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# CITY OF GREENSBORO CAMP BURTON WATER AND SEWER UTILTIES PROJECT PROPOSAL FOR PROFESSIONAL SERVICES

The City of Greensboro (hereinafter "the CITY") intends to provide water and sewer service to the Camp Burton site to facilitate development of a new Army Reserve Center and to alleviate the need for costly improvements associated with raising all the existing equipment above the flood elevation. The new lift station will also facilitate elimination of up to four upstream pump stations (Corbin Road, Brightwood, McKnight Mill, & Nealtown Road) while also increasing the City's service area by 2,107 acres (643 acres of Tier 1, 447 acres of Tier 2, and 1,027 acres of Tier 3). One of the four lift stations, the Corbin Road Lift Station, currently experiences flooding associated with changes in upstream drainage patterns. The proposed improvements include the abandonment of the Corbin Road LS, and design to accommodate the future abandonment of the remaining three lift stations.

The major components of the project include a sewer flow evaluation (current flows to year 2050) and sizing, review of water service flows to the Camp Burton site and associated water system improvements, hydraulic analysis of the proposed Camp Burton Lift Station and Force Main (to include analysis of Reedy Creek Pump Station and Force Main), route evaluations for the water main, gravity sewers, and force main, design and implementation of Camp Burton Lift Station and Force Main, new water main, and offsite gravity sewers. Specifically, the components of the project are shown on the attached figure and include:

- Camp Burton Lift Station (CBLS) Construction of a lift station on the Camp Burton Site to collect flow from the proposed development, and to provide for the abandonment of the Corbin Road Lift Station, and future abandonment of the Brightwood, McKnight Mill, and Nealtown Road lift stations. Based on studies by others the CBLS shall accommodate a peak flow of between 12 and 14 MGD in year 2050. Final siting and sizing of the station will be determined in the Preliminary Design Phase of the project.
- Camp Burton Force Main (CBFM) Construction of approximately 4,200 LF of 20 to 24-inch Force Main from the CBLS to the Reedy Creek Force Main (RCFM). The alignment will generally follow Camp Burton Road and connect to the RCFM near Huffine Mill Road.
- Camp Burton Water Main Extension (CBWM) Construction of approximately 11,300 LF of 12-inch water main along Rankin Mill Road from Huffine Mill Road to Camp Burton Road, then along Camp Burton Road to the new CBLS site and continuing westward to the property frontage. Final determination of routing and sizing and any other improvements required to ensure adequate pressure and fire flows are available will depend upon a hydraulic evaluation. The Camp Burton facility demands are to be provided by the site developers or City.
- Corbin Road and North Buffalo Creek Outfall (CRO & NBCO) Construction of approximately 20,900 LF of 8-inch to 36-inch gravity sewer. The final sizing, corridor and final alignment within this corridor will be determined as part of this project but is anticipated to generally follow the corridors shown in Figure 2 of the Corbin Road Lift Station Study, by Arcadis (March 2019). Abandonment of the Corbin Road Lift Station is included in this scope. In addition, the scope of work includes a preliminary routing and flow analysis sufficient to size and confirm invert

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elevations for future gravity sewers in the service area. This analysis will provide for the abandonment of the McKnight Mill, Brightwood, and Nealtown Lift Stations, as well as review of the areas not currently served.

Freese and Nichols, Inc. (FNI) proposes to provide consulting services for preliminary, final design, and bidding assistance for the proposed improvements. Construction phase services are not included in the current scope of work. A detailed scope of work is provided below:

**BASIC SERVICES:** FNI shall render the following professional services in connection with the development of the Project:

