested: No

Funding Source Items:

Budget Transfer Items:

Additional Information/Comments:

Contact for Questions: FM

Phone: 678 531-6800

GEORGIA
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

Richard E. Dunn, Director

Watershed Protection Branch
2 Martin Luther King, Jr. Drive
Suite 1470, East Tower
Atlanta, Georgia 30334
404-463-1511

GEORGIA NOTICE OF INTENT (NOI)

General NPDES Permit No. GAG610000 for
Phase II Municipal Separate Storm Sewer Systems (MS4)

1. General Information

A. Name of small MS4: ____Hall County_____

B. If the MS4 is a City, provide the County where located: _____

C. Name of responsible official:___Richard P. Higgins_____
Title:_Chairman, Hall County Board of Commissioners_____
Mailing Address:_P.O. Drawer 1435_____
City:_Gainesville_____ State:_GA_____ Zip Code:_30503_____
Telephone Number:_770-535-8260_____
Email Address: __rhiggins@hallcounty.org_____

D. Designated stormwater management program contact:
Name:__Franklin P. Miller_____
Title:___Hall County Engineer_____
Mailing Address:__P.O. Drawer 1435_____
City:_Gainesville_____ State: ___GA_____ Zip Code: __30503____
Telephone Number:__770-531-6800_____
Email Address:__fmiller@hallcounty.org_____

E. Provide the river basin(s) to which your MS4 discharges: _____
_____Chattahoochee and Oconee_____

F. Provide the latitude and longitude of the MS4 center (e.g. City Hall, County offices, MS4 mailing address) using Global Positioning System (GPS) – WGS84:
Latitude: _34.2777_____ Longitude: __-83.8769_____

2. Sharing Responsibility

A. Has another entity agreed to implement a control measure or BMP on your behalf? Yes___X____ No_____ (If No, skip to Part 3)

Control Measure #1:

1. Name of entity__City of Gainesville_____

2. Control measure or component of control measure to be implemented by entity on your behalf: ___Water bill insert_____
_____

B. Attach an additional page if necessary to list additional shared responsibilities. **It is mandatory that you submit a copy of a written agreement between your MS4 and the other entity demonstrating written acceptance of responsibility.**

3. <u>Certification Statement</u>

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based upon my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Printed Name:_Richard P. Higgins_____ Date:_____

Signature: _____ Title: Chairman, Hall County BOC

AGENDA ITEM

Public Works and Utilities

REPORT TO: **Work Session (01/09/23)**

REPORT TO: **Voting Meeting (01/12/23)**

ITEM NO: 727/2022

SUBJECT: Approval and authorization for the Chairman to execute a resolution to ratify closed negotiated settlements and affirm all actions taken relating to the Friendship Road Sewer Project, and authorize the execution of any and all additional documents necessary to effectuate the ratification and affirmation, subject to approval by the County Attorney. Commission District 1.

Meetings:

Work Session Date: 01/09/23

Voting Meeting Date: 01/12/23

Executive Summary:

Presenter: SY

Recommendation:
Approve

Purpose of Request:
Authorize Croy Engineering, LLC to negotiate the remaining easement relating to the Friendship Road Sewer project and ratify twenty (20) easements previously obtained by Hall County Engineering.

History:

The twenty (20) easements negotiated by Hall County Engineering were obtained over the time period from 2017-2020.

Facts and Issues:
The Friendship Road Sewer Project is an approx. 5 mile sewer infrastructure project that traverses twenty-one (21) parcels that required easements for construction and sanitary sewer use. Croy Engineering would negotiate one (1) remaining 20' wide sewer easement along this route at parcel 15048F 000044.

Options:

Funding Requested $ 12,500.00

Are funds within current budget? Yes

Source of Funds SPLOST VIII

Does the action involve a Resolution, Ordinance, Contract, Agreement, etc.?	No
Has it been reviewed by the County Attorney?	Yes
Is there a deadline for this item?	

Approvals:

Submit	Approve	Budget	Finance
WS	BN	EW	WG

Attorney	Administration	Clerk
WLI	CR	JR

Attachments:

Financial Supplement
Resolution
Easement - 21 exhibit
Exhibit A

HALL COUNTY BOARD OF COMMISSIONERS
FINANCIAL SUPPLEMENT REPORT

AGENDA ITEM 727/2022

Funds Requested: $ 12,500.00

Request Budgeted: Yes

Proposed Source of Funding:

SPLOST VIII

Budget Transfer Requested:

No

Funding Source Items:

Fiscal Year	Fund	Division	Account	Amount
2023	028 - SPLOST VIII	1827 - SP-VIII FRIENDSHIP RD SWR	5009 - INFRASTRUCTURE	$12,500.00

Budget Transfer Items:

Additional Information/Comments:

The estimated cost to secure one final easement is estimated at $12,500.00.

Contact for Questions: BN

Phone: 770 531-6800

STATE OF GEORGIA

COUNTY OF HALL

RESOLUTION APPROVING AND RATIFYING CLOSED NEGOTIATED SETTLEMENTS RELATING TO FRIENDSHIP ROAD SEWER EASEMENTS AND AUTHORIZING COUNTY AGENTS TO NEGOTIATE REMAINING EASEMENT

WHEREAS, the County has employed Croy Engineering, LLC to negotiate and recommend settlement of easements in connection with the Friendship Road Sewer Project; and

WHEREAS, Hall County Engineering has negotiated and recommended closed settlements as to twenty easements connected with the Friendship Road Sewer Project; and

WHEREAS, the Board of Commissioners has reviewed the closed settlements negotiated by Hall County Engineering as to the twenty easements connected with the Friendship Road Sewer Project and believes that those settlements should be approved and ratified in full by the County; and

WHEREAS, the Board of Commissioners has reviewed the recommended settlement proposed by Croy Engineering, LLC as to the final remaining necessary easement connected with the Friendship Road Sewer Project and believes that the recommended settlement should also be approved and ratified in full by the County; and

WHEREAS, the Friendship Road Sewer Project will greatly benefit the residents of Hall County and will promote the health, safety, and general welfare of County residents and businesses; and

WHEREAS, the Board of Commissioners has determined that the negotiated closed settlements by Hall County Engineering as to the twenty easements and the recommendation as to

the settlement by Croy Engineering, LLC of the final necessary easement should be approved and ratified by the Board so that the Project may proceed as scheduled.

NOW THEREFORE, the Board of Commissioners of Hall County, Georgia hereby adopts, approves, and ratifies the twenty closed settlements listed on the attached Exhibit A which were negotiated by Hall County Engineering, and the Board of Commissioners further approves and ratifies the proposed settlement amount for the final necessary easement negotiated by Croy Engineering, LLC in the amount listed on the attached Exhibit A hereto subject to review and approval of the County's Law Department.

SO RESOLVED this the _____ day of January, 2023.

HALL COUNTY BOARD OF COMMISSIONERS

_____
Chairman, Richard Higgins

ATTEST:

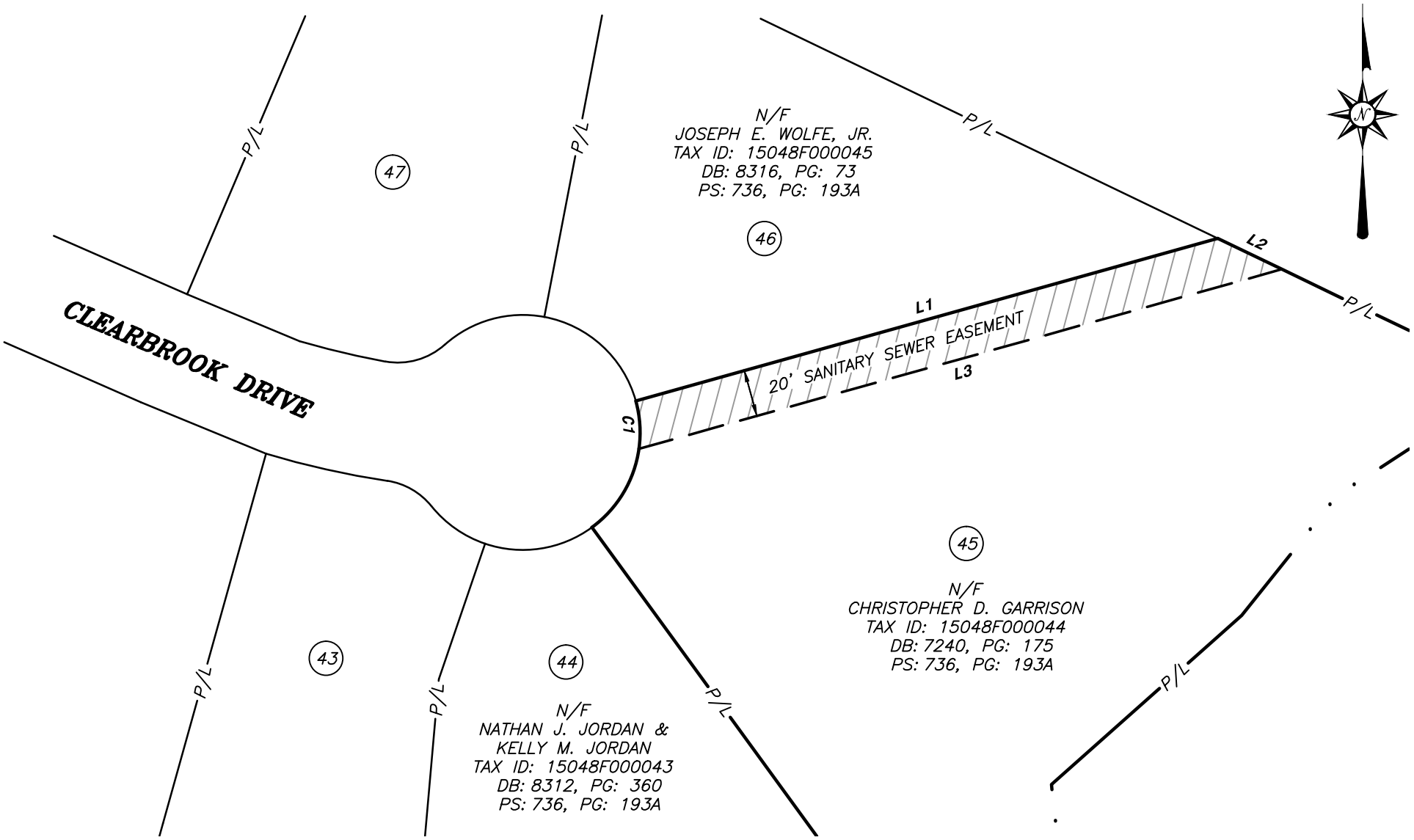
_____ (SEAL)
Jennifer Rivera, County Clerk

