PORT OF GALVESTON
REQUEST FOR DISCUSSION AND
TRUSTEES ACTION

BUSINESS ITEM

PREPARED BY:  Jeffrey Thomas  Chief Engineer  June 23, 2020

SUBJECT:  Consider and Approve First Amendment to the Professional Services Agreement between the Board of Trustees of the Galveston Wharves and Freese and Nichols, Inc. for Engineering Services needed for the Second Phase of the Internal Roadway (Rider 38 Grant) at an Additional Amount Not to Exceed $473,310.00

BACKGROUND:  Wharves Staff developed a list of priority projects from the Masterplan that was presented to the Board in February 2020. On this list were four phases of roadway improvement projects, I-IV, that together would implement the internal Port road which was proposed in the Masterplan. For Phase II of the roadway, Staff applied for and received a Rider 38 Grant from TxDOT. To move forward with Engineering on the project, Staff negotiated an amendment to the Professional Services Agreement with Freese and Nichols, Inc (FNI). FNI is currently working on the design of the roadways and utilities for access to Cruise Terminal 3, which is adjacent to and similar in nature to the Rider 38 project. FNI will provide Conceptual Design, Environmental Study, Geotechnical Design, Final Design, and Bid Phase Engineering Services for this project. The project scope includes replacing existing port-owned railroad tracks and pavement with new reinforced concrete pavement and installing new storm sewer system along with allowances for signage/traffic control devices, lighting, pedestrian/bike routes and landscaping. The Engineering Services are scheduled to be completed in May of 2021 to leave three months to bid and let a construction contract before the end of August 2021. The fee for these Engineering Services is $473,310.00.

RECOMMENDATIONS:  The Board of Trustees is respectfully requested to listen to the briefing of the Port Director and approve the Port Director to enter into a First Amendment to the Professional Services Agreement between the Board of Trustees of the Galveston Wharves and Freese and Nichols, Inc. for Engineering Services needed for the Second Phase of the Internal Roadway (Rider 38 Grant) at an Additional Amount Not to Exceed $473,310.00

Respectfully Submitted By:

Rodger Rees, Port Director/CEO

DATE ACTION TAKEN:

Approved:  
Disapproved:  
Deferred To:  
Incorporated into Minutes:  

Motion By:  
Seconded By:  
Unanimous:  
By:  
Yes  No
GALVESTON WHARVES

CONSIDER AND APPROVE FIRST AMENDMENT TO THE PROFESSIONAL SERVICES AGREEMENT BETWEEN THE BOARD OF TRUSTEES OF THE GALVESTON WHARVES AND FREESE AND NICHOLLS, INC. FOR ENGINEERING SERVICES NEEDED FOR THE SECOND PHASE OF THE INTERNAL ROADWAY (RIDER 38 GRANT) AT AN ADDITIONAL AMOUNT NOT TO EXCEED $473,310.00

Background

As part of the Galves:on Wharves’ Masterplan, the need for an internal Port road was identified. The road would stretch from Harborside Drive to Pier 10, the future site for Cruise Terminal 3. In December 2019, the Wharves began a Traffic Study which is developing the traffic volumes that can be expected over the next 20 years and verifying how the proposed internal Port roadway will handle these traffic volumes. Wharves Staff developed a list of priority projects from the Masterplan that were presented to the Board in February 2020. On this list were four phases of roadway improvement projects, I-IV that together would implement the internal Port road which was proposed in the Masterplan. Phase I is a section of roadway from 29th Street to 33rd Street which is currently under construction; Phase II is a section of roadway from 14th Street to 26th Street; Phase III is a section of roadway from 33rd Street to 41st Street; and Phase IV is a section of roadway from 41st Street to Harborside Drive.

In order to fund the roadway improvement projects, Wharves Staff have applied for state and federal grants. Phase II, which was submitted as a Rider 38 project with TXDOT, was approved by the Port Authority Advisory Committee (PAAC) on March 31st. The Texas Transportation Commission approved the Rider 38 projects in May and currently TXDOT is drafting an Advanced Funding Agreement, which will make the Port eligible for reimbursement for construction costs on this project up to $3,750,000.00. At the April 2020 Board meeting, the Board of Trustees approved an agreement amendment to Survey the project area.

Current Situation

To move forward with Engineering for this project, this Staff negotiated an amendment to the Professional Services Agreement with Freese and Nichols, Inc (FNI). FNI is currently working on the design of the roadways and utilities for access to Cruise Terminal 3, which is adjacent to and similar in nature to the Rider 38 project. FNI will provide Conceptual Design, Environmental Study, Geotechnical Design, Final Design, and Bid Phase Engineering Services for this project. The project scope includes replacing existing port-owned railroad tracks and pavement with new reinforced concrete pavement and installing new storm sewer system alongside with allowances for signage/traffic control devices, lighting, pedestrian/bike routes, landscaping, and evaluation of green initiatives that can be included in the project. The Engineering Services are scheduled to be completed in May of 2021 to leave three months to bid and let a construction contract before the end of August 2021. The fee for these Engineering Services is $473,310.00.
Fiscal Impact

The Engineering Services for Planning and Design are not expected to exceed $473,310.00. This is part of the $1,250,000.00 local share presented for the Rider 38 Grant. This will be funded out of Operating Revenue.

