

Exhibit C

Mandatory Cost Proposal Worksheet

IFB #010-44

Company Name: Geo-Hydro Engineers, Inc.

Bidder's Name: Will Donaldson

Bidder's Signature: 

Date: 4-20-2023

Fee and Rate Schedule:

In connection with the Consultant's preparation of the Cost Proposal, it is understood and agreed hereby that the following Fee and Rate Schedule was the basis for the Cost Proposal to provide the Scope of Work as set forth in the Invitation for Bid. Furthermore, it is also understood and agreed that this Fee and Rate Schedule will be the basis for any additional services required for the work by the owner.

1. Basic Engineering Service Rates:

A. Engineering Services:

1. Project Geologist, per hour	\$100
2. Structural Engineer, P.E., per hour	\$160
3. Geotechnical Engineer, P.E. per hour	\$160
4. Environmental Engineer, P.E., per hour	\$160
5. Staff Engineer, per hour	\$100
6. Project Engineer/Project Manager, P.E., per hour	\$160
7. Senior Engineer/Senior Project Manager, P.E., per hour	\$160
8. Senior Engineer/Division Manager, P.E., per hour	\$175
9. Chief Engineer/Principal, P.E. per hour	\$200
10. CAD Operator/Draftsperson, per hour	\$100

B. Technician Services:

1. Chief Engineering Technician, per hour	\$95
2. Metals Technician/Inspector, per hour	\$150
3. Concrete Technician/Inspector, per hour	\$80
4. Soils Technician/Inspector, per hour	\$80
5. Environmental Technician/Inspector, per hour	\$95
6. Asphalt Technician/Inspector, per hour	\$80
7. Registered Roof Observer (by the Roof Consultants Inst.), per hour	\$100
8. Registered Roof Consultant, per hour	\$150
9. General Engineering Technician/Inspector, per hour	\$80
10. Certified Industrial Hygienist, per hour	\$150

C. Clerical Services:

Secretarial, per hour \$ 60 _____

D. Special Services:

Special tests, engineering consultations or evaluations in conjunction with any of the Following testing services shall be charged at the Basic Engineering Service Rates. Special supplies and/or equipment not listed shall be charged at cost.

2. Soils:

A. Field Services:

Field density tests either by drive cylinder, and cone or Nuclear gauge, per hour \$80 _____

B. Laboratory Services:

1. Standard Compaction Test, ASTM D-698 or AASHTO T-99 including rough plots and grain size curves except on base rock. Method D does not include grain size.
 - (a) Method A (4" mold), per test \$280 _____
 - (b) Method B, C or D (6" mold), per test \$280 _____
 - (c) Standard Proctor, per test \$280 _____

2. Modified Compaction Test, ASTM D-1557 or AASHTO T-180 including rough plots and grain size curves except base rock. Method D does not include grain size.
 - (a) Method A (4" mold), per test \$350 _____
 - (b) Method B, C or D (6" mold), per test \$350 _____
 - (c) Standard Proctor, per test \$350 _____

3. CBR at optimum moisture content, including laboratory compaction test, ASTM D-1883 or AASHTO T-193 with plot of compaction and CBR curves, per each \$1,000 _____

4. CBR, Corps of Engineers Method, per each \$1,000 _____

5. Natural moisture content, per each \$ 20 _____

- 6.. Atterberg limits, per each \$ 120 _____

7. Grain size, per each \$ 120 _____

- 8.. Washed 200, per each \$ 120 _____

9. Washed 200 + Hydrometer, per each \$ 160 _____

10. Consolidation Test:
 - (a) Undisturbed sample, per each \$850 _____
 - (b) Remolded sample, per each \$ 950 _____

11. Tri-axial Shear Test:	
(a) Pile load testing ASTM (D1153), per each	\$ _____
(b) Pile driving monitoring, per LF	\$ _____
(c) UU Test, per each	\$ 330 _____
(d) CU Test, per each	\$ 2,500 _____
(e) CU Test with pore pressure, per each	\$ 2,500 _____
(f) Add for remold, per each	\$ 100 _____
(g) Unconfined compressive strength test, each (to calculate shear strength of soil)	\$ 240 _____

12. Permeability testing (Tri-axial apparatus):	
(a) Remolded, per each	\$ 650 _____
(b) Undisturbed, per each	\$ 550 _____

13. Tri-axial compression test, consolidated, un-drained, per pt.	\$ 1,200 _____
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14. California Bearing Ration (CBR), each pt.	\$ 350 _____
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15. Swell test on CBR, per each	\$ 50 _____
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16. Sand Equivalent Test GDT63, per each	\$250 _____
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17. Soil resistivity, per each	\$300 _____
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3. Soil Cement:

