

# Attachment A

## Engineering Services for LWWCS-3000 Mill Street Sewer Pipe Upsize December 22, 2025

---

### Project Understanding

The City of Lewisville, TX (City)'s existing gravity sanitary sewer main along Mill Street has encountered increased loads as a result of upstream development. Previous modeling efforts revealed potential for surcharge and sanitary overflows under the peak 5-year, 6-hour storm. As recommended in its Wastewater Collection System Master Plan to alleviate these issues, the City intends to replace approximately 6,500 linear feet of existing 10-inch and 12-inch-diameter sewer from a manhole along Cowan Drive just north of Prairie Creek to a manhole at the intersection of Lakeview Circle and Mill Street with new 15-inch-diameter sewer (the Project). The proposed 15-inch replacement sewer will generally follow the existing sewer alignment along Mill Street.

The City has requested CDM Smith to provide professional services for the design, permitting, and bidding of the Project.

### Scope of Services

To execute the design of the Project, CDM Smith will complete the following scope of services:

#### Task 1 Project Management

CDM Smith will provide the following project management services during the execution of the Project as follows:

- Conduct a project kickoff meeting to discuss project objectives, scope of work, communications, information needs, and schedule. It is expected that this meeting will last up to two hours. CDM Smith will prepare an agenda prior to the meeting for City preview and will prepare and distribute meeting summary minutes.
- Maintain communication between CDM Smith's and City's project manager.
- Implement CDM Smith firmwide quality assurance and quality control standards as relevant to the Project.
- Establish and update project schedule as the work progresses.
- Maintain a decisions and directives log for shared reference.
- Provide the City with monthly status reports of project progress, expenditures to date, and cost-to-budget information.
- Provide monthly progress invoices based on work completed to date and project phase.
- Advise the City when the established project expectations cannot be met or when the engineering fee or construction cost will increase as a changed directives from City on the scope of the desired improvements.

### Task 1 Work Products

- Project Kickoff Meeting Agenda and Summary.
- Monthly Status Report, Progress Invoice, Updated Schedule and Decision and Directives log

## **Task 2 Field Investigations**

### **2.1 Topographic Survey and SUE**

For use in design of the replacement sewer main, CDM Smith will establish horizontal and vertical project control and collect engineering design survey information in a corridor approximately 50 feet wide and 1.3 miles long along the existing sewer main alignment. The survey will include existing surface features and topography, horizontal extents of existing pavements, survey of manholes or existing sanitary or storm lines out to the first manhole outside the survey corridor, trees of diameter 12-inches or greater, and other surface features encountered along the survey footprint. CDM Smith will survey property corners, where found, to assist in locating base mapping plats or property boundaries. CDM Smith will survey marked utilities in the field per Task 2.2 - SUE Investigation, and borehole locations and top elevations will be surveyed. The CDM Smith team will process and provide all survey data in format that can interface with Civil 3D format.

CDM Smith will also complete Level B Subsurface Utility Engineering (SUE) along a 20-foot wide corridor along the assumed centerline of 6,600 LF of existing sewer line in accordance with ASCE Publication 38-22.

CDM Smith will send project location data to potentially affected utilities and request available mapping in the vicinity of the project. CDM Smith will incorporate the information provided into the survey.

### Task 2.1 Work Products

- Topographic survey, including Level B SUE information.

### **2.2 Geotechnical Investigation**

To evaluate subsurface conditions as required for design of the replacement sewer main, CDM Smith will complete geotechnical investigations that include the following:

Subsurface Investigations: Planned subsurface investigations consist of up to fifteen (15) borings, which have been selected based on the assumed sewer length of 1.2 miles. A total of 13 borings are anticipated to be drilled up to 15 feet below-grade and 2 borings drilled up to 30 feet below-grade. The boring spacing is approximately every 1,000 feet with additional borings planned at both railroad crossings and in the vicinity of the USACE's Lake Lewisville Dam. The test borings will be performed using a truck-mounted drill rig and the borings are anticipated to be advanced using auger and wash-rotary drilling techniques. Soil samples are anticipated to be collected continuously at 2.5-foot intervals to the planned depth of boring. Groundwater level measurements will also be collected and recorded in each open test boring during and at the end of drilling. Collected soil samples from the test borings will be delivered to a geotechnical laboratory where selected samples will be subject to index, strength and corrosion testing, as applicable. Collected information will be compiled in a Geotechnical Baseline Report (GBR).

Geotechnical Report: Based on the results of the geotechnical subsurface investigation described above, engineering analyses will be performed to evaluate the existing subsurface conditions, as

they relate to the design and construction of the proposed improvements. Geotechnical engineering design recommendations will be developed. A Geotechnical Engineering Report (GER) will be prepared summarizing the subsurface investigation, analyses performed, and engineering recommendations developed for the design and construction of the proposed improvements. Also included in the report will be the test boring logs and results of the field and laboratory testing performed.

#### Task 2.2 Work Products

- Geotechnical Data Report (GDR) to be included as part of the bidding documents.
- Geotechnical Engineering Report (GER), with design recommendations. (This report will not be included as part of the bidding documents).