Staff Recommendation

The Board of Trustees is respectfully requested to listen to the briefing of the Port Director and approve the Port Director to enter into a First Amendment to the Professional Services Agreement between the Board of Trustees of the Galveston Wharves and Freese and Nichols, Inc. for Engineering Services needed for the Second Phase of the Internal Roadway (Rider 38 Grant) at an Additional Amount Not to Exceed $473,310.00
FIRST AMENDMENT TO PROFESSIONAL SERVICES AGREEMENT

THIS AGREEMENT ("Agreement") is entered into by and between the BOARD OF TRUSTEES OF THE GALVESTON WHARVES ("Client"), a separate utility of the City of Galveston, Texas (the "City"), and FRESE AND NICHOLS, INC. ("Consultant"), a Texas corporation.

WHEREAS, Client and Consultant entered into a Professional Services Agreement with an effective date of December 18, 2019 (the "Professional Services Agreement" or "PSA"), by which Consultant agreed to provide professional services for Client at the Port of Galveston (the "Port"); and

WHEREAS, Client and Consultant would like to amend the Professional Services Agreement as set forth herein.

NOW, THEREFORE, the parties mutually agree as follows (any capitalized word not otherwise defined herein has the definition given to it in the Professional Services Agreement):

1. Section 1(b) is hereby added to the Professional Services Agreement, with the following language:

   b. Additional Services. In addition to the Services set out in Section 1(a) above, Consultant agrees to perform additional construction management services (the "Additional Services"). A general description of the Additional Services is attached hereto as Exhibit A-1 and incorporated herein by reference.

2. Section 2 of the Professional Services Agreement is deleted in its entirety, and is replaced with the following language:

   2. Payment for Services

   a. Fees, Price Protection - Services. Unless otherwise agreed to in writing by both parties hereto, Client shall pay Consultant for the Services in accordance with the Fee Schedule included within Attachment CO to Exhibit A attached hereto. The fees specified in the Fee Schedule are the total fees, expenses, and other charges for the Services and will not be increased during the term of this Agreement without Client’s prior written consent. Consultant represents that the price stated for the Services performed hereunder is at least as favorable as that charged to any other customer for the same or similar services.

   b. Fees, Price Protection – Additional Services. Unless otherwise agreed to in writing by both parties hereto, Client shall pay Consultant for the Additional Services in an amount not to exceed $473,310.00.

   c. Invoices for Services. Consultant shall invoice Client monthly for Services rendered, setting forth the hours worked, and price of materials provided for which payment is sought. Consultant must include with each invoice copies of any receipts or other documentary evidence that Client may reasonably request to support the claims made in the invoice. Client will pay for those Services and expenses within 30 days of receipt of a properly completed invoice. Notwithstanding any provision of this Agreement to the contrary, the total of all consideration
(fees, expenses, and other charges) to be paid to Consultant for Services rendered under this Agreement must not exceed the sum of $800,320.00 unless approved in advance by Client.

d. **Invoices for Additional Services.** Consultant shall invoice Client monthly for Additional Services rendered as described in Section 1(b) above, setting forth the hours worked, and price of materials provided for which payment is sought. Consultant must include with each invoice copies of any receipts or other documentary evidence that Client may reasonably request to support the claims made in the invoice. Client will pay for those Additional Services and expenses within 30 days of receipt of a properly completed invoice. Notwithstanding any provision of this Agreement to the contrary, the total of all consideration (fees, expenses, and other charges) to be paid to Consultant for Additional Services rendered under this Agreement must not exceed the sum of $473,310 unless approved in advance by Client.

3. The term “Services” used in Sections 3, 4, 6, 7, 8, 10 and 11 of the Professional Services Agreement is amended to read, “Services and Additional Services.”

4. Except as herein amended, which amendments are effective as of the Effective Date, the terms of the Professional Services Agreement remain in full force and effect and the terms thereof are hereby ratified and confirmed.

**In Witness Whereof,** the parties have executed this Amendment effective as of June 30, 2020 (the "Effective Date").

**CLIENT:**

**BOARD OF TRUSTEES OF THE GALVESTON WHARVES**

By: __________________________
    Rodger E. Rees, Port Director/CEO

Approved as to form:

______________________________
Anthony P. Brown,
Counsel to the Board of Trustees
of the Galveston Wharves

**CONSULTANT:**

**FREES AND NICHOLS, INC.**

By: __________________________
Name: _________________________
Title: _________________________
SCHEDULE OF EXHIBITS

Exhibit A-1 - Description of Additional Services and Fees [Sections 1(b) and 2(c)]
June 1, 2020

Mr. Jeffrey Thomas
Port of Galveston
123 Rosenberg Ave., 8th Floor
Galveston, TX 77550

Re: Revised Scope & Fee Proposal – East End Cruise Corridor

Dear Jeffrey:

Please find attached our revised proposal for the design of East End Cruise Corridor. Our scope and fees are based on discussions at the pre-scoping meeting held on January 21, 2020, details provided in the Rider 38 application, and comments received from the Port on May 11, 2020. Construction Phase services were not included based on direction received from Port of Galveston at the pre-scoping meeting.

