



# City of Galveston

## CAPITAL PROJECTS STAFF REPORT

16 July 2019

To: Brian Maxwell, City Manager  
Hon. Mayor and City Council Members

From: Daniel Christodoss, P.E., City Engineer

**RE:** Consider for approval a proposal from Terracon Consultants, Inc., for the 24 inch water line from the 59<sup>th</sup> Street Pump Station (PS) to the Airport PS in the amount not to exceed \$224,690.00 to perform Construction Material Testing Geotechnical Engineering Services. Authorizing the City Manager to execute all necessary documents upon final approval by the City Attorney.

### **I. Background**

- A. The City's Water Master Plan included the construction of a 24 inch waterline from the 59<sup>th</sup> Street Pump Station to the Airport Pump Station as a critical part of the needed redundant infrastructure for the City of Galveston.
- B. The proposed waterline was included in the Capital Improvement Plan, and will provide needed backup capability for the Airport Pump Station to help ensure uninterrupted water service to the West End.
- C. Reliable water supply can also be provided to a significant portion of the Island's residents during an emergency situation by the installation of this new 24 inch waterline.
- D. It is important to have reliable water distribution system redundancy Island-wide, during failure at one of the three Pump Stations, by enabling redundant feed from the other two pump stations.
- E. The project also involves the installation of fiber optic lines that provide hard wired high speed communications connectivity between the three pump stations for future supervisory control and data acquisition (SCADA) for remotely controlling and monitoring the performance of the three pump stations.
- F. The City completed a preliminary engineering assessment of the feasible routes from the 59th Street Pump Station Area to the Airport Pump Station for laying the 24 inch water line and fiber optic system.
- G. Maps prepared by City Staff showing feasible routes were provided to an engineering consultant, and a proposal was solicited to identify the best route, and design the water line, and the fiber optic system.
- H. AWC designed and prepare construction plans for installation of the proposed 24 inch water line.
- I. The waterline project was advertised for bids on June 10, 2019 with bid opening scheduled for July 24, 2019.





# City of Galveston

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- J. The project involves the construction of approximately 3.5 miles of 24" water transmission main and 4" fiber optic conduit from the 59th Street Pump Station to the Airport Pump Station. It also provides for the construction of approximately 1 mile of 10" water line along 55th Street, roadway paving and landscaping with Crape Myrtle trees and Mexican Olive trees which are included as add alternates in the bid.
- K. At the time the Construction Contractor is selected subsequent to the bid opening on July 24th, and construction begins, Construction Material Testing by an Independent Geotechnical Engineering Testing Laboratory is important, to verify and document quality assurance/quality control (QA/QC) during construction.

### II. Current Situation

- A. City requested a proposal from Terracon Consultants, Inc., an independent Geotechnical Engineering Firm that was prequalified by City Council in 2018 for a period of 3 years.
- B. Terracon provided a proposal for \$224,690.00.
- C. Terracon is available to perform at the City's request.

### III. Impact or ramifications:

The project is part of the City's continued efforts to improve the water infrastructure throughout the City of Galveston. Lack of Construction Material Testing by an Independent Geotechnical Engineering Firm will prevent the City from verifying QA/QC during construction of the project by the contractor. This will lead to future problems if the quality of material and workmanship is not verified with in-situ and offsite laboratory testing standards employed during construction.

### IV. Alternatives in order of priority

- A. Approve the proposal from Terracon Consultants, Inc., for the 24 inch water line from the 59<sup>th</sup> Street Pump Station (PS) to the Airport PS in an amount not to exceed \$224,690.00 to perform Construction Material Testing Geotechnical Engineering Services.
- B. Do not approve the request and risk the lack of QA/QC verification of materials and workmanship during construction.

### V. Recommendation

Approve the proposal from Terracon Consultants, Inc., for the 24 inch water line from the 59<sup>th</sup> Street Pump Station (PS) to the Airport PS in an amount not to exceed \$224,690.00 to perform Construction Material Testing Geotechnical Engineering Services.

### VI. Fiscal Impact Report

Requested by: Daniel Christodoss, P.E., City Engineer  
Funding Source: W1707 WATERWORKS REVENUE BONDS, SERIES 2008 FUND 40115





# City of Galveston

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W1707 WATERWORKS CO 2017 BONDS FUND 40117  
Materials Testing \$ 224,690.00

**Total Cost of Implementation \$ 224,690.00**

Respectfully Submitted,

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Daniel Christodoss, P.E.  
City Engineer





July 3, 2019

City of Galveston  
823 Rosenberg  
Galveston, Texas 77553

Attn: Mr. Daniel Christodoss  
E: DChristodoss@GalvestonTX.Gov

**RE: Cost Estimate for Materials Services  
24 Inch Waterline and Paving  
53rd Street North to Airport Pump Station on Hope Blvd  
Galveston, Texas  
Terracon Document No. P91191129**

Dear Mr. Christodoss:

It is our understanding that Terracon Consultants, Inc. (**Terracon**) has been selected based solely on our qualifications to provide materials services on the referenced Project. In this letter we have presented our understanding of the scope of the project, our proposed services, and our budget estimate.