### **2.3 Easement Preparation**

CDM Smith will obtain two residential and five commercial title reports indicating existing property ownership, easements, and encumbrances. CDM Smith will develop one temporary construction and one permanent easement document (exhibit and metes and bounds description) for each parcel to be provided to the City for obtaining these easements. CDM Smith will also prepare one map and metes and bounds description for use in obtaining from USACE a ROW or utility use agreement on lands owned or controlled by USACE.

#### Task 2.3 Work Products

- Up to seven Permanent Easement exhibits and descriptions.
- Up to seven Temporary Construction Easement exhibits and descriptions.
- One easement exhibit and description for use in negotiations with USACE.

### **2.4 Texas Historical Commission (THC) Consultation**

CDM Smith will prepare a letter to the THC describing the project and requesting their review, in accordance with Section 191.0525 of the Antiquities Code of Texas.

#### Task 2.4 Work Products

- THC letter and response.

## **Task 3 Design Phase Services**

### **3.1 Preliminary (30%) Design**

Under 30% Preliminary Design, CDM Smith will progress the design to convey the general intent of the design scope, extent, and character of the work. 30% design documents will include plan view routing of the replacement sewer main and manholes, identification of pipe segments where open cut trench and trenchless pipe installation methods are to be used,

At initiation of design, CDM Smith will review available relevant project information as provided by the City, including: record drawings of existing sewers, roads, and other utilities in the area, CCTV inspections (video, reports and/or databases) of mains and laterals near the project area, operations inspection reports/records, previous rehabilitation and repair information, and any other project reports and masterplan information, flow information for existing sewer main and laterals, pump stations, and force mains, and existing agreements, permissions, easements, mapping, and documentation related to the existing sewer main on land owned or controlled by stakeholder [including the United States Army Corps of Engineers (USACE), Dallas Area Rapid Transit (DART), and Denton County Transportation Authority (DCTA)].

CDM Smith will submit a 30% Design Progress Submittal consisting of the 30% drawings and the list of anticipated technical specifications as described above to the City for review and comment. CDM Smith will coordinate with the City to prepare for and facilitate a 30% Preliminary Design Review Meeting to discuss City comments and confirm replacement pipe routing and installation methods. The Project Manager and up to two (2) team members will participate in the meeting, which is assumed to last for approximately 2-hours. CDM Smith will develop a meeting summary to document comments, decisions and action items requiring follow-up by respective parties.

Following meeting, CDM Smith will make adjustment as agreed and prepare final 30% progress drawings for use in reviewing with the stakeholders.

Subsequent to submittal of the 30% Design, CDM smith will prepare an Opinion of Probable Construction Cost (OPCC). The cost opinion will be a Class 4 estimate, per AACE International Recommended Practice No. 18R-97, with appropriate contingencies based on design progress completion.

Upon agreement of the proposed routing and installation methods, CDM Smith will coordinate review meetings with the USACE, and with DART and DCTA. The purpose of the meetings will be to present the Project purpose and preliminary plans, and to obtain information relative to technical requirements for work within lands of these agencies and permitting and final approval to construct requirements.

Task 3.1 Work Products:

- 30% OPCC
- 30% Design Review Meeting Summary and Comment Responses
- USACE and DART/DCTA Meeting Summaries

Task 3.1 Project Deliverables:

- 30% Design Progress Submittal (30% Progress Design Drawings, List of Technical Specifications)

### **3.2 Design Development (60%) Design**

The 60% Design Development includes the progression of the design drawings and specifications based on the 30% Submittal and subsequent direction from the City relative to design decisions.

The 60% Design will include progression of the design development of the 30% Design Submittal including the following: Cover Sheet, General Notes, Project Overview/Survey Control drawings, Project Plan and Profile drawings, and Standard and Additional Details. 60% Technical Specifications (Divisions 1 through 50) will also be developed. Bid and Construction specifications will utilize City standard drawings and specifications and NCTCOG specifications, to extent applicable.

CDM Smith will submit a 60% Design Progress Submittal consisting of the 60% drawings and 60% progress technical specifications (Division 01 through 50) as described above to the City for review and comment.

CDM Smith will coordinate with the City to prepare for and facilitate a 60% Design Review Meeting with the City to review the 60% Design Submittal and discuss any maintenance of operations limitations and key design considerations and City decisions for progressing the design to the 90-percent pre-final design milestone. CDM Smith will develop a meeting summary to document comments, decisions and action items requiring follow-up by respective parties.

Subsequent to submittal of the 60% Design Submittal, CDM Smith will revise and update the previous 30% OPCC to reflect Project updates and design progression subsequent to the 30% Preliminary Design. The cost opinion will be a Class 3 estimate, per AACE International Recommended Practice No. 18R-97, with appropriate contingencies based on design progress completion.

Near the end of 60% Design, CDM Smith will coordinate virtual review meetings with the USACE, and with DART and DCTA. The purpose of the meetings will be to present the proposed project, review permitting/submittal information for construction, and receive feedback on the proposed project.

Task 3.2 Work Products:

- 60% Updated OPCC
- 60% Design Review Meeting Summary and Comment Responses

Task 3.2 Project Deliverables:

- 60% Design Progress Submittal (60% Progress Design Drawings, 60% Technical Specifications)

### **3.3 Pre-Final (90%) Design**

Upon approval of the 60% Design Development plans, CDM Smith will develop 90% Pre-Final design documents (drawings and technical specifications). Pre-Final drawings will include advancement of 60% progress drawings, plus added erosion control drawings and details and Traffic Control Plan and Details.

