



Engineering Department

DATE: February 27, 2024

FROM: Gabe Schell, City Engineer

ITEM: S Washington Street - Engineering Amendment - HC 158

REQUEST:

Consider approval of amendment 4 to the existing agreement for professional services with Apex Engineering Group, Inc for S Washington St reconstruction - HC 158

BACKGROUND INFORMATION:

Apex Engineering Group, Inc. is under contract to perform preliminary and design engineering services relating to the reconstruction of S Washington Street between Burleigh Avenue and the south Bismarck drainage ditch. This request is for authorization of scope and fee to include the construction engineering of the project. This project is funded primarily through ½ cent sales tax, with additional funding through special assessments, developer prepayment and water utility.

RECOMMENDED CITY COMMISSION ACTION:

Approve amendment 4 to the existing agreement for professional services with Apex Engineering Group, Inc for S Washington St reconstruction – HC 158

STAFF CONTACT INFORMATION:

Gabe Schell, City Engineer, 701-355-1507, gschell@bismarcknd.gov

ATTACHMENTS:

1. Amend 3 Apex - HC 158

AMENDMENT TO AGREEMENT FOR PROFESSIONAL SERVICES
Amendment 3: Construction Administration

Background Data:

Effective Date of Owner-Engineer Agreement: November 22, 2022

Owner: City of Bismarck

Engineer: Apex Engineering Group, Inc.

Project: South Washington Street Reconstruction
City Number; HC 158

Nature of Amendment:

- Additional Services to be performed by Engineer
- Modifications to services of Engineer
- Modifications of payment to Engineer
- Modifications to time(s) for rendering Services

Description of Modifications:

- Attachment “D” – Phase III - Construction Administration

Agreement Summary:

Original agreement amount:	\$ <u>521,426.18</u>
Net change for prior amendments:	\$ <u>765,008.04</u>
This amendment amount – Attachment D*	\$ <u>1,536,081.95</u>
Adjusted Agreement amount:	\$ <u>2,822,516.17</u>

***Amendment amount for Phase III Construction Administration will be billed separately from the original contract and prior amendments.**

Engineer and Owner hereby agree to modify the above-referenced Agreement as set forth in this Amendment. All provisions of the Agreement not modified by this or previous Amendments remain in effect. The Effective Date of this Amendment is February 27, 2024.

OWNER:

City of Bismarck

By:

Michael T. Schmitz

Title: President, Board of City Commissioners

Date Signed:

ENGINEER:

Apex Engineering Group, Inc.

By:

Jason P. Gullicks, PE

Title: Vice President

Date Signed:



Water | Transportation | Municipal | Facilities

ATTACHMENT "D"
SCOPE OF SERVICES
PHASE III – CONSTRUCTION ADMINISTRATION

South Washington Street Reconstruction
Burleigh Avenue to the South Bismarck Drainage Ditch
AC-NHU-1-981(137); PCN 23859
CPU-1-981(140); PCN 24022
City Project - HC 158
February 13, 2024

PROJECT DESCRIPTION

The purpose of this attachment is to describe the scope of services and responsibilities required to complete construction administration services. Services include construction inspection, materials testing, and survey to verify the contractor's work is performed according to the governing specifications, plans, and special provisions.

Project improvements include reconstructing 1 mile of South Washington Street from Burleigh Avenue to the South Bismarck Drainage Ditch. The roadway will be reconstructed to a three-lane urban road section with a center left turn lane. Improvements include lighting, landscaping, a 10-foot shared-use path, a 6-foot pedestrian sidewalk, the extension of a 16-inch watermain, installation of a sanitary sewer forcemain, stormwater forcemain, and the installation of a storm sewer system. A traffic signal will be installed at the London Avenue/Santa Fe Avenue intersection with right turn lanes on South Washington Street. A fiber optic interconnect cable will be installed to connect all signals on South Washington Street, including existing signals at Denver Avenue, Reno Avenue, Wachter Avenue, and the new signal at London Avenue/Santa Fe Avenue. A single lane roundabout will be constructed at the Burleigh Avenue intersection. Burleigh Avenue will be widened between South Washington Street and Boston Drive to a three-lane section with a center left turn lane.

PROJECT SCHEDULE

The work tasks outlined below are estimated based on the construction completion dates as identified below and may vary depending upon the Contractor's actual schedule.

Bid Date: 2/16/2024

Estimated Start Construction: 04/08/2024

Substantial Completion: 11/15/2024

Final Completion: 6/28/2025

A total of 192 days (32 weeks) of construction observation services have been assumed for the 2024 construction season and a total of 20 days of construction observation services have been assumed for the 2025 construction season; the hourly summary is based on an average of 3 full time construction



staff working 6 days per week for 12-hour days during construction activities. Additional time is included for office staff before construction begins and for close-out activities. Surveying and materials testing are anticipated to be completed within the same timeframes.

