



Hall County Government

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To: David Gibbs, Chairman
Kathy Cooper, District 1 Commissioner
Billy Powell, District 2 Commissioner
Gregg Poole, District 3 Commissioner
Jeff Stowe, District 4 Commissioner

From: Katie Ahmed, Planning & Zoning Director

Date: August 20, 2026

Subject: **2862, 2894 White Sulphur Road & 3323, 3331 Seymour Road | Rezone** | from Agricultural Residential (AR-1) and Light Industrial (I-1) to Heavy Industrial (I-2) | on a combined 109.64± acre tract located on the southeast side of White Sulphur Road at its intersection with Cagle Road | Zoned AR-1 & I-1 (C); Tax Parcels 15020 000012, 15020A000012A(pt), 15020A000010(pt), 15020A000011(pt) | **Proposed Use: Industrial Park** | Commission District 3 | **Danji, LLC, applicant**

Dear Mr. Chairman and District Commissioners,

This application was tabled at July 23, 2026, Board of Commissioners meeting to the September 10, 2026, with the Board's directive that the applicant provides a Traffic Impact Study. The study, prepared by Keck + Wood and dated August 7, 2026, was received by staff on August 12, 2026. Brent Cook, Assistant Public Works Director, has reviewed the study and offers the following comments summarized below. Original edits are found within the Traffic Study itself.

- Title Page:
 - Detail corrections such as verifying the correct description of the GDOT project
- Section 1.2: Proposed Development
 - Identify "multi-use path along the frontage."
- Section 1.3: Planned Transportation Improvements
 - Detail corrections
- Section 1.4: Roadways
 - Add "Sandra Deal Elementary" as a land use along Ramsey Road; Add "multi-use path exists on White Sulphur Road in the study limits and is included in the section under construction.
- Section 2.2: Background Growth
 - Verify the growth rate is consistent with MPO's MTP growth rate.
- Section 2.3: Study Scenarios
 - Detail corrections

- Sections 4.1 & 4.2: Distribution & Assignment of Project-Generated Trips
 - Comment: “Distribution and assignment (of project-generated trips) seems to be inconsistent with the proximity of the Blue Ridge Connector.”
- Section 7- Conclusions:
 - Left out reference to PI000731
 - Comment: “I can’t support 6 driveways. Interparcel access needs to be considered. While ISD (Intersection Sight Distance) is not usually included in a TIS (Traffic Impact Study), the terrain needs to be considered.

The applicant has been notified that the application cannot be considered complete until all comments from the Public Works review have been addressed. These comments were provided to the applicant on August 19, 2026.

Updated conditions were presented by Staff at the July 23, 2026, Board of Commissioners meeting and will be re-evaluated once staff determines that the Traffic Impact Study is adequate.

If the updated Traffic Impact Study is received and accepted by Staff in time for Board consideration, an updated Memorandum will be provided prior to the September 10, 2026, Board meeting.

TRAFFIC IMPACT STUDY

Danji Site Development

~~US 23/SR 365/Cornelia Highway |~~

White Sulphur Road

Gainesville, GA

Keck & Wood Project No.
260238.00

August 7, 2026

Prepared by:



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1. INTRODUCTION

An industrial development, identified as the Danji Business Park, is proposed in Gainesville, Georgia along the south side of White Sulphur Road between Ramsey Road and US 23/SR 365/Cornelia Highway. A Traffic Impact Study was performed to determine the amount of new traffic that would be generated by the proposed development and how the new traffic would impact the existing roadway network. For the purpose of this study, US 23/SR 365/Cornelia Highway and White Sulphur Road will be considered in the east and west direction, while Ramsey Road will be considered in the north and south direction.

1.1. STUDY AREA

The study area is located to the south of White Sulphur Road in Gainesville, GA. Figure 1.1 presents the location of the project site and identifies the study intersections. Three (3) of the study intersections are existing and six (6) are driveways for the proposed development. The study intersections are listed below, with existing intersections indicated in bold.

1. **US 23/SR 365/Cornelia Highway at White Sulphur Road**
2. **US 23/SR 365/Cornelia Highway at Ramsey Road**
3. **White Sulphur Road at Ramsey Road**
4. White Sulphur Road at Site Driveway #1
5. White Sulphur Road at Site Driveway #2
6. White Sulphur Road at Site Driveway #3
7. White Sulphur Road at Site Driveway #4
8. White Sulphur Road at Site Driveway #5
9. White Sulphur Road at Site Driveway #6

1.2. PROPOSED DEVELOPMENT

The development will consist of three industrial buildings of varying sizes: a 50,000 square-foot building (Tract 1), a 650,000 square-foot building (Tract 2), and a 175,000 square-foot building (Tract 3). The proposed development will be positioned on 109.7 acres with 62.2 acres for the largest proposed building, 26 acres for the next largest building, and 21 acres for the smallest building.

Access to the site would be provided by six full access driveways along White Sulphur Road. One driveway will provide direct access to the 50,000 square-foot building, three driveways will provide access to the 650,000 square-foot building, and two driveways will provide access to the 175,000 square-foot building. The proposed site layout is provided in **Appendix A**. The proposed development is expected to be built out in the year 2031. Currently, the proposed project site is undeveloped and appears to contain no existing infrastructure (i.e., roads, paths, buildings).

2 multi-use path is along the fringe

1.3. PLANNED TRANSPORTATION IMPROVEMENTS

A search for planned Georgia Department of Transportation (GDOT) projects in or near the study area was performed using the GDOT GeoPI web application (<http://www.dot.ga.gov/DS/Maps/geopi#>). Based on that search, one project was identified within the proposed study area.

- PI: S015986 – *Realignment* Alignment and Widening of White Sulphur Road and Cagle Road *verify this description*
 - This project includes the *Realignment* alignment and widening of White Sulphur Road at US 23/SR 365/Cornelia Highway to Cagle Road. A second northwest-bound lane will be added on White Sulphur Road before transitioning into a right-turn lane for the Gainesville Inland Port entrance. This project will also create an additional left-turn lane from northbound US 23/SR 365/Cornelia Highway onto White Sulphur Road. Project completion is

~~completion is~~ expected in Summer 2027.

- PI: 0020731 – Widening of US 23/SR 365/Cornelia Highway from I-985 to Belton Bridge Road
 - This project includes the widening of US 23/SR 365/Cornelia Highway from four (4) to six (6) lanes from I-985 to Belton Bridge Road. Additionally, the project will convert existing at-grade intersections to limited access interchanges at White Sulphur Road, Ramsey Road, and SR 52 in Lula. Project will also construct overpasses at Kubota Way and Cagle Road. The planned construction for this project is in 2037.

1.4. ROADWAYS

US 23/SR 365/Cornelia Highway is a four-lane, divided roadway that traverses east-west through the study area. It is classified as a principal arterial roadway with a posted 65-mph speed limit. Land uses consist primarily of industrial developments and vacant parcels along the roadway. Near the study area, there are no dedicated pedestrian or bicycle facilities.

Ramsey Road is a two-lane, undivided roadway that traverses north-south through the study area. It is classified as a local roadway with no posted speed limit sign in the vicinity of the project site. Land uses along the route consist primarily of industrial developments. Near the study area, there are no dedicated pedestrian or bicycle facilities.

White Sulphur Road is a two-lane, undivided roadway that traverses east-west through the study area. It is classified as a major collector roadway with a posted 35-mph speed limit in the vicinity of the project site. Land uses along the route consist primarily of industrial developments. Near the study area, there are no dedicated pedestrian or bicycle facilities.