CDM Smith will update and supplement the City's standard Division 0 ("Front-end") contract documents, as provided by the City for incorporation with the project manual (Division 01 through 50 technical specifications) into the overall Contract Specifications document.

CDM Smith will facilitate a 90% Pre-Final Design Review Meeting with the City to discuss any final comments. CDM Smith will have three (3) team members, in addition to the Project Manager, participating in the meeting. It is assumed that the meeting will last for 2 hours. CDM Smith will develop a meeting summary to document comments, decisions and action items requiring follow-up by respective parties

CDM Smith will revise and update the previous 60% OPCC to reflect Project updates and design progression subsequent to the 60% Design Development. The cost opinion will be a Class 2 estimate, per AACE International Recommended Practice No. 18R-97, with appropriate contingencies based on design progress completion.

Near the end of 90% Design, CDM Smith will submit permitting/construction information to USACE, DART and DCTA. CDM Smith will coordinate a virtual review meeting with each entity to discuss any questions or comments with agency staff. CDM Smith will submit additional

requested information. It is anticipated that the permit submittals include geotechnical design calculations and information available on the 90% plans.

Task 3.3 Work Products:

- 90% Updated Opinion of Probable Construction Costs (OPCC)
- 90% Design Review Meeting Summary and Comment Responses

Task 3.3 Project Deliverables:

- 90% Design Progress Submittal (90% Progress Design Drawings, 90% Division 00 “Front End” contract document, 90% Technical Specifications [Division 01 through 50])

### **3.4 Final (100%) Design**

Following a 90% review meeting with the City, CDM Smith shall submit Contract Documents (100%) to the CITY per the approved Project Schedule. Each plan sheet shall be stamped, dated, and signed by the Engineer registered in State of Texas. Contract Documents will be considered bid-ready documents (“Issued for Bid”).

CDM Smith will revise the previous 90% OPCC to reflect Project revisions and design progression subsequent to the 100% Pre-Final Design. The cost opinion will be a Class 2 estimate, per AACE International Recommended Practice No. 18R-97, with appropriate contingencies based on design progress completion.

Task 3.4 Work Products

- 100% Updated Opinion of Probable Construction Costs (OPCC)

Task 3.4 Project Deliverables

- 100% Sealed Contract Documents (100% Drawings, 100% Division 00 “Front End” contract document, 100% Technical Specifications [Division 01 through 50])

### **Task 4 Bidding Services**

CDM Smith will assist the City in responding to contractor questions and requests for clarification. CDM Smith will attend the pre-bid meeting and assist the City in responding to contractor questions. CDM Smith will prepare addenda items for up to two (2) addenda that will be issued by the City to prospective bidders.

### **Project Assumptions**

This scope of services is based on the following assumptions.

- Project meetings will be attended by CDM Smith’s Project Manager, Technical Design Leader, or other senior technical staff.
- City will negotiate with the effected property owners to execute necessary easement agreements.
- CDM Smith to communicate schedule and City will coordinate private property owners to allow access for field investigations.
- No traffic control or vegetation clearing will be required for subsurface investigations. All test borings will be backfilled with soil cuttings or bentonite chips.

- Drilling in the USACE's Lewisville Dam will require a Section 408 permit and development of a Drilling and Invasive Program Plan (DIPP) for submittal to the USACE.
- Boring locations will be off DART right-of-way such that no license agreement or right-of-entry will be needed from DART.
- Completion of Stormwater Pollution Prevention Plan and TCEQ Stormwater Discharge Permit from TCEQ will be included as responsibility of the Contractor in the Contract Documents.
- City will provide available relevant data for CDM Smith's review following Project initiation.
- CDM Smith will use City "front-end" (Division 00) construction contract document if available.
- The Project will not require wetland delineation, Waters of the US delineation, nor Waters of the State delineation.
- The Project will not require permitting or correspondence related to a CWA Section 404 nor Section 401.
- Threatened and Endangered species habitat evaluation will not be required.
- General Exclusions
  - Post-30% Design revisions to sewer main alignment or routing.
  - Preparing additional applications and supporting documents for outside funding.
  - Assisting City in preparing for, or appearing at litigation, mediation, arbitration, dispute review boards, or other legal and/or administrative proceedings.
  - Performing additional investigations, studies or analyses not included in the above scope.
  - Additional permitting or permitting coordination not included in the above scope.
  - Additional meetings with City, permitting agencies, or stakeholders not included in the above scope.
  - Additional design or analysis of Lewisville Lake Dam or adjacent areas not included in standard design of open cut or trenchless construction methods.

## Fee Summary

CDM Smith will complete the above scope of services under the applicable contract. The work for Tasks 1 through 4 will be completed on a time and material basis, using billing rates appropriate to the staff assigned to the project. Additional or supplemental services can be negotiated separately.

