



April 25, 2024  
Proposal No.: 23-1348-004

Mr. Wesley Brandon, P.E.  
Town of Little Elm  
wbrandon@littleelm.org

**Subject: Construction Materials Testing Services  
Little Elm Public Safety Annex  
Little Elm, Texas**

Dear Mr. Brandon:

Geotex Engineering is pleased to submit this proposal for construction materials testing for the above-referenced project. We understand that the project entails the construction and associated site improvements for the Little Elm Public Safety Annex located at 107 Ryan Spiritas Parkway in Little Elm, Texas.

This proposal is based on architectural, structural, and civil bid set plans dated January 22, 2024; geotechnical report by Geotex Engineering dated August 18, 2023 and geotechnical addendum dated September 27, 2023.

#### **PROJECT INFORMATION**

Based on our review of the project plans and specifications, we understand that the project will consist of the following:

- ◆ Building (approximately 15,000 square feet):
  - ◆ Moisture-conditioned subgrade (6.5 feet with a 2.5-foot select fill cap)
  - ◆ Auger cast-in-place pile foundation system – 129 total
  - ◆ Slab-on-grade floor system with grade beams
  - ◆ CMU masonry walls
  - ◆ Upper-level concrete slabs over pan decking
  - ◆ Elevator pit and walls
  - ◆ Structural steel
- ◆ Paving and sidewalks:
  - ◆ Scarified and re-compacted subgrade for sidewalks
  - ◆ 6- to 8-inch lime-treated or flexible base paving subgrade
  - ◆ Portland cement concrete paving
- ◆ Miscellaneous:
  - ◆ Utility trench backfill
  - ◆ Dumpster pad and slab

## SCOPE OF SERVICES

The following scope of services is based on our review of the project documents and is limited to providing testing and/or observations for the previously mentioned construction. ***We do request that your construction representative provide us with a 24-hour notice for scheduling purposes. Same-day call-ins will be billed at premium rates.*** As such, we agree to provide the appropriate personnel to perform the below construction materials services.

### Earthwork

- Obtain and perform laboratory moisture/density relations (ASTM D698) and soil classification tests (liquid limit, plastic limit, and percent finer than no. 200 sieve analysis) for each soil type
- Perform in-place moisture/density tests at the proposed rate of 1/3,000 square feet for the building pad, 1/5,000 square feet for paving areas, and 1/100 linear feet for trench utility backfill and grade beam backfill per lift, with a minimum of 3 tests per lift
- Perform sulfate tests on pavement subgrade at the rate of 1/300 linear feet
- Perform in-place sieve analysis and depth checks at the rate of 1/5,000 square feet on lime treated paving subgrades

### ACIP Pile Installation

- An engineer or geologist will be onsite on the first day of pile placement to verify the soil design parameters and to provide assistance if any problems arise during placement.
- Excavation observation of the drilled shafts will include:
  - record the diameter of the pile
  - record top and bottom pile elevations (information obtained from plans or provided by contractor)
  - record length of pile
  - record if plumbness is within specification tolerance
  - record horizontal and vertical bars quantity and size
  - record reinforcing steel placement
  - record stroke counts and time grout was placed

### Reinforcing Steel

- Perform reinforcing steel observation which will include:
  - verify the number and size of bars
  - verify clearance between bars and spacing
  - verify securing, tying, and chairing of bars

### Cast-In-Place Concrete

- Perform testing during concrete placements, which will include:
  - perform ambient and concrete temperature determinations
  - perform entrained air content determination
  - perform slump determination
- Cast concrete test cylinders at the proposed rate of 5/100 cubic yards of concrete, or fraction thereof, placed per day

- Compressive strength determination of concrete test cylinders with one tested at 7 days, three tested at 28 days, and one held in reserve
- Perform pavement depth checks by core every 300 feet or less

#### Masonry

- Perform testing during masonry operations which will include:
  - Ambient, mortar, and grout temperature determinations
- Cast grout prisms at the proposed rate of 4 per set shall be made during the first day of masonry work and for every 5,000 SF of wall (or less) thereafter
- Compressive strength determination of grout prisms with one tested at 7 days and three tested at 28 days

#### Structural Steel

- Perform visual observation on welded and bolted connections
- Perform ultrasonic observation on moment or “full-penetration” welded connections

#### **Notes and Qualifications:**

Preparation of a compliance letter or other tasks and services that will require Professional Engineering (PE) hours will be billed at the PE’s rate of \$250/hour.