1.0 PROJECT MANAGEMENT

1.01 PROJECT MANAGEMENT

The Apex project manager will be the City of Bismarck's main point of contact and will be responsible for the overall coordination of work completed. This task consists of managing the project budget, work assignments, internal coordination meetings, and coordination with the City of Bismarck and NDDOT.

Consultant team meetings and communication will be held as needed to coordinate with project staff and to discuss the work plan, coordination of work activities, and project submittals. The project schedule, scope, and budget will be tracked, and the City of Bismarck will be notified of any potential changes.

1.02 PROJECT INITIATION & SHOP DRAWING REVIEW

This task includes time for the construction staff to review plans, setup the record keeping system and create a work plan. Also includes shop drawing review by the design and construction staff.

1.03 PRE-CONSTRUCTION MEETING

Apex will attend and participate in the pre-construction meeting and utility coordination meetings hosted by the Contractor.

1.04 WEEKLY CONSTRUCTION MEETING

Apex will attend and participate in the weekly construction and utility coordination meetings hosted by the Contractor.

1.05 CONSTRUCTION CHANGE ORDERS

Apex will review and respond to change order requests and RFIs. Apex will work with the City to negotiate the change order; maintain contact with the NDDOT during the negotiation process to ensure that all parties agree.

1.06 WEEKLY RECORDS

Apex staff will maintain a daily diary of construction activities throughout the duration of the project. Take photographs of the project throughout the duration of the project and maintain files of photographs taken. Aerial and ground images obtained will be made available to the City upon request.

1.07 CONSTRUCTION AUTOMATE RECORD SYSTEM (CARS) ENTRY

Apex will keep appropriate project records in the NDDOT CARS system. These items will include project diary, haul sheets, pay quantities, pay estimates, progress reports, stockpile/invoice items, construction status, and contract adjustments. Apex will input PQEs, to produce weekly progress reports and pay estimates on a biweekly basis. This task also includes work associated with reviewing payrolls, conducting labor compliance interviews, and monthly EEO Inspection Reports per the NDDOT External Civil Rights Manual.



2.0 CONSTRUCTION ADMINISTRATION

Apex will verify and document in the field the Contractor's work is in conformance with the contract documents. Apex will obtain certifications, measure, and document quantities for each of the bid items. The major works items for each construction operation are summarized below.

2.01 REMOVALS

Apex will verify removal limits and review construction items related to removal operations, including clearing and grubbing, removal of asphalt and concrete pavement, removal of aggregates, and removal of culverts.

2.02 EARTHWORK

Apex will verify earthwork operations including stripping and respreading topsoil; common excavation; embankment; and compaction.

2.03 AGGREGATE BASE/TRAFFIC SERVICE AGGREGATE/GEOSYNTHETIC

Apex will verify all construction items related to aggregate base operations including placement and compaction, grade control, and geosynthetic fabric placement.

2.04 BITUMINOUS PAVEMENT

Apex will field verify all construction items related to hot mix asphalt laydown operations including leveling course, wear course, placement and compaction, and chip seal inspection.

2.05 CONCRETE PAVEMENT

Apex will field verify construction items related to concrete paving operations. This includes jointing layouts, rebar placement, mainline paving, curb & gutter, saw cutting/jointing, and joint sealant.

2.06 STORM SEWER

Apex will field verify all construction items related to storm sewer installations including the installation of manholes, inlets, trunkline, and forcemain.

2.07 SANITARY FORCEMAIN

Apex will field verify all construction items related to the sanitary forcemain installation including the installation, horizontal/vertical grade control, backfill/compaction, and pressure testing.

2.08 WATERMAIN

Apex will field verify all construction items related to watermain installation including the installation, horizontal/vertical grade control, backfill/compaction, pressure and bacteriological testing.

2.09 EROSION CONTROL

Apex will field verify construction items related to erosion control including temporary cover crop, mulching, fiber rolls, and erosion control blankets. This task includes reviewing the Contractor's SWPP.

2.10 SIDEWALK/DRIVEWAY/MEDIAN/BOULEVARD CONCRETE

Apex will field verify construction items related to concrete flatwork operations. This includes sidewalk placement, ADA ramps, driveways, and stamped concrete medians. Jointing layouts, rebar placement, saw cutting/jointing, and joint sealant will also be reviewed.



2.11 TRAFFIC CONTROL

Apex will field verify all construction items related to construction traffic control. Daily inspections of the traffic control will be completed by Apex and the Contractor will be notified of any deficiencies, revisions or corrections.