CDM Smith proposes to complete Tasks 1 through 4 on a time and materials basis for the estimated not to exceed budget of \$539,360.00. This budget has been developed based on estimated hours for each task multiplied by the applicable category in the billing rate table. The breakdown in fee, by Task, is as follows:

TASK	FEE
1. Project Management	\$40,200
2. Site Investigations	\$224,950
3. Design Services	\$257,060
4. Bid Services	\$17,150
<b>TOTAL</b>	<b>\$539,360</b>

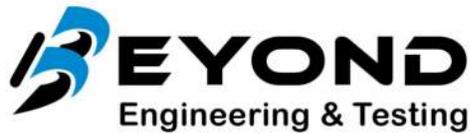
## Schedule

A summary schedule has been developed as the basis of this proposal and milestones are provided below for City review. We would like to review the milestone dates with City to complete any updates to the assumptions for meetings, design phase work, and future construction phase. The following are key milestones in the proposed project schedule:

- February 2026 NTP
- February 2026 Kick-off Meeting
- May 2026 Issue 30% Design Documents
- July 2026 Issue 60% Design Documents
- August 2026 Issue Easement Documents
- September 2026 Issue 90% Design Package
- November 2026 Issue Bid Package

## Attachments

- None



November 13, 2025,  
Via Email: [mcbarnetteav@csmith.com](mailto:mcbarnetteav@csmith.com)

Mr. André V. McBarnette, PE, PMP  
Client Service Leader  
CDM Smith  
12400 Coit Road, Suite 400  
Dallas, TX 75251

**Re: Proposal for Geotechnical Data Report  
City of Lewisville – Mill Street Gravity Sewer Upsizing  
Dallas, Texas  
BEYOND Proposal No. G250148**

Dear Mr. McBarnette:

Beyond Engineering and Testing, LLC (BEYOND) is very pleased to provide CDM Smith (Client) with this proposal for a geotechnical data report. This proposal is for the proposed the City of Lewisville – Mill Street Gravity Sewer Upsizing in Dallas, Texas.

Based on the information provided by the Client in emails dated November 7, 2025, the proposed scope includes conducting 15 borings with an estimated total footage of 255 feet located along N. Mill Street in Dallas, Texas. Upon completion, we will furnish a comprehensive Geotechnical Data Report representing bore location diagrams, bore logs, field exploration and laboratory procedures, and laboratory results. Please note that the report will not include Geotechnical engineering recommendations, as per the client's request.

We assume that no vegetation clearing is necessary and that the project site is accessible to a conventional 2-wheel drive truck-mounted drill rig and support truck.

## Scope of Services

### Geotechnical Engineering Services

The intent of this study is to provide Client and the design team with specific information about the geology and subsurface soil conditions at the proposed site. *BEYOND will provide a representative in the field during subsurface investigation to log subsurface materials while drilling and to direct the drill crew during all field activities.*

### Exploratory Boreholes

Geotechnical drilling and sampling will be conducted in accordance with the current standard of practice based on applicable ASTM standards. The following is a summary of the field exploration activities:

- Coordinate field activities with Client or the designated representative.
- Call Texas811 to initiate underground utility “clearance”. (Note that this only assists with major utilities registered with Texas811. Plumbing, electrical, or other utilities that are owned by the landowner are usually not registered.)
- Drill Thirteen (13) Borings to 15 feet or auger refusal within the existing sewer system

alignment.

- Drill two (2) borings to 30 feet or auger refusal at each of the road level railroad crossings on Mill Street.
- CDM Smith/City will provide right-of-entry/access for the borings.
- No specialized safety training or PPE (besides the standard PPE) is anticipated to be required for this site.
- We will drill the boreholes using a truck-mounted drill rig with the following drilling sampling techniques:
  - Continuous sampling shall be completed using split spoon samples (SSS) for cohesionless soils and field extruded Shelby tubes (PST) for cohesive soils.
  - Solid stem, hollow stem augers or mud rotary drilling in soils;
  - NX or NQ Rock coring shall be performed continuously when encountering rock;
  - Additional fees and schedules may apply if alternative drilling equipment, sampling, drilling, or coring are required outside of what is presented above.
- Beyond will provide all necessary materials (sample jars/plastic bags or materials to wrap/seal tubes, soil/rock core boxes, aluminum foil, rubber bands, tape, markers, etc.) and labor required for soil sampling, packaging, and transporting of samples. All recovered soil and rock samples will be properly wrapped or bagged, clearly labeled, and stored in wax-coated cardboard boxes for delivery to the laboratory.
- We will transport all collected soil and rock samples to Beyond's laboratory for testing.
- We will provide boring draft logs within 48 hours of drilling completion so CDM Smith can review and work with you to assign lab testing.
- Upon completion of testing, we will store the samples for 90 days, upon which they will be discarded unless otherwise requested. Additional fees may apply for longer storage times.
- We will Collect water level readings in the boreholes during drilling, upon boring completion, and after 24 hours (if possible). This investigation in no way shall be considered as a comprehensive ground water exploration. Piezometers are not included in the scope at this time.
- All borings will be backfilled with soil cuttings or bentonite chips.