APPROVED AS TO FORM:

_____
Van Stephens, County Attorney

Exhibit A

'EXHIBIT – A'



= REQUIRED SANITARY SEWER EASEMENT AREA
0.124 ACRES or 5,399 SQ.FEET

LINE	BEARING	DISTANCE
L1	N 74°23'47" E	257.17'
L2	S 64°19'21" E	30.31'
L3	S 74°23'47" W	284.12'

CURVE	ARC LENGTH	RADIUS	CHORD BEARING	CHORD LENGTH
C1	20.58'	50.00'	N 03°48'52" W	20.43'

SANITARY SEWER EASEMENT EXHIBIT FOR:

CHRISTOPHER D. GARRISON

6342 CLEARBROOK DRIVE, FLOWERY BRANCH, GEORGIA 30542

FRIENDSHIP G.M.D. (1419)
HALL COUNTY, GEORGIA
LOT 45 OF SOUTHERN OAKS SUBDIVISION
PLAT SLIDE: 736, PAGE: 193A

0' 60' 120' 180'

Owner	Recorded Easement (Y or N)	Paid to Seller	Record DATA
Pirkle (We Flip LLC, Wayne McLeroy)	Y	$16,000.00	2/13/2020
We Flip 08154000022	Y	$25,013.00	2/13/2020
Charles Bell	Y	$4,000.00	2/21/2019
Williams	Y	$11,220.00	8/28/2019
Puckett	Y	$11,226.00	4/17/2019
Freindship Farms HOA	Y Condemn	$16,191.00	6/2/2020
Jones	Y	$10,350.00	2/21/2019
Jones 15048000026B	Y	$1,400.00	2/21/2019
Bush	Y	$9,500.00	6/6/2019
Davis	Y	$3,847.00	2/21/2019
Hancock	Y	$3,000.00	2/21/2019
Scales	Y	$7,500.00	2/21/2019
Pirkle 15048000034	Y	$4,000.00	2/21/2019
Freindship Farms HOA	Y Condemn	$2,840.00	6/9/2020
Jenkins	Y Condemn	$5,900.00	9/20/2021
Carlo	Y	$29,000.00	3/8/2021
Gunter	Y	$6,000.00	7/18/2019
Elinburg 15078000034A	Y	$4,630.00	12/12/2019
Nelson 150480000290	Y	$10,000.00	7/18/2019 6290
Hall County 15048D000103	N	$0.00	
Hampton 15048F000045	Y	$5,500.00	2/21/2019
Garrison 15048F000044	N	$12,500.00	negotiating

Owner	Recorded Easement (Y or N)	Paid to Seller	Record DATA
TOTAL		$199,617.00	

AGENDA ITEM

Public Works and Utilities

REPORT TO: **Work Session (01/09/23)**

REPORT TO: **Voting Meeting (01/12/23)**

ITEM NO: 726/2022

SUBJECT: Approve the release of $354,230.00 Irrevocable Letter of Credit for Streets and Stormwater Management Facilities in the Shores at Lynncliff Subdivision. Commission District 2.

Meetings:

Work Session Date: 01/09/23 **Voting Meeting Date:** 01/12/23

Executive Summary:

Presenter: SY

Recommendation:
Approve

Purpose of Request:
Approve the release of $354,230.00 Irrevocable Letter of Credit for Streets and Stormwater Management Facilities in the Shores at Lynncliff Subdivision.

History:

Facts and Issues:

Options:

Funding Requested	$ 0.00
Are funds within current budget?	No
Source of Funds	
Does the action involve a Resolution, Ordinance, Contract, Agreement, etc.?	No
Has it been reviewed by the County Attorney?	Yes
Is there a deadline for this item?	

Approvals:

Submit	Approve	Budget	Finance
WS	BN	EW	WG

Attorney	Administration	Clerk

Attorney	Administration	Clerk
WLI	LJ	JR

Attachments:

Irrevocable Letter of Credit
Final Plat Information

AMERIS BANK

IRREVOCABLE LETTER OF CREDIT

Hall County Board of Commissioners
P.O. Drawer 1435
Gainesville, GA 30503

RE: The Shores at Lynncliff
C/O Foxdale Properties LLC
655 Engineering Dr, Ste 208
Peachtree Corners, GA 30092

Chairman Richard Higgins:

The purpose of this Irrevocable Letter of Credit is one of the following:

- Public subdivisions/developments – To induce the Hall County Board of Commissioners to approve the street system as shown on the final plat, to induce the Hall County Board of Commissioners to accept the streets as shown on the final plat for public maintenance, and to ensure the completion of the project as per the approved plans and the regulations of Hall County, Georgia.

- Private subdivisions/developments – To induce the Hall County Board of Commissioners to approve the street system as shown on the final plat and to ensure the completion of the project as per the approved plans and the regulations of Hall County, Georgia.

Ameris Bank (Banking institution hereinafter referred to as "Issuer") hereby establishes its Irrevocable Letter of Credit No. 7732001213-201 in favor of Hall County, Georgia, for the account of Foxdale Properties LLC (Owner/developer) up to the aggregate amount of $354,230.00 dollars effective immediately and available by your draft(s) drawn at sight on the Issuer when accompanied by this Irrevocable Letter of Credit. This Irrevocable Letter of Credit is to cover the value of materials and work associated with the construction of Shores at Lynncliff.

The owner/developer responsibilities are as follows:

All construction of the street system of Shores at Lynncliff will be maintained for fifteen (15) months according to the terms and requirements as shown on the recorded final plat and of the Subdivision Regulations in force in Hall County, Georgia. Sidewalks will be completed throughout entire subdivision as shown on the recorded final plat within fifteen (15) months of the signing of said plat. The sidewalks, cuts, fills, sub-grades, shoulders, pavement, grassing, storm water management facilities, and traffic signs in Shores at Lynncliff must be properly maintained and free from faults in design, materials, and workmanship as shown on the recorded final plat and as set out in the Subdivision Regulations in force in Hall County, Georgia.

Hall County will pursue the collection of funds for deficiencies upon the elapsing of one (1) year from final platting ***and*** after the compliance date given in the 45-day written notice.

AMERIS BANK

The condition of the obligation created hereunder is such that the Issuer hereby agrees that all drafts drawn under and in compliance with the terms of this Irrevocable Letter of Credit will be duly honored if drawn and presented for payment to the Issuer's office upon the failure of Owner/developer to meet the responsibilities as outlined in the preceding paragraph. Upon full compliance, this obligation shall be void; otherwise, it shall remain in force. Jurisdiction for any civil litigation necessary for collection of bond claims hereunder shall be in the Superior Court of Hall County, Georgia.

This Irrevocable Letter of Credit is hereby issued on February 17, 2021 and expires on February 17, 2023 and the Issuer will have no more liability after that date. When the indicated expiration date falls on Sunday or a legal holiday, or for any reason the Issuer is not open for business, the expiration date shall be extended to the next succeeding business day.

IN WITNESS WHEREOF the Issuer has set its hand and affixed its seal on this day of February 17, 2021.

Witness

Ameris Bank
Issuer

KAREN RIEL NOTARY PUBLIC FULTON COUNTY, GEORGIA MY COMMISSION EXPIRES FEBRUARY 07, 2022

Notary Public

My Commission Expires:

[Seal]

By:
Karen Cross, Senior Vice President

The amount of the bond equals 30 percent of all completed infrastructure including base, paving, grassing, stormwater management facilities, and sidewalks plus 100 percent of the cost of all incomplete infrastructure such as remaining sidewalks and asphalt topping. The unit cost data used in the calculations will be based upon the latest Georgia Department of Transportation (GADOT) Item Mean Summary, or the latest Hall County contract data, whichever is higher.

Final Plat Information

Consider release of $354,230.00 Irrevocable Letter of Credit for Streets and Stormwater Management Facilities in The Shores at Lynncliff Subdivision.

Subject Subdivision is located off of Robinson Road.

NAME OF SUBDIVISION:	The Shores at Lynncliff
NAME OF OWNER/DEVELOPER:	Foxdale Properties, LLC
ADDRESS:	655 Engineering Dr. Suite 208 Peachtree Corners, GA 30092
TYPE OF MAINTENANCE BOND:	Irrevocable Letter of Credit
DATE OF BOND:	February 17, 2021
AMOUNT OF BOND:	$354,230.00
FINANCIAL INSTITUTION: AND ADDRESS:	Ameris Bank- Atlanta 3595 Marietta Hwy Canton, GA 30248
Account No.:	7732001213-201

COMM. DIST.	STREET NAME	SHEET NO.	R/W IN FEET	LENGTH IN MILES	WIDTH IN FEET	TYPE OF SURFACE	STATE REF. NO.
2	Galley Court	17	50	.270	20	P.M.	----
2	Castoff Court	17	50	.341	20	P.M.	----
2	Dockside Shore Drive	17	50	.719	20	P.M.	----
2	Top Side Drive	17	50	.081	20	P.M.	----

NOTES:

NUMBER OF LOTS:	97
CURB & GUTTER:	24" Rolled Back
TOTAL ACRES OF S/D:	108.329 AC

AGENDA ITEM

Sheriff's Office

REPORT TO: **Work Session (01/09/23)**

REPORT TO: **Voting Meeting (01/12/23)**

ITEM NO: 665/2022

SUBJECT: Approve the application of the U.S. Bureau of Justice Assistance's State Criminal Alien Assistance Program (SCAAP) for the Sheriff's Office to reimburse housing of alien prisoners and personnel in the amount of $126,711.00, and if awarded, appoint the Grants Manager as the Program Designee and authorize the Chairman to execute all related application and award documents. No match is required.

Meetings:

Work Session Date: 01/09/23

Voting Meeting Date: 01/12/23

Executive Summary:

Presenter: CI

Recommendation:
Grants Division staff recommends approval.