The Basic work includes Preliminary design, final design, bid phase services and a geotechnical study for East End Cruise Corridor as defined in our scope. Per your request, construction phase of the project and inspection services were not included. As shown in Attachment CO of our proposal, the Basic Fee has been revised to $473,310. Please refer to this Attachment for the fee breakdown.

We appreciate the opportunity to submit this proposal. We certainly look forward to being of assistance to Port of Galveston on this major development.

Sincerely,

James “JB” Ferguson, P.E.
Project Manager

cc: Eric Potts (FNI)
    Ron Bavarian (FNI)
SCOPE OF SERVICES AND RESPONSIBILITIES OF THE PORT

Project Understanding:

The Port of Galveston is seeking engineering services for the development of a new Cruise Corridor Road, along with three access roads from Harborside Drive to a new cruise terminal. Roadways will be up to four lanes wide, as determined by the current traffic study. Development of roadways includes replacing existing port-owned railroad tracks and pavement with new reinforced concrete pavement and installing new storm sewer system along with allowances for signage/traffic control devices, lighting, pedestrian/bike routes and landscaping. Other improvements related to this roadway expansion will be specified by the Port.

In addition to engineering for the site development, FNI will perform a drainage analysis of the area to address concerns regarding drainage in both the existing and proposed conditions. Details for the drainage analysis are outlined below.

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

This Basic Services generally includes:

2. Final Design of East End Cruise Corridor.
3. Bid Phase services for the extension of East End Cruise Corridor.
4. Geotechnical Study for East End Cruise Corridor.
5. Environmental Study to prepare a Categorical Exclusion Report for East End Cruise Corridor.

The Final Design of East End Cruise Corridor is covered under “Final Design”, if the Port’s Rider 38 application is granted by the Texas Department of Transportation, Houston District.

A. PRELIMINARY DESIGN PHASE

1. Provide overall project management, scoping, contract administration, invoicing, quality control/quality assurance, and monthly one-page reports.
2. Conduct on-site pre-design meeting to validate understanding of the project scope, budget, and schedule.
3. Conduct monthly project update conference calls.
4. Review field survey, ROW data and as-builds provided by the Port’s surveying consultant, High Tide Surveying.
5. FNI will prepare TIN file from the Surveyor’s data for the purpose of design.
6. Prepare one preliminary planimetric layout for the East End Cruise Corridor as discussed in the pre-scoping meeting on January 21, 2020. The planimetric layout will depict three travel lanes from 20th Street to 16th Street and four travel lanes from 16th Street to 14th Street as well as three access roads (20th Street, 16th Street and 14th Street) from Harborside Drive to East End Cruise Corridor.
7. Conduct one meeting with the Port and City of Galveston to discuss drainage requirements for the proposed project.
8. Prepare an Engineer’s Opinion of Probable Construction Cost (OPCC) based on the preliminary planimetric layout.
9. Conduct one review meeting with the Port to review the attributes of the preliminary planimetric layout and get feedback on needed refinements to the preliminary design.

10. Study, evaluate, and develop costs for Green Initiatives such as solar power, storm water solutions, etc. that could potentially be included in the project.

11. Prepare one final refined planimetric layout and OPCC that incorporates the feedback received from the review of the preliminary design.

12. Geotechnical Study - Coordinate with the sub-consultant to conduct a Geotechnical Study to make recommendations for subgrade stabilization, utility and storm bedding and backfill, pavement design, foundations, fill, and other design components. Please note that upon completion of Conceptual Design, FNI and subconsultant will finalize the boring locations and depths, within the limits of their contract, to provide the required recommendations for the various designs.

   a. Terracon Consulting, Inc. will perform the geotechnical investigation consisting of 7 pavement borings for a total of 145 feet. See attached sub consultant proposal for more details.

13. Environmental Study - Under the current TxDOT guidance, FNI believes that the project could be environmentally cleared by TxDOT through a Categorical Exclusion (CE) Report. Based on this, FNI would perform review of readily available internet databases, perform a site visit to the proposed corridor and surrounding areas to verify the presence of constraints or issues, and prepare the CE Report. This Report will consist of many Technical Reports which include Historic Studies, Hazardous Materials Initial Site Assessment, Water Resources, Surface Water Analysis including effects, if any, on a State 303 (d) list water body, Tier I Site Assessment, Species Analysis Form/Spreadsheet, Air Quality Report and Conformity Report with Qualitative MSAT Report, and Community Impact Assessment Technical Report Form. All Technical Reports contained in the CE Report will be prepared in accordance with the current TxDOT formats and include supporting documentation and figures. FNI will submit Draft CE Technical Reports for review by the Port of Galveston and, upon the Port’s approval, TxDOT Houston District and/or TxDOT Maritime. Upon receipt of comments, FNI will make any required revisions and will resubmit for further reviews, to complete and receive approval.

FNI assumes that a public meeting and public hearing for the project and associated documentation will not be required. FNI assumes that Archeological Background Studies will not be required due to the highly disturbed nature of the project area and that noise modeling and Noise Report will not be required due to the lack of noise sensitive receptors in the immediate project area.