- Add San-dra Deal Elementary
Multi-use path exists on ~~WSR~~ WSR in the study limits & is included in the section under construction

1.5. INTERSECTIONS

The following nine (9) intersections were identified to be studied (existing intersections are in bold):

1. **US 23/SR 365/Cornelia Highway at White Sulphur Road**
2. **US 23/SR 365/Cornelia Highway at Ramsey Road**
3. **White Sulphur Road at Ramsey Road**
4. White Sulphur Road at Site Driveway #1
5. White Sulphur Road at Site Driveway #2
6. White Sulphur Road at Site Driveway #3
7. White Sulphur Road at Site Driveway #4
8. White Sulphur Road at Site Driveway #5
9. White Sulphur Road at Site Driveway #6

The existing lane geometries and intersection control types are presented in Figure 1.2.



Figure 1.1 – Aerial View of Study Area

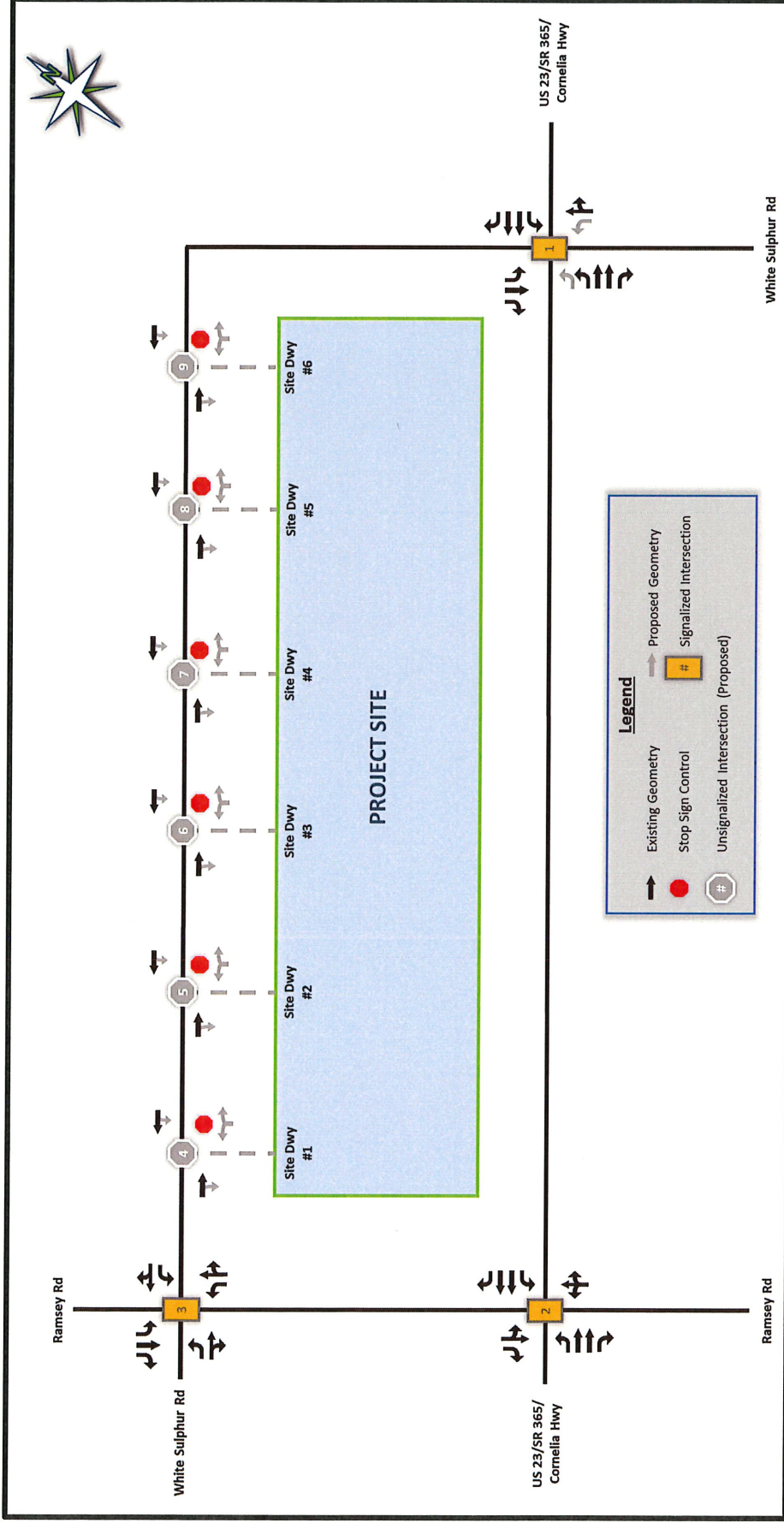


Figure 1.2 – Existing and Proposed Intersection Geometries

2. TRAFFIC ANALYSIS AND METHODOLOGY

2.1. TRAFFIC DATA COLLECTION

The traffic data for this project was collected on Tuesday, May 12, 2026. The following traffic counts were collected:

- 3 – 4-Hour TMCs (6:00 am to 8:00 am & 4:00 pm to 6:00 pm)
 - US 23/SR 365/Cornelia Highway at White Sulphur Road
 - US 23/SR 365/Cornelia Highway at Ramsey Road
 - White Sulphur Road and Ramsey Road
- 1 – 24-Hour Bi-Directional Classification Tube Counts
 - White Sulphur Road east of Ramsey Road

The traffic counts obtained for this study are included in **Appendix B**.

2.2. BACKGROUND GROWTH

A build-out year of 2031 is established for the project. An average annual growth rate was determined based on historic Average Annual Daily Traffic (AADT) counts recorded for nearby GDOT Count Stations. AADTs for the following count stations were obtained from GDOT's Traffic Analysis and Data Application (TADA) website (<https://gdottrafficdata.drakewell.com/publicmultinodemap.asp>):

- 139-0214: US 23/SR 365/Cornelia Highway north of White Sulphur Road
- 139-8198: Ramsey Road west of White Sulphur Road
- 139-0538: White Sulphur Road east of US 23/SR 365/Cornelia Highway
- 139-0536: White Sulphur Road south of Ramsey Road
- 139-0215: US 23/SR 365/Cornelia Highway south of Lula Road

Both the 5-year and 15-year growth rates were calculated at each of the historical traffic count locations. The 5-year growth rate of the five (5) locations averaged 2.7% while the 15-year growth rate averaged 2.1%. Overall, a 2.4% annual growth rate was used for the purpose of this study. The growth rate calculations can be found in **Appendix B**. The 2.4% growth rate was applied to the Existing Year 2026 peak hour traffic for a period of five (5) years to establish the 2031 future year background scenario volumes.

Is the growth rate consistent w/ MPO MTP growth rate?

2.3. STUDY SCENARIOS

For the purposes of this study, two (2) scenarios will be analyzed beyond the Existing Year 2026 scenario. Details for each scenario analyzed can be found below:

- Opening Year 2031 – Background Scenario
 - This scenario will include the background growth rate applied for five (5) years and geometry changes from GDOT PI S015986 – *Re alignment* Alignment and Widening of White Sulphur and Cagle Road. This scenario will not include any project trips from the proposed development.
- Opening Year 2031 – With Project Scenario
 - In addition to the background growth rate applied for five (5) years. This scenario will include trips from the manufacturing plant and two warehouse buildings along White Sulphur Road. It will also include GDOT PI S015986 – *Re alignment* Alignment and Widening of White Sulphur and Cagle Road.

2.4. LEVEL OF SERVICE CRITERIA

In order to quantify the impacts of additional traffic and to determine any needed roadway and/or operational improvements, a capacity analysis was performed for each scenario's peak hour conditions based on the methodology outlined in the *Highway Capacity Manual (HCM)*. Various computer programs are available which implement the *HCM* methodology. For this project, Synchro 12 was used to analyze each of the study intersections.