### **Laboratory Testing**

We will perform the following tests on representative soil and bedrock samples as request by the Client. The Client provided quantities for estimation purpose:

- Moisture Content
- Atterberg Limits
- Gradation/Sieve Analysis
- Hydrometer Test D7928
- PH of Soil, ASTM D854
- Material finer than #200
- Soil Chloride and Sulfate, (EPA 300.0)
- Unconfined Compressive Strength, Rock (if sample allows)
- Unconfine compressive Strength, Soil (if sample allows)

A geotechnical engineer will coordinate the field activities. CDM Smith will assign laboratory testing. The Geotechnical Data Report will be stamped by a Professional Engineer registered in the State of Texas, and will contain the following:

- A summary of the project scope, as understood by Beyond at the time of the GDR;
- The limitations of the GDR
- A general description of the project site, as experienced at the time of the field investigation
- A site location/vicinity map
- A description of the subsurface investigation performed, including:
  - The number and location of geotechnical test borings;
  - A boring location plan for the site showing the location of the test borings;
  - How the test borings were drilled (i.e. equipment used, sampling intervals, sample wrapping, etc.);
  - Groundwater level measurements method and the recorded groundwater during drilling and at drilling completion;
  - Laboratory testing program performed on collected soil and rock samples; and
  - Percentages of rock core recovery and Rock Quality Designation (RQD).
- A general description of the subsurface soils encountered during the subsurface investigation, including the USCS designation, results of in-situ testing (SPT, pocket penetrometer, etc.) and depths/elevations and soil strengths of each stratum;
- The regional geology at the project site;
- All test boring logs;
- Photos of soil/rock samples collected;
- All laboratory test results, including results of corrosion series testing and potential impacts on steel, concrete, etc.;
- Electronic copy of the final data report.

### **Exclusions**

The following services are specifically excluded in the scope of services at this time:

- All required permitting activities.
- Site Clearing. Our proposal does not include backhoe services to clear vegetation or mesquite to access bore locations.
- Private subsurface utility locate techniques (such as GPR, etc.)
- All environmental services or other issues related hazardous materials, if encountered.
- Any additional boreholes not defined above.
- Land or elevation surveys.
- Geotechnical engineering recommendations

### **Assumptions**

Beyond has made several assumptions in preparing this proposal, and the final invoice will be based on actual quantities:

- The drilling and sampling and total number of borings are provided by the Client. If additional sampling and testing are required for the proposed project, then the scope and fees will need to be adjusted accordingly.
- The site is accessible to a truck-mounted drill rig.
- Anticipated drilling production is estimated at 85 feet per day.
- The client will provide boring staking and/or a KMZ file with boring locations.
- BEYOND will handle underground utility clearances.
- Water is assumed to be offsite, with round trips taking up to about 45 minutes per trip and one trip required per boring. The exact source and time may vary depending on the available water

- source identified during the initial site visit.
- Field Technicians are assumed to work 10 hours per day.
  - Access to the Property: BEYOND’s proposed fee assumes that the Client will provide landowner permission for site access. If access gates are locked, we will need keys, combinations, or a scheduled meeting with the landowner for access.
  - BEYOND requires Client to provide a schematic of existing underground structures, if there are such documents. BEYOND will initiate underground utility clearance through appropriate utility locate companies, but those services can only clear locations of major utilities entering/exiting the property. They will not locate facility utilities such as plumbing or electrical lines that are considered private. We assumed that the Client allows the current landowner to review proposed borehole locations to assess clearance of underground utilities.
  - Client will provide any other completed studies, reports, plans, plats, existing site topographic information, or data that may be of assistance or necessary for BEYOND to perform under this Agreement. BEYOND has the right to rely on information contained in documents provided by Client.
  - Client will be responsible for all application and permit fees required by any involved agencies.
  - BEYOND will perform its services in a manner consistent with the standard of care and skill ordinarily exercised by members of the profession practicing under similar conditions in the geographic vicinity and at the time the services will be performed. No warranty or guarantee, express or implied, is provided as part of the services offered by this proposal.
  - Engineering services, meetings and consultation, as well as special administrative task *outside of the scope specifically addressed in the proposal above*, are considered a separate item to be charged at the appropriate professional staff rate.
  - Safety in the Work Place: BEYOND takes safety in the workplace very seriously. We will follow our stringent safety program as well as that of our drilling subcontractor.

**Schedule**

BEYOND will initiate the underground utility search within five days of receiving a signed Professional Service Agreement (PSA) after an initial site visit. The drill crew can normally mobilize within 2 to 3 weeks of signed PSA but will vary depending on project schedule and crew availability. The geotechnical field work is anticipated to take 3 days in the field to complete but also will be dependent on clearance of underground structures, access to all boreholes and weather conditions. Following an approved lab assignment based on the planned testing, BEYOND can provide a geotechnical data report within approximately four weeks after completion of drilling.

**Compensation and Payment**

**Compensation**

BEYOND proposes to perform the work items detailed above following the corresponding fee options below. Please initial the preferred option below:

Geotechnical Services	Total:	\$29,849.60
-----------------------	--------	-------------

Client and BEYOND may subsequently agree in writing to provide additional services rendered under the *Work Order* for additional, negotiated compensation.

We trust that this proposal covers all of your necessary work items for the geotechnical study. Thank you for the opportunity to provide this proposal to you. If in agreement, return a signed copy of the 3-page Professional Service Agreement (PSA) via email or fax. We will return a fully executed copy to you.