It is assumed that the Port will provide the surveying and mapping files currently under way to FNI prior to start of this phase to be used as the base file/map for the development of the Project.

**B. FINAL DESIGN PHASE**

Upon approval of the conceptual design and confirmation that the Port's Rider 38 application has been granted, FNI shall proceed with development of Final Design Documents for East End Cruise Corridor. Final professional services in this phase are as follows:

1. Provide overall project management, scoping, contract administration, invoicing, quality control/quality assurance, and monthly one-page reports.
2. Conduct monthly project update conference calls and attend four milestone submittal review meetings.
3. Perform two site visits to verify existing site conditions.
4. Conduct additional meetings with the Port and City of Galveston to discuss drainage requirements for the proposed project.
5. Coordinate project with the Pier 10 Cruise Terminal project to make provisions in the design for seamless tie-ins and transistions.
6. Coordinate with the City of Galveston on their 14th Street Pump Station and 18th Street Storm System and make provisions in the project design for their crossing of East End Cruise Corridor.
7. Prepare designs for the following: roadway, traffic control, roadway related drainage system, signing, pavement markings, landscaping and SWPPP. All designs to meet City of Galveston requirements and criteria.
8. Prepare design for three (3) signalized intersections, at 14th, 16th, and 20th Streets.
9. Prepare design for illumination throughout the corridor utilizing cobra head style roadway fixtures. This will include a minimum of one (1) and a maximum of two (2) electrical utility service locations. Design will comply with the National Electrical Code and local ordinances. TxDOT standard electrical details will be utilized in design where possible. FNI will utilize solar power system, where determined to be applicable, as an alternate power source to reduce power from power grid. FNI will provide tie-in to power grid to ensure operation.
10. Provide utility coordination for tie-ins and relocations of existing utilities.
11. FNI will submit full-size & half-size formatted electronic file copies of the 30%-complete plans, and Engineer's Opinion of Probable Construction Cost (OPCC) to the Port for review and comments.
12. Upon receipt of 30%-complete comments, FNI will proceed with development of 60% construction documents.
13. FNI will submit full-size & half-size formatted electronic file copies of the 60%-complete plans, and Engineer's Opinion of Probable Construction Cost (OPCC) to the Port for review and comments.
14. Upon receipt of 60%-complete comments, FNI will proceed with development of 90% construction documents.
15. FNI will prepare the required technical specifications and project manual for the Project.
16. FNI will submit full-size & half-size formatted electronic file copies of the 90%-complete plans, technical specification and project manual and Engineer's Opinion of Probable Construction Cost (OPCC) to the Port for review and comments.
17. Upon receipt of 90%-complete comments, FNI will proceed with development of 100% construction documents.
18. FNI will assist the Port in approval of plans by City, utility companies, and other agencies.
19. FNI will submit one (1) hard copy of half size plans and full-size & half-size formatted electronic file copies of the 100%-complete plans, and Engineer's Opinion of Probable Construction Cost (OPCC) to the Port.

C. BID PHASE

Upon completion of the design services and approval of "Final" drawings and specifications by the Port, FNI will proceed with the performance of services in this phase as follows:

1. Assist the Port in securing bids. Notify prospective contractors and vendors listed in FNI's database of prospective bidders. Provide a copy of the notice to bidders for the Port to use in notifying construction news publications and publishing appropriate legal notice. The cost for publications shall be paid by the Port.
2. Upload Bid Document to CivCast on behalf of the Port for purpose of Construction Document and Bid proposal downloads. Actual Bid Proposals will be submitted by hard copies.
3. Maintain information on entities that have downloaded Bid Documents. Provide information on plan holders to interested contractors and vendors on request.
4. Assist the Port by responding to questions and interpreting bid documents. Prepare and issue addenda to the bid documents to plan holders if necessary.

5. Assist the Port in conducting a pre-bid conference and coordinate responses with the Port. Response to the pre-bid conference will be in the form of addenda issued after the conference. Attend the tour of the project site after the pre-bid conference, if necessary.

6. FNI will assist the Port in the opening, tabulating, and analyzing the bids received. Review the qualification information provided by the apparent low bidder to determine if, based on the information available, they appear to be qualified to construct the project. Recommend award of contract or other actions as appropriate to be taken by the Port. Pre-qualification of all prospective bidders and issuing a list of eligible bidders prior to the bid opening is not included in basic services.

7. Assist the Port in the preparation of Construction Contract Documents for construction contracts. Provide five (5) sets of Construction Contract Documents which include information from the apparent low bidder's bid documents, legal documents, and addenda bound in the documents for execution by the Port and construction contractor. Upon execution of documents, distribute two (2) copies to contractor, two (2) copies to the Port and one (1) for FNI.

8. Provide eight (8) sets of Conformed Plans and Specifications for the construction purposes. Distribute three (3) copies to the contractor, two (2) copies to the Port, two (2) copies for FNI, and one (1) copy to the testing lab firm (testing lab firm to be assigned by the Port).

Note: It is assumed that the Port will handle the construction phase of the project. If construction phase services are needed, FNI will submit a scope and fee for this work at later date.