HCM defines level of service (LOS) in terms of the amount of control delay, including initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. The LOS categories range from A to F, with different thresholds specified according to the type of stop control at the intersection. The LOS criteria for unsignalized and signalized intersections are listed in Table 2.1.

Table 2.1 – Level of Service Criteria

Level of Service (LOS)	Unsignalized or Roundabout Control Delay per Vehicle (sec)	Signalized Control Delay per Vehicle (sec)
A	≤ 10	≤ 10
B	> 10 and ≤ 15	> 10 and ≤ 20
C	> 15 and ≤ 25	> 20 and ≤ 35
D	> 25 and ≤ 35	> 35 and ≤ 55
E	> 35 and ≤ 50	> 55 and ≤ 80
F	> 50	> 80

Rural, sparsely developed areas have a minimum LOS requirement of C based on rural residents' expectation for relatively uncongested conditions in combination with design flexibility associated with lower right of way costs. The minimum LOS for urban areas is D, reflecting the greater acceptance of delay and congestion by urban residents. Additionally, the increased density of developments makes right of way costs much higher in urban areas. The study intersections are located in a suburban/transition area; therefore, a minimum LOS D is assumed for the study intersections.

2.5. BACK OF QUEUE ANALYSIS

A Back of Queue (BOQ) analysis was used to determine the storage needs for each of the scenarios listed in Section 2.3. The 95th percentile BOQ length was calculated for specific movements at each intersection. The queue is expected to be the reported length or shorter 95 percent of the time. The BOQ results were taken from the capacity analysis reports output by Synchro 12 for each study intersection.

3. EXISTING YEAR 2026 CONDITIONS

3.1. EXISTING INTERSECTION CAPACITY ANALYSIS

A capacity analysis was performed for the Existing Year 2026 conditions using the current intersection geometries. The results of the analysis are listed in Table 3.1 and the reports from the capacity analysis are included in **Appendix C**.

Table 3.1 – Existing Year 2026 Capacity Analysis Results

No.	Intersection	Intersection Control	Approach	Existing Year 2026			
				AM Peak		PM Peak	
				LOS	sec/veh	LOS	sec/veh
1	US 23/SR 365/Cornelia Highway @ White Sulphur Road	Signalized	Overall	B	14.2	B	19.4
			EB	A	9.9	B	18.8
			WB	B	11.9	B	10.8
			NB	F	88.2	E	68.8
			SB	F	81.9	E	78.8
2	US 23/SR 365/Cornelia Highway @ Ramsey Road	Signalized	Overall	B	13.7	B	13.4
			EB	B	12.6	B	13.9
			WB	B	12.7	A	8.4
			NB	E	78.1	E	73.5
			SB	F	87.9	F	85.7
3	White Sulphur Road @ Ramsey Road	Signalized	Overall	B	12.2	B	10.7
			EB	A	8.1	A	6.4
			WB	B	14.9	B	11.6
			NB	B	12.2	B	12.8
			SB	A	10.0	B	12.9

As shown in Table 3.1, each of the study intersections is currently operating with acceptable overall LOS during both the AM and PM peak periods.

For the intersection at US 23/SR 365/Cornelia Highway and White Sulphur Road, both the northbound and southbound movements on White Sulphur Road currently operate with LOS F during the AM peak period and LOS E during the PM peak period.

For the intersection at US 23/SR 365/Cornelia Highway and Ramsey Road, the northbound movement on Ramsey Road currently operates with LOS E during both peak periods, while the southbound approach operates at an inadequate LOS F during both peak periods.

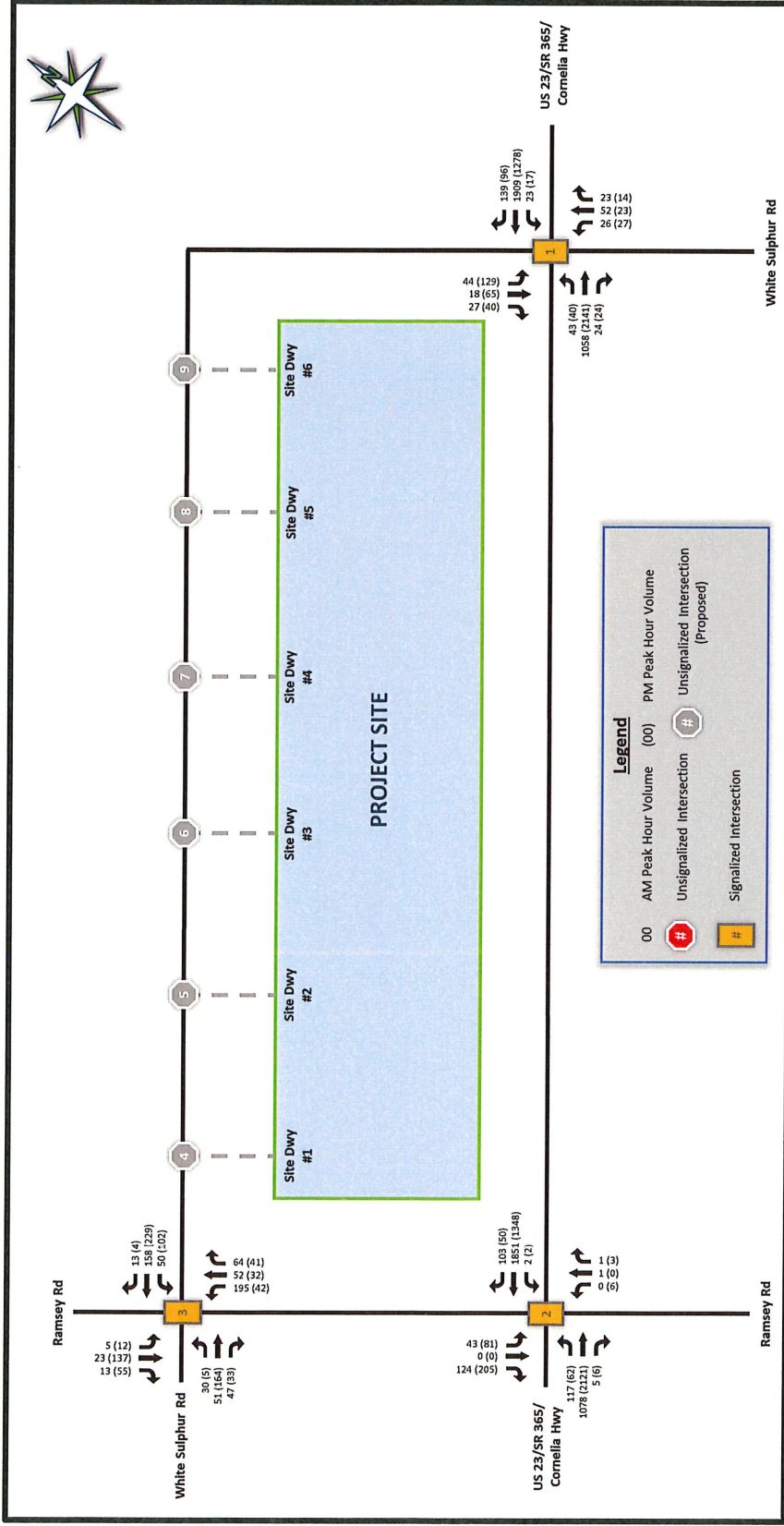


Figure 3.1 – Existing Year 2026 Peak Hour Traffic

4. TRIP GENERATION

The traffic that would be generated by the proposed development was estimated using the Institute of Transportation Engineers (ITE) *Trip Generation Manual (TGM) 12th Edition*. The number of trips expected to be generated by this development were determined using ITE Land Use Code 140 – Manufacturing for the largest building in the Danji Business Park, and ITE Land Use Code 150 – Industrial Warehouse for the smaller buildings.