Purpose of Request:
Approve the application of the U.S. Bureau of Justice Assistance's State criminal Alien Assistance Program (SCAAP) for the Hall County Sheriff's Office to reimburse housing of alien prisoners and personnel in the amount of $126,711.00, and if awarded, appoint the Grants Manager as the Program Designee and authorize the Chairman to execute all related application and award documents. No match is required.

History:

Hall County has received SCAAP funding since 2004. The Board of Commissioners approved the last application on April 14, 2022 agenda number 129 item number 132/2022.

Facts and Issues:
This is federal funding from the U. S. Bureau of Justice Assistance (BJA) which makes payments to units of local governments that incur certain types of costs due to incarceration of undocumented criminal aliens during a specific 12 month reporting period (July 1, 2020 through June 30, 2021).

Options:

Funding Requested	$ 0.00
Are funds within current budget?	Yes
Source of Funds	General Fund
Does the action involve a Resolution, Ordinance, Contract, Agreement, etc.?	No
Has it been reviewed by the County Attorney?	Yes
Is there a deadline for this item?	2023-01-30

Approvals:

Grants Staff	Submit	Approve	Grants
JW	SC	SC	JW
Budget	**Finance**	**Attorney**	**Administration**
EW	WG	WLI	CR
Clerk			
JR			

Attachments:

FY22 SCAAP RFP

HALL COUNTY BOARD OF COMMISSIONERS
FINANCIAL SUPPLEMENT REPORT

AGENDA ITEM 665/2022

Funds Requested: $ 0.00

Request Budgeted: Yes

Proposed Source of Funding:

General Fund

Budget Transfer Requested:

No

Funding Source Items:

Fiscal Year	Fund	Division	Account	Amount
2023	001 - GENERAL	141 - SHERIFF - JAIL	4104 - SALARIES	$118,711.00
2023	001 - GENERAL	141 - SHERIFF - JAIL	4495 - BOARDING OF PRISONERS	$8,000.00
2023	001 - GENERAL	141 - SHERIFF - JAIL	3719 - STATE CRIMINAL ALIEN ASS	$-126,711.00

Budget Transfer Items:

Additional Information/Comments:

Contact for Questions: SC

Phone: 770-718-5151

OMB No. 1121-0329
Expires 12/31/2023

U.S. Department of Justice
Office of Justice Programs
Bureau of Justice Assistance

BJA FY 2022 State Criminal Alien Assistance Program

Program Requirements and Application Instructions

Assistance Listing Number # 16.606

Grants.gov Opportunity Number: O-BJA-2022-171484

Solicitation Release Date: December 09, 2022 12:00 PM ET

Application Grants.gov Deadline: January 30, 2023 8:59 PM ET

Application JustGrants Deadline: February 06, 2023 8:59 PM ET

Overview

Under the statutorily required State Criminal Alien Assistance Program (SCAAP), the Office of Justice Programs (OJP) of the U.S. Department of Justice (DOJ) makes payments to eligible "states" and "units of local government" that incur certain types of costs due to "incarceration" of "undocumented criminal aliens" during a particular 12-month reporting period. **The reporting period for the FY 2022 program is July 1, 2020, through June 30, 2021.**

Before entering **any** information into the online application for the FY 2022 program, the government official who will complete and submit the application on behalf of an applicant government **MUST** carefully review this document.

This solicitation incorporates guidance provided in the OJP Grant Application Resource Guide which provides additional information for applicants to prepare and submit applications to OJP for funding. **If this solicitation expressly modifies any provision in the OJP Grant Application Resource Guide, the applicant is to follow the guidelines in this solicitation as to that provision.**

Eligible Applicants:
City or township governments, County governments, State governments

Contact Information

For assistance with the requirements of this solicitation, or other aspects of the FY 2022 program, contact the **SCAAP Help Desk** by phone at 1-202-353-4411 or by email to SCAAP@usdoj.gov. The SCAAP Help Desk operates Monday–Friday from 9 a.m. to 5 p.m.

ET. It is closed on federal holidays.

Submission Information

Registration: Before submitting an application, all applicants must register with the System for Award Management (SAM). You must renew and validate your registration every 12 months. If you do not renew your SAM registration, it will expire. An expired registration can delay or prevent application submission in Grants.gov and JustGrants. Registration and renewal can take up to 10 business days to complete.

Submission: Applications must be submitted to DOJ electronically through a two-step process via Grants.gov and JustGrants.

Step 1: The applicant must submit by the Grants.gov deadline the required Application for Federal Assistance standard form (SF-424) when they register in Grants.gov at https://www.grants.gov/web/grants/register.html. **Submit the SF-424 as early as possible, but no later than 48 hours before the Grants.gov deadline**. If an applicant fails to submit in Grants.gov, they will be unable to apply in JustGrants.

For technical assistance with submitting the SF-424 in Grants.gov, contact the Grants.gov Customer Support Hotline at 800-518-4726, 606-545-5035, Grants.gov Customer Support, or support@grants.gov. The Grants.gov Support Hotline operates 24 hours a day, 7 days a week, except on federal holidays.

Step 2: The applicant must submit the **full application,** including attachments, in JustGrants at JustGrants.usdoj.gov by the JustGrants application deadline.

For technical assistance with submitting the **full application** in JustGrants, contact the JustGrants Service Desk at 833-872-5175 or JustGrants.Support@usdoj.gov. The JustGrants Service Desk operates 7 a.m. to 9 p.m. ET Monday–Friday and 9 a.m. to 5 p.m. ET on Saturday, Sunday, and Federal holidays.

OJP encourages applicants to review, the "How to Apply" section in the OJP Grant Application Resource Guide and the JustGrants website for more information, resources, and training. Applicants should maintain all receipts and confirmations received from SAM.gov, Grants.gov, JustGrants systems. Also see the SCAAP Application Submission and Acceptance Job Aid Reference Guide.

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Program Description

Overview

OJP is committed to advancing work that promotes civil rights and racial equity, increases access to justice, supports crime victims and individuals impacted by the justice system, strengthens community safety and protects the public from crime and evolving threats, and builds trust between law enforcement and the community.

OJP's BJA administers SCAAP. Under SCAAP, OJP is statutorily required to make payments to "states" and "units of local government" that incur certain types of costs due to the "incarceration" of "undocumented criminal aliens" during a specific 12-month reporting period. See below for a detailed discussion of eligibility and definitions including the definitions of "state," "unit of local government," incarceration" "undocumented criminal aliens" for purposes of SCAAP.

Under the FY 2022 program, payments will be made in connection with "undocumented criminal aliens" who had been convicted of at least one felony or two misdemeanors (typically for violations of state or local law) and who were "incarcerated" under the legal authority of the applicant government for at least 4 consecutive days during the "reporting period." (Additional details are set out in later sections of this document.)

As part of its application, each applicant government provides particular information about individuals it "incarcerated" — under its own legal authority — for at least 4 consecutive days during the "reporting period" and whom the applicant government either (1) knows were "undocumented criminal aliens" or (2) reasonably and in good faith believes were "undocumented criminal aliens." (OJP transmits the data submitted on such individuals to the U.S. Department of Homeland Security (DHS) for a detailed review.) As part of its application, each applicant government also must provide information pertinent to its average costs of incarceration during the "reporting period."

Broadly speaking, SCAAP payments are calculated from information provided by applicant governments in online applications, information provided to OJP by DHS regarding the DHS review of data on "eligible inmates," and the amount of appropriated funds available for the SCAAP application cycle (e.g., for the FY 2022 program). Detailed information on payment calculations can be found in Appendix D: SCAAP Payment Calculations – General Overview. All information submitted as part of an application is subject to appropriate review by OJP.

Statutory Authority

The FY 2022 program is authorized by 8 U.S.C. 1231(i); Department of Justice Appropriations Act, 2022 (Pub. L. No. 117-103, 136 Stat. 49, 125)

Specific Information

Restriction on Use of SCAAP Payment; Associated Records
As a matter of federal law, a "state" or "unit of local government" that receives a payment under the FY 2022 program must use the payment "only for correctional purposes." See 8 U.S.C. § 1231(i)(6).

"Correctional Purposes": With respect to a "state" or "unit of local government," use of a SCAAP payment for "correctional purposes" means:

- Use of the funds to pay any cost reasonably attributable to that government's operation of a "correctional facility" for its own use, such as
  - Salaries and wages paid to employees who work primarily and directly in the "correctional facility" (**regardless** of whether those employees are "correctional officers").
  - Costs of employment benefits provided to (or on behalf of) employees who work directly in and for the "correctional facility."
  - The reasonably allocable portion of the salaries, wages, and benefits paid to employees who, although not primarily and directly working in and for the "correctional facility," provide necessary services either to the correctional facility (e.g., administrative support) or the individuals "incarcerated" in the correctional facility (e.g., medical care, transportation).
  - Repair, maintenance, and "overhead" (e.g., utilities) costs reasonably attributable to operation of the "correctional facility."
- Use of the funds for payments to a "contract correctional facility" that are reasonably attributable to "incarceration" of individuals in such a facility on behalf of (pursuant to the legal authority of) the pertinent "state" or "unit of local government."

Maintenance of Records
An applicant government that receives a payment under the FY 2022 program must, for not less than 3 years after the date it draws down that payment from OJP, maintain records sufficient to demonstrate that the payment was used solely for "correctional purposes," and must make those records available to DOJ (including OJP) upon request.

Limit on Request for Compensation
As a matter of federal law, "no jurisdiction shall request compensation for any cost greater than the actual cost for federal immigration and other detainees housed in state and local detention facilities." See, e.g., Department of Justice Appropriations Act, 2022 (Pub. L. No. 117-103, 136 Stat. 49, 125).

Federal Award Information

Solicitation Categories

This solicitation does not include Solicitation Categories.

Awards, Amounts and Durations

Anticipated Number of Awards	**Anticipated Maximum Dollar Amount of awards**
550	$59,000,000
Period of Performance Start Date	**Period of performance duration**
7/1/20	12 months

Anticipated Total Amount to be Awarded Under Solicitation
$198,998,538

Availability of Funds

This solicitation, and awards under this solicitation, are subject to the availability of

appropriated funds and to any modifications or additional requirements that may be imposed by the agency or by law. In addition, nothing in this solicitation is intended to, and does not, create any right or benefit, substantive or procedural, enforceable at law or in equity by any party against the United States, its departments, agencies, or entities, its officers, employees, or agents, or any other person.