ARTICLE II

TIME OF COMPLETION

FNI agrees to complete the services in accordance with the schedule established in each Task Authorization.

- Preliminary Engineering: 103 Days after NTP & receipt of topographical survey data.
- Final Design: 227 Days after the Final Design NTP.
- Bid and Award Phase: 60 Days after Bid Phase NTP.

ARTICLE III

RESPONSIBILITIES OF THE PORT: The Port shall perform the following in a timely manner so as not to delay the services of FNI:

A. Designate in writing a person to act as the Port's representative with respect to the services to be rendered under this AGREEMENT. Such person shall have contract authority to transmit instructions, receive information, interpret and define the Port's policies and decisions with respect to FNI's services for the Project.

B. Provide all criteria and full information as to the Port's requirements for the Project, including design objectives and constraints, space, capacity and performance requirements, flexibility and expandability, and any budgetary limitations; and furnish copies of all design and construction standards which the Port will require to be included in the drawings and specifications.
C. Assist FNI by placing at FNI's disposal all available information pertinent to the Project including previous reports and any other data relative to design of the Project.

D. Arrange for access to and make all provisions for FNI to enter upon public and private property as required for FNI to perform services under this AGREEMENT.

E. Examine all studies, reports, sketches, drawings, specifications, proposals and other documents presented by FNI, obtain advice of an attorney, insurance counselor and other consultants as The Port deems appropriate for such examination and render in writing decisions pertaining thereto within a reasonable time so as not to delay the services of FNI.

F. Furnish approvals and permits from all governmental authorities having jurisdiction over the Project and such approvals and consents from others as may be necessary for completion of the Project.

G. The Port shall make or arrange to have made all subsurface investigations, including but not limited to borings, test pits, soil resistivity surveys, and other subsurface explorations. The Port shall also make or arrange to have made the interpretations of data and reports resulting from such investigations. All costs associated with such investigations shall be paid by the Port.

H. Provide such accounting, independent cost estimating and insurance counseling services as may be required for the Project, such legal services as the Port may require or FNI may reasonably request with regard to legal issues pertaining to the Project including any that may be raised by Contractor(s), such auditing service as the Port may require to ascertain how or for what purpose any Contractor has used the monies paid under the construction contract, and such inspection services as The Port may require to ascertain that Contractor(s) are complying with any law, rule, regulation, ordinance, code or order applicable to their furnishing and performing the work.

I. If the Port designates a person to serve in the capacity of Resident Project Representative who is not FNI or FNI's agent or employee, the duties, responsibilities and limitations of authority of such Resident Project Representative(s) will be set forth in an Attachment attached to and made a part of this AGREEMENT before the Construction Phase of the Project begins. Said attachment shall also set forth appropriate modifications of the Construction Phase services as defined in Attachment SC, Article I, C, together with such adjustment of compensation as appropriate.

J. Attend the pre bid conference, bid opening, preconstruction conferences, construction progress and other job related meetings and substantial completion inspections and final payment inspections.

K. Give prompt written notice to FNI whenever the Port observes or otherwise becomes aware of any development that affects the scope or timing of FNI's services, or any defect or nonconformance of the work of any Contractor.

L. Furnish, or direct FNI to provide, Additional Services as stipulated in Attachment SC, Article II of this AGREEMENT or other services as required.

M. Bear all costs incident to compliance with the requirements of this Article III.
ARTICLE IV

DESIGNATED REPRESENTATIVES: FNI and the Port designate the following representatives:

The Port’s Designated Representative: Jeffrey W. Thomas, Chief Engineer, 123 Rosenberg Ave. 8th Floor, Galveston, Texas 77550; Phone: (409) 502-7112; Email: jthomas@portofgalveston.com

FNI’s Project Manager: James “JB” Ferguson, P.E., 11200 Broadway, Suite 2320, Pearland, Texas 77584; Phone (713) 600-6878; Email: JB.Ferguson@Freese.com

FNI’s Accounting Representative: Kristina Isaac, 10497 Town and Country Way, Suite 500, Houston, Texas 77024; Phone: (713) 600-6860; Fax: (713) 600-6801; Email: kristina.isaac@freese.com
## Compensation

<table>
<thead>
<tr>
<th>Basic Services (Lump Sum)</th>
<th>Amount</th>
</tr>
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<tbody>
<tr>
<td>Preliminary Design Phase &amp; Environmental Study</td>
<td>$98,250</td>
</tr>
<tr>
<td>Geotechnical Study plus 10%</td>
<td>$18,150</td>
</tr>
<tr>
<td>Final Design Phase</td>
<td>$336,250</td>
</tr>
<tr>
<td>Bid and Award Services</td>
<td>$ 15,000</td>
</tr>
<tr>
<td>Project Expenses &amp; ACA/TDLR Compliance Review</td>
<td>$ 5,650</td>
</tr>
<tr>
<td><strong>Total Basic Services:</strong></td>
<td><strong>$ 473,310</strong></td>
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</tbody>
</table>
June 1, 2020

Freese & Nichols, Inc.
11200 Broadway Street, Suite 2320
Pearland, Texas 77584

Attn: Mr. James “JB” Ferguson, P.E. – Project Manager

Re: Cost Estimate for Geotechnical Engineering Services
Old Port Industrial Road – Port of Galveston
Harborside Drive and 20th Street
Galveston, Texas
Terracon Document No. P92205122.Revision1

Dear Mr. Ferguson:

Terracon Consultants, Inc. (Terracon) understands that we have been selected based on qualifications to provide Geotechnical Engineering services for the above referenced project. The following exhibits outline our understanding of the scope of services to be performed by Terracon for this project and provides an estimate of the cost of our services.