The total number of project-generated trips was estimated for the typical weekday and the morning and evening peak hours. Since the development is considered an industrial development and will generate drivers that are employees or other business-related trips, pass-by trips will not be anticipated for the site. The full trip generation results can be found in Table 4.1.

Table 4.1 – Trip Generation

ITE Category	ITE Code	Size	Unit	Daily			AM Peak Hour			PM Peak Hour		
				Total	In	Out	Total	In	Out	Total	In	Out
Warehouse - Car + Truck Trips	150	50	KSF	91	46	45	7	6	1	9	3	6
Pass-by Trips	0% AM / 0% PM			0	0	0	0	0	0	0	0	0
New Trips				91	46	45	7	6	1	9	3	6
Manufacturing - Car + Truck Trips	140	62	Acres	1899	950	949	169	130	39	176	41	135
Pass-by Trips	0% AM / 0% PM			0	0	0	0	0	0	0	0	0
New Trips				1899	950	949	169	130	39	176	41	135
Warehouse - Car + Truck Trips	150	175	KSF	316	159	157	25	18	7	30	9	21
Pass-by Trips	0% AM / 0% PM			0	0	0	0	0	0	0	0	0
New Trips				316	159	157	25	18	7	30	9	21
Overall Total Trips	(Car + Truck Trips)			2,306	1,155	1,151	201	154	47	215	53	162
Overall Pass-By Trips				0	0	0	0	0	0	0	0	0
Overall New Trips				2,306	1,155	1,151	201	154	47	215	53	162

4.1. DISTRIBUTION OF PROJECT-GENERATED TRIPS

The new trips generated by the project were distributed to the surrounding roadway network based on existing traffic patterns observed in the peak hours. The inbound trips were allocated based on the existing traffic patterns entering the study area. The outbound trips were then assigned to the site driveways and distributed based on the route vehicles would have taken if the site were not built. The new trip distribution of project-generated traffic is shown in Figure 4.1.

4.2. ASSIGNMENT OF PROJECT-GENERATED TRIPS

The number of new trips were assigned to the roadway network based on the trip distribution outlined previously. The project-generated traffic (Figure 4.2) was superimposed onto the Opening Year 2031 – Background traffic (Figure 5.1) to provide an estimate of the traffic expected to be present when the proposed development is complete (Figure 5.2).

Distribution & Assignment seems to be inconsistent w/ the proximity of the Blue Ridge Connector.