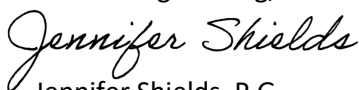
#### **COMPENSATION**

While testing is dependent on the construction sequence, contractor performance and efficiency, weather conditions, and the actual testing performed, we suggest an **estimated budget of \$111,167.50**. The invoicing for this project will use the attached Fee Schedule **and the actual quantity of work performed**. The estimated budget will not be exceeded without prior approval. Services provided by Geotex Engineering will be consistent with the engineering standards prevailing at the time and in the area that the work is performed; no other warranty, express or implied, is intended. Estimates are valid for 60 days. If ICC Special Inspections are requested or required, additional fees will apply. Any additional testing that the client requests will be billed. Fees are subject to increases upon the calendar year or following years of signing the contract. Additional slump, entrained air, and temperature tests requested will be charged to the client. (Slump-\$20), (Entrained Air and Unit Weight-\$25), (Temperature-\$5). If NICET inspector is required, additional fees will apply.

A Letter of Agreement for your execution will be forwarded to your office upon your approval of this proposal.

We appreciate the opportunity to provide you with our services. Please call if you have any questions or wish to discuss any aspect of our proposal.

Sincerely,  
Geotex Engineering, LLC



Jennifer Shields, P.G.  
Senior Geologist / Senior Project Manager

Attachments: Budget Estimate



**Geotex Engineering**  
 1101 Shady Oaks Dr.  
 Denton, Texas  
 Phone: 940.735.3433

**Budget Estimate for Construction Materials**  
 Testing & Observation Services  
**Little Elm Public Safety Annex**  
 Little Elm, Texas  
**22-1348-004**

Item	Quantity	Unit	Unit Rate	Total
<b>Earthwork Observation &amp; Testing Paving &amp; Utilities</b>				
Moisture Density Relations (ASTM D698 - Method A or B)	6	each	\$185.00	\$1,110.00
Moisture Density Relations Treated (ASTM D698 - Method A or B)	2	each	\$280.00	\$560.00
Moisture Density Relations (ASTM D698 - Method C)	1	each	\$200.00	\$200.00
Atterberg Limits (ASTM 4318)	9	each	\$95.00	\$855.00
Minus 200 Sieve Analysis	6	each	\$50.00	\$300.00
Sieve Analysis (Tex-110-E)	1	each	\$260.00	\$260.00
Oversized Rock Correction	1	each	\$80.00	\$80.00
Lime Depth Checks	9	each	\$20.00	\$180.00
Lime Subgrade Gradations	9	each	\$20.00	\$180.00
Sulfate Content in Soils, Colorimetric Method	2	each	\$105.00	\$210.00
Lime Series, Plasticity Index Method	1	each	\$500.00	\$500.00
In-Place Moisture-Density Tests (Paving) Min 3 Per Trip	43	each	\$20.00	\$860.00
In-Place Moisture-Density Tests (Utilities) Min 3 Per Trip	100	each	\$20.00	\$2,000.00
Certified Engineering Soils Technician - Paving (Min. 4 hrs. per trip)	84	hour	\$60.00	\$5,040.00
Certified Engineering Soils Technician - Utilities (Min. 4 hrs. per trip)	40	hour	\$60.00	\$2,400.00
Trip Charge	31	trip	\$50.00	\$1,550.00
Project Manager	15	hour	\$125.00	\$1,875.00
Project Administration	n/a	%	10	\$1,816.00
<b>Estimated Total for Earthwork Services for Paving &amp; Utilities:</b>				<b>\$19,976.00</b>
<b>Concrete Observation &amp; Testing - Paving</b>				
Concrete Test Cylinders (4 x 8 inch) (Includes: ambient & concrete temperatures, slump, air & unit weight)	170	each	\$25.00	\$4,250.00
Certified Engineering Concrete Technician (Min. 4 hrs. per trip) (Includes reinforcing observation & cylinder pick up)	185	hour	\$60.00	\$11,100.00
Core Drilling Machine Fee	1	trip	\$375.00	\$375.00
Hilti Ferrosan (Min. 4 hr. charge)	1	hour	\$125.00	\$125.00
4-inch Diameter or Less, Concrete Cores to 8" depth	6	each	\$75.00	\$450.00
Core Hole Patching	6	each	\$75.00	\$450.00
Engineering Concrete Core Technician	6	hour	\$65.00	\$390.00
Trip Charge	49	trip	\$50.00	\$2,450.00
Project Manager	18	hour	\$125.00	\$2,250.00
Project Administration	n/a	%	10	\$2,184.00
<b>Estimated Total for Concrete Services for Paving:</b>				<b>\$24,024.00</b>
<b>Earthwork Observation &amp; Testing Building Pad</b>				
Moisture Density Relations (ASTM D698 - Method A or B)	1	each	\$185.00	\$185.00
Atterberg Limits	1	each	\$95.00	\$95.00
Minus 200 Sieve Analysis	1	each	\$50.00	\$50.00
In-Place Moisture-Density Tests, Min 3 per trip	100	each	\$20.00	\$2,000.00
Certified Engineering Soils Technician (Min. 4 hrs. per trip)	64	hour	\$60.00	\$3,840.00
Trip Charge	10	trip	\$50.00	\$500.00
Project Manager	6	hour	\$125.00	\$750.00
Project Administration	n/a	%	10	\$742.00
<b>Estimated Total for Earthwork Services:</b>				<b>\$8,162.00</b>