2.12 PAVEMENT MARKING/SIGNING

Apex will field verify all construction items related to permanent pavement marking and signing.

2.13 STREET LIGHTING AND TRAFFIC SIGNALS

Apex will field verify construction items related to the street lighting, traffic signals and interconnect.

2.14 LANDSCAPING

Apex will field verify all construction items related to seeding and landscaping items including permanent seeding, mulching, fiber rolls, tree plantings, fences, and landscape appurtenances.

2.15 MATERIAL TESTING

Apex will coordinate materials testing for the project with the Contractor and Apex's materials testing subconsultant. Materials testing will be provided by Terracon under a separate agreement, see attached scope of services.

3.0 CONSTRUCTION STAKING

3.01 CONSTRUCTION STAKING

Apex will provide construction staking to include survey control and horizontal and vertical control necessary for construction of the project. In addition, property pins will be reset where disturbed by construction within construction easements. Two survey markers will be reset as described in the plans. The following Items are anticipated to require survey:

- Survey Control Points
- Traffic Control
- ROW and Easements
- Removals
- Watermain
- Sanitary Forcemain
- Lighting
- Traffic Signal
- Fiber Optic Interconnect
- Storm Sewer
- Curb and Gutter
- Roundabout Staking
- Subgrade Blue-Top
- Aggregate Trim Line
- Concrete Joint Layout
- Hand Pours/Intersections
- Sidewalk and Shared-Use Path
- Landscaping and Trees
- Signs and Pavement Marking
- As-built Utilities
- As-built Seeding Limits
- Erosion Control Staking
- Utility Relocations



4.0 PROJECT CLOSEOUT

4.01 FINAL RECORDS, PROJECT ACCEPTANCE & APPROVAL

This task includes time to prepare the final project records including verifying quantities for accuracy, completing necessary final document forms, completing record drawings, packaging, and delivering final documents to the City and NDDOT. Apex will conduct and prepare minutes for the Substantial Completion and Final Completion inspections, final punch list, and approval/acceptance letters to the Contractor.

4.02 FINAL RECORD SUBMITTAL

Apex Task 4.02 contains the services required to submit final records to the NDDOT Bismarck District. All records will be prepared completed per the Construction Records Manual.

TASKS NOT INCLUDED IN THIS SCOPE OF WORK

- Onsite Safety Procedures and Operations
- Dispute Resolution/Claim Analysis
- Materials testing for failed test results



Cost of Money Rate (0.52%)		\$2,433.06
Fixed Fee (15%)		\$183,254.62
		Subtotal (with Fixed Fee and COM)
Direct Cost Totals		\$1,407,385.15
PHASE III GRAND TOTAL		\$1,536,081.95

DIRECT COST ITEMS

Vehicle Mileage @ \$0.67 / Mile						
Task 2.0 - Construction Administration & Observation	Round Trip From-To	No. of Trips	Per Trip Mileage	Total Mileage	Cost (@ \$0.67/mi)	
	Bismarck Site	600	6	3,600	\$2,412.00	
	Site	600	10	6,000	\$4,020.00	
	Vehicle Mileage Totals			9,600	\$6,432.00	
Survey Vehicle Mileage @ \$1.00 / Mile	Round Trip From-To	No. of Trips	Per Trip Mileage	Total Mileage	Cost (@ \$1.00/mi)	
Task 3.0 - Construction Staking	Bismarck Site	75	6	450	\$450.00	
	Project Site	75	10	750	\$750.00	
	Survey Vehicle Mileage Totals			1,200	\$1,200.00	
Subsistence (\$35 / day / person max)	No. of days	No. of people	Total No. of per diems	Cost (@ \$35/day)		
	0	0	0	\$0.00		
	Subsistence Totals			0	\$0.00	
Lodging (\$150 / night)	Lodging Location	No. of nights	No. of people	Total No. of nights	Cost (@ \$150/day)	
	Bismarck	0	0	0	\$0.00	
	Lodging Totals			0	\$0.00	
Printing Costs					\$0.00	
Misc Costs					\$5,000.00	
Subconsultants:						
Bolton & Menk					\$9,447.00	
Terracon					\$106,617.80	
Direct Costs Total					\$128,696.80	

OVERTIME COSTS

Classification	OT Rate	Hr. Rate	Add. OT Rate	OT Hours	Direct OT Costs
Senior Eng Tech	\$70.50	\$47.00	\$23.50	200	\$4,700.00
Engineer Tech II	\$39.00	\$26.00	\$13.00	500	\$6,500.00
Surveyor II	\$49.50	\$33.00	\$16.50	150	\$2,475.00
				Total Overtime Cost	\$13,675.00

Expense Notes:

1.Meals are payable on a daily per diem basis and limited to \$35.00 per employee per day (Breakfast \$7.00, Lunch \$10.50, Dinner \$17.50).