Eligibility Information

Important Note: The online FY 2022 SCAAP application specifically incorporates by reference the **eligibility requirements, definitions of terms**, and **detailed application instructions** set out in this document. To assist applicants, this document uses quotation marks to highlight defined terms (e.g., "state," "unit of local government," "undocumented criminal alien," "eligible inmate," and "correctional purposes").

In general, a "state" or "unit of local government" is eligible to apply for a payment under the FY 2022 program if it "incarcerated" individuals in a "correctional facility" during the "reporting period" whom it either (1) knows were "undocumented criminal aliens" or (2) reasonably and in good faith believes were "undocumented criminal aliens."

Absent highly unusual circumstances, OJP will not extend the application deadline or permit an applicant government to submit its application after the application deadline. Much as in previous years, promptly after the application deadline, OJP will transmit to DHS the data on "eligible inmates" from all of the applications submitted to JustGrants prior to the application deadline. The volume of "eligible inmates" data transmitted to DHS (and the nature and complexity of the DHS review of those data) is such that it is not possible to transmit supplemental or corrected data to DHS.

Any application must be completed and submitted by a government official with the legal authority to apply to the FY 2022 program on behalf of the chief executive of the applicant government. This "submitting government official" must be registered in JustGrants in order to complete and submit an application under the FY 2022 program.

Instructions on how to register in JustGrants and how to access the online application for the FY 2022 program appear in the How to Apply section.

Only a "state" or "unit of local government" is eligible to apply, and only on its own behalf.

For purposes of the FY 2022 program:

> **"State"** includes the District of Columbia, Puerto Rico, Guam, the U.S. Virgin Islands, the Commonwealth of the Northern Mariana Islands, and American Samoa.
>
> **"Unit of local government"** means a political subdivision of a "state" with authority to independently establish a budget and impose taxes (typically, a "general-purpose" political subdivision of a state). The term may include a county or municipality (e.g., city, county, town, township, village, borough, or parish). **Note: A department or**

agency that is part of such a "unit of local government" is not itself considered a "unit of local government," and applications listing an agency that is not the "unit of local government" will be denied.

Joint applications by two or more "states" or "units of local government" are **not** permitted, **even if** the application names only one state or unit of local government as the applicant. As a rule, an application must not incorporate or report data on either (1) individuals held in custody by the applicant government on behalf of (pursuant to the legal authority of) another state or unit of local government or (2) costs associated with individuals held in custody on behalf of another state or unit of local government.

Similarly, a governmental entity that is not itself a "state" or a "unit of local government" (e.g., a regional jail, special jail district, or regional jail authority or board) is **not** eligible to apply. Rather, each "state" or "unit of local government" that uses the regional facility may include (as part of its own application) data that directly reflect its own use of the facility.

Certifications in the Online Application for the FY 2022 Program
As part of the online application to the FY 2022 program, the "submitting government official" must make a number of detailed certifications to OJP under penalty of perjury, including formal certifications regarding the accuracy of the information being provided, the official's conformity with the requirements and instructions set out in this document, and the official's legal authority to execute the certifications and submit the application on behalf of the applicant government.

JustGrants is designed to reject an application to the FY 2022 program if the "submitting government official" fails to execute any of the required certifications. An application cannot and will not be considered submitted (including for purposes of the application deadline) until all of the certifications have been made. See the Disclosures and Assurances section for more information.

DOJ Reliance on the Required Certifications as Material; Penalties for False Statements
As indicated in the text of each required certification, DOJ, including OJP, will rely on each certification submitted in connection with an application to the FY 2022 program as a material representation in any decision to make a payment.

A materially false, fictitious, or fraudulent statement to the federal government (or concealment or omission of a material fact) as part of a required certification, or in the application that it supports, may be the subject of criminal prosecution (including under 18 U.S.C. §§ 1001 and/or 1621, and/or 34 U.S.C. §§ 10271-10273), and also may subject both the "submitting government official" and the applicant government to civil penalties and administrative remedies for false claims or otherwise (including under 31 U.S.C. §§ 3729-3730 and §§ 3801-3812). Also, certifications provided to OJP in connection with the FY 2022 program are subject to review by DOJ, including by OJP and the DOJ Office of the Inspector General.

Application and Submission Information

In the online SCAAP application, each applicant government will be asked to provide specific types of information. In general, they are:

- Information on the applicant government and its "chief executive."
- Information on the "submitting government official."
- Data on "eligible inmates" during the "reporting period," which are provided through upload of a single ASCII- formatted file.
- Data pertinent to the applicant government's costs of incarceration for the "reporting period," including information on "correctional officers" and associated salary expenditures, the total number of inmates incarcerated, and the "maximum bed count" of the applicant's "correctional facilities."

"Submitting Government Official"
The online SCAAP application may be completed and submitted only by an appropriate official of the applicant government. For each applicant government, there may be only one "submitting government official." That "submitting government official" must have the legal authority to apply to the FY 2022 program on behalf of the applicant government, must have the necessary knowledge and information to complete the entire application accurately, and must in fact complete and submit all sections of the application. **Due diligence is required.**

The certifications within the online application vary in their precise content, but in each of them, the "submitting government official" must certify, on behalf of the official and the applicant government, under penalty of perjury, that the information entered is "true and correct to the best of my knowledge and belief, based upon diligent inquiry and review," and is provided in accordance with the requirements, definitions, and instructions set out in this document. In addition, in each such certification, the "submitting government official" certifies that the official has "the legal authority to make this certification to OJP, including from the chief executive of the applicant government."

Part I. Information on the SCAAP Applicant Government and Its "Chief Executive"

Information on the Applicant "State" or "Unit of Local Government"
Refer to the information above on "Eligibility," including the definitions of "state" and "unit of local government," to determine whether an interested entity is eligible to apply.

If the prospective applicant is in fact a "state" or "unit of local government," enter the appropriate information for the applicant government in section 1 of the application.

Information on the "Chief Executive" of the Applicant "State" or "Unit of Local Government"
Also in section 1 of the application, enter the appropriate information for the current "chief executive" of the applicant government.

Note that, in virtually all cases, the chief executive of a "state" is the governor. As to "units of local government," the title of the chief executive will vary depending on the organization of the local government, but only one individual in the local government is its "chief executive" (e.g., the mayor).

Click on the "Save Information" button to continue to the next section of the application. (If an error message appears, make the appropriate corrections, then click “Save Information” again.)

Part II. Information on “Eligible Inmates”

“Eligible Inmates”
Each applicant government is to provide detailed information about the individuals (1) the applicant government “incarcerated” for at least 4 consecutive days during the “reporting period” and (2) who the applicant government either **knows** were “undocumented criminal aliens” or **reasonably and in good faith believes** were “undocumented criminal aliens.” For purposes of the application to the FY 2022 program, such individuals are referred to as “eligible inmates.”

Recap: An individual is an “eligible inmate” only if **all** of the following are true, and the inmate was:

- “Incarcerated” by the applicant government under its own legal authority (see definition below).
- For at least 4 consecutive days during the “reporting period.”
- The applicant government either knows, or reasonably and in good faith believes, that the inmate is an “undocumented criminal alien,” that is, that the inmate is both —
    - “undocumented” (see definition below)
    - “criminal alien” (see definition below)

“Incarcerated”
For purposes of the FY 2022 program, an individual is considered to have been “incarcerated” by (or on behalf of) the applicant government when held (confined) in a “correctional facility” **under the legal authority of the applicant government, following conviction of the individual for a criminal offense.** Such incarceration may have been in a “correctional facility” operated by the applicant government or in a “contract correctional facility” (including a regional facility) used by the applicant government.

- An inmate is not considered to have been “incarcerated” by or on behalf of an applicant government if the applicant government held the inmate in custody on behalf of (under the legal authority of) another “state” or “unit of local government,” pursuant to a contractual arrangement.

“Undocumented”
For purposes of the FY 2022 program, an individual is “undocumented” **if, as of the date the individual was “incarcerated” by the applicant government**, the individual was a foreign citizen or foreign national with no legitimate claim under federal law to be a U.S. citizen or U.S. national, and the individual (1) entered the United States without authorization under federal law to do so, or (2) entered the United States under a federal legal authorization that had expired or otherwise was no longer in effect, or (3) was the subject of deportation or exclusion proceedings.

- Generally, a person born in the United States (including in a U.S. territory) is a U.S. citizen or U.S. national.

“Criminal Alien”
For purposes of the FY 2022 program, an “alien” (that is, an individual who is not a citizen or national of the United States) is a “criminal alien” if, as of the date the individual was “incarcerated” by the government, that individual had been convicted of at least one felony or two misdemeanors.

- Adjudication of a juvenile as a delinquent does not constitute conviction of a felony or a misdemeanor for purposes of the FY 2022 program

“Inmate Records” and Associated Data Elements
In section 2 of the application, the “submitting government official” is to provide an “inmate record” for each “eligible inmate.”

- **Multiple Periods of Incarceration**: If, during the reporting period, the applicant government incarcerated a particular “eligible inmate” for two or more periods of at least 4 consecutive days each, the applicant must create a separate “inmate record” for each such distinct period of incarceration. The applicant may not combine such distinct periods of incarceration in a single inmate record.
- **“Eligible Inmates” Who Use Aliases**: If an applicant government has reason to believe that a particular “eligible inmate” uses or has used aliases, the applicant may submit a separate “inmate record” for each alias, provided the information in the separate inmate record(s) is identical in all respects, other than as to last, first, and/or middle names. (Note that this requirement for identical information — except as to names — specifically includes the “unique inmate number assigned by the applicant government.” (See list below.)

Each “inmate record” is to provide all of the following information, to the extent known to the applicant government, using due diligence:

- Alien number, also referred to as “A-number”
- Last name
- First name
- Middle name (not required, but to be provided if available)
- Date of birth
- Unique inmate identifying number assigned by the applicant government
- Foreign country of birth
- “Date incarcerated” (see definition in Appendix A)
- FBI number

Law Enforcement Support Center (LESC) Immigration Alien Query (IAQ)
This is an OPTIONAL field. See Appendix E for more information.