<b><u>ACIP Observations</u></b>				
Grout Cubes (Includes: ambient & grout temperatures, and flow rate)	84	each	\$25.00	\$2,100.00
Certified Sr. Engineering Technician (Min. 4 hrs. per trip)	56	hour	\$75.00	\$4,200.00
Certified Sr. Engineering Technician (Estimated overtime)	21	hour	\$112.50	\$2,362.50
Senior Engineer (PE)	6	hour	\$250.00	\$1,500.00
Trip Charge	15	trip	\$50.00	\$750.00
Project Manager	9	hour	\$125.00	\$1,125.00
Project Administration	n/a	%	10	\$1,204.00
<b>Estimated Total for Drilled Shaft Services:</b>				<b>\$13,241.50</b>
<b><u>Concrete Observation &amp; Testing Building</u></b>				
Concrete Test Cylinders (4 x 8 inch) (Includes: ambient & concrete temperatures, slump, air & unit weight)	100	each	\$25.00	\$2,500.00
Certified Engineering Concrete Technician (Min. 4 hrs. per trip) (Includes reinforcing observation & cylinder pick up)	145	hour	\$60.00	\$8,700.00
Trip Charge	40	trip	\$50.00	\$2,000.00
Project Manager	12	hour	\$125.00	\$1,500.00
Project Administration	n/a	%	10	\$1,470.00
<b>Estimated Total for Concrete Services:</b>				<b>\$16,170.00</b>
<b><u>Fireproofing / Firestopping Observation &amp; Testing</u></b>				
Fireproofing Observation (Min. 5 hrs. per trip)	25	hour	\$95.00	\$2,375.00
Thickness & Density testing		each	\$35.00	\$0.00
Adhesion testing		each	\$45.00	\$0.00
Trip Charge	5	trip	\$50.00	\$250.00
Project Manager	3	hour	\$125.00	\$375.00
Project Administration	n/a	%	10	\$300.00
<b>Estimated Total for Fireproofing Services:</b>				<b>\$3,300.00</b>
<b><u>Masonry Observation &amp; Testing</u></b>				
Mortar Cubes (6 per set)		each	\$25.00	\$0.00
Grout Prisms (4 per set)	60	each	\$35.00	\$2,100.00
Certified Engineering Technician (Min. 4 hrs. per trip) (Includes observation and masonry pickup)	60	hour	\$85.00	\$5,100.00
Trip Charge	15	trip	\$50.00	\$750.00
Project Manager	7	hour	\$125.00	\$875.00
Project Administration	n/a	%	10	\$883.00
<b>Estimated Total for Masonry Services:</b>				<b>\$9,708.00</b>
<b><u>Structural Steel Observation</u></b>				
CWI Specialist Visual Observation (Min. 5 hrs. per trip)	40	hour	\$85.00	\$3,400.00
Ultrasonic Inspection (Min. 5 hrs. per trip)	20	hour	\$95.00	\$1,900.00
Material Fee	4	day	\$50.00	\$200.00
Trip Charge	12	trip	\$90.00	\$1,080.00
Project Manager	6	hour	\$125.00	\$750.00
Project Administration	n/a	%	10	\$733.00
<b>Estimated Total for Structural Steel Services:</b>				<b>\$8,063.00</b>
<b><u>Storm Shelter Observation</u></b>				
Visual Observation (Min. 4 hrs. per trip)	24	hour	\$125.00	\$3,000.00
Sr. Engineer (submittal research and final walk through)	6	hour	\$250.00	\$1,500.00
Trip Charge	7	trip	\$50.00	\$350.00
Project Manager	5	hour	\$125.00	\$625.00
Project Administration	n/a	%	10	\$548.00
<b>Estimated Total for Storm Shelter Services:</b>				<b>\$6,023.00</b>
<b>Project Setup Fee</b>	1	each	\$250.00	\$250.00
<b>Allowance for Sr. Engineer</b>	9	hour	\$250.00	\$2,250.00
				<b>\$2,500.00</b>
<b>Estimated Total for Above Services:</b>				<b>\$111,167.50</b>