Exhibit A Project Understanding
Exhibit B Scope of Services
Exhibit C Compensation and Project Schedule
Exhibit D Site Location
Exhibit E Anticipated Exploration Plan

Our base fee to perform the Scope of Services described in this document is $16,500. See Exhibit C for more details of our fees and consideration of additional services.
The work will be performed under the existing Master Service Agreement between Freese & Nichols, Inc. and Terracon Consultants, Inc. dated April 1, 2015. Your authorization for Terracon to proceed in accordance with this cost estimate can be issued by returning a copy of the “Subconsultant Authorization” document to our office. If you have any questions, please do not hesitate to contact us.

Sincerely,

Terracon Consultants, Inc.
(Texas Firm Registration No.: F-3272)

For: Geetesh Mutyala, E.I.T.
Staff Geotechnical Engineer

Patrick M. Beecher, P.E.
Geotechnical Services Manager

Rebecca L. Cummins, P.E.
Project Engineer
EXHIBIT A - PROJECT UNDERSTANDING

Our Scope of Services is based on our understanding of the project as described by Freese & Nichols, Inc. and Port of Galveston. We have not visited the project site to confirm the information provided. Aspects of the project, undefined or assumed, are highlighted as shown below. We request the design team verify all information prior to our initiation of field exploration activities.

Site Location

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project location</td>
<td>The project is located at the intersection of Harborside Drive and 20th Street in Galveston, Texas. (See Exhibit D)</td>
</tr>
<tr>
<td>Existing improvements</td>
<td>Based on aerial images and the information provided by Freese &amp; Nichols, Inc. and Port of Galveston, an existing railroad (currently not in use) operated by Port of Galveston, concrete pavements, and 20th Street consisting of a two-lane concrete roadway are located within the proposed alignment area. Existing buildings are located adjacent to the project alignment.</td>
</tr>
<tr>
<td>Current ground cover</td>
<td>Concrete pavements, asphaltic concrete pavements along 20th Street, and a portion of the proposed alignment along the existing railroad is covered by scattered grass/weeds and gravel/crushed stone at the ground surface.</td>
</tr>
<tr>
<td>Existing topography</td>
<td>Relatively level.</td>
</tr>
<tr>
<td>Site access</td>
<td>We expect the site and exploration locations are accessible with our truck-mounted drilling equipment during normal business hours. Terracon plans to access the site when cruise ships are not docked.</td>
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</tbody>
</table>
Planned Construction

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The project includes the construction of a new two-lane concrete roadway, approximately 2,800 feet in length, along the proposed alignment. The proposed alignment includes the following segments:</td>
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<tr>
<td></td>
<td>- Approximately 250 feet along 20th Street between Harborside Drive and the railroad tracks.</td>
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<td>- Approximately 1,500 feet along the existing railroad between 20th Street and 16th Street.</td>
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<td></td>
<td>- Approximately 300 feet along 16th Street between Harborside Drive and the railroad tracks.</td>
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<td></td>
<td>- Approximately 750 feet long from the intersection of 16th Street and railroad to 14th Street.</td>
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<tr>
<td>Project</td>
<td>Based on the information provided to us, we also understand that traffic signals are planned to be constructed near the following intersections:</td>
</tr>
<tr>
<td>description</td>
<td>- Proposed alignment and 14th Street</td>
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<td></td>
<td>- Proposed alignment and 16th Street</td>
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<tr>
<td></td>
<td>- Proposed alignment and 20th Street</td>
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<tr>
<td></td>
<td>See Exhibit E for the proposed alignment area.</td>
</tr>
<tr>
<td>Foundation</td>
<td>We understand that the proposed traffic signals are planned to be supported by a drilled straight-shaft foundation system. <strong>We assume the maximum foundation design shear load is 9 kips</strong> and the maximum moment is 270 kip feet. We request that loading information be provided to us. Based on information provided by Freese and Nichols, we understand that the Texas Cone Penetrometer (TCP) is not required to design the foundation.</td>
</tr>
<tr>
<td>system</td>
<td></td>
</tr>
<tr>
<td>Pavements</td>
<td>Based on information provided by Freese and Nichols, we understand the pavement section is planned to consist of 8 inches of reinforced concrete underlain by 8 inches of treated subgrade.</td>
</tr>
</tbody>
</table>
EXHIBIT B - SCOPE OF SERVICES

Our proposed Scope of Services consists of field exploration, laboratory testing, and engineering/project delivery. These services are described in the following sections.