Respectfully Submitted,  
**Beyond Engineering and Testing, LLC**



Derek Barosh.  
Project Manager

Enclosure:    Figure 1 - Proposed Boring Locations  
                     Project Cost Estimate



Figure 1 – Proposed Boring Locations

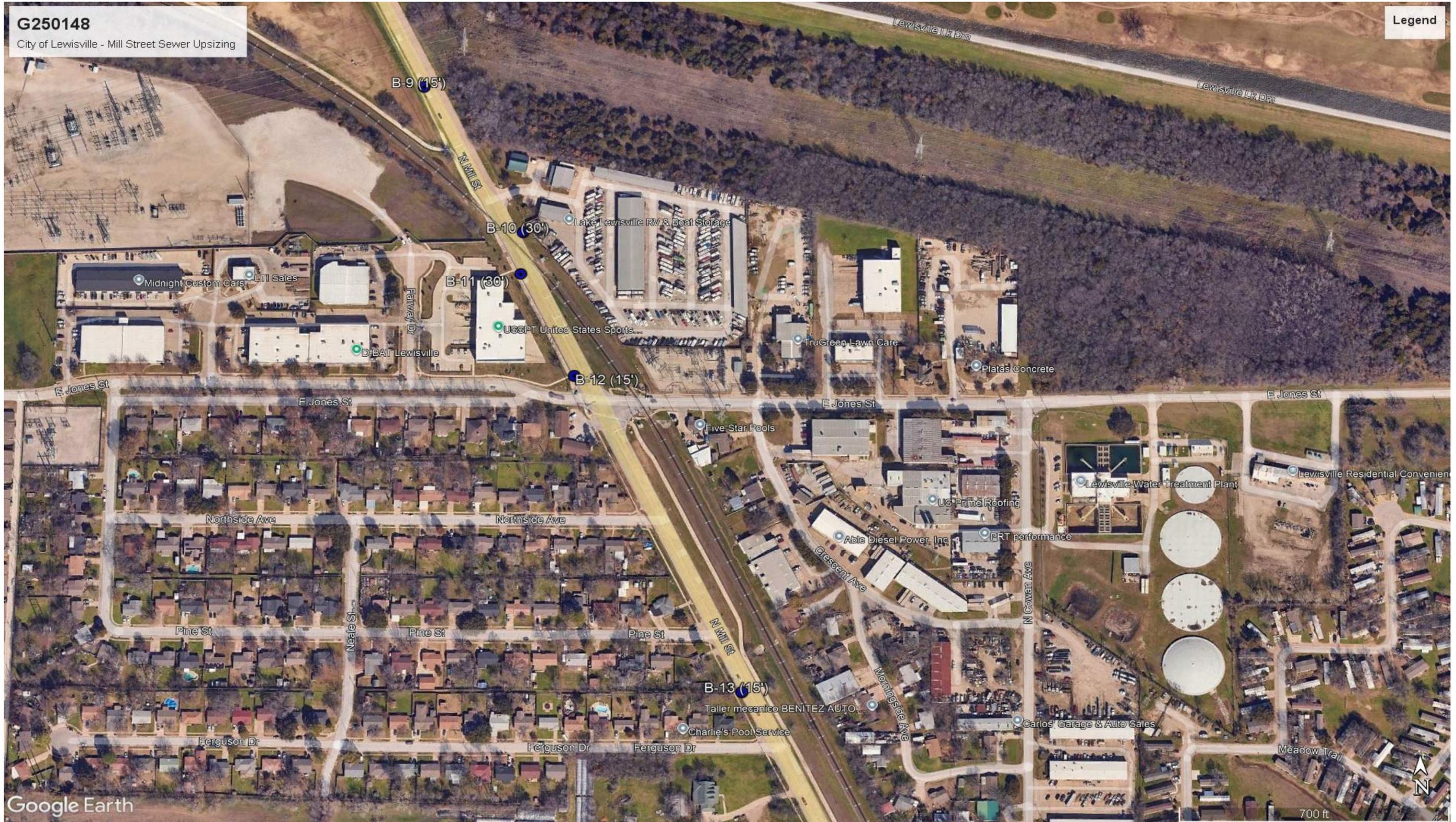


Figure 1 – Proposed Boring Locations



Figure 1 – Proposed Boring Locations

Date: November 11, 2025  
 Revised: Rev. 0

[www.BeyondET.com](http://www.BeyondET.com)

Prepared By: Derek Barosh  
 Beyond Office: Round Rock  
 Beyond Proposal No. G250148

Drilling Scope of Work:	
13 Borings to	15
2 Borings to	30
Borings to	
<b>Total Borings =</b>	<b>15</b>
<b>Total Footage (ft) =</b>	<b>255</b>
<b>Assumes Total Rig Days =</b>	<b>3</b>

Project Name: Mill Street Gravity Sewer Upsizing  
 Project Location: Lewisville, TX  
 Client: CDM Smith  
 Project Info. Replacing existing sewer line in Lewisville, TX