# A. Preliminary Design Phase

- Project Management: FNI will track the budget and schedule on a monthly basis. FNI will meet
  with the CITY'S project manager monthly for up to eighteen (18) months to update the schedule,
  progress of work and potential changes to the scope of work. Monthly status reports will be
  submitted.
- 2. Kickoff Meeting: FNI will conduct a kickoff meeting with the CITY staff to discuss project goals, deliverables and schedule. This meeting will also establish protocol and lines of communications, gather all available documents pertinent to the Project and discuss project scope and schedule. A data request memorandum outlining project data needs will be presented and discussed at the Kickoff meeting. FNI will document the results of the meeting in the form of meeting minutes.
- Property Owner Notices: FNI will prepare survey notification letters for properties impacted by proposed field reconnaissance, survey and geotechnical explorations. FNI will coordinate with the CITY to get the letters issued. It is anticipated that FNI will distribute and pay associated costs for the letters.
- 4. Field Reconnaissance: FNI will conduct field reconnaissance to ascertain existing site conditions at the lift station site and along the pipeline corridors.
- 5. Basin Study: Based on development information provided by the CITY, a review of existing flows, and the future land use plan for developed and undeveloped areas in the Basin Study Area (shown on the attached figure) and the respective service areas for the Corbin Road, McKnight Mill, Brightwood, and Nealtown Road service areas, FNI will verify flow requirements and finalize sizing of facilities for the lift station and force main, water main, and gravity sewers. Existing flows will be used to establish typical per capita flows for the basin and estimates for future flows will be extrapolated based on population projections for residential development. Future industrial and commercial flows will be based on state Standards. In addition, FNI will provide recommendations on phasing of pumping capacity and operational considerations based on the projected flows.
- 6. Hydraulic Analysis: FNI will conduct a hydraulic analysis of the overall force main / lift station system to determine the adequacy of the planned system. FNI will generate a preliminary hydraulic grade line (HGL) profile for the force main. FNI will develop a system curve for the lift station. From this curve, preliminary pump selections will be made. FNI will evaluate up to three (3) lift station layouts/configurations for consideration by the CITY.

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- 7. Corridor Study: Evaluate the feasibility of up to three (3) potential routes for each of the pipelines which include: a) the CBFM, b) CBWM, and c) CBO & NBCO. The feasibility analysis will include a comparison of design and construction schedule, easement requirements, and Opinion of Probable Construction Cost (OPCC) associated with the potential routes. Evaluate the impact on existing utilities, streets, highways, driveways, and traffic. Determine requirements for appurtenances, permanent and construction easement requirements. Prepare a Route Study Report with a schematic layout of the recommended alignment with appropriate exhibits to indicate the recommended alignment assessing sizing, pipe material alternatives, recommended permanent and temporary construction easement requirements, final design criteria, updated design and construction schedule and OPCC.
- 8. CBLS siting evaluation: It is understood that an approximate location for the lift station has been identified. Included in this scope is the evaluation of the area and determination of a final site location, size, and orientation. FNI will evaluate site access, site elevation, availability of adequate power, location of the flood plain relative to the site and overall size and hydraulic grade. Should it be determined that this area is not adequate for the construction of a lift station, FNI will notify the CITY immediately.
- 9. Evaluate odor control alternatives at the lift station and along the force main. The alternatives evaluated along with FNI's recommendations will be included in the preliminary design report. The final design will incorporate the recommended and approved alternative.
- 10. Provide an evaluation of the proposed electrical systems and provide recommendations for the voltage of the new pumping units and associated electrical equipment. Coordinate requirements with the power company and prepare a one-line diagram. It is anticipated the lift station will utilize vendor control panels and will have an on-site generator.
- 11. Prepare a Preliminary Design Report (PDR) summarizing the recommendations for the lift station including preliminary site plan and yard piping, recommendations for pumps, VFD's, generators and other major equipment items, discussion of recommended electric improvements and a Preliminary Opinion of Probable Construction Cost (OPCC). Also included in the PDR will be a summary of the recommended final pipeline alignments for the force main, water main, and gravity sewers, and the basin evaluation.

## B. <u>Final Design Phase</u>

Upon approval of the PDR, FNI will initiate the final design phase. It is anticipated that up to four (4) separate bid packages will be provided. The services below include services for each of the packages:

- Furnish necessary information to utility companies whose facilities may be affected or services
  may be required for the Project and coordinate potential impacts and conflicts. Provide site civil
  design of the lift station site to support the electric utilities site requirements, including site
  grading and roads.
- 2. 60% Review: Furnish CITY up to five (5) copies of preliminary (60%) plans and specifications marked "Preliminary" for approval by CITY. FNI will meet with the CITY to present the preliminary

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plans and specifications and receive comments. Review documents will include dimensional layout drawings, plans, sections and elevations of the facilities for all of the trades, typical details, and most special details. The drawings will be in sufficient development to show the overall layouts and design intent, but will lack many notes and minor details. The specifications will include the front end documents and draft specifications for major equipment items.