Field Exploration

The field exploration program consists of the following:

<table>
<thead>
<tr>
<th>Planned Location</th>
<th>Number of Borings</th>
<th>Planned Boring Depth¹ (feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proposed traffic signal area</td>
<td>3</td>
<td>35 ²</td>
</tr>
<tr>
<td>(Borings P-1, P-4 and P-7)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proposed alignment area</td>
<td>4</td>
<td>10</td>
</tr>
<tr>
<td>(Borings P-2, P-3, P-5 and P-6)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>7</td>
<td>145</td>
</tr>
</tbody>
</table>

1. Below grade at the time of our field program.  
2. We understand that the TCP test is not required for these borings.

Boring Layout and Elevations: We will use handheld GPS equipment to locate borings with an estimated horizontal accuracy of +/-25 feet. Field measurements from existing site features may be utilized. If available, approximate elevations will be obtained by interpolation from a site specific, surveyed topographic map.

Subsurface Exploration Procedures: We will advance soil borings with a standard truck-mounted drill rig using solid stem continuous flight augers. We plan to core through the existing concrete and auger through the existing asphaltic concrete to access the underlying subgrade. Samples will be obtained continuously in the upper 12 feet of each boring and at intervals of 5 feet thereafter. Soil sampling is typically performed using open-tube and/or split-barrel sampling procedures. The split-barrel samplers are driven in accordance with the standard penetration test (SPT). The samples will be placed in appropriate containers, taken to our soil laboratory for testing, and classified by a Geotechnical Engineer. In addition, we will observe and record groundwater levels during drilling and sampling.

Our exploration team will prepare field boring logs as part of standard drilling operations including sampling depths, penetration distances, and other relevant sampling information. Field logs include visual classifications of materials observed during drilling, and our interpretation of subsurface conditions between samples. Final boring logs, prepared from field logs, represent the Geotechnical Engineer’s interpretation, and include modifications based on observations and laboratory tests.

Property Disturbance: We will backfill borings with auger cuttings upon completion. Pavements will be patched with cold-mix asphalt and/or ready mixed concrete, as appropriate. Our services
do not include repair of the site beyond backfilling our boreholes, and cold patching existing pavements. Excess auger cuttings will be dispersed in the general vicinity of the borehole or in nearby grassy areas.

**Site Access:** Terracon must be granted access to the site by the property owner. By acceptance of this cost estimate, without information to the contrary, we consider this as authorization to access the property for conducting field exploration in accordance with the Scope of Services. We understand that at least one member within the field crew (maximum size of five personnel) must have a Transportation Worker Identification Credential (TWIC) card to access the site and perform our field work.

**Traffic Control:** We plan to use traffic control consisting of cones and signs for our field program.

**Safety**

Terracon is currently not aware of environmental concerns at this project site that would create health or safety hazards associated with our exploration program; thus, our Scope considers standard OSHA Level D Personal Protection Equipment (PPE) appropriate. Our Scope of Services does not include environmental site assessment services, but identification of unusual or unnatural materials encountered while drilling will be noted on our logs and discussed in our report.

Exploration efforts require borings (and possibly excavations) into the subsurface, therefore Terracon will comply with Texas 811, a free utility locating service, to help locate public utilities within the vicinity of the site and dedicated public easements. We will consult with the owner/client regarding potential utilities, or other unmarked underground hazards. Based upon the results of this consultation, we will consider the need for alternative subsurface exploration methods, as the safety of our field crew is a priority.

All private utilities should be marked by the owner/client prior to commencement of field exploration. Terracon will not be responsible for damage to private utilities not made aware to us. If the owner/client is unable to accurately locate private utilities, Terracon can assist the owner/client by coordinating or subcontracting with a private utility locating service. Fees associated with the additional services are not included in our current Scope of Services. The detection of underground utilities is dependent upon the composition and construction of the utility line; some utilities are comprised of non-electrically conductive materials and may not be readily detected. The use of a private utility locate service would not relieve the owner of their responsibilities in identifying private underground utilities.

Consultant will be responsible for supervision and site safety measures for its own employees, but shall not be responsible for the supervision or health and safety precautions for any third parties, including Client’s contractors, subcontractors, or other parties present at the site. In addition, Consultant retains the right to stop work without penalty at any time Consultant believes it is in the best interests of Consultant’s employees or subcontractors to do so in order to reduce the risk of
exposure to the coronavirus. Client agrees it will respond quickly to all requests for information made by Consultant related to Consultant's pre-task planning and risk assessment processes. Client acknowledges its responsibility for notifying Consultant of any circumstances that present a risk of exposure to the coronavirus or individuals who have tested positive for COVID-19 or are self-quarantining due to exhibiting symptoms associated with the coronavirus.

**Laboratory Testing**

The project engineer will review field data and assign laboratory tests to understand the engineering properties of various soil strata. The anticipated laboratory testing may include the following:

- Moisture content
- Unit weight
- Atterberg limits
- Percent finer than No. 200 Sieve
- Unconfined compressive strength
- Unconsolidated-Undrained Triaxial

Our laboratory testing program includes examination of soil samples by an engineer. Based on the results of our field and laboratory programs, we will describe and classify soil samples in accordance with the Unified Soil Classification System (USCS).