APPENDIX D
SCOPE OF SERVICES
PHASE III – ENGINEER OF RECORD (BOLTON & MENK)
South Washington Street Reconstruction
Burleigh Avenue to the South Bismarck Drainage Ditch
AC-NHU-1-981(137); PCN 23859
City Project - HC 158
JANUARY 26, 2024

Task 13: Engineer of Record

Project Bidding Phase – This task includes addressing questions from the City of Bismarck or NDDOT Construction Services and/or contractors during the bidding of the project, creating addenda for minor changes in quantities and design details for plan sections 85, 100, 110, 120, 150, and 160.

Construction Phase – This task includes addressing field questions during construction, addressing plan revisions and design change orders, and reviewing shop drawings for plan sections 85, 100, 110, 120, 150, and 160.



Appendix D: Phase III Fee

Client: City of Bismarck **Bolton & Menk, Inc.**
City Project HC 148, AC-NHU-1-981(137), PCN 23859, Bismarck South Washington Street

Task No.	Work Task Description	Principal in Charge	Team Project Manager	Signals Lead	ITS Lead	Signals Designer	Landscape Architect	ITS Designer	Design Engineer	Admin	Total Hours	Total Labor Cost
	Name	Mike Bittner	Chris Dahl	Mike Larson	Jake Folkeringa	Aaron Hamby	Josh Shields	Darrin Rickbeil	Ryan Genz	Amber Coulthart		
13.0	Engineer of Record	0	24	4	4	4	4	4	4	6	54	\$2,624
Total Hours		0	24	4	4	4	4	4	4	6	54	\$2,624

Rate Calculation

Average Hourly Rate	\$65.00	\$55.00	\$50.00	\$62.00	\$38.00	\$55.00	\$47.00	\$41.00	\$22.00
Average Hourly Overhead (213.06%)	\$138.49	\$117.18	\$106.53	\$132.10	\$80.96	\$117.18	\$100.14	\$87.35	\$46.87
Average Hourly Fixed Fee (15%)	\$30.52	\$25.83	\$23.48	\$29.11	\$17.84	\$25.83	\$22.07	\$19.25	\$10.33
Total Hourly Rate	\$234.01	\$198.01	\$180.01	\$223.21	\$136.81	\$198.01	\$169.21	\$147.61	\$79.20
Toal Labor Cost	\$0	\$1,320	\$200	\$248	\$152	\$220	\$188	\$164	\$132
Total Cost	\$0	\$4,752	\$720	\$893	\$547	\$792	\$677	\$590	\$475

Direct Expenses	Number	Total
Lodging (\$125/Night)	0	\$0
Vehicle Miles (\$0.56/Mile)	0	\$0
Meals (\$35/Day)	0	\$0
Total		\$0

Financial Summary	
Total Labor Costs	\$2,624
Overhead (213.06%)	\$5,591
Subtotal (Labor and Overhead)	\$8,215
Fixed Fee (15%)	\$1,232
Data Purchase	\$0
Travel	\$0
Total	\$9,447



1502 Grumman Lane Ste 4, PO Box 2084
Bismarck, North Dakota 58502-2084
P (701) 258-2833
F (701) 258-2857
Terracon.com

February 8, 2024
Apex Engineering Group
600 South 2nd Street – Suite 145
Bismarck, North Dakota

Attn: Troy Ripplinger
701-226-0175
Troy.ripplinger@apexenggroup.com

Re: Proposal for Materials Testing
AC-NHU-1-981(137)(PCN-23859) and CPU-1-981(140)(PCN-24022)
South Washington Street
Bismarck, North Dakota
Terracon Proposal No. PM2241016

Dear Mr. Ripplinger:

Terracon Consultants, Inc. (Terracon) appreciates the opportunity to submit this proposal to provide construction materials testing services for the AC-NHU-1-981(137)(PCN-23859) and CPU-1-981(140)(PCN-24022) project. Our proposal includes an outline of the project information, our proposed scope of services, estimated quantities, unit rates, and a total estimated fee for our services.

1.0 CAPABILITIES AND EXPERIENCE

Construction Materials Testing Services

Our team of inspectors and technicians are experienced with providing materials testing, inspections and/or observations of concrete, soils, aggregate, masonry, structural steel, foundations, fireproofing, and asphalt pavement in the local area and are familiar with the recognized building jurisdiction requirements.