Drilling Footage/Day =	100
Reduced Mob Rate =	1
Markup =	15

Field Services	Quantity	Unit	Unit Price	Total
Mobilization/Demobilization of Drill Crew	1	LS	\$ 525.00	\$ 525.00
Drilling & Sampling (Hollow Stem Auger or HWT Casing - 0 to 50')	0	feet	\$ 29.90	\$ -
Drilling & Sampling (Hollow Stem Auger or HWT Casing - 50 to 100')	0	feet	\$ 32.20	\$ -
Drilling & Sampling (CFA, Mud Rotary or Air Rotary - 0 to 50')	200	feet	\$ 22.00	\$ 4,400.00
NQ Rock Coring (0-50')	55	feet	\$ 30.00	\$ 1,650.00
Drilling & Sampling (CFA, Mud Rotary or Air Rotary y - 50' to 100')	0	feet	\$ 25.30	\$ -
Additional Samples (TCP, SPT or Shelby Tube) 0-50'	54	Each	\$ 22.00	\$ 1,188.00
Concrete coring & Surface completion (through pavement)	0	Each	\$ 160.28	\$ -
Standby, hrs	5	Hours	\$ 275.00	\$ 1,375.00
Backhoe Mob/Demob (For Test Pit or Site Clearing)	0	EA	\$ 1,437.50	\$ -
Perform Test Pits to 10 feet deep or Site Clearing	0	Hours	\$ 172.50	\$ -
Cement / Bentonite Grout	0	feet	\$ 7.48	\$ -
Support Truck	3	Days	\$ 143.75	\$ 431.25
Per Diem (driller's staff)	0	Days	\$ 345.00	\$ -
<b>Subtotal</b>				<b>\$ 9,569.25</b>

Laboratory Testing	Quantity	Unit	Unit Price	Total
Atterberg Limits (Liquid, Plastic Limits and PI), ASTM D4318	30	Each	\$ 95.45	\$ 2,863.50
Percent Minus #200 Content only, ASTM D1140	15	Each	\$ 54.05	\$ 810.75
Gradation/Sieve Analysis, (Includes Wash No. 200), ASTM C136 and D1140	15	Each	\$ 103.50	\$ 1,552.50
Moisture Content only, ASTM D2216	45	Each	\$ 13.80	\$ 621.00
Unit Weight/Moisture of cohesive sample, ASTM D2937	0	Each	\$ 40.25	\$ -
Unconfined Compression - Soil, ASTM D2166	6	Each	\$ 79.35	\$ 476.10
Unconfined Compression - Rock, ASTM D7012 - Method C, unconfined, peak load Only	2	Each	\$ 110.40	\$ 220.80
Unconsolidated-undrained Triaxial Compression (UU test), ASTM D2850	0	Each	\$ 140.30	\$ -
Hydrometer Test D7928	4	Each	\$ 132.00	\$ 528.00
Direct Shear 3 pts on sand, ASTM D3080	0	Each	\$ 550.85	\$ -
Direct Shear 3 pts on clay, ASTM D3080	0	Each	\$ 764.75	\$ -
Soil Chloride and Sulfate (water soluble), EPA 300.0	3	Each	\$ 147.20	\$ 441.60
Moisture-Density Relationship (Standard Proctor), ASTM D698	0	Each	\$ 219.65	\$ -
California Bearing Ratio (CBR), ASTM 1883	0	Each	\$ 488.75	\$ -
1-D Consolidation - ASTM D 2435	0	Each	\$ 713.00	\$ -
Expansion/Swell or Collapse Potential, ASTM D 4546 (Collapse - Method B)	0	Each	\$ 241.50	\$ -
Expansion/Swell or Collapse Potential, ASTM D 4546 (Swell - Method C)	0	Each	\$ 356.50	\$ -
Specific Gravity of Soils, ASTM D854	0	Each	\$ 92.00	\$ -
<b>Oxidation-Reduction Potential (ORP) of Soil (SM2580B)</b>	<b>0</b>	<b>Each</b>	<b>\$ 145.00</b>	<b>\$ -</b>
Soil Box Electrical Resistivity, ASTM G187	0	Each	\$ 143.75	\$ -
pH of Soil, ASTM G51	3	Each	\$ 43.70	\$ 131.10
<b>Subtotal</b>				<b>\$ 7,645.35</b>

Thermal and Electrical Resistivity Testing	Quantity	Unit	Unit Price	Total
Mob/Demob for Electrical Resistivity Crew	0	LS	\$ 1,500.00	\$ -
Per Diem (Electrical Resistivity Crew)	0	Day	\$ 170.00	\$ -
Laboratory Thermal Resistivity (RHO) dry-out curve, per Sample	0	Each	\$ 900.00	\$ -
4-Pin Wenner Array Field Electrical Resistivity (0 to 100 feet "a" Spacing)	0	Each	\$ 750.00	\$ -
4-Pin Wenner Array Field Electrical Resistivity (0 to 200 feet "a" Spacing)	0	Each	\$ 900.00	\$ -
4-Pin Wenner Array Field Electrical Resistivity (0 to 300 feet "a" Spacing)	0	Each	\$ 1,050.00	\$ -
ER Results/Report	0	LS	\$ 400.00	\$ -
<b>Subtotal</b>				<b>\$ -</b>

MASW Surveys	Quantity	Unit	Unit Price	Total
Mobilization/Per Diem/Travel for Geophysical Crew	0	LS	\$ 1,500.00	\$ -
1-D MASW Survey	0	Each	\$ 750.00	\$ -
1-D MASW Analysis and Report	0	LS	\$ 400.00	\$ -
Per Diem	0	Days	\$ 150.00	\$ -
<b>Subtotal</b>				<b>\$ -</b>