The detailed instructions for each of these data elements are set out in the table titled “SCAAP Data Elements for ‘Inmate Records’ — FY 2022 Program” in Appendix A. That table identifies the mandatory data elements; specifies the precise format to be used for

each data element; sets out the rules to follow for individuals with compound or hyphenated first, last, or middle names; and specifically defines “date incarcerated” and “date released.” (It also defines the required ASCII fixed-field format.)

- For ease of reference, the “submitting government official” may wish to print out a copy of “SCAAP Data Elements for ‘Inmate Records’ — FY 2022 Program.”
- Be aware that an “inmate record” that does not identify a **specific country** as the inmate’s country of birth, but instead indicates that the country of birth is “unknown,” will **not** be considered in the calculation of the amount of any payment under the FY 2022 program unless DHS (through its data review) is able to confirm that the inmate was in fact “undocumented,” and the “inmate record” otherwise is sufficient.

Submission of “Inmate Records”
An applicant must provide “inmate records” for “eligible inmates” by uploading a single ASCII-formatted (.txt) file that contains the **entire** set of inmate records for the “reporting period.”

- The “submitting government official” will upload a single ASCII-formatted file with all “inmate records” for “eligible inmates
  - Appendix A (titled “SCAAP Data Elements for ‘Inmate Records’ — FY 2022 Program”) sets out the required ASCII fixed-field format to be used for the inmate file upload.
  - Appendix B lists DHS Immigration and Customs Enforcement (ICE) Country Codes. “Inmate records” submitted as part of a single ASCII fixed-field file are to include the appropriate “ICE Country Code” from the list in Appendix B. Do not use an abbreviation from any other list of country codes.
  - Appendix C (titled “Instructions for upload of ASCII fixed-field file of ‘inmate records’”) provides detailed instructions for the ASCII fixed-field file upload process.

Part III. Information on “Correctional Officers” and “Correctional Facilities”

Required Information on “Correctional Officers”
In section 3 of the online application, the “submitting government official” must provide, by direct entry into the online application, all of the following information related to “correctional officers”:

- The total number of **full-time “correctional officers”** employed by the **applicant government** during the reporting period.
- The total number (reported as Full-Time Employees (FTEs)) of **part-time “correctional officers”** employed by the **applicant government** during the reporting period.
- The total number of **full-time “correctional officers”** providing services to the applicant government as employees of **“contract correctional facilities”** (or as contractors) during the reporting period.
- The total number (reported as FTEs) of **part-time “correctional officers”** providing services to the applicant government as employees of **“contract correctional**

facilities" (or as contractors) during the reporting period.
- "Actual salary expenditures for correctional officers" during the reporting period.

In addition, section 3 of the online application requires the "submitting government official" to provide (as a file attached to the application) a "'Correctional Officer' Salary Expenditures Detail."

Pertinent Definitions: "Correctional Officers" and "Associated Salary Expenditures"

- **"Correctional facility"** means a facility typically used to hold (confine) in-custody individuals convicted of one or more criminal offenses
  - A "correctional facility" may be operated by a "state" or "unit of local government" for its own use.
  - Or a "correctional facility" may be operated by a private or governmental entity that holds individuals in custody **on behalf of** (pursuant to the legal authority of) a "state" or "unit of local government," pursuant to a contractual arrangement. For purposes of the FY 2022 program, such a facility (including a regional facility) is a **"contract correctional facility."**
  - A "correctional facility" may — in addition to holding in-custody individuals who have been **convicted** of criminal offenses — also hold in-custody individuals who have been **charged** with criminal offenses. A facility that is used primarily for pretrial detention, however, is **not** a "correctional facility."
- **"Correctional Officer"**: For purposes of the FY 2022 program, "correctional officer" means a person whose **primary** employment responsibility is to maintain custody of individuals held in a "correctional facility." A person who meets this definition is a "correctional officer," regardless of whether this person is an employee of the applicant government or an employee of a "contract correctional facility" used by the applicant government.
  - Based on the **primary** employment responsibility, the term "correctional officer" may include a person who fills a position such as deputy sheriff, correctional facility or jail supervisor, chief of security or shift commander for a correctional facility, or warden or assistant warden of a correctional facility. The term "correctional officer" also may include a transportation officer (or someone in a similar position), **but only** if the person's **primary** employment responsibility is to maintain custody of inmates who remain in custody but temporarily are outside of the "correctional facility."
  - "Incarcerated" is defined above.
  - Persons whose **primary** responsibility is something other than to maintain custody of individuals held in custody in a "correctional facility" are not "correctional officers" for purposes of this program and **may not** be included in the "correctional officer" data reported in section 3 of the online application. This is the case **even though** such persons may provide services to a correctional facility used by the applicant government or its inmates.
  - Persons who provide office and secretarial support or administrative services to (or for) a "correctional facility"; or whose **primary** employment responsibility involves housekeeping or maintenance at a correctional facility; or provide food, health or medical care, education, training, or vocational counseling to

"incarcerated" inmates are not "correctional officers" for purposes of the FY 2022 program. They may not be included in the "correctional officer" data reported in section 3 of the online application.
    - Similarly, persons whose **primary** employment responsibility is to work with inmates who are no longer held in custody in a "correctional facility" (e.g., parole and probation officers) or whose work involves inmates but whose primary employment responsibility is something other than "maintaining custody" of an inmate held in custody in a "correctional facility" (e.g., judges, prosecutors, public defenders, hearing officers, and warrant and apprehension units personnel) are not "correctional officers" for purposes of the FY 2022 program. They **may not** be included in the "correctional officer" data reported in section 3 of the online application.
- **"Total number" of "correctional officers"**
    - For **full-time** "correctional officers" employed by the applicant government, report the total number of full-time correctional officers employed during the reporting period.
    - For **part-time** "correctional officers" employed by the applicant government (reported as FTEs), report the total number of part- time correctional officers employed during the reporting period.
    - For **full-time** "correctional officers" employed by a "contract correctional facility," include only the "total number" of such officers whose employment is reasonably attributable — using due diligence — to use of the correctional facility by the applicant government for inmates held in custody under its own legal authority. As the "total number," report the total number of such full-time correctional officers employed during the reporting period.
    - Similarly, for **part-time** "correctional officers" employed by a "contract correctional facility," include **only** the "total number" of such officers whose employment is reasonably attributable — using due diligence — to use of the correctional facility by the applicant government for inmates held in custody under its own legal authority. As the "total number," report the total number of such part-time correctional officers employed during the reporting period.
- **"'Actual salary expenditures for correctional officers' during the reporting period" means the sum of:**
    - The actual amount (if any) paid by the applicant government during the "reporting period" as the "salaries and wages" of full-time and part-time "correctional officers" it employed. Paid leave (medical leave, family leave, vacation leave) may be included in this total.
    - The actual amount (if any) **paid by any** "contract correctional facility" as the "salaries and wages" of full-time and part-time "correctional officers," but only to the extent the amounts paid are reasonably attributable — using due diligence — to inmates held in custody on behalf of, and under the legal authority of, the applicant government.
- **"Salaries and wages"** may include amounts paid to a "correctional officer" as premium pay for a specialized service, as shift-differential pay, and/or as fixed-pay increases for time in service. It also may include additional amounts paid for overtime when such additional amounts are required by law (e.g., by statute or regulation) or

by contractual obligation.
    - “Salaries and wages” may not include any payments or costs for employment benefits, including (without limitation) social security, retirement or pension plans, health or medical services, insurance (e.g., medical, dental, vision, disability, and life insurance), and/or report awards.

Information Required in the “‘Correctional Officer’ Salary Expenditures Detail (for the Reporting Period)”
Each applicant must attach a file to the application that sets out for each “correctional officer” included in the reported number of “correctional officers” the following:

- The title of the position held by the person (e.g., “corrections officer,” “deputy sheriff,” “warden”) and the total “salaries and wages” paid to the person during the reporting period for that work. (The name of the correctional officer should not be included.)
- For an individual “correctional officer” employed by a “contract correctional facility,” the “salaries and wages” listed must be the amount reasonably attributable — using due diligence — to inmates held in custody on behalf of, and under the legal authority of, the applicant government.
- This salary “detail” file may be submitted in one of several commonly used file formats (e.g., Adobe PDF, Microsoft Word, or Microsoft Excel). **Note:** The sum of all “salaries and wages” listed in the “detail” file must match the amount entered in the online application as “‘Actual salary expenditures for correctional officers during the reporting period.”
    - JustGrants does **not** accept **executable** file types as application attachments. These disallowed file types include, but are not limited to, the following extensions: “.com,” “.bat,” “.exe,” “.vbs,” “.cfg,” “.dat,” “.db,” “.dbf,” “.dll,” “.ini,” “.log,” “.ora,” “.sys,” and “.zip.”
- To “attach” the file:
    - Click on the “attach” button. A pop-up window will appear.
    - Click on the "Browse" button.
    - Locate the correct file name and double-click on it. The file name will appear in the blank field. Click the “Upload” button.

Required Information on “Correctional Facilities”
In section 3 of the online application, the “submitting government official” also must provide, by direct entry into the online application, all of the following information related to “correctional facilities”:

- “Maximum bed count” for the reporting period
- “Total all inmate days” for the reporting period

In addition, section 3 of the online application requires the “submitting government official” to provide, as a file attached to the application, detail on “All inmate days, by reporting day” for the reporting period.