Laboratory Capabilities

Our laboratory is accredited by AASHTO Re:source which is recognized by ASTM E329 Standard Specification for Agencies Engaged in Construction Inspection, Testing, or Special Inspection. The scope of accreditation includes the field of Soils, Aggregates, and Portland Cement Concrete. As a requirement of accreditation, we regularly participate in the Proficiency Sample Programs of AASHTO Re:source, the Concrete and Cement Reference Laboratory (CCRL) and WACEL. Our office employs engineering technicians and special inspectors certified by the American Concrete Institute (ACI), National Institute for Certification in Engineering Technologies (NICET), American Welding Society (AWS), the International Code Council (ICC), Virginia Department of Transportation (VDOT) and WACEL. In addition, we provide a rigorous internal training program where our staff are evaluated in specific field and laboratory test procedures by internal Terracon auditors and external agencies.

- **Accredited by AASHTO re:source (formerly known-as AMRL)**
- **Inspected by Concrete and Cement Reference Laboratory (CCRL)**
- **Validated by United States Army Corps of Engineers (USACE)**

Compass | Materials Data Delivery

Traditional methods of reporting and accessing results of your project’s inspections, testing, and observations are no longer sufficient for today’s construction projects. With a large amount of reports generated on a single project, you now have a solution to quickly find and view specific data to make timely, informed decisions for your project. Terracon offers you the ability to view and interact with your testing data in a new way and is committed to using innovative techniques to deliver quality projects. Construction data is viewed by geographic location in relation to your project drawings as part of our seamless project delivery system.

Advantages to Terracon Compass:

- Mapped Testing Data on Your Dashboard
- Filtering Tools (date, test type, deviations, etc.)
- Intuitive Test Status by Color
- Additional GIS Layers
- Augmented Testing Reports with In-Place Locations
- Quicker Turnaround Time

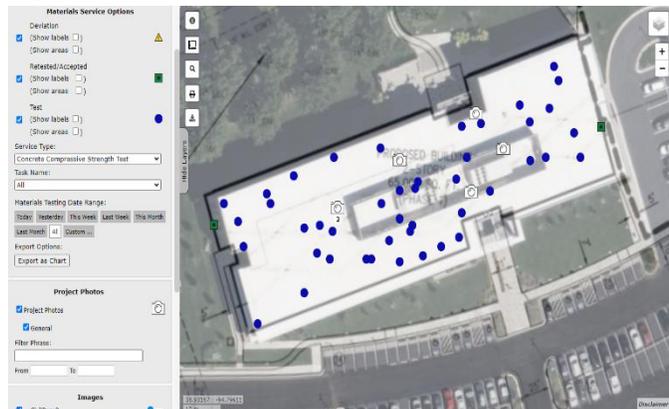
One of Terracon Compass’ greatest strengths is that we curate your projects for your future. Terracon Compass shows your team members an interactive map with locations of past and present projects to navigate geographically; or for those that prefer a tabular format, we have that option too. Either way, as you collaborate with Terracon, your team members will be able to build a library of past projects curated online through a secured login. That means a few years after completion, your team can readily find a final, signed deliverable.

How It Works:

We overlay your project drawings into an accessible GIS map. Our field professionals will locate where they are standing on the plan through their mobile devices. When performing a test or observation, they simply drop a pin where the work is, perform our work, and collect the data. Field professionals complete the data collection through intuitive forms built into the application.

Once complete, the technicians can submit the report from their device in the field which dramatically reduces report turnaround time. After the report has been reviewed and approved it is visible in Terracon Compass.

Imagine seeing all your materials testing data for your project on one screen, located where the work occurred, and with intuitive filters to find what you need. What used to take hours can now be accomplished in minutes using Terracon Compass.





2.0 PROJECT INFORMATION

Our understanding of the required construction materials testing services for this project is based upon information provided by your firm, our experience with other projects of this type, and the following information:

- Plans Provided on the NDDOT website dated 11-21-2023

A construction schedule was not provided to Terracon prior to submitting this proposal, therefore our assumptions on the schedule should be considered an estimate until we can review the contractor’s schedule. Pertinent project information is summarized below:

ITEM	DESCRIPTION
Location	The project is located at South Washington Street in Bismarck, North Dakota.
Size	The site encompasses approximately 2.6 miles of roadway.
Project Description	We understand the project will consist of Grading, Aggregate Base, PCC Pavement, HMA, Curb & Gutter, Milling, Shared Use Path, Sidewalk, Storm Sewer, Watermain, Force Main, Lighting, Signals, Interconnect Cable, Signing, and Markings.