- 3. 90% Review: Furnish CITY up to five (5) copies of preliminary (90%) plans, specifications, and bid proposals marked "Preliminary" for approval by CITY. FNI will meet with the CITY to present the preliminary plans and specifications and receive comments. Review documents will include all drawing sheets and specifications with some minor corrections and notes still remaining.
- 4. Prepare bidder's proposal forms (project quantities) of the improvements to be constructed.
- 5. Prepare revised OPCC at 60% and 90% Reviews.
- 6. Based on CITY comments and coordination, FNI will prepare final construction plans, specifications, contract documents, and updated OPCC for the project. The plans and specifications will be used for the Bidding and Construction Phase.
- 7. Transient Analysis Engineering: FNI will provide transient analysis engineering services based on the final proposed alignment of the force main. A detailed scope of work is described below.
  - a. Data Collection and Model Development Develop numerical models for the appropriate software procedure based on system parameters as provided in the Preliminary Design Phase. This phase includes steady state simulations for design flow rates and the building of one model from the CBLS and the Reedy Creek Pump Station to the collective downstream discharge location at the T.Z. Osborne Water Reclamation Facility.
  - b. Transient Case Simulations For the proposed project, the following would be typical candidate cases for simulation of surges for each model:
    - i. Case 1 CBLS & RCLS steady state
    - ii. Case 2 CBLS power failure, RCLS steady state
    - iii. Case 3 RCLS power failure, CBLS steady state
    - iv. Case 4 CBLS & RCLS power failure
  - c. Base Case Simulations The transient cases shall be simulated for base conditions, asbuilt, or as designed for the flow. All existing surge protection devices or proposed devices shall be included in the analysis.
  - d. If the maximum allowable surge pressures in the system are violated under conditions above, additional surge protection devices will be sized and added to the model. The cases above will be re-run at the flow rates to determine the locations (if any), size, characteristics, and new set points for both existing and new surge protection devices on the system.
  - e. Technical Memorandum Review and interpret results of computer simulations and provide three (3) copies of written summary technical memorandum with graphs and plots of simulation results. The draft memorandum will be submitted to the CITY for review and comment. A meeting or phone conference will be scheduled with the CITY to

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review and discuss comments on the draft memorandum. A memorandum report will be issued that includes the resolution of comments by the CITY.

# C. <u>Permitting</u>

FNI will assist the CITY in acquiring the necessary permits and approvals for construction of the project. The CITY will pay fees associated with the permits. The following are anticipated:

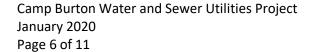
- a. NCDOT Encroachment Permit It is assumed that a portions of the line replacement will be located within NCDOT rights-of-way and will require an encroachment agreement. FNI will prepare the applicable applications and coordinate with the agency and address questions and comments until a permit is received.
- b. NCDEQ Sewer Extension Permit FNI will prepare the necessary permit application(s) and submit along with the plans for approval. FNI will coordinate with the agency and address questions and comments until an Authorization to Construct is received.
- c. Erosion Control Permitting It is anticipated that erosion control permits will be required for the project. FNI will design and include erosion control measures and details in the plans. FNI will submit the permit application(s) to the DEQ Division of Energy, Mineral, and Land Resources, and will coordinate with the agency to address questions and comments until approval of the application.
- d. Flood Control Permit it is anticipated portions of the project will be located in the floodplain and or floodway and will require a Floodplain Development Permit from Guilford County. FNI will prepare and submit the floodplain development permit application along with the required documentation, and coordinate with the agency to address guestions and comments until the application is approved.

# 1. Background Research and Field Data Collection

- FNI will download the existing HEC-RAS model for the project area from the Flood Risk Information System (FRIS) website.
- FNI will download readily available QL2 LiDAR to assist in building or supplementing the HEC-RAS geometric data.
- FNI will conduct a one-day field visit to obtain supplemental information to assist with the model. This will not entail a detailed topographic survey of the area.

#### 2. Alternative Models

- FNI will develop a model with various configurations for the CBO and NBCO corridor that is likely to achieve a "no-rise" in Base Flood Elevations (BFE) within the mapped FEMA floodplain.
- FNI will then produce a "revised" model in HEC-RAS for the selected alternative to evaluate the impact of the proposed project on BFEs.
- The impact of the proposed project may ultimately result in a rise in BFE that is unavoidable. Attempts to mitigate the rise with adjacent floodplain modifications will be studied to the extent allowed by environmental permits.
   If a no-rise still cannot be obtained, a CLOMR/LOMR is specifically excluded





from this scope of work.