Pertinent Definitions relating to “Correctional Facilities”

- **“Correctional facility” and “contract correctional facility”** are defined above.
- **“‘Maximum bed count’ for the reporting period”**: If the applicant government held inmates in custody only in “correctional facilities” operated by the applicant government itself for its own use, the “‘maximum bed count’ for the reporting period” is the **maximum capacity** during any single day of the reporting period of all such “correctional facilities” operated by the applicant government. If, however, the applicant government **either** did not operate a “correctional facility” for its own use or operated one or more “correctional facilities” for its own use and also used other facilities to hold inmates in custody, the “‘maximum bed count’ for the reporting period” is the sum of:
  - The maximum **capacity** during any single day of the reporting period of all “correctional facilities” operated by the applicant government itself for its own use.
  - The maximum number of inmates, if any, actually held in custody on behalf of (under the legal authority of) the applicant government in a “contract correctional facility” during any single day of the reporting period.
  - The maximum number of inmates, if any, **actually held in custody** by the applicant government during any single day of the reporting period in “temporary” or “overflow” facilities (e.g., gymnasiums).
- **“‘Total all inmate days’ for the reporting period”** means the cumulative number of days — determined using the nightly “head count” for each of the days in the reporting period — inmates were held in custody in a “correctional facility” by or on behalf of the applicant government (pursuant to its own legal authority) during the “reporting period” **regardless of inmate citizenship, legal status, or the number of days held in custody.**

Information Required in the “‘All Inmate Days, by Reporting Day’ Detail (for the Reporting Period)”

- Each applicant must attach a file to its application that sets out for **each particular day of the reporting period** — using nightly “head counts” — the number of inmates held in custody in a “correctional facility” by or on behalf of the applicant government (pursuant to its own legal authority), **regardless of inmate citizenship, legal status, or the number of days held in custody.**
- This “detail” file may be submitted in one of several commonly used file formats (e.g., Adobe PDF, Microsoft Word, or Microsoft Excel). **Note:** The sum of all daily entries for “all inmate days” listed in this “detail” file must match the number entered in the online application as “‘Total all inmate days’ for the reporting period.”
- JustGrants does **not** accept **executable** file types as application attachments. These disallowed file types include, but are not limited to, the following extensions: “.com,” “.bat,” “.exe,” “.vbs,” “.cfg,” “.dat,” “.db,” “.dbf,” “.dll,” “.ini,” “.log,” “.ora,” “.sys,” and “.zip.”
- To “attach” the file:
  - Click on the “Attach” button. A pop-up window will appear.
  - Click on the "Browse" button.
  - Locate the correct file name and double-click on it. The file name will appear in the blank field.

- Click the “Upload” button.

Important Note Regarding “Correctional Officers” and “Correctional Facilities” Data
As indicated earlier, all information submitted as part of an application to the FY 2022 program is subject to appropriate review by OJP. In appropriate circumstances (e.g., indications that an entry related to “correctional officers” or “total all inmate days” may be erroneous), OJP may require additional information related to the accuracy of the information in the application.

Using data provided by the applicant in section 3 of the application (e.g., data on “correctional officers,” data on “total all inmate days”), JustGrants calculates each applicant’s average daily (salaries) cost per inmate during the “reporting period.” As a point of reference and comparison, for the FY 2020 program, the overall average daily (salaries) cost per inmate (i.e., the average of the daily costs for all applicants that received payments) was $56.51.

REMINDER
For each applicant government, there may be only **one** “submitting government official.” That “submitting government official” **must** complete all sections of the application and **must** be the one who submits the application to OJP.

All recipients and subrecipients (including any for-profit organization) must forgo any profit or management fee.

Application and Submission Information

Content of Application Submission and Available Surveys

See the "Application Elements and Formatting Instructions" section of the OJP Grant Application Resource Guide for information on what happens to an application that does not contain all the specified elements or is nonresponsive to the scope of the solicitation.

Information to Complete the Application for Federal Assistance (SF-424) in Grants.gov

The SF-424 must be submitted in Grants.gov. It is a required standard form used as a cover sheet for submission of pre-applications, applications, and related information. See the OJP Grant Application Resource Guide for additional information on completing the SF-424.

In Section 8F of the SF-424, please include the name and contact information of the individual **who will complete the application in JustGrants**. JustGrants will use this information *(email address)* to assign the application to this user in JustGrants.

Intergovernmental Review: This solicitation (“funding opportunity”) **is not** subject to Executive Order 12372. (In completing the SF-424, an applicant is to answer question 19 by selecting the response that the “Program is not covered by E.O. 12372.”)

Intergovernmental Review: This solicitation ("funding opportunity") **is** subject to Executive Order 12372. An applicant may find the names and addresses of State Single Points of Contact (SPOCs) at the following website: https://www.whitehouse.gov/wp-content/uploads/2020/04/SPOC-4-13-20.pdf. If the applicant's State appears on the SPOC list, the applicant must contact its SPOC to find out about, and comply with, the State's process under E.O. 12372. On the SF-424, an applicant whose State appears on the SPOC list is to make the appropriate selection in response to question 19, once the applicant has complied with its State E.O. 12372 process. An applicant whose State does not appear on the SPOC list should answer question 19 by selecting "Program is subject to E.O. 12372 but has not been selected by the State for review."

Standard Applicant Information (JustGrants 424 and General Agency Information)

The Standard Applicant Information section of the JustGrants application is pre-populated with the SF-424 data submitted in Grants.gov. The applicant will need to review the Standard Applicant Information in JustGrants and make edits as needed. Within this section, the applicant will need to add zip codes for areas affected by the project; confirm their Authorized Organization Representative; and verify and confirm the organization's unique entity identifier, legal name, and address.

Disclosure and Assurances

The applicant will address the following disclosures and assurances.

Required Certification to OJP by the Submitting Government Official: Applicant Government and Submitting Government Official

On behalf of myself and the applicant government, and in support of this application to the SCAAP program, I certify to OJP, under penalty of perjury, that the information on the applicant government and the submitting government official entered above as part of this online application to the SCAAP program is true and correct to the best of my knowledge and belief, based upon diligent inquiry and review, and is provided in accordance with the requirements, definitions, and instructions set out in the SCAAP Program Requirements and Application Instructions." I further certify that I have the legal authority to make this certification to OJP, including from the chief executive of the applicant government.

I understand and acknowledge that OJP will rely upon this and all other certifications in this online application as material representations in any decision to make a SCAAP payment to the applicant government in response to this application.

I understand and acknowledge that a materially false, fictitious, or fraudulent statement (or concealment or omission of a material fact) in this certification, or in the application that it supports, may be the subject of criminal prosecution (including under 18 U.S.C. §§ 1001 and/or 1621, and/or 34 U.S.C. §§ 10271-10273), and also may subject me and the applicant "state" or "unit of local government" to civil penalties and administrative remedies for false claims or otherwise (including under 31 U.S.C. §§ 3729-3730 and §§ 3801-3812). I also understand and acknowledge that payments under OJP programs such as SCAAP, including certifications provided in connections with such payments, are subject to review by DOJ, including by OJP and the DOJ's Office of the Inspector General.

Required Certification to OJP by the Submitting Government Official: Information on "Eligible Inmates"

On behalf of myself and the applicant government, and in support of this application to the SCAAP program, I certify to OJP, under penalty of perjury, that the information on "eligible inmates" entered or uploaded as part of this online application to the SCAAP program (1) was determined and is reported here using due diligence, and in accordance with the requirements, definitions, and instructions set out in the SCAAP Program Requirements and Application Instructions," and (2) is true and correct to the best of my knowledge and belief, based upon diligent inquiry and review. I further certify that I have the legal authority to make this certification to OJP, including from the chief executive of the applicant government.

I understand and acknowledge that OJP will rely upon this certification as a material representation in making any SCAAP payment to the applicant government in response to this application and that this certification is subject to review by DOJ. I also understand that, if this certification is false or otherwise inaccurate or misleading (including because of omission of a material fact), both I and the applicant government may be subject to criminal prosecution, civil penalties, and/or administrative remedies, including as described in the certification in this online application as to the "Applicant Government and Submitting Government Official."

Required Certification to OJP by the Submitting Government Official: Information on "Correctional Officers" and "Facilities"

On behalf of myself and the applicant government, and in support of this application to the SCAAP program, I certify to OJP, under penalty of perjury, that the information on "correctional officers" and "correctional facilities" entered or uploaded as part of this online application to the SCAAP program (1) was determined and is reported here using due diligence, and in accordance with the requirements, definitions, and instructions set out in the SCAAP Program Requirements and Application Instructions" and (2) is true and correct to the best of my knowledge and belief, based upon diligent inquiry and review. I further certify that I have the legal authority to make this certification to OJP, including from the chief executive of the applicant government.

I understand and acknowledge that OJP will rely upon this certification as a material representation in making any SCAAP payment to the applicant government in response to this application, and that this certification is subject to review by DOJ. I also understand that, if this certification is false or otherwise inaccurate or misleading (including because of omission of a material fact), both I and the applicant government may be subject to criminal prosecution, civil penalties, and/or administrative remedies, including as described in the certification in this online application as to the "Applicant Government and Submitting Government Official."

How to Apply

Registration: Before submitting an application, all applicants must register with the System for Award Management (SAM). You must renew and validate your registration every 12 months. If you do not renew your SAM registration, it will expire. An expired registration can delay or prevent application submission in Grants.gov and JustGrants. Registration and renewal can take up to 10 business days to complete.

Submission: Applications must be submitted to DOJ electronically through a two-step process via Grants.gov and JustGrants.

Step 1: After registering with SAM, the applicant must submit the **SF-424** and an **SF-LLL** in Grants.gov at https://www.grants.gov/web/grants/register.html by the Grants.gov deadline. **Submit the SF-424 and SF-LLL as early as possible, but no later that 48 hours before the Grants.gov deadline.** If an applicant fails to submit in Grants.gov, they will be unable to apply in JustGrants.

Step 2: The applicant must then submit the **full application,** including attachments, in JustGrants at JustGrants.usdoj.gov by the Grants.gov deadline.

Within 24 hours after receipt of confirmation emails from Grants.gov, the individual in Section 8F of the SF-424 will receive an email from DIAMD-NoReply@usdoj.gov with instructions on how to create a JustGrants account. Register the Entity Administrator and the Application Submitter with JustGrants as early as possible but no later than 48-72 hours before the JustGrants deadline. Once registered in JustGrants, the Application Submitter will receive an emailed link to complete the rest of the application in JustGrants. The Entity Administrator also will need to log into JustGrants to review and invite the applicant's Authorized Representative(s) before an application can be submitted.

Submit the complete application package in JustGrants at least 24 – 48 hours prior to the JustGrants deadline. Some of the application components will be entered directly into JustGrants, and others will require uploading attached documents. Therefore, applicants will need to allow ample time before the JustGrants deadline to prepare each component. Applicants may save their progress in the system and revise the application as needed prior to hitting the Submit button at the end of the application in JustGrants.