3.0 SCOPE OF SERVICES

Terracon proposes to provide materials testing and special inspection services as summarized below:

ITEM	DESCRIPTION
Earthwork	Terracon will obtain samples for laboratory tests, perform in-place field density testing for excavation, subgrade preparation, aggregate base beneath pavements, backfill of pipe, and excavated areas and beneath roadways.
Concrete	<p>During concrete placements, observation, sampling, and testing will be performed by Terracon for the concrete used for miscellaneous concrete construction and other structural elements. The concrete will be sampled and tested for slump, and temperature at the time of placement. Testing will be performed in general accordance with project plans and specifications.</p> <ul style="list-style-type: none"> ▪ Cast 1 set of 4 (4-inch by 8-inch) cylinders for each 2000 square yards of concrete pavement or fraction thereof for each day’s placement for each concrete mix. ▪ Cast 1 set of 4 (4-inch by 8-inch) cylinders for each 50 cubic yards of curb & gutter, sidewalk, and driveways or fraction thereof for each day’s placement for each concrete mix.
Asphalt Concrete Pavement	Relative field density-compaction testing by core methods will be performed during asphalt concrete paving operations. Asphalt samples will be obtained during asphalt paving and tested for unit weight, density, and asphalt content and gradation.



ITEM	DESCRIPTION
<p>Project Management</p>	<p>A project manager will be assigned to the project to review the daily activity and assist in scheduling the work. Field and laboratory tests will be reviewed prior to final submittal. The project manager will be responsible for the project budget, communicating with the contractor regarding schedule, deviations, and documenting the resolution of outstanding deviations.</p> <p>To help create a good working relationship with the contractor and for the contractor to better understand our scope of work for the project, we request that Terracon be invited to preconstruction meetings prior to each phase of construction.</p>

Scope Assumptions/Exclusions:

- This proposal is limited to Base Bid of \$106,617.80. Services not included in this proposal can be provided at an additional fee.
- We have assumed that contractors on the site will work a single shift, typical schedule of 5 days per week.
- All quantities are based off the needs called out in the plans provided.

Commitment to Timely Report Turnaround:

We understand the importance of report turnaround to our clients, and we are committed to delivering test results on a timely basis as well as the following reporting standards:

- Failing tests or non-conformance items will be communicated to the designated parties prior to leaving the site and handwritten draft reports are available at the end of each day.
- Final reports with non-conformances (Deviation Reports) will be provided within 24 hours of testing.
- Final reports without non-conformances will be provided within five business days.
- Final laboratory test reports will be provided within two days of test completion.

Terracon Field Representative:

In addition to the above services, our field personnel will provide the following services during their visit:

- Check in with the project general superintendent upon arrival on-site.
- Confirm that current approved construction documents are available during our visit.
- Notify the general contractor of our field observations and test results prior to leaving the site.
- Submit a written draft report to the Terracon project manager for review.
- Our field personnel have the right to decline work if they believe the conditions are not safe.

Scheduling of Services:

We understand that the client may not be involved with scheduling our services; this is typically the responsibility of the general contractor. We request that the following information be passed on to whom will be responsible for scheduling our services.

- Scheduling testing services should be requested no later than 5:00 pm on the business day preceding the work to ensure Terracon will be available for testing.
- Scheduling is performed through our dispatcher by calling (701) 258-2833.
- Terracon will not be responsible for tests that are not performed due to a failure to schedule our services on the project.
- Testing and observations will only determine compliance with project specifications at the test locations, at the time our services are performed.

- Cancellation of services should be done prior to a Terracon representative mobilizing to the project. Failure to do so will result in a cancellation fee.
- Terracon will not be responsible for tests that are not performed due to a failure to schedule our services on the project.
- Testing and observations will only determine compliance with project specifications at the test locations, at the time our services are performed.

4.0 COMPENSATION

Based on the project information available for our review, our time and materials estimated budget to perform the proposed scope of services for the Base Bid is \$106,617.80. A summary of our unit rates, estimated quantities, alternate bid prices, and the resulting costs is included on the attached Fee Estimate. Fees for services provided will be based on the unit rates shown in that exhibit. Please note that this is only a budget estimate and not a not-to-exceed price. Any additional out of scope items will be performed in accordance with our current fee schedule.

Many factors, including those out of our control, such as weather, the contractor's schedule including overtime and weekend work, and the need for re-testing will dictate the final fee for our services. We will not exceed our budget without first notifying you and providing a summary of work performed to date and remaining work.

5.0 AUTHORIZATION

We appreciate your consideration of Terracon Consultants for this work and look forward to working as your materials consultant on this and future projects. We can forward a contract for services upon our successful notification of award. The agreement, including the limitations it contains, shall constitute the exclusive terms, conditions, and service to be performed for this project. If you have any questions or need additional information, please contact us at your convenience.

Sincerely,

Terracon Consultants, Inc.