Engineering Services (Field Support)	Quantity	Unit	Unit Price	Total
Field Geotechnical Technician or Logger	30	Hours	\$ 76.00	\$ 2,280.00
Trip Charge for Projects outside of Dallas/Fort Worth	0	Miles	\$ 0.67	\$ -
Support Vehicle	3	Days	\$ 75.00	\$ 225.00
Site Recon	8	Hours	\$ 75.00	\$ 600.00
Traffic Control	3	Days	\$ 2,500.00	\$ 7,500.00
Per Diem (BEYOND staff)		Days	\$ 150.00	\$ -
<b>Subtotal</b>				<b>\$ 10,605.00</b>

Engineering Services (Office Support)	Quantity	Unit	Unit Price	Total
Principal	0	Hours	\$ 205.00	\$ -
Senior Professional Engineer (Review Report)	0	Hours	\$ 170.00	\$ -
Project Manager / Engineer (Project Management, Review gINT logs, Prepare Report)	0	Hours	\$ 145.00	\$ -
Staff Professional or Geologist (Coordination)	12	Hours	\$ 110.00	\$ 1,320.00
Staff Professional or Geologist (Utility Locates)	6	Hours	\$ 110.00	\$ 660.00
Administrative Staff	1	Hours	\$ 50.00	\$ 50.00
<b>Subtotal</b>				<b>\$ 2,030.00</b>

Comments/Notes: **Total (Drilling and Engineering) = \$ 29,849.60**  
**Total (MASW, ER and TR) = \$ -**  
**Total = \$ 29,849.60**

# PJB Surveying



200 W. Belmont Drive, Suite D - Allen, Texas 75013 - (972) 649-6669

November 20, 2025

Mr. Andre V. McBarnette, PE, PMP  
Client Service Leader  
CDM Smith  
[mcbarnetteav@cdmsmith.com](mailto:mcbarnetteav@cdmsmith.com)

RE: Professional Survey Services  
Mill Road Gravity Sewer - Lewisville, Texas

Andre,

We appreciate the opportunity to provide professional survey services for the above reference project. The project location is generally described as Mill Street from 400 LF north of Lark Park Road to creek crossing at Cowan (approx. 6,600 LF), limits being more specifically shown on the attached Exhibit. This fee proposal is provided per your request:

## **Proposed Services**

All survey services are based on Texas State Plane Coordinate System (horizontal), North Central Zone 4202, NAD 83 Horizontally NAVD88 Vertically.

Proposed services include the following:

- A. Project Control:** Three Primary Control shall be established along project. Primary Control shall establish vertical values with a closed level loop. Control shall be established at stable locations outside future project construction area.
- B. Research & ROW Recovery:** Conduct office and field research to identify and recover affected boundary/property, right-of-way lines and easements within project area. Boundary and ROW services shall be provided in accordance with the Survey Act and Rules of the Texas Board of Professional Engineers and Land Surveyors.
- C. Design Survey:** Services will be provided to collect topographic data for the project corridor. The width shall be ROW to ROW along Mill Steet. Scope area shall include a minimum of 50 feet along intersection roadways, and intersection drives. Survey shall also include 50-foot swath generally centered along existing pipeline south of Valley Ridge to creek. The following features shall provide deliverables:

- Top of curb, back of curb, sidewalks, driveways and utility appurtenances
- Top and bottom of walls, toe of slope, grade breaks, rip-rap, drainage pipes, headwalls, overhead electric lines, guy wires, traffic control boxes/arms/poles
- Train bridge data – piers, heights and width.
- Topo may include locating of all existing manhole, inlets and water valves within project area and shall include measure downs information (where accessible).
- All streets, adjacent ownerships and/or plats shall be identified and labeled.

**D. Subsurface Utility Engineering:**

- Quality Level B shall be provided with a 20-foot wide corridor along the entire limits of project.
- Quality level A shall be performed as directed by CDM Smith. Services are considered additional services, with fees provided by identified location(s)
- Level B findings shall be added to CAD deliverable
- Services shall be conducted under the direction of a Professional Engineer registered in the State of Texas.

**E. Parcel Documents:**

- Prepare up to fifteen (7 Permanent Easements, 7 Temporary Construction Easements, 1 USACE Easement) metes & bounds description, with exhibit, of proposed Easement acquisitions.
- Documents shall be prepared in accordance with the Survey Act and Rules of the Texas Board of Professional Engineers and Land Surveyors.

**Deliverables**

The following data shall be provided for both street segments mentioned above:

- A. PDFs of control point sketches
- B. PDFs of all Manhole measure down data. Includes X,Y,Z values of top, measure to flowline(s), material, and pipe size of connections (as best determined)
- C. Survey data point list in ASCII format
- D. All survey data in DWG format (including contours)
- E. TIN or XML file
- F. Project Control in WORD format
- G. DWG basefile of all reconstructed boundary(s).

**Time of Performance**

Proposed Topographic Services shall be completed in 40 working days. Time of performance does not include working days lost due to inclement weather or holidays.

**Proposed Fees for Mill Street Gravity Sewer**

- Design Survey **\$52,000.00**
- ROW Recovery **\$25,000.00**
- 7 Easements (\$4,000 each) **\$28,000.00**
- Level B SUE **\$45,000.00**

**TOTAL** **\$150,000.00**

**Closing**

I trust that the above proposal will meet the needs of CDM Smith. However, please let us know if any adjustments are needed to meet your needs.

Sincerely yours,

Patrick J. Baldasaro, RPLS  
President  
PJB Surveying, LLC  
Texas Firm No. 10194303