For additional information, see the "How to Apply" section in the OJP Grant Application Resource Guide and the DOJ Application Submission Checklist.

Submission Dates and Time

The **SF-424** and the **SF-LLL** must be submitted in Grants.gov by January 30, 2023, at 8:59 p.m. ET.

The **full application** must be submitted in JustGrants by February 6, 2023, at 8:59 p.m. ET.

OJP urges applicants to submit their Grants.gov and JustGrants submissions prior to the due dates with sufficient time to correct any errors and resubmit by the submission deadlines if a rejection notification is received. To be considered timely, the **full application** must be submitted in JustGrants by the JustGrants application deadline. Failure to begin the SAM.gov, Grants.gov, or JustGrants registration process in sufficient time (i.e., waiting until the date identified in this solicitation) is not an acceptable reason for late submission.

Absent highly unusual circumstances, OJP will **not** extend this deadline or permit an applicant government to submit its application after the application deadline. Much as in previous years, promptly after the application deadline, OJP will transmit to DHS the data on "eligible inmates" from all of the applications submitted to JustGrants before the deadline. The volume of "eligible inmates" data transmitted to DHS (and the nature and

complexity of the DHS review of those data) is such that it is not possible to transmit supplemental or corrected data to DHS.

Experiencing Unforeseen Technical Issues Preventing Submission of an Application

OJP will only consider a request to submit an application after the deadline when the applicant can document that a technical issue with a government system prevented application submission.

If an applicant misses a deadline due to unforeseen technical issues with SAM.gov, Grants.gov, or JustGrants, the applicant may request a waiver to submit an application after the deadline. However, the waiver request will not be considered unless it includes a tracking number generated when the applicant contacts the applicable service desks to report technical difficulties. Tracking numbers are generated automatically when an applicant emails the applicable service desks; and for this reason, applicants are encouraged to email the appropriate service desk, even if they also intend to call the service desk for phone support. Experiencing wait times for phone support does not relieve the applicant of the responsibility of getting a tracking number.

An applicant experiencing technical difficulties must contact the associated service desk indicated below to report the technical issue and receive a tracking number:

- SAM.gov - contact the SAM Help Desk (Federal Service Desk), Monday – Friday from 8 a.m. to 8 p.m. ET at 866-606-8220.
- Grants.gov - contact the Grants.gov Customer Support Hotline, 24 hours a day, 7 days a week, except on federal holidays, at 800-518-4726, 606-545-5035, or support@grants.gov.
- JustGrants - contact the JustGrants Service Desk at JustGrants.Support@usdoj.gov or 833-872-5175, Monday – Friday from 7 a.m. to 9 p.m. ET and Saturday, Sunday, and Federal holidays from 9 a.m. to 5 p.m. ET.

If an applicant has technical issues with SAM.gov or Grants.gov, the applicant must contact the SCAAP Help Desk at scaap@usdoj.gov within **24 hours of the Grants.gov deadline** to request approval to submit after the deadline.

If an applicant has technical issues with JustGrants that prevent application submission by the deadline, the applicant must contact the SCAAP Help Desk at scaap@usdoj.gov within **24 hours of the JustGrants deadline** to request approval to submit after the deadline.

Waiver requests sent to the SCAAP Help Desk must -

- describe the technical difficulties experienced,
- include a timeline of the applicant's submission efforts (e.g., date and time the error occurred, date and time of actions taken to resolve the issue and resubmit; and date and time support representatives responded),
- include an attachment of the complete grant application and all the required documentation and materials,
- include the applicant's Unique Entity Identifier (UEI), and

- include any SAM.gov, Grants.gov, and JustGrants Service Desk tracking numbers documenting the technical issue.

OJP will review each waiver request and the required supporting documentation and notify the applicant whether the request for late submission has been approved or denied. An applicant who does not provide documentation of a technical issue or who does not submit a waiver request within the required time period will be denied.

For more details on the waiver process, OJP encourages applicants to review the "Experiencing Unforeseen Technical Issues" section in the OJP Grant Application Resource Guide.

Application Review Information

Review Process

OJP Review of Applications; Corrections to Data (Other than "Eligible Inmate" Data)
All information submitted as part of an application is subject to appropriate review by OJP. If a properly submitted application appears to contain errors that may be corrected by the applicant (such as inaccurate data on correctional officers or correctional facilities), OJP typically will notify the applicant via an email message to the "submitting government official" and the applicant's chief executive using the email addresses provided in the application. In such a notification, OJP may provide an applicant with an opportunity to correct the application by a particular date. In any such case, to be considered for a SCAAP payment, the applicant must make the appropriate corrections by that date.

Due to the nature and complexity of the data review by DHS, however, **no** corrections may be made to data submitted on "eligible inmates" (or "inmate records") after the application deadline has passed.

Federal Award Administration Information

Federal Award Notices

Notification and Acceptance of Payment
Once the amount of any payment under the FY 2022 program has been determined, award notifications will be sent through JustGrants. Please note that the JustGrants award notifications for all OJP programs include standard language, some of which is not applicable to SCAAP. For example, the language regarding post-award programmatic and financial reports can be disregarded. The SCAAP help desk will send a subsequent notification to recipients that will provide information concerning the amount available to the applicant government and will provide detailed instructions for online acceptance (in JustGrants) and drawdown of funds.

An applicant government is to complete the online acceptance process within 45 calendar days after receipt of the email notice from OJP. Formal acceptance in JustGrants is required before any electronic transfer of funds to the applicant government. See the SCAAP Application Submission and Acceptance Job Aid Reference Guide.

Federal Awarding Agency Contact(s)

For assistance with the online application to the FY 2022 program or other aspects of the FY 2022 program, contact the SCAAP Help Desk by phone at 1–202–353–4411 or by email to SCAAP@usdoj.gov. The SCAAP Help Desk operates Monday through Friday Monday–Friday from 9 a.m. to 5 p.m. ET. It is closed on federal holidays.

For technical assistance with submitting the SF-424 in Grants.gov, contact the Grants.gov Customer Support Hotline at 800–518–4726, 606–545–5035, at the Grants.gov customer support web page, or email at support@grants.gov. The Grants.gov Support Hotline operates 24 hours a day, 7 days a week, except on federal holidays.

For technical assistance with submitting the full application in DOJ's Justice Grants System (JustGrants), contact the JustGrants Service Desk at JustGrants.Support@usdoj.gov, 833–872–5175. The JustGrants Service Desk operates 5 a.m. to 9.p.m. eastern time Monday through Friday and 9 a.m. to 5 p.m. Saturday, Sunday, and federal holidays.

Application Checklist

Standard Solicitation Resources

OJP Grant Application Resource Guide provides guidance to assist OJP grant applicants in preparing and submitting applications for OJP funding.

DOJ Grants Financial Guide serves as the primary reference manual to assist award recipients in fulfilling their fiduciary responsibility to safeguard grant funds and to ensure funds are used for the purposes for which they were awarded. It compiles a variety of laws, rules and regulations that affect the financial and administrative management of DOJ awards. This guide serves as a starting point for all award recipients and subrecipients of DOJ grants and cooperative agreements in ensuring the effective day-to-day management of awards.

JustGrants Resources Website is an entryway into information about JustGrants and the grants management system itself. Through this portal both award recipients and applicants can access training resource and user support options, find frequently asked questions and sign-up for the JustGrants Update e-newsletter.

JustGrants Application Submission Training Page offers helpful information and resources on the application process. This training page includes e-learning videos, reference guides, checklists and other resources to help applicants complete an application.

Virtual Q&A Sessions are advertised here and provide opportunities for users to receive topic-specific training, direct technical assistance and support on JustGrants system functionality.

Appendix A: SCAAP Data Elements for "Inmate Records" — FY 2022 Program

Please go to https://bja.ojp.gov/funding/fy-2022-SCAAP-appendix-a.pdf for Appendix A

Appendix B: DHS ICE Country Codes — For Use in "Inmate Records"

Country Name	ICE Code	Country Name	ICE Code	Country Name	ICE Code
Afghanistan	AFGHA	Chad	CHAD	Ghana	GHANA
Albania	ALBAN	Chile	CHILE	Gibraltar	GIBRA
Algeria	ALGER	China, Peoples Republic	CHINA	Greece	GREEC
Andorra	ANDOR	Christmas Island	CHRIS	Greenland	GREEN
Angola	ANGOL	Cocos Islands	COCOS	Grenada	GRENA
Anguilla	ANGUI	Colombia	COLOM	Guadeloupe	GUADE
Antigua-Barbuda	ANTIG	Comoros	COMOR	Guatemala	GUATE
Argentina	ARGEN	Congo, Democratic Republic	DECON	Guinea	UINEA
Armenia	ARMEN	Congo, Republic	CONGO	Guinea Bissau	BISSA
Aruba	ARUBA	Cook Islands	COOK	Guyana	GUYAN
Australia	RALIA	Costa Rica	COSTA	Haiti	HAITI
Austria	STRIA	Cote d'Ivoire	IVORY	Holy See	VATIC
Azerbaijan	AZERB	Croatia	CROAT	Honduras	HONDU
Bahamas, The	BAHAM	Cuba	CUBA	Hong Kong	HONGK
Bahrain	BAHRA	Cyprus	CYPRU	Hungary	HUNGA
Bangladesh	BANGL	Czech Republic	CZREP	Iceland	ICELA
Barbados	BARBA	Czechoslovakia, former	CZECH	India	INDIA
Belarus	BELAR	Denmark	DENMA	Indonesia	INDON
Belgium	BELGI	Djibouti	DJIBO	Iran	IRAN
Belize	BELIZ	Dominica	INICA	Iraq	IRAQ
Benin	BENIN	Dominican Republic	DR	Ireland	IRELA
Bermuda	BERMU	Ecuador	ECUAD	Israel	ISRAE
Bhutan	BHUTA	Egypt	EGYPT	Italy	ITALY
Bolivia	BOLIV	El Salvador	ELSAL	Jamaica	JAMAI
Bosnia-Herzegovina	BOSNI	Equatorial Guinea	EQUAT	Japan	JAPAN
Botswana	BOTSW	Eritrea	ERITR	Jordan	JORDA
Brazil	BRAZI	Estonia	ESTON	Kazakhstan	KAZAK
British Virgin Islands	BVI	Ethiopia	ETHIO	Kenya	KENYA
Brunei	BRUNE	Falkland Islands	FALKL	Kiribati	KIRIB
Bulgaria	BULGA	Fiji	FIJI	Korea	KOREA
Burkina Faso	BURKI	Finland	FINLA	Kuwait	KUWAI
Burma	BURMA	France	FRANC	Kyrgyzstan	KYRGY
Burundi	BURUN	French Guiana	FRGUI	Laos	LAOS
Cambodia	CAMBO	French Polynesia	POLYN	Latvia	LATVI
Cameroon	CAMER	French Southern and Antarctic Lands	ANTAR	Lebanon	LEBAN
Canada	CANAD	Gabon	GABON	Lesotho	LESOT
Cape Verde	CAPEV	Gambia	GAMBI	Liberia	LIBER
Cayman Islands	CAYMA	Georgia	GEORG	Libya	LIBYA
Central African Republic	CAFRI	Germany	GERMA	Liechtenstein	LIECH
Lithuania	LITHU	Palestine	PALES	Sweden	SWEDE
Luxembourg	LUXEM	Panama	PANAM	Switzerland	SWITZ
Macau	MACAU	Papua New Guinea	PAPUA	Syria	SYRIA