**SCHEDULED ASSUMPTIONS AND NOTES**

Utility backfill completed at a rate of 300 linear feet per day, full depth of trench.  
Building pad moisture conditioning and select fill placement will be completed in 6 days.  
Pavement concrete placed at 200 cubic yards per pour, and sidewalk concrete placed at 60 cubic yards per pour.  
Reinforcing steel observation for pavement concrete will be performed on the same trip as the concrete placement.  
City approach concrete will be placed at a rate of two approaches / turn lanes per pour.  
Pavement thickness coring will be completed in a single trip.  
Light pole base concrete will be placed at a rate of at least 6 bases per pour.  
Lime treatment onsite will be performed in 2 days.  
Storm Inlets will be placed at a rate of 3 per pour.  
Sanitary sewer manholes are assumed to be pre-cast.  
Top of pipe for water service lines with no profiles are 4 feet below grade (no flow line elevations provided).  
ACIP piles will be installed at a rate of 20 per day with one drill rig onsite. We have assumed that the grout pump will have a stroke counter in working condition.  
Pilasters / pier caps and column leave outs will be completed in one placement.  
Concrete for grade beams will be completed at a rate of 80 cubic yards per pour.  
  
Concrete for building slabs on void will placed at a rate of 250 cubic yards per pour and slabs on deck will be placed in a single pour.  
Visual structural steel inspections performed at a rate of two trips per area per floor.  
Ultrasonic inspections performed at a rate of one trip per area per floor where moment connections are present.  
Firestopping testing and observations completed in 5 trips.  
Storm louvers and storm door frames installation will be completed in one trip per opening.

**NOT INCLUDED IN REQUIREMENTS OR THE BUDGET**

Tests in excess of above stated quantities or additional tests not listed  
Retesting of any failed tests / observation  
Temporary site curing facility  
Project compliance letter

The fees listed above for field and laboratory tests, include the equipment necessary to accomplish the task. Fees not listed above are available upon request. Estimates are valid for 60 days. Any additional testing that the client requests will be billed. There will be a 50% surcharge to the standard testing fees on all testing performed on rush orders. All services and personnel fees are subject to a minimum fee of four hours per trip for all scheduled inspections, site visits and for cancellations (on-site or in route) unless noted otherwise. Hourly rates quoted are portal to portal and apply to standard work days, Monday through Friday 7:00 am to 6:00 pm. Overtime rate of 1.5 times the quoted rate will be applied outside of the standard work hours, over 8 hours a day and on Saturday. Sundays and Holidays will be billed at 2 times the quoted rates. Fees listed above are per unit/hour, unless otherwise noted. Same-day call-ins to be billed at 1.5 times the hourly rate of the available personnel, up to and including the project manager's rate. Fees listed are for informational use only and are subject to change. If ICC Special Inspections are required, additional fees will apply. Fees are subject to increases upon the calendar year or following years of signing the contract. Additional slump, entrained air and temperature tests requested will be charged to client. (Slump-\$20), (Entrained Air and Unit Weight-\$25), (Temperature-\$5). If NICET inspector is required, additional fees will apply.