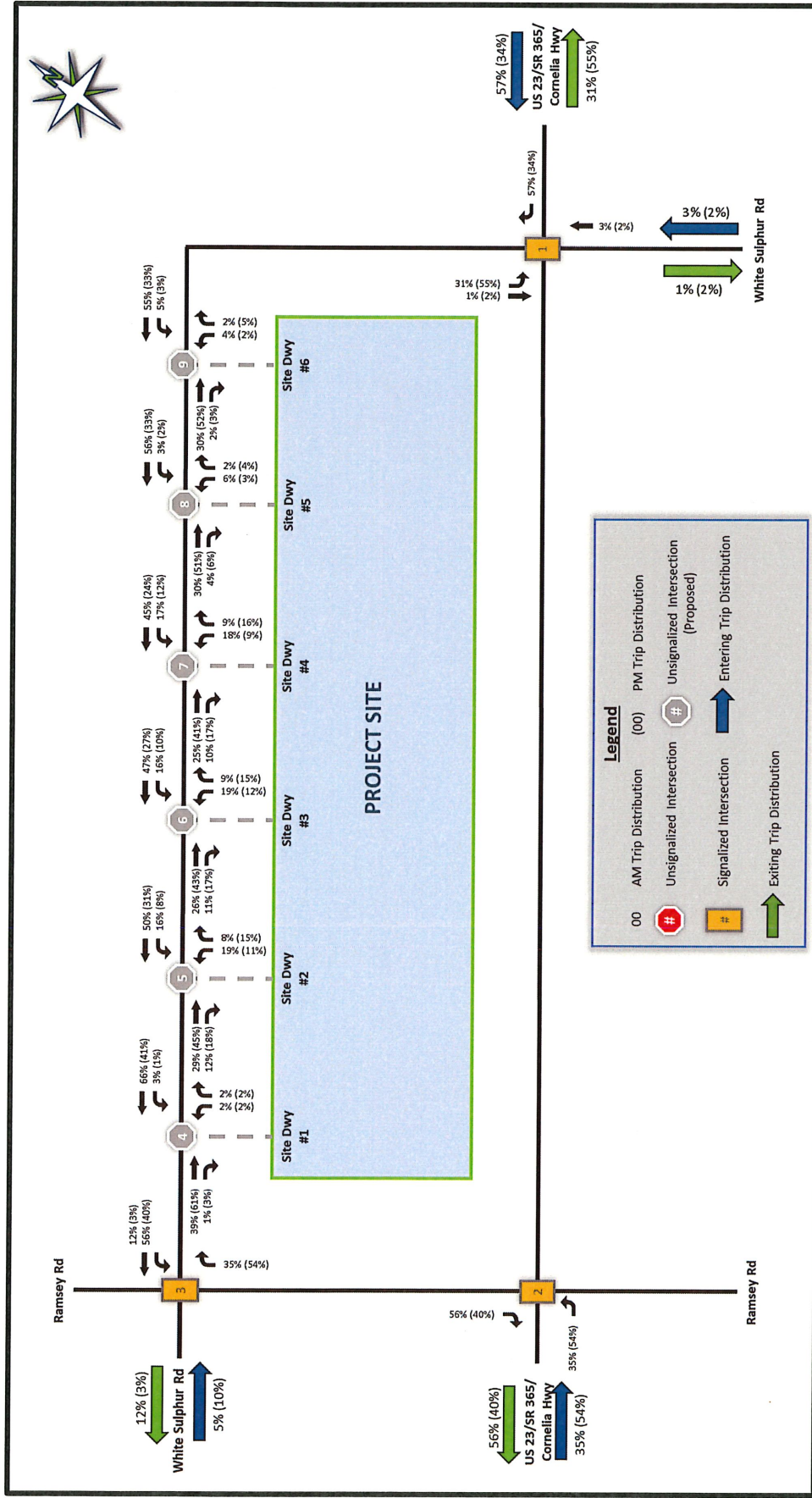


Figure 4.1 – New Trip Distribution

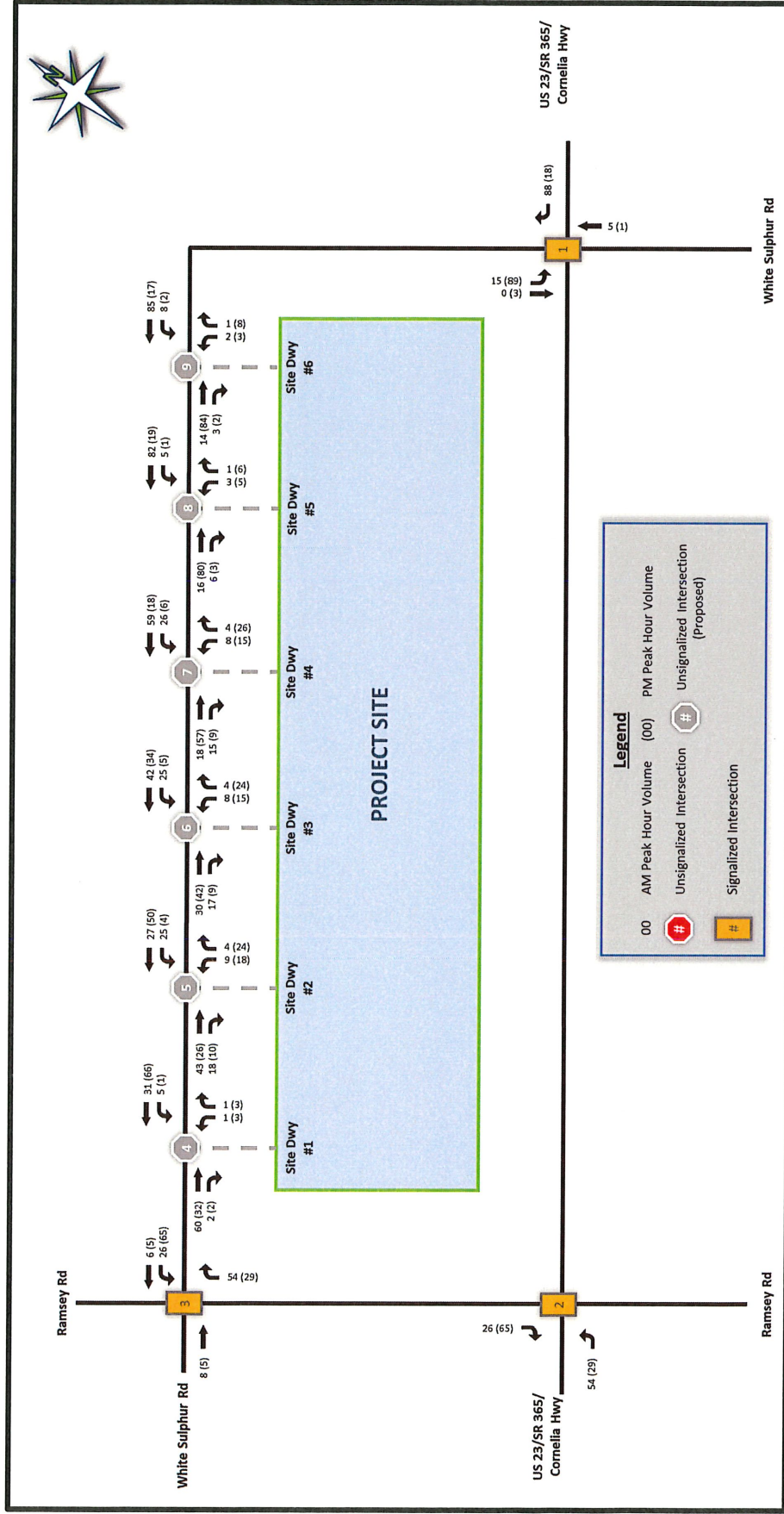


Figure 4.2 – Peak Hour Project Trip Adjustments

5. OPENING YEAR 2031 CONDITIONS

5.1. OPENING YEAR 2031 INTERSECTION CAPACITY ANALYSIS

A capacity analysis was performed to evaluate the AM and PM peak hour periods for both the Opening Year 2031 scenarios. The results of the analysis are listed in Table 5.1. Reports detailing the capacity analysis are included in **Appendix D**. The Opening Year peak hour traffic volumes are shown in Figures 5.1 and 5.2. For the purposes of this study, the following assumptions were made:

- Opening Year 2031 – Background
 - This scenario assumes the same roadway network and lane assignments as in the Existing Year 2026 conditions, with the addition of the White Sulphur Road project mentioned previously.
- Opening Year 2031 – With Project
 - This scenario assumes the same roadway network and lane assignments as in the Opening Year 2031 – Background scenario with the addition of the site driveways. The proposed driveways are detailed below:
 - The intersection at US 23/SR 365/Cornelia Highway and White Sulphur Road is expected to include the following upgrades:
 - Eastbound dual left-turn lanes on US 23/SR 365/Cornelia Highway
 - Two (2) northbound receiving lanes on White Sulphur Road
 - Extended left and right-turn lanes on White Sulphur Road for the southbound approach
 - The addition of a dedicated left-turn lane for the northbound approach on White Sulphur Road
 - Tract 1: A full access driveway at White Sulphur Road and Site Driveway #1 will be constructed with a single lane in and a single lane out of the project site. The eastbound and westbound lane configurations on White Sulphur Road will not be altered. The northbound approach will consist of a shared left and right-turn lane to exit the site.
 - Tract 2: Three full access driveways at White Sulphur Road and Site Driveway #2 through Site Driveway #4 will be constructed with a single lane in and a single lane out of the project site. The eastbound and westbound lane configurations on White Sulphur Road will not be altered. The northbound approach will consist of a shared left and right-turn lane to exit the site.
 - Tract 3: Two full access driveways along White Sulphur Road will be constructed at the intersections with Site Driveway #5 and Site Driveway #6 with a single lane in and a single lane out of the project site. The eastbound and westbound lane configurations on White Sulphur Road will not be altered. The northbound approach will consist of a shared left and right-turn lane to exit the site.

Table 5.1 – Opening Year 2031 Capacity Analysis Results

No.	Intersection	Intersection Control	Approach	Opening Year 2031							
				Background		With Project		Background		With Project	
				AM Peak				PM Peak			
				LOS	sec/veh	LOS	sec/veh	LOS	sec/veh	LOS	sec/veh
1	US 23/SR 365/Cornelia Highway @ White Sulphur Road	Signalized	Overall	B	17.7	B	19.6	C	32.4	D	45.3
			EB	B	10.9	B	11.9	D	39.5	D	54.9
			WB	B	17.4	B	19.4	B	13.9	B	16.1
			NB	E	77.3	E	74.3	E	66.9	E	63.1
			SB	F	82.5	F	82.5	E	78.8	F	115.5
2	US 23/SR 365/Cornelia Highway @ Ramsey Road	Signalized	Overall	B	16.9	C	21.8	B	18.0	B	19.1
			EB	B	13.2	B	17.4	C	20.4	C	21.2
			WB	B	17.7	C	23.2	B	10.2	B	11.7
			NB	E	77.3	E	77.3	E	72.2	E	72.2
			SB	F	87.6	F	87.6	F	85.2	F	85.2
3	White Sulphur Road @ Ramsey Road	Signalized	Overall	B	13.2	B	13.6	B	11.4	B	12.0
			EB	A	8.9	A	9.1	A	6.9	A	6.9
			WB	B	16.3	B	16.5	B	12.4	B	12.4
			NB	B	13.0	B	13.4	B	13.6	B	15.3
			SB	B	10.4	B	10.8	B	13.6	B	15.0
4	White Sulphur Road @ Site Driveway #1	Side Street Stop Controlled	EB	--	--	A	0.0	--	--	A	0.0
			WBL	--	--	A	7.9	--	--	A	8.1
			NB	--	--	B	11.6	--	--	B	12.3
5	White Sulphur Road @ Site Driveway #2	Side Street Stop Controlled	EB	--	--	A	0.0	--	--	A	0.0
			WBL	--	--	A	7.9	--	--	A	8.1
			NB	--	--	B	13.0	--	--	B	12.7
6	White Sulphur Road @ Site Driveway #3	Side Street Stop Controlled	EB	--	--	A	0.0	--	--	A	0.0
			WBL	--	--	A	7.9	--	--	A	8.2
			NB	--	--	B	13.0	--	--	B	12.9
7	White Sulphur Road @ Site Driveway #4	Side Street Stop Controlled	EB	--	--	A	0.0	--	--	A	0.0
			WBL	--	--	A	7.8	--	--	A	8.3
			NB	--	--	B	12.9	--	--	B	13.1
8	White Sulphur Road @ Site Driveway #5	Side Street Stop Controlled	EB	--	--	A	0.0	--	--	A	0.0
			WBL	--	--	A	7.8	--	--	A	8.3
			NB	--	--	B	12.6	--	--	B	12.5
9	White Sulphur Road @ Site Driveway #6	Side Street Stop Controlled	EB	--	--	A	0.0	--	--	A	0.0
			WBL	--	--	A	7.7	--	--	A	8.3
			NB	--	--	B	12.3	--	--	B	12.0

As shown in Table 5.1, each of the study intersections is currently operating with acceptable overall LOS during both the AM and PM peak periods.