#### 3. No-Rise Statement and Floodplain Development Permit

- FNI will produce a no-rise narrative to supplement the revised HEC-RAS model and signed No Rise / No-Impact Statement for submission to the Floodplain Administrator.
- The Floodplain Administrator reserves the right to submit the project to NC Floodplain Mapping Program for review and comment
- FNI will revise and resubmit the model and narrative based on comments from regulators.
- After the no-rise is approved, FNI will complete a Floodplain Development Permit from the local authority and submit for review.
- e. USACE Section 404 Permitting It is anticipated that the project will be designed to fall within the requirements of a Nationwide 12 permit without pre-construction notification. If it is determined that an individual permit is required, FNI will notify the CITY immediately. FNI can complete this task as an additional service. Note: All work related to the 401/404 permit will be done via a subcontractor under FNI's direction.
- f. Guilford County Site Plan it is anticipated the CBPS will require site plan approval from Guilford County. FNI will submit the application and will coordinate with the agency to address questions and comments until the application is approved.
- g. Water Extension Permit FNI will prepare and submit a Water Extension permit application to the CITY for review and approval.
- h. High Voltage Transmission Line Encroachments The proposed water main & gravity sewer include crossings of high voltage overhead transmission lines. FNI will prepare the encroachment application(s) and coordinate with the CITY until the encroachment(s) is approved.
- Technical Review Committee (TRC) review The proposed LS will require TRC review.
   FNI will prepare and submit the documents to the TRC for review and approval and will coordinate with the CITY to address all comments.
- j. Construction Drawing Review (CDR) The water main, force main and gravity sewers will require CDR. FNI will prepare and submit the documents to the City's Engineering Department for review and approval and will coordinate with the CITY to address all comments.

#### D. Survey Services

FNI will subcontract with a surveying firm to provide surveying services. The services listed below are based upon aerial topographic survey and photography for the entire pipeline corridor, spot topo for multiple road crossings, spot topo at creek crossings, heavily wooded areas along the pipeline corridor, topographic survey of the lift station site, boundary survey for the lift station

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site, and the preparation of up to 72 easement documents along the CBFM, CBWM, CBO, and NBCO alignments as applicable. A detailed scope of work is described below.

- Ownership Data Research property ownership of the affected parcels and obtain copies
  of deeds, subdivision plats, right-of-way maps and ownership addresses along the route.
  Prepare a landowners Excel spreadsheet to include parcel number and landowner's name
  and address. Prepare a deed plot of all ownerships, subdivisions, and rights-of-way within
  one hundred feet either side of the proposed pipeline alignment. All properties shall be
  numbered to match the corresponding list of landowners in the Excel spreadsheet.
- 2. Ownership Map Locate property corners of parcels that are affected by the proposed pipeline alignment. Calculate property lines, easement lines, and right-of-way lines of existing streets and utilities.
- 3. Easements Prepare an exhibit and boundary easement description for each tract that the pipelines will cross. The legal descriptions and plats shall meet the criteria stated below. Easements shall be signed and sealed by a Registered Professional Land Surveyor, currently registered in the State of North Carolina. Each easement shall have attached to it a copy of the corresponding deed for that property and a closure computation sheet for the easement tract. A draft copy of each easement shall be submitted. After review by the City, Consultant shall incorporate comments as appropriate and submit one final copy of the easements and deeds to the City. This proposal is based upon preparation of up to 72 easement documents. Legal descriptions shall include sufficient information to identify the location, boundaries, monumentation, and area of the described tract, as well as its relationship to the parent tract out of which it is surveyed. Each legal description shall be accompanied by an exhibit plat which depicts the worded description. Legal descriptions and Exhibit Plats shall be reproduced on 8.5"x11" size paper. All must be legible. The Exhibit Plat or Legal Description should be able to stand alone.
- 4. Control Points Control Points for Aerial Survey & Photography Establish up to 30 control points along the route. The project control will be provided by GPS static and RTK methodology and will meet the control accuracies of topographic surveys.
- 5. Photogrammetric Mapping Provide aerial mapping for approximately 6.9 miles of pipeline corridor. The flight will be approximately 2000' above average ground level with a planned photo scale of 1"=333' (1:4,000) and shall meet or exceed the US Army Corps of Engineers Photogrammetric Mapping Standards for Ground Control. Deliverables will include new, color digital orthophotography with a 3" pixel resolution referenced to the specified datum set in TIF format; topographic mapping (500 foot width) with 1' contour interval and digital terrain model (DTM) in AutoCad format surface. Mapping will meet American Society of Photogrammetry and Remote Sensing, Class 1 standards.
- 6. Traditional Topographic/Design Survey Traditional topographic survey will be required in areas where the aerial survey may have difficulty penetrating dense cover, at areas where critical elevation checks are needed, or to obtain invert elevations of existing utilities. Traditional topographic survey will locate all improvements within a 100-foot-wide corridor along the pipeline alignment at various road crossings, creek crossings, heavily wooded areas, verify critical high point elevations along the pipeline, and each lift station site. Provide elevations of all tops and toes of slope and at all vertical changes within 80 feet either side of the proposed final pipeline centerline. This information shall be sufficient to generate a contour model (DTM) of the proposed pipeline route. Record a general description of the existing terrain. This shall include the top elevation of all manholes as well as the invert elevations of all conduits entering and exiting the manholes. Prepare a