Sam Wangler
Assistant Project Manager

Ty Kelsch
Senior Project Manager

Attachments:

Fee Estimate

Fee Estimate

Materials Services
 AC-NHU-1-981(137) (PCN-23859)
 Bismarck, North Dakota
 Terracon Proposal No. PM2241016

TASK NUMBER	DESCRIPTION	RATE	QUANTITY	UNITS	TRIPS	TOTAL
1.1	Earthwork - 203 Common Excavation (Type A)					
	Project Management	\$ 145.00	2.00	hours		\$290.00
	Field Density Technician	\$ 104.00	1.50	hours	7	\$1,092.00
	Technician Travel Time	\$ 104.00	0.50	hours	7	\$364.00
	Modified Proctor	\$ 231.00	3.00	tests	1	\$693.00
	Company Mileage (Travel)	\$ 1.55	8.00	miles	7	\$86.80
	Sub Total					\$2,525.80
1.2	Earthwork - 714 Storm Drain					
	Project Management	\$ 145.00	7.00	hours	1	\$1,015.00
	Field Density Technician	\$ 104.00	1.00	hours	25	\$2,600.00
	Technician Travel Time	\$ 104.00	0.50	hours	25	\$1,300.00
	Sieve/Gradation (Soil)	\$ 150.00	4.00	tests	1	\$600.00
	Modified Proctor	\$ 231.00	2.00	tests	1	\$462.00
	Company Mileage (Travel)	\$ 1.55	8.00	miles	25	\$310.00
	Sub Total					\$6,287.00
1.3	Earthwork - 724 Watermain & Sanitary Sewer					
	Project Management	\$ 145.00	7.00	hours	1	\$1,015.00
	Field Density Technician	\$ 104.00	1.00	hours	25	\$2,600.00
	Technician Travel Time	\$ 104.00	0.50	hours	25	\$1,300.00
	Modified Proctor	\$ 231.00	2.00	tests	1	\$462.00
	Company Mileage (Travel)	\$ 1.55	8.00	miles	25	\$310.00
	Sub Total					\$5,687.00
2.1	Aggregate - 256 Riprap (Grade 1)					
	Project Management	\$ 145.00	0.50	hours	1	\$72.50
	Technician Travel Time	\$ 104.00	0.50	hours	1	\$52.00
	Field Gradation Technician	\$ 197.00	2.00	hours	1	\$394.00
	Company Mileage (Travel)	\$ 1.55	8.00	miles	1	\$12.40
	Sub Total					\$530.90
2.2	Aggregate - 302 Traffic Service / Aggregate Base Course					
	Project Management	\$ 145.00	12.00	hours	1	\$1,740.00
	Field Density Technician	\$ 104.00	1.00	hours	42	\$4,368.00
	Technician Travel Time	\$ 104.00	0.50	hours	42	\$2,184.00
	Sieve/Gradation (Soil)	\$ 150.00	42.00	tests	1	\$6,300.00
	Sieve Analysis / Fractured Faces / Shale	\$ 272.00	5.00	tests	1	\$1,360.00
	Plasticity Index	\$ 124.00	1.00	tests	1	\$124.00
	LA Abrasion	\$ 282.00	1.00	tests	1	\$282.00
	Company Mileage (Travel)	\$ 1.550	8.00	miles	42	\$520.80
	Sub Total					\$16,878.80

3.1	Asphalt - 420 Cover Coat Material						
	Project Management	\$	145.00	1.00	hours	1	\$145.00
	Field Density Technician	\$	104.00	2.00	hours	1	\$208.00
	Technician Travel Time	\$	104.00	1.00	hours	1	\$104.00
	Sieve/Gradation (Soil)	\$	150.00	3.00	tests	1	\$450.00
	LA Abrasion	\$	282.00	1.00	tests	1	\$282.00
	Company Mileage (Travel)	\$	1.55	8.00	miles	2	\$24.80
	Sub Total						\$1,213.80
3.2	Asphalt - 430 Hot Mix Asphalt						
	Project Management	\$	145.00	3.00	hours	1	\$435.00
	Field Density Technician	\$	104.00	1.00	hours	4	\$416.00
	Technician Travel Time	\$	104.00	0.50	hours	4	\$208.00
	Bituminous Extracting Gradation	\$	220.00	4.00	tests	1	\$880.00
	Fine Aggregate Angularity	\$	302.00	4.00	tests	1	\$1,208.00
	Gyratory Density & Rice (% Voids)	\$	400.00	4.00	tests	1	\$1,600.00
	Shale / Fractures / Flat & Elongated / SE	\$	400.00	1.00	tests	1	\$400.00
	Core Density (field cut)	\$	50.00	20.00	tests	1	\$1,000.00
	Company Mileage (Travel)	\$	1.55	8.00	miles	4	\$49.60
	Sub Total						\$6,196.60
4.1	Concrete Testing - 550 Concrete Pavement						
	Project Management	\$	145.00	20.00	hours		\$2,900.00
	Coring Technician (Portal to Portal)	\$	185.00	6.00	hours		\$1,110.00
	Sampling Technician	\$	104.00	1.00	hours	18	\$1,872.00
	Field Testing Technician	\$	104.00	4.00	hours	48	\$19,968.00
	Technician Travel Time	\$	104.00	1.00	hours	48	\$4,992.00
	Compressive Strength of 4" x 8" Cylinder	\$	25.00	4.00	tests	16	\$1,600.00
	Flexural Strength of Concrete Beam	\$	62.00	4.00	tests		\$248.00
	Fine Aggregate Gradation & Moisture	\$	118.00	1.00	tests	16	\$1,888.00
	Fine Aggregate Gradation & Quality	\$	179.00	1.00	tests	2	\$358.00
	Intermediate Aggregate Gradation & Moisture	\$	118.00	1.00	tests	16	\$1,888.00
	Intermediate Aggregate Gradation & Quality	\$	179.00	1.00	tests	2	\$358.00
	Coarse Aggregate Gradation & Moisture	\$	150.00	1.00	tests	16	\$2,400.00
	Coarse Aggregate Gradation & Quality	\$	240.00	1.00	tests	2	\$480.00
	Core Measurement	\$	47.00	9.00	tests		\$423.00
	Company Mileage (Travel)	\$	1.55	8.00	miles	48	\$595.20
	Bit Wear	\$	2.90	80.00	inches		\$232.00
	Sub Total						\$41,312.20