For the intersection at US 23/SR 365/Cornelia Highway and White Sulphur Road, both the northbound and southbound movements on White Sulphur Road are expected to operate with LOS F in the AM peak scenarios, and LOS E during the PM peak in the Background scenario. The southbound LOS on White Sulphur Road is expected to degrade from E to F in the With Project PM peak scenario. This intersection is currently lacking a dedicated southbound left-turn phase, despite bordering on LOS F in the Background 2031 PM peak scenario.

For the intersection at US 23/SR 365/Cornelia Highway and Ramsey Road, the northbound movement on Ramsey Road is expected to operate with LOS E in all future scenarios, while the southbound approach operates at an inadequate LOS F in all future scenarios.

5.2. BACK OF QUEUE ANALYSIS

A Back of Queue (BOQ) analysis was used to determine the storage needs for the Opening Year 2031 scenarios. The 95th percentile BOQ length was calculated for specific movements at each intersection. The queue is expected to be the reported length or shorter 95 percent of the time. The BOQ results were taken from the capacity analysis reports for each study intersection (refer to **Appendix D** for the capacity analysis reports). Table 5.2 lists the BOQ lengths for each peak hour for the Opening Year 2031 – Background and With Project scenarios.

Table 5.2 – Opening Year 2031 Back of Queue Results

No.	Intersection	Intersection Control	Movement	Existing/Proposed Full Length Storage (feet)	95th Percentile Back of Queue (feet)			
					Background 2031		With Project 2031	
					AM Peak	PM Peak	AM Peak	PM Peak
1	US 23/SR 365/Cornelia Highway @ White Sulphur Road	Signalized	EBL	600	56	29	56	29
			EBT	N/A	321	1833	321	1833
			EBR	600	0	0	0	0
			WBL	460	25	25	25	25
			WBT	N/A	1537	626	1544	626
			WBR	350	44	27	64	29
			NBL	180	78	43	77	43
			NBT	N/A	142	69	151	73
			SBL	250	110	272	138	528
2	US 23/SR 365/Cornelia Highway @ Ramsey Road	Signalized	SBT	N/A	54	137	54	140
			SBR	160	0	25	0	25
			EBL	450	241	141	330	186
			EBT	N/A	390	1747	390	1747
			EBR	270	0	0	0	0
			WBL	460	25	25	25	25
			WBT	N/A	1687	515	1714	517
			WBR	280	50	25	49	25
			NBT	N/A	25	0	25	0
3	White Sulphur Road @ Ramsey Road	Signalized	SBT	N/A	110	178	110	178
			SBR	360	0	0	0	0
			EBL	230	25	25	25	25
			EBT	N/A	37	75	42	77
			WBL	100	51	72	70	115
			WBT	N/A	140	140	143	143
			NBL	80	151	41	156	42
			NBT	N/A	62	38	77	40
			SBL	160	25	25	25	25
4	White Sulphur Road @ Site Driveway #1	Side Street Stop Controlled	SBT	N/A	25	104	25	106
			SBR	280	0	25	0	25
			EB	N/A	--	--	0	0
5	White Sulphur Road @ Site Driveway #2	Side Street Stop Controlled	WB	N/A	--	--	0	0
			NB	N/A	--	--	25	25
			EB	N/A	--	--	0	0
6	White Sulphur Road @ Site Driveway #3	Side Street Stop Controlled	WB	N/A	--	--	25	0
			NB	N/A	--	--	25	25
			EB	N/A	--	--	0	0
7	White Sulphur Road @ Site Driveway #4	Side Street Stop Controlled	WB	N/A	--	--	25	0
			NB	N/A	--	--	25	25
			EB	N/A	--	--	0	0
8	White Sulphur Road @ Site Driveway #5	Side Street Stop Controlled	WB	N/A	--	--	0	0
			NB	N/A	--	--	0	25
			EB	N/A	--	--	0	0
9	White Sulphur Road @ Site Driveway #6	Side Street Stop Controlled	WB	N/A	--	--	0	0
			NB	N/A	--	--	0	25
			EB	N/A	--	--	0	0

As shown in Table 5.2, the results of the BOQ analysis indicate that five (5) of the seven (7) study intersections is expected to have sufficient storage to accommodate the project-generated traffic for each of the Opening Year 2031 scenarios.

For the intersection of US 23/SR 365/Cornelia Highway, the southbound left-turn queues off of White Sulphur Road are expected to extend beyond the existing 250 feet of storage space in each of the PM peak scenarios. The southbound left-turn queues are expected to extend 272 feet and 528 feet in the Background and With Project PM scenarios respectively. It is expected that the addition of a dedicated left-turn phase for this movement in the With Project scenario will reduce queueing.

For the intersection of White Sulphur Road and Ramsey Road, the northbound left-turn queues are expected to stretch roughly 150 feet from the stop bar in both AM peak scenarios, exceeding the existing storage space of 80 feet. However, the proposed development is not expected to impact the queuing on this approach.