A. Field Services:

Observation of soil cement field placement, per hour	\$ 80 _____
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B. Laboratory Services:

 Soil Cement Design:

1. First soil cement mixture, including grain size determination liquid and plastic limits, compaction test at three cement contents, curing three specimens at each cement content and compressive strength tests at each cement content (includes calcium absorption test on soil sample)	\$ 3,500 _____
2. Each additional cement content using same sample	\$ 1,000 _____
3. For wetting and drying tests (add for each cement content)	\$ 1,250 _____

4. Asphaltic Materials:

A. Field Services:

1. Observation and field testing of asphaltic concrete placement, per hour	\$ 80 _____
2. Two-man asphaltic concrete coring crew, including trailer and equipment, per hour	\$ 180 _____

B. Laboratory Services

Asphaltic Materials and Tests

1. Asphaltic Concrete Mix Design	
(a) Marshall method, per design	\$ _____
(b) Hubbard – field method, per design, two inch	\$ _____
(c) Hubbard – field method, per design, six inch	\$ _____
2. Bitumen content only, per test	\$ <u>250</u>
3. Bitumen and gradation of asphaltic concrete, per test	\$ <u>350</u>
4. Density, samples F.O.B. laboratory	
(a) Already mixed, per test	\$ <u>35</u>
(b) Not already mixed, per test	\$ <u>60</u>
5. Hubbard – field stability, samples F.O.B. laboratory	
(a) Three specimens, two inches	\$ _____
(b) Three specimens, six inches	\$ _____
6. Marshall Method Stability, three specimens	\$ <u>300</u>

5. Concrete and Cement:

A. Field Services:

1. Concrete quality control inspection and testing (including, but not limited to, visual observations, slump, temperature and air entrainment testing), ASTM C-143	\$ <u>80</u>
2. Cylinders (3 specimens per set), ASTM C-39, per set	\$ <u>60</u>
3. Reserve cylinders, per each	\$ <u>20</u>
4. Inspection and testing of ready mix plants, pre-stress/ pre-cast yards, concrete product plants, construction sites and concrete structures shall be charged at the Basic Engineering Service Rates plus testing at cost.	\$ _____ At Cost
6. Cylinders made by others shall be picked up and delivered to the laboratory on a time and travel charge basis at the Basic Engineering Service Rates. A charge of \$24 per case of 24 plastic cylinder molds will be accessed when cylinders are made by others.	\$ <u>25</u>
7. Non-Destructive inspection and testing of concrete products and structures, including failures, and flexural testing of concrete beams shall be charged at the Basic Engineering Service Rates, plus velocity attenuation equipment charged at cost.	\$ _____ At Cost
8. Concrete Coring:	
(a) Two-man crew plus machine, per hour	\$ <u>180</u>
(b) Machine only, per hour (rental)	\$ <u>165</u>
(c) Compressive strength test, each	\$ <u>80</u>

B. Laboratory Services:

1. Concrete Materials:

(a) Sieve Analysis, Dry ASTM C-136, per each	\$140
(b) Finer than No. 200 Sieve, ASTM C-117, per each	\$100
(c) Specific gravity, ASTM C-127 or C-126, coarse fine, per each	\$140
(d) Absorption, ASTM C-127 or C-128, coarse, per each	\$130
(e) Absorption, ASTM C-127 or C-128, fine, per each	\$140
(f) Unit Weight, ASTM C-29, per each	\$120
(g) Organic impurities (Calorimetric) ASTM C-40, each	\$130
(h) Effect of organic impurities, ASTM C-87, per each	\$
(i) Clay lumps in aggregate, AASHTO T-112, each	\$150
(j) Soft particles in aggregate, ASDTM C-238, each	\$150
(k) Friable particles in aggregate, ASTM C-142, each	\$150
(l) Abrasion (Los Angeles Rattler), ASTM C-131, each	\$400
(m) Preparation of sample for abrasion test, if crushed, per each	\$
(n) Staining Test, light weight aggregate, ASTM C-641	\$
(o) Loss on ignition, light weight aggregate	\$
(p) Sulfate soundness, Sodium or Magnesium, ASTM-88 five (5) cycle. Each additional 5 cycles without loss determination, per each.	\$700
(q) Potential Alkali Reactivity, per each	\$

2. Mix Verifications:

(a) Initial mix, including basis test of fine and coarse aggregate, six confirmatory cylinders, per mix	\$700
(b) Additional mixes, same aggregate, six confirmatory cylinders, per mix	\$700
(c) Flexural strength mix six (6) test beams including tests of aggregate, per mix	\$900
(d) Additional mixes, six (6) test beams, some aggregate, per mix	\$900
(e) Light weight aggregate mixes, add to above, each	\$100
(f) Mix, no confirmatory tests (calculated)	\$300
(g) Mix designs, applicable hourly rates	\$100

3. Testing of Cylinders and Beams:

(a) Cylinders compressive strength, including curing, ASTM C-39 per each	\$20
(b) Reserves, not tested, including curing, per each	\$20
(c) Splitting Test, ASTM C-496, per each	\$
(d) Beams, per break, ASTM C-78, per each	\$45

Note: Engineering, consultation, evaluation and preparation of samples for testing in conjunction with any above lab testing services shall be charged at the Basic Engineering Services Rate.