4.2	Concrete Testing - 748 Curb & Gutter					
	Project Manager	\$	145.00	6.00	hours	\$870.00
	Technician Travel Time	\$	104.00	0.50	hours	20 \$1,040.00
	Sampling Technician	\$	104.00	1.00	hours	2 \$208.00
	Field Testing Technician	\$	104.00	1.00	hours	30 \$3,120.00
	Fine Aggregate Gradation & Moisture	\$	118.00	1.00	tests	1 \$118.00
	Fine Aggregate Gradation & Quality	\$	179.00	1.00	tests	1 \$179.00
	Coarse Aggregate Gradation & Moisture	\$	150.00	1.00	tests	1 \$150.00
	Coarse Aggregate Gradation & Quality	\$	240.00	1.00	tests	1 \$240.00
	Compressive Strength of 4" x 8" Cylinder	\$	25.00	4.00	tests	20 \$2,000.00
	Company Mileage (Travel)	\$	1.55	8.00	miles	20 \$248.00
	Sub Total					\$8,173.00
4.3	Concrete Testing - 750 Imprinted, Sidewalks, Medians & Driveways					
	Project Management	\$	145.00	8.00	hours	\$1,160.00
	Technician Travel Time	\$	104.00	0.50	hours	30 \$1,560.00
	Sampling Technician	\$	104.00	1.00	hours	4 \$416.00
	Field Testing Technician	\$	104.00	1.50	hours	30 \$4,680.00
	Compressive Strength of 4" x 8" Cylinder	\$	25.00	4.00	tests	30 \$3,000.00
	Fine Aggregate Gradation & Moisture	\$	118.00	1.00	tests	2 \$236.00
	Fine Aggregate Gradation & Quality	\$	179.00	1.00	tests	2 \$358.00
	Coarse Aggregate Gradation & Moisture	\$	150.00	1.00	tests	2 \$300.00
	Coarse Aggregate Gradation & Quality	\$	240.00	1.00	tests	2 \$480.00
	Company Mileage (Travel)	\$	1.55	8.00	miles	30 \$372.00
	Sub Total					\$12,562.00
4.4	Concrete Testing - 770 Lighting Foundations					
	Project Manager	\$	145.00	2.50	hours	\$362.50
	Technician Travel Time	\$	104.00	0.50	hours	10 \$520.00
	Field Testing Technician	\$	104.00	1.50	hours	10 \$1,560.00
	Compressive Strength of 4" x 8" Cylinder	\$	25.00	4.00	tests	10 \$1,000.00
	Company Mileage (Travel)	\$	1.55	8.00	miles	10 \$124.00
	Sub Total					\$3,566.50
4.5	Concrete Testing - 772 Traffic Signal System					
	Project Management	\$	145.00	1.00	hours	\$145.00
	Technician Travel Time	\$	104.00	0.50	hours	8 \$416.00
	Field Testing Technician	\$	104.00	1.50	hours	4 \$624.00
	Compressive Strength of 4" x 8" Cylinder	\$	25.00	4.00	tests	4 \$400.00
	Company Mileage (Travel)	\$	1.55	8.00	miles	8 \$99.20
	Sub Total					\$1,684.20
	Total					\$106,617.80