**Engineering and Project Delivery**

Results of our field and laboratory programs will be evaluated by a professional engineer. The engineer will develop a geotechnical site characterization, perform the engineering calculations necessary to evaluate foundation alternatives, and develop appropriate geotechnical engineering design criteria for earth-related phases of the project.

Your project will be delivered using our GeoReport® system. Upon initiation, we provide you and your design team the necessary link and password to access the website (if not previously registered). Each project includes a calendar to track the schedule, an interactive site map, a listing of team members, access to the project documents as they are uploaded to the site, and a collaboration portal. The typical delivery process includes the following:

- Project Planning – Proposal information, schedule and anticipated exploration plan will be posted for review and verification
- Site Characterization – Findings of the site exploration
- Geotechnical Engineering – Recommendations and geotechnical engineering report

When utilized, our collaboration portal documents communication, eliminating the need for long email threads. This collaborative effort allows prompt evaluation and discussion of options related to the design and associated benefits and risks of each option. With the ability to inform all parties
as the work progresses, decisions and consensus can be reached faster. In some cases, only minimal uploads and collaboration will be required, because options for design and construction are limited or unnecessary. This is typically the case for uncomplicated projects with no anomalies found at the site.

When services are complete, we upload a printable version of our completed geotechnical engineering report, including the professional engineer's seal and signature, which documents our services. Previous submittals, collaboration and the report are maintained in our system. This allows future reference and integration into subsequent aspects of our services as the project goes through final design and construction.

The geotechnical engineering report will provide the following:

- Boring logs with field and laboratory data
- Stratification based on visual soil classification
- Groundwater levels observed during and after the completion of drilling
- Site Location and Exploration Plans
- Subsurface exploration procedures
- Description of subsurface conditions
- Foundation recommendations for design and construction of traffic signals
- Estimated settlement of foundations
- Subgrade preparation/earthwork recommendations
- Pavement design guidelines
EXHIBIT C - COMPENSATION AND PROJECT SCHEDULE

Compensation

Based upon our understanding of the site, the project as summarized in Exhibit A, and our planned Scope of Services outlined in Exhibit B, our base fee is shown in the following table:

<table>
<thead>
<tr>
<th>Task</th>
<th>Lump Sum Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subsurface Exploration, Laboratory Testing, Geotechnical Consulting &amp; Reporting</td>
<td>$16,500</td>
</tr>
</tbody>
</table>

Additional services not part of the base fee include the following:

<table>
<thead>
<tr>
<th>Additional Services (see Exhibit B)</th>
<th>Lump Sum Fee</th>
<th>Initial for Authorization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private Utility Locate Service¹</td>
<td>$1,000</td>
<td></td>
</tr>
</tbody>
</table>

¹. If the owner/client is unable to accurately locate private utilities, we can subcontract a private utility locating firm and/or utilize geophysical equipment, if necessary. The detection of underground utilities is dependent upon the composition and construction of utility lines. Some utilities are comprised of non-electrically conductive materials and may not be readily detected. The use of a private locate service does not relieve the owner of their responsibilities in identifying private underground utilities.

Our Scope of Services does not include services associated with survey of boring locations, special equipment for wet/soft ground conditions, tree or shrub clearing, or repair of damage to existing landscape. If such services are desired by the owner/client, we should be notified so we can adjust our Scope of Services.

Additional consultation (such as attendance on a project conference call, engineering analysis outside of the proposed scope, review of project documents, etc.) requested will be performed on a time-and-materials basis. A Project Engineer billing rate of $130 per hour will apply. The fee to provide additional consultation services will be in excess of the above provided fee to complete the geotechnical services and will not be incurred without prior approval of the client.

Unless instructed otherwise, we will submit our invoice(s) to the address shown at the beginning of this proposal. If conditions are encountered that require Scope of Services revisions and/or result in higher fees, we will contact you for approval, prior to initiating services. A supplemental proposal stating the modified Scope of Services as well as its effect on our fee will be prepared. We will not proceed without your authorization.

Project Schedule

We developed a schedule to complete the Scope of Services based upon our existing availability and understanding of your project schedule. However, this does not account for delays in field exploration beyond our control, such as weather conditions, permit delays, or lack of permission.
to access the boring locations. In the event the schedule provided is inconsistent with your needs, please contact us so we may consider alternatives.

<table>
<thead>
<tr>
<th>GeoReport® Delivery</th>
<th>Posting Date from Notice to Proceed</th>
<th>¹, ²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Planning</td>
<td>5 days</td>
<td></td>
</tr>
<tr>
<td>Site Characterization</td>
<td>20 days</td>
<td></td>
</tr>
<tr>
<td>Geotechnica Engineering</td>
<td>30 days</td>
<td></td>
</tr>
</tbody>
</table>

¹. Upon receipt of your notice to proceed we will activate the schedule component of our GeoReport® website with specific, anticipated calendar days for the three delivery points noted above as well as other pertinent events such as field exploration crews on-site, etc.

². We will maintain a current calendar of activities within our GeoReport® website. In the event of a need to modify the schedule, the schedule will be updated to maintain a current awareness of our plans for delivery.