6. Block, Brick, Tile, Pipe:

A. Field Services:

1. Inspection and testing at manufacturer's plant, or in the field shall be charged at Basic Engineering Service Rates plus testing at cost. \$ _____ At Cost _____
2. Mortar and/or grout cubes (6 specimens per set), per set \$ 100

B. Laboratory Services:

Concrete Masonry Units:

1. Compressive Strength, ASTM C-140, 5 specimens, per each \$ 220
2. Absorption and moisture content, ASTM C-140, specimens, per each \$ 200
3. Linear drying shrinkage, ASTM C-341, minimum specimens, each \$ _____
4. Concrete masonry block prism compressive strength tests, per set \$ 600

7. Metals:

A. Field Services:

1. Visual shop and erection inspection, including witnessing of welder's qualifications shall be charged at Basic Engineering Service Rates.
2. Radiographic, Magnetic Particle and Ultrasonic Testing Charge:
 - (a) 2-man radiographic crew with camera and Darkroom \$ _____
 - (b) Radiographic camera, loaded each, per hour \$ _____
 - (c) Radiographic darkroom on truck, per day \$ _____
 - (d) X-ray machine, each, per hour \$ _____
 - (e) Magnetic particle machine (dry), per hour \$ 120
 - (f) Ultrasonic machine, per hour \$ 160
 - (g) Thickness and corrosion measurement equipment, per hour \$ 160
3. Physical and Mechanical Properties Testing:
 - (h) Tensile test apparent yield and ultimate strength, initial sample \$ 200
 - (i) Guided Bend Test, per each \$ 200

8. Non-Destructive Structural/Materials Evaluation:

A. Fabrication/Erection Evaluation: - Evaluation of any or all of the following as established by project specifications: dimensional tolerances, material certifications, welds by visual techniques, welding procedures, welder/weld operator certifications, paint thickness, material storage conditions, column alignment, elevation verifications, bolt hole alignments and bolt torque, weld by visual techniques, steel decking, prime touch up and/or final painting.

1. AS/ASNT Senior Level Certified Technician, per hour \$175 _____
2. AWS/ASNT Certified Technician, per hour \$160 _____
3. ASNT Level II Technician, per hour \$160 _____
4. ASNT Level I Technician, per hour \$130 _____

B. Field Non-Destructive Testing: – by ASNT Level II Technician

1. Visible dye or fluorescent penetrant, per hour \$130 _____
2. Magnetic particle – wet or dry, per hour \$130 _____
3. Ultrasonic testing, per hour \$160 _____
4. Ultrasonic equipment charge, per hour \$140 _____
5. Eddy current testing, per hour \$160 _____
6. Eddy current equipment charge, per hour \$140 _____
7. X or Gamma Radiography (Iridium 192) per hour,
per crew \$ _____
8. Gamma Radiography (Cobalt 60) per hour, per crew \$ _____
9. Ground Penetrating Radar:
 - (a) Minimum rate ½ day rate (4 hrs.), per hour \$ 800 _____
 - (b) Minimum daily rate (8 hrs.), per hour \$1,500 _____
 - (c) Supplemental rate, per hour \$ 200 _____
10. Seismic refraction, per hour \$160 _____
11. Laboratory services:
 - (a) Liquid penetrant, per hour \$110 _____
 - (b) Magnetic particle, per hour \$110 _____
 - (c) Rockwell testing, per set \$130 _____
 - (d) Guided bend test, per each \$130 _____
 - (e) Tensile test, per each \$130 _____
 - (f) Machine charges, per each \$ 100 _____
12. Radiographic welder coupon:
 - (a) Plant, per each \$200 _____
 - (b) Pipe, per each \$200 _____
13. Welding procedure qualifications:
 - (a) ASME, per each \$ 300 _____
 - (b) AWS, per each \$ 300 _____
14. Ultrasonic testing, per hour \$160 _____
15. Equipment charge for ultrasonic testing, per day \$140 _____
16. Eddy current testing, per hour \$160 _____
17. Equipment charge for eddy current testing, per day \$140 _____
18. X or Gamma Radiography:
 - (a) ASNT Level III, per hour \$ 250 _____
 - (b) Materials Engineer, per hour \$175 _____
 - (c) Materials Consultant, per hour \$175 _____
 - (d) Mobile darkroom mileage, per mile \$ _____
 - (e) Radiographic film, current market price plus (Not
to exceed 5%) _____ 5 %
 - (f) Special transducers required, cost plus (Not to
to exceed 5%) _____ 5 %
 - (g) Special probes, cost plus (Not to exceed 5%) _____ 5 %
19. ASTM D 2938 – Unconfined compressive (PSI),
per each \$ 240 _____
20. L.A. Abrasives (ASTM C 131), per each \$ 400 _____
21. L.A. Abrasives (ASTM C 535), per each \$ 400 _____
22. Fireproofing thickness, per hour \$ 100 _____