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final digital topographic/ design survey drawing in AutoCad 2004 (or later version) format at a scale of 1"=50'. The drawing shall show all features located, horizontal and vertical control points, property lines, existing easement lines, and existing visible utilities. Other deliverables shall include a copy of all field notes and field sketches, a hard copy coordinate list of points located in the field and a digital ASCII point list. For purposes of this scope, it is anticipated that up to 4,000 linear feet of the routes will be by traditional topographic survey methods.

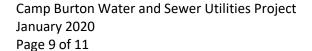
7. Future Sewer Routes Spot Elevations – Spot elevations will be obtained along the proposed future sewer routes at proposed river/stream crossings. For purposes of this scope, it is anticipated that up to 15 river/stream crossings elevations will be obtained by traditional survey methods.

## E. Geotechnical Investigation

The proposed geotechnical scope of work will consist of field exploration, laboratory testing, engineering analysis, and reporting as presented below.

# **Field Exploration**

- Select appropriate locations for exploratory borings within the vicinity of each proposed lift station, each river crossing, each crossing to be installed by bore and other pertinent areas along the route. FNI will notify One Call of the planned borings and coordinate DOT and the City prior to commencement of the field exploration activities in order to locate existing underground utilities within the area.
- 2. Subcontract with a drilling contractor to drill the following borings:
  - Three (3) borings to an approximate depth of 40-feet within the vicinity of the CBLS
  - Nine (9) borings to an approximate depth of 8-feet along the CBFM corridor
  - Twenty-four (24) borings to an approximate depth of 8-feet along the CBWM corridor
  - Forty-six (46) borings to an approximate depth of 18-feet along the CRO and NBCO pipeline corridor
  - a. The borings will be advanced using standard rotary drilling equipment with continuous-flight augers (solid or hollow stem) or rotary wash methods. Subsurface samples will be collected using 3-inch diameter Shelby tubes for cohesive soils and a 2-inch diameter split-spoon sampler in conjunction with the Standard Penetration Test (SPT) for intermediate and non-cohesive soils. Rock and rock-like materials will be cored using an NX core barrel and/or tested in situ, as appropriate for the material.
  - b. Groundwater observations within the borings will be recorded at the time of drilling and at the completion of drilling and sampling.
  - c. The borings will be backfilled with auger cuttings upon completion of drilling and sampling.





 An Engineer or Geologist experienced in logging borings will direct the drilling, log the borings, and handle and transport the samples. Visual classification of the subsurface stratigraphy shall be provided according to ASTM D2488 and the Unified Soil Classification System (USCS) during drilling and sampling.

#### **Laboratory Testing**

- 1. Testing shall be performed on samples obtained from the borings to determine soil classification and pertinent engineering properties of the subsurface materials.
- 2. The Engineer will select samples for laboratory testing, assign tests, and review the test results.
- 3. Laboratory tests will be appropriately assigned for the specific subsurface materials encountered during exploration, but are expected to include:
  - i. Classification tests (liquid and plastic limits and percent passing the no. 200 sieve or gradation)
  - ii. Moisture content
  - iii. Unit dry weight
  - iv. Unconfined compressive strength
  - v. One-dimensional swell (restrained and unrestrained)

#### **Engineering Analysis and Reporting**

- 1. The Engineer will perform the geotechnical engineering analysis and prepare a technical memorandum summarizing the geotechnical investigation, which will include the following:
  - i. Appendix with the boring locations, boring logs, laboratory test results, and a key to the symbols used.
  - ii. Discussion of subsurface conditions and soil properties indicated by the field and laboratory work and the implications for design.
  - iii. Foundation recommendations for support of the proposed LS, including bearing capacity of soils, suitable bearing material, lateral and overturning resistance, etc. applicable for the recommended foundation or foundation options.
  - iv. General discussion of expected construction related issues.
  - v. Earthwork related recommendations for use during development of plans and specifications.