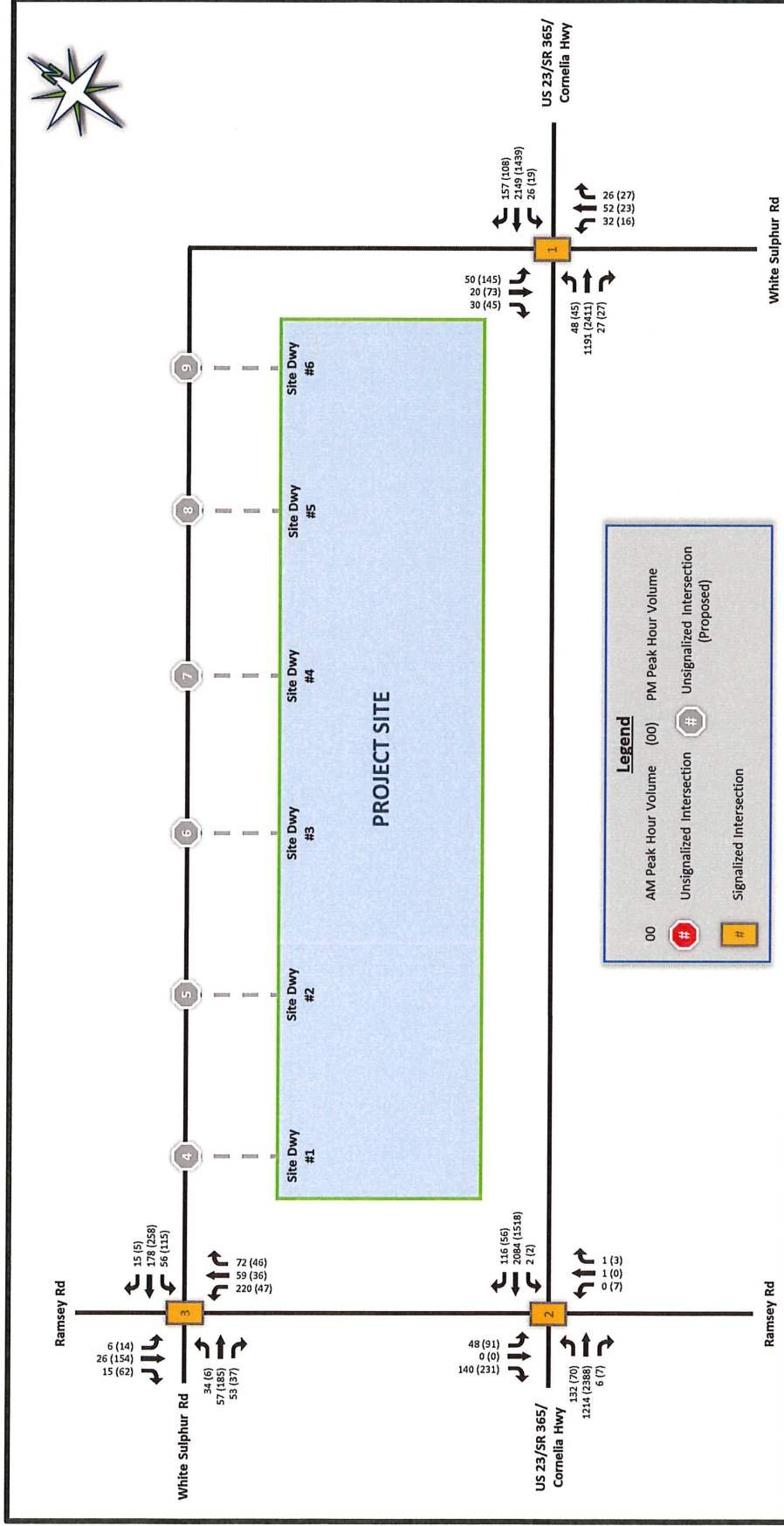


Figure 5.1 – Opening Year 2031 – Background Peak Hour Traffic

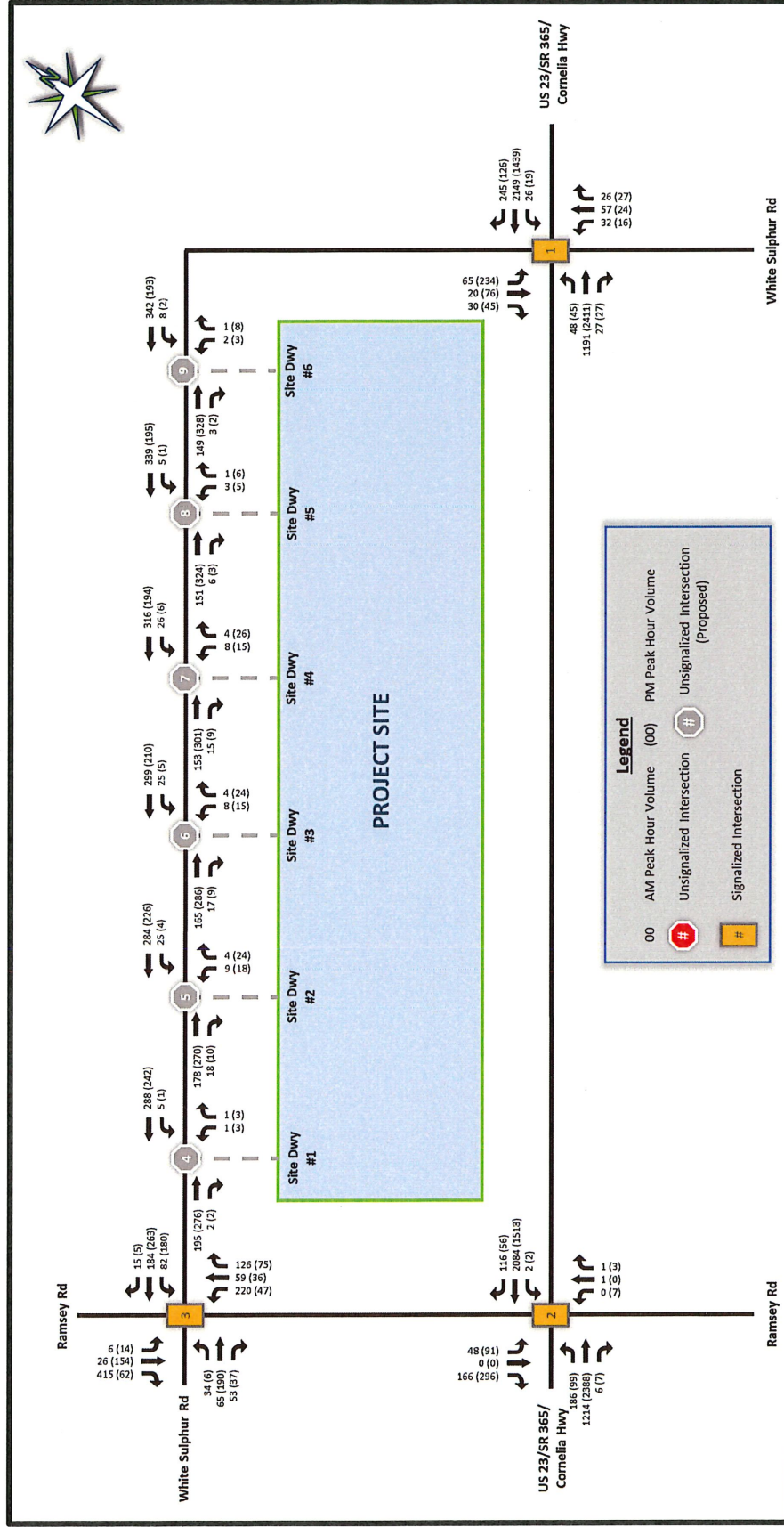


Figure 5.2 – Opening Year 2031 – With Project Peak Hour Traffic

6. AUXILIARY LANES

The GDOT manual *Regulations for Driveway and Encroachment Control* requires that the need for auxiliary turn lanes be determined in conjunction with commercial driveway permits on state-maintained roadways. The proposed driveways were evaluated based on the traffic expected for each development in the Opening Year 2031 – With Project scenarios. No other scenarios were evaluated for auxiliary turn lanes. The intersection evaluated is as follows:

- White Sulphur Road at Tract 1
- White Sulphur Road at Tract 2
- White Sulphur Road at Tract 3

6.1. RIGHT-TURN LANES

The minimum requirements for right-turn deceleration lanes can be found in Section 4.9.1.1 of the *Regulations for Driveway and Encroachment Control* manual by GDOT. Below is a recreation of “Table 4-6 – Minimum Volume Requiring Right Turn Lanes” taken from that manual:

Table 6.1 – Minimum Volumes Requiring Right-Turn Lanes

Posted Speed	2 Lane Routes		More than 2 Lanes on Main Road	
	AADT		AADT	
	< 6,000	>= 6,000	< 10,000	>= 10,000
35 MPH or Less	200 RTV a day	100 RTV a day	200 RTV a day	100 RTV a day
40 to 50 MPH	150 RTV a day	75 RTV a day	150 RTV a day	75 RTV a day
55 to 60 MPH	100 RTV a day	50 RTV a day	100 RTV a day	50 RTV a day
>= 65 MPH	Always	Always	Always	Always

- White Sulphur Road at Tract 1
 - White Sulphur Road is a 35-mph roadway with two lanes and a 2023 AADT of 3,950 vehicles along this roadway segment. Therefore, a threshold for warranting a right-turn lane is 200 right-turning vehicles a day. The eastbound right-turn movement from White Sulphur Road into Tract 1 is not expected to meet that volume threshold for the Site Driveway, with a daily entering total of 23 right turning vehicles. Therefore, an eastbound right-turn lane should not be evaluated for the Opening Year 2031 – With Project scenarios.
- White Sulphur Road at Tract 2
 - White Sulphur Road is a 35-mph roadway with two lanes and a 2023 AADT of 3,950 vehicles along this roadway segment. Therefore, a threshold for warranting a right-turn lane is 200 right-turning vehicles a day. The eastbound right-turn movement from White Sulphur Road into Tract 2 is not expected to meet that volume threshold for the three Site Driveways, with a daily entering total of 168 right turning vehicles. Therefore, an eastbound right-turn lane should not be evaluated for the Opening Year 2031 – With Project scenarios.