- 23. Torque wrench/rebound hammer charge, per day \$160
- 24. Floor flatness (F-Meter) charge, per day \$160

9. Roofing:

A. Field Services:

Roofing installation inspection and project meetings shall be charged at Basic Engineering Services Rates.

B. Laboratory Services:

Roofing Materials:

- 1. Dissection, including total weight, number plies, interplay bitumen, top bitumen, aggregate weight and diagramming, per sample:
 - (a) With aggregates, (asphalt or coal tar) \$
 - (b) Without aggregates \$
 - (c) Trimming sample to proper size \$
 - (d) Diagramming only \$
- 2. Moisture Content of felts, ASTM D-95, per sample \$
- 3. Unit Weight of felt, ASTM C-461, per sample \$
- 4. Moisture Content of aggregate, ASTM D-18864, per sample \$

10. Drilling Services:

A. Mobilization and demobilization of rig:

- 1. All terrain mounted, per each \$1,000
- 2. Truck mounted, per each \$900

B. Auger boring:

- 1. 0 – 50 ft., per LF \$12
- 2. Greater than 50 ft., per LF \$15

C. Soil test boring with standard penetration resistance:

- 1. 0 – 50 ft., per LF \$15
- 2. Greater than 50 ft., per LF \$18

D. Undisturbed sample (3"), per each \$120

E. Piston Samples (3"), per each \$200

F. Setting and removing casing for rock coring, per LF \$15

G. NX or NQ rock coring with report of rock quality designation and percent recover:

- 1. 0 – 50 ft., per LF \$90
- 2. Greater than 50 ft., per LF \$120

H. Difficult moving, water hauling, per hour \$300

I. Direct Push (includes collection of ground water and soil samples):

- 1. Minimum rate ½ day rate (4 hrs.), per hour \$4,000
- 2. Minimum daily rate (8 hrs.), per hour \$5,000
- 3. Supplemental rate, per hour \$300

- J. Dozer rental for clearing access to boring locations and moving drill rig, per day \$ 2,500
- K. Water tank, per day \$ 250
- L. Piezometer, backfilled with cuttings, non-grouted for water level measurements, per LF \$ 40
- M. Premium for sand pack and bentonite seal of piezometer, per each
- N. Grout seal boreholes (\$50.00 min. per borehole), per LF \$ 15
- O. Subsistence: 2 man crew, per day \$ 75

11. Environmental Services:

A. Water/NPDES Monitoring:

- 1. Comprehensive Monitoring Plan (CMP), LS \$
- 2. Monthly NPDES service (includes weekly inspection/sampling), per month \$ 1,200
- 3. Automated sampler rental, per sampler, per month \$
- 4. Testing turbidity of water – GSP 20, per test \$ 40
- 5. Testing turbidity of water – GDT 109, per test \$ 40
- 6. Erosion control report, per each \$ 80
- 7. pH test, per test \$ 20
- 8. Chloride/sulfate test, per test \$ 40
- 9. Monthly NPDES report to EPD, per each \$ 150

B. Asbestos Testing:

Testing of asbestos in accordance with 1985 edition (purple book)

EPA Guidance for controlling Asbestos Materials in Buildings.

- EPA Method 560/5-85-024, per test \$ 15

C. Chemical/Hydrocarbon Testing:

- 1. Subsurface chemical testing for Total Petroleum Hydrocarbon (TPH), per each \$ 100
- 2. Subsurface chemical testing for Total Petroleum Benzene Toluene Ethyl Xylene (BTEX), per each \$ 100
- 3. Subsurface chemical testing for Total Petroleum Polynuclear Aromatic Hydrocarbon (PAH) \$ 100

12. Traffic Control and Equipment Rental:

- A. Cones, barriers & signage, per day \$ 500
- B. Flagman, per hour \$ 65
- C. Heavy Equipment rentals to include operator and transportation to and from site, cost plus _____ 15 %