# F. Subsurface Utility Engineering (SUE)

Consultant will subcontract with a SUE firm to provide the following SUE services:

- 1. SUE Quality Level "A" (QLA) Provide QLA information for a total of up to twenty (20) test hole locations along varies points throughout the pipeline alignment. QLA services will be in accordance with ASCE Publication CI/ASCE 38-02 (Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data). Subconsultant will excavate test holes by means of non-destructive vacuum excavation methods. Subconsultant will produce a summary sheet containing the coordinates and elevation to the top of the utility at each test hole location with test holes incorporated in the surveyor's topographic survey file.
- 2. SUE Quality Level "B" (QLB) Designate horizontal location information for the sections of pipelines in the vicinity of each river crossing or other bored crossing. For purposes of this scope, it is anticipated that QLB services will be provided for up to 14,600 linear feet of the alignment. This information is obtained through the application and interpretation of appropriate non-destructive surface geophysical methods. A variety of electromagnetic

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equipment will be used to complete the process. Residential services and irrigation systems will not be mapped, commercial services will be mapped should they cross or parallel the alignment. Un-locatable lines will be depicted as per records from the utility if available.

#### G. Bid and Award Phase Assistance

Upon completion of the design services and approval of "Final" plans and specifications by CITY, FNI will proceed with the performance of services in this phase as described below. It is anticipated that up to four (4) separate bid packages will be provided. The services below include services for each of the packages:

- 1. Assist CITY in securing bids. The CITY will issue the notice to bidders for publication.
- 2. Attend a pre-bid conference for each of the construction contracts.
- 3. Assist the CITY by answering questions during the bid to clarify, correct, or change the bidding documents. The CITY will compile and issue all Addenda.
- 4. Assist CITY in the opening, tabulation, and analysis of the bids received and furnish recommendations on the award of contracts as appropriate.
- 5. FNI will provide a pdf copy of the conformed contract documents to the CITY. The CITY will print and provide the final documents for contract execution.
- 6. The Bid and Award phase will be considered complete upon execution of the construction contracts and distribution of the conformed copies of the plans and specifications.

**TIME OF COMPLETION:** FNI is authorized to commence work on the Project upon execution of this Agreement and agrees to complete the services in accordance with the following schedule:

- Waterline Final Design and permitting completed on or before January 31, 2021
- Lift Station Final Design and permitting completed on or before August 31, 2021
- Gravity Sewer Final Design and permitting completed on or before July 31, 2021
- Force Main Final Design and permitting completed on or before May 31, 2021

It is anticipated that a Notice to Proceed (NTP) will be issued in April of 2020. If FNI's services are delayed through no fault of FNI, FNI shall be entitled to adjust contract schedule consistent with the number of days of delay. These delays may include but are not limited to delays in City or regulatory reviews, delays on the flow of information to be provided to FNI, governmental approvals, etc. These delays may result in an adjustment to compensation as outlined on the face of this Agreement and in Attachment CO.

**COMPENSATION:** FNI proposes to furnish services as described herein for a lump sum fee of Two Million Three Hundred Seventy-Seven Thousand One Hundred Sixty Dollars (\$2,377,160) as broken down in the table below. If FNI sees the Scope of Services changing so that additional services are needed, FNI will notify the City before proceeding.



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Task Description	Total Fee
Task A – Preliminary Design	\$242,800
Task B – Final Design	\$1,348,860
Task C - Permitting	\$172,000
Task D - Survey	\$287,000
Task E – Geotechnical Investigation	\$225,000
Task F – Subsurface Utility Engineering (SUE)	\$65,500
Task G – Bid and Award Assistance	\$36,000
Total	\$2,377,160

FNI will contract with the following MWBE firms, in the amounts shown for various project components:

- Critek (MBE Erosion and Sediment Control Permitting and Design Assistance) \$153,300
- Stewart (MBE Survey, SUE, Easement Docs) \$298,585
- SAMR (MBE Electrical, Instrumentation and Mechanical Design) \$128,000
- Westcott Small (WBE Site Civil, Permitting Assistance) \$75,000
- Falcon (WBE Geotechnical, Environmental) \$265,000
- Taylor Engineering (WBE Force Main Design) \$103,000