**A. PROJECT INFORMATION**

The Project consists of the construction of 3.5 miles of 24-inch water transmission line and 4 inch fiber optic conduit from 59<sup>th</sup> Street to Airport Pump Station. Construction also includes 1 mile of 10-inch waterline along 55<sup>th</sup> Street. 55<sup>th</sup> Street Pavement Rehab of approximately 26,650 yards of existing asphalt pavement and 9,780 feet of liner concrete curb. Construction also includes the rehab of approximately 2,700 feet of sanitary sewer line. Project duration is 825 calendar days, or end of construction.

Terracon was provided with the following construction documents for preparation of this proposal:

- Construction plans by Arceneaux Wilson & Cole, dated May 25, 2019, and
- Construction specifications by Arceneaux Wilson & Cole, dated May 25, 2019.

## B. SCOPE OF SERVICES

Terracon proposes to provide the following services when scheduled by the contractor or Owners representative.

### 1. Earthwork:

- Sample subgrade, backfill, and treated materials. Test the samples for classification by the Atterberg Limits and moisture density relationship.
- Perform field density tests using the nuclear method to determine the moisture content and percent compaction of the material

### 2. Concrete:

- Sample the fresh concrete for each mix, perform required tests, including slump, air content, concrete temperature, and cast test specimens during placements. **Terracon requests that a copy of the approved mix design(s) be provided to us prior to placement of the concrete.**
- Perform compressive tests of concrete test cylinders cast in the field.

### 3. Asphalt Pavement Observations and Testing:

- Sample asphalt materials during placement, prepare, and test the samples for asphalt content, gradation, bulk specific gravity of lab molded specimens, theoretical maximum specific gravity, and Hveem stability and density. One sample will be obtained of asphalt placed each day.
- Perform in-situ nuclear density tests to assist in determining an asphalt rolling pattern, when requested by the contractor.
- Perform in-situ nuclear density tests to determine the relative percent compaction of the asphalt at the frequency specified.

**4. Project Management and Administration:**

- Communicate with Terracon Engineering Technicians, Contractor, and Owner's site representative.
- Review laboratory and field test reports.
- Monitor our budget and invoice.

**Additional Services:**

If work beyond the scope listed above is requested by the Client, Terracon will issue a short Supplement to the Agreement form, or Supplement Cost estimate, that outlines the additional work to be performed and the associated fees. To authorize us to begin this additional work, you simply return a signed copy of the Supplement.

**Project Schedule:**

Field testing services will be provided on a "call-out" basis when scheduled by your representative. A minimum of 24-hours' notice is required to schedule our services, although we will attempt to meet requests in a shorter time frame. To schedule our services please contact our dispatcher at (281) 557-2900. The dispatch office hours are from 7:00 a.m. to 5:00 p.m. Messages left after business hours will be checked the following business day. Terracon shall not be held responsible for tests not performed as a result of a failure to schedule our services or any subsequent damage caused as a result of a lack of testing. Terracon recommends that a copy of this proposal be provided to the general contractor so they understand our scope of services and schedule us accordingly. Please note that the number of tests and trips described in the Scope of Services does not constitute a minimum or maximum number of tests or trips that may be required for this project.

**C. COMPENSATION**

Our estimated budget for providing the scope of services is **\$224,690**. We will not exceed our estimated budget amount unless authorized by the Client. Overtime is defined as all hours in excess of eight per day, Monday through Saturday, and all hours worked holidays. Overtime rates will be 1.5 times the hourly rate quoted.