- White Sulphur Road at Tract 3
 - White Sulphur Road is a 35-mph roadway with two lanes and a 2023 AADT of 3,950 vehicles along this roadway segment. Therefore, a threshold for warranting a right-turn lane is 200 right-turning vehicles a day. The eastbound right-turn movement from White Sulphur Road into Tract 3 is not expected to meet that volume threshold for the two Site Driveways, with a daily entering total of 42 right turning vehicles. Therefore, an eastbound right-turn lane should not be evaluated for the Opening Year 2031 – With Project scenarios.

6.2. LEFT-TURN LANES

The minimum requirements for a left-turn lane can be found in Section 4.9.1.2 of the *Regulations for Driveway and Encroachment Control* manual by GDOT. Below is a recreation of “Table 4-7a – Minimum Volumes Requiring Left Turn Lanes” taken from that manual:

Table 6.2 – Minimum Volumes Requiring Left-Turn Lanes

Posted Speed	2 Lane Routes		More than 2 Lanes on Main Road	
	AADT		AADT	
	< 6,000	>= 6,000	< 10,000	>= 10,000
35 MPH or Less	300 LTV a day	200 LTV a day	400 LTV a day	300 LTV a day
40 to 50 MPH	250 LTV a day	175 LTV a day	325 LTV a day	250 LTV a day
>= 55 MPH	200 LTV a day	150 LTV a day	250 LTV a day	200 LTV a day

Based on the above table, a left-turn lane would be required as follows:

- White Sulphur Road at Tract 1
 - White Sulphur Road is a 35-mph roadway with two lanes and a 2023 AADT of 3,950 vehicles along this roadway segment. Therefore, a threshold for warranting a left-turn lane is 300 left-turning vehicles a day. The westbound left-turn movement from White Sulphur Road into Tract 1 is not expected to meet that volume threshold for the Site Driveway, with a daily entering total of 22 left turning vehicles. Therefore, a westbound left-turn lane should not be evaluated for the Opening Year 2031 – With Project scenarios.
- White Sulphur Road at Tract 2
 - White Sulphur Road is a 35-mph roadway with two lanes and a 2023 AADT of 3,950 vehicles along this roadway segment. Therefore, a threshold for warranting a left-turn lane is 300 left-turning vehicles a day. The westbound left-turn movement from White Sulphur Road into Tract 3 is not expected to meet that volume threshold for the three Site Driveways, with a daily entering total of 149 left turning vehicles. Therefore, a westbound left-turn lane should not be evaluated for the Opening Year 2031 – With Project scenarios.
- White Sulphur Road at Tract 3
 - White Sulphur Road is a 35-mph roadway with two lanes and a 2023 AADT of 3,950 vehicles along this roadway segment. Therefore, a threshold for warranting a left-turn lane is 300 left-turning vehicles a day. The westbound left-turn movement from White Sulphur Road into Tract 3 is not expected to meet that volume threshold for the two Site Driveways, with a daily entering total of 37 left turning vehicles. Therefore, a westbound left-turn lane should not be evaluated for the Opening Year 2031 – With Project scenarios.

7. CONCLUSIONS

An industrial development, identified as the Danji Business Park, is proposed in Gainesville, Georgia along the south side of White Sulphur Road between Ramsey Road and US 23/SR 365/Cornelia Highway. The proposed site includes three industrial buildings of varying sizes: a 50,000 square-foot building (Tract 1), a 650,000 square-foot building (Tract 2), and a 175,000 square-foot building (Tract 3).

Access to the site would be provided by six full access driveways along White Sulphur Road. One driveway will provide access to the 50,000 square-foot building, three will provide access to the 650,000 square-foot building, and two driveways will provide access to the 175,000 square-foot building. The proposed project is expected to generate a total of 2,306 total trips on a typical weekday, 201 new trips during the AM peak hour, and 215 new trips during the PM peak hour.

A search for planned GDOT projects in or near the study area was performed using the GDOT GeoPI web application (<http://www.dot.ga.gov/DS/Maps/geopi#>). Based on the results of that search, one project was found in the vicinity of the study area. This project is tied to the widening and realignment of White Sulphur Road.

Left out
PI over 71

For the Existing Year 2026 capacity analysis, each of the study intersections is currently operating with acceptable overall LOS during both the AM and PM peak periods. For the intersection at US 23/SR 365/Cornelia Highway and White Sulphur Road, both the northbound and southbound movements on White Sulphur Road currently operate with LOS F during the AM peak, and LOS E during the PM peak. For the intersection at US 23/SR 365/Cornelia Highway and Ramsey Road, the northbound movement on Ramsey Road currently operates with LOS E during both peak periods, while the southbound approach operates at an inadequate LOS F during both peak periods.

For the Opening Year 2031 scenarios, each of the study intersections is expected to operate with acceptable overall LOS for both the AM and PM peaks. For the intersection at US 23/SR 365/Cornelia Highway and White Sulphur Road, both the northbound and southbound movements on White Sulphur Road are expected to operate with LOS E or worse in each of the Opening Year scenarios. For the intersection at US 23/SR 365/Cornelia Highway and Ramsey Road, the northbound movement on Ramsey Road is expected to operate with LOS E in all studied scenarios, while the southbound approach operates with LOS F in all studied scenarios.

According to the BOQ analysis, the southbound left-turn queues on White Sulphur Road at US 23/SR 365/Cornelia Highway are expected to exceed the existing 250 feet of storage space in each of the PM peak scenarios. The southbound left-turn queues are expected to extend 272 feet and 528 feet in the Background and With Project PM scenarios respectively. It is expected that the addition of a dedicated left-turn phase for this movement in the With Project scenario will reduce queueing.

For the intersection of White Sulphur Road and Ramsey Road, the northbound left-turn queues in the AM peak for both the Background and With Project scenarios are expected to be around 150 feet from the stop bar, exceeding the existing storage space of 80 feet on this approach.

The need for auxiliary lanes was also evaluated. The information provided in the GDOT manual *Regulations for Driveway and Encroachment Control* states that auxiliary turn lanes be determined in conjunction with commercial driveway permits on state-maintained roadways. Based on information in the manual, it was determined that auxiliary lanes should not be considered at any of the driveways at the proposed development in the Opening Year 2031.

I can't support 6 driveways. Interparcel access needs to be considered. While ISD isn't usually included in a TIS, the terrain needs to be considered.

8. REFERENCES

1. Trip Generation, 12th Edition + Supplement, Institute of Transportation Engineers, Washington, DC, 2021.
2. Synchro, Version 12, Trafficware Ltd., Sugar Land, TX, 2019.
3. Highway Capacity Manual, 7th Edition, Transportation Research Board, Washington, DC, 2016.
4. Highway Capacity Software, Version 2023, McTrans, Gainesville, FL, 2023.