Country Name	ICE Code	Country Name	ICE Code	Country Name	ICE Code
Macedonia	MACED	Paraguay	PARAG	Taiwan	TAIWA
Madagascar	MADAG	Peru	PERU	Tajikistan	TAJIK
Malawi	MALAW	Philippines	PHILI	Tanzania	TANZA
Malaysia	MALAY	Pitcairn Island	PITCA	Thailand	THAIL
Maldives	MALDI	Poland	POLAN	Togo	TOGO
Mali	MALI	Portugal	PORTU	Tonga	TONGA
Malta	MALTA	Qatar	QATAR	Trinidad and Tobago	TRINI
Marshall Islands	MARSH	Reunion	REUNI	Tunisia	TUNIS
Martinique	MARTI	Romania	ROMAN	Turkey	TURKE
Mauritania	MAUTA	Russia	RUSSI	Turkmenistan	TURKM
Mauritius	MAUTI	Rwanda	RWAND	Turks and Caicos Islands	TURKS
Mexico	MEXIC	Samoa	SAMOA	Tuvalu	TUVAL
Micronesia, Federated States	FSM	San Marino	SANMA	Uganda	UGAND
Moldova	MOLDO	Sao Tome and Principe	SAOTO	Ukraine	UKRAI
Monaco	MONAC	Saudi Arabia*	SAUDI	United Arab Emirates	UAE
Mongolia	MONGO	Senegal	SENEG	United Kingdom	UK
Montserrat	MONTS	Seychelles	SEYCH	Uruguay	URUGU
Morocco	MOROC	Sierra Leone	SIERR	Uzbekistan	UZBEK
Mozambique	MOZAM	Singapore	SINGA	Vanuatu	VANUA
Namibia	NAMIB	Slovak Republic	SLOVA	Venezuela	VENEZ
Nauru	NAURU	Slovenia	SLOVE	Vietnam	VIETN
Nepal	NEPAL	Solomon Islands	SOLOM	Wallis and Futuna Islands	WALLI
Netherlands	NETHE	Somalia	SOMAL	West Indies	WINDI
Netherlands Antilles	ANTIL	South Africa	SAFRI	Western Sahara	WSAHA
New Caledonia	NEWCA	South Korea	SKORE	Western Samoa	WSAMO
New Zealand	NEWZE	Soviet Union, former	USSR	Yemen	YEMEN
Nicaragua	NICAR	Spain	SPAIN	Yugoslavia, former	YUGOS
Niger	NIGE	Sri Lanka	SRILA	Zambia	ZAMBI
Nigeria	NIGIA	St. Helena	STHEL	Zimbabwe	ZIMBA
Niue	NIUE	St. Kitts-Nevis	STKIT		
North Korea	NKORE	St. Lucia	STLUC	Born on ship/ plane	SHIP
Northern Ireland	NIREL	St. Pierre and Miquelon	STPIE	Stateless	STATE
Norway	NORWA	St. Vincent and the Grenadines	STVIN		
Oman	OMAN	Sudan	SUDAN		
Pakistan	PAKIS	Suriname	SURIN		
Palau	PALAU	Swaziland	SWAZI		

* ARABI also may be used as the code for Saudi Arabia

Appendix C: Instructions for Upload of ASCII Fixed-field File of "Inmate Records"

Upload of an ASCII Fixed-field File of All "Inmate Records"
This method for submitting "inmate records" on "eligible inmates" allows an applicant to submit the entire set of inmate records as a single ASCII-formatted file uploaded directly into JustGrants. Appendix A specifies the required fields and format.

Each "inmate record" in the uploaded ASCII file is to contain all mandatory data fields in the specified format. Through a file upload "status report" (which will refer to each "inmate record" as a "line"), JustGrants will flag "inmate records" within the ASCII file that do not contain the required information, are not exactly **165 or 166** characters long, or do not follow (or appear not to follow) the specified data format.

"Inmate records" that are incomplete or are not in the specified format as of the date and time of the application deadline will **not** be considered as part of OJP's payment calculation process. If an ASCII inmate-record file has been uploaded, but the applicant government has **not** yet submitted its application to OJP's JustGrants, the applicant has the option to correct, add to, or otherwise modify the ASCII inmate-record file and upload that file as a **replacement** for the entire file previously uploaded. (See below.)

To help ensure that the maximum number of "inmate records" is taken into account in the calculation of the amount of any payment, the applicant should be **meticulous** in preparing the ASCII fixed-field file. If JustGrants nevertheless identifies errors in the file — and the application deadline has not yet passed — the applicant should correct those errors as soon as possible, **before** it "submits" the application to JustGrants.

ALERTS

- An ASCII "inmate-record" file may **not** be corrected, added to, or modified **in any way** once the application deadline has passed.
- If an applicant uploads an ASCII fixed-field file of "inmate records," any subsequent upload of a new or modified file **will overwrite (and delete)** the previously uploaded file **in its entirety**. Similarly, the addition of any inmate records via direct data entry will overwrite (and delete) the previously uploaded ASCII fixed-field file in its entirety.
- Upload of a large ASCII fixed-field file of "inmate records" may take a considerable amount of time.
  - Generally, there is a brief start-up delay when the upload is being initiated.
  - A file that contains 50,000 "inmate records" may take 15 minutes or longer to upload, even after the file upload actually has begun.
  - If the applicant's internet browser "times out" or is disconnected during the file upload process, errors may result. It is important to review the file upload "status report" (see below) to determine whether the expected number of "inmate records" in fact was uploaded.

The Upload Process – In General
To submit "inmate records" for "eligible inmates" by uploading a single ASCII fixed-field file that includes all such inmate records, follow these steps:

Step 1: In section 2 of the online application, click on the "Upload Inmate File" button.

Step 2: Click on the "Upload" box to attach the file. A pop-up window will appear.

Step 3: Click on the “Browse” button in the pop-up window.

Step 4: Locate the correct file name and double click on it. The file name will appear in the blank field.

Step 5: Click the “Upload” button. A message should appear in the pop-up window that indicates the status of the file upload. Click the "X" in the upper right corner of the pop-up box to close it. The ASCII fixed-field file name should now appear next to the upload button on the main page.

Step 6: Click the “Validate” button. Any errors present in the inmate file will be displayed. Correct any errors listed and reupload the entire inmate file once the update is completed.

Step 7: Click the “Continue” button to proceed to the next section of the application. The file upload “status report” will indicate the total number of “inmate records” uploaded and the number of those records that are “complete.” In addition, the report will provide a detailed list of any inmate records (by “line” number) that are incomplete and/or are not in the specific data format. It also will indicate the data fields in which the error(s) appear.

Appendix D: SCAAP Payment Calculations — General Overview

A General Overview of the Method OJP Uses to Calculate Payments under SCAAP
DHS reviews “inmate records.” All “complete” inmate records submitted in applications from “eligible applicants” are forwarded by OJP to DHS promptly after the application deadline.

1. DHS conducts a detailed review that focuses on determining whether each individual identified in an “inmate record” in fact was “undocumented” — or was instead a U.S. citizen (or national) or otherwise lawfully present in the United States — at the time of the incarceration identified in the inmate record.
2. DHS provides the results of its review to OJP.
3. OJP reviews the data provided by applicants, including data on “correctional officers,” “actual salary expenditures for correctional officers,” and “total all inmate days.” As appropriate and feasible, OJP requires additional — or corrected — information from applicants.
4. For each applicant government with one or more “inmate records” determined to be eligible for payment, JustGrants calculates the average daily (salaries) cost per inmate for the applicable “reporting period.” In general, this is done by dividing “actual salary expenditures for correctional officers” (for the reporting period) by “total all inmate days” (for the reporting period).
5. Using the results of the DHS review, the OJP review, and each applicant’s average daily (salaries) cost per inmate, JustGrants calculates an amount — referred to as the

applicant's total "eligible inmate costs" — that reflects the applicant's total (salaries) costs of incarcerating "undocumented criminal aliens" during the applicable "reporting period."

6. Funds available from appropriations to OJP for SCAAP for the particular application cycle are paid to applicant governments on a proportionate (percentage) basis, using each applicant's total "eligible inmate costs."

For example, during the FY 2021 program, payments made to applicant governments represented approximately 31.4 percent of each applicant's total "eligible inmate costs."

Appendix E: Law Enforcement Support Center Immigration Alien Query Overview

Overview

State and local law enforcement agencies may provide specific notice to DHS of an "undocumented criminal alien's" name, their release date, and the individual's home and work addresses through the Law Enforcement Support Center (LESC). The LESC Immigration Alien Query (IAQ) field is an optional field for each inmate record to assist in establishing the eligibility of inmates for SCAAP reimbursement.

LESC is ICE's single national point of contact that provides timely immigration status information; identity information; and real-time assistance to local, state, and federal law enforcement agencies on aliens suspected of, arrested for, or convicted of criminal activity. LESC, located in Williston, Vermont, operates 24 hours a day, 7 days a week, 365 days a year.