<b>Budget Estimate</b>				
<b>24 Inch Waterline and Paving 53rd Street North to Airport Pump Station on Hope Blvd</b>				
<b>Service</b>	<b>Quantity</b>	<b>Unit</b>	<b>Unit Rate</b>	<b>Estimate</b>
<b>1.0 Field</b>				
Engineering Technician	2000	hour	\$ 50.00	\$ 100,000.00
Engineering Technician, OT	500	hour	\$ 75.00	\$ 37,500.00
Nuclear Gauge	400	day	\$ 60.00	\$ 24,000.00
Vehicle Charge (including pick ups)	450	day	\$ 60.00	\$ 27,000.00
			sub-total	<b>\$ 188,500.00</b>
<b>2.0 Laboratory</b>				
Moisture Density Relationship	8	each	\$ 175.00	\$ 1,400.00
Atterberg Limits	8	each	\$ 60.00	\$ 480.00
Cylinder Tests (4 cyl/set )	160	each	\$ 16.00	\$ 2,560.00
Asphalt Lab Series	25	each	\$ 500.00	\$ 12,500.00
			sub-total	<b>\$ 16,940.00</b>
<b>3.0 Project Management &amp; Administration</b>				
Administrative	60	hour	\$ 50.00	\$ 3,000.00
Project Manager	130	hour	\$ 125.00	\$ 16,250.00
			<b>Total</b>	<b>\$ 224,690.00</b>

**D. SITE ACCESS AND SAFETY**

Client shall secure all necessary site related approvals, permits, licenses, and consents necessary to commence and complete the services and will execute any necessary site access agreement. Terracon 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.

**E. TESTING AND OBSERVATION**

Terracon will only provide testing when called by your onsite representative. The extent of our observations and documentation will be limited to the items observed during the site visits.

Owner understands that testing and observation are discrete sampling procedures, and that such procedures indicate conditions only at the depths, locations, and times the procedures were performed. Terracon will provide test results and opinions based on tests and field observations only for the work tested. Owner understands that testing and observation are not continuous or exhaustive, and are conducted to reduce – not eliminate – project risk. Owner agrees to the level or amount of testing performed and the associated risk. Owner is responsible (even if delegated to contractor) for notifying and scheduling Terracon so Terracon can perform these services. Terracon shall not be responsible for the quality and completeness of Owner's contractor's work or their adherence to the project documents, and Terracon's performance of testing and observation services shall not relieve contractor in any way from its responsibility for defects discovered in its work, or create a warranty or guarantee. Terracon will not supervise or direct the work performed by contractor or its subcontractors and is not responsible for their means and methods.

**F. AUTHORIZATION**

Please authorize us to proceed by signing the attached Agreement issued by the City of Galveston and returning a signed copy to Terracon. We look forward to working with you on this Project. Please call us at 281-557-2900 if you have any questions or comments regarding this document.

Sincerely,  
Terracon Consultants, Inc.  
TX Registration No. F-3272



Mark D. Wells, P.E., PMP  
Principal



Sean Barber  
Materials Department Manager

Attachment: Agreement

## MATERIALS TESTING SERVICES AGREEMENT

### 24 Inch Waterline and Paving 53rd Street North to Airport Pump Station on Hope Blvd (Project)

This Materials Testing Services Agreement (“Agreement”) is hereby entered between the City of Galveston, Texas, (the “City” or “Client”) and Terracon Consultants, Inc. (“Terracon” or “Consultant”), a Corporation for the rendition of materials testing services described herein for the following project. References to the City/Client and Terracon /Consultant, jointly shall be referred to as the “Parties” to this Agreement.

**NOW THEREFORE**, the parties do mutually agree as follows:

1. Scope of Services (work): The scope of materials testing services subject to this Agreement is described in **Exhibit A** and includes the following documents attached hereto and incorporated herein for all purposes:
  - Project - 24 Inch Waterline and Paving 53<sup>rd</sup> Street North to Airport Pump Station on Hope Blvd.
  - RFQ # **#18-04** (Terracon Prequalified by City Council in October 2018 for 3 years)
  - **Exhibit A** = Consultant Cost Estimate #P91191129; Project Information; Scope of Services; Estimated Testing Schedule; and Proposal/CMT Acceptance Form.
2. Time of Performance: The services set forth in Consultant’s proposal (**Exhibit A**) shall commence upon the issuance of a Notice to Proceed. Due to the nature and extent of the project, the work is expected to be completed within (825) calendar days from Notice To Proceed terminating at 825th calendar day or end of construction.
3. Independent Contractors: The parties are independent Contractors as to each other. Nothing in this Agreement shall be construed as creating any agency or employment relationship. Neither party shall make any representations tending to create an apparent or implied agency or employment relationship. Neither party has the authority to act for the other or to create obligations or debts binding on the other. Neither party shall be responsible for any obligations or expenses incurred by the other.
4. The City does not waive or relinquish any governmental immunities or defenses on behalf of itself and its trustees, officers, employees, or agents as a result of the execution of this Agreement and performance of the functions or obligations described herein. Nothing herein shall be construed as creating any personal liability on the part of any officer, or director, or employee or representative of the City.
5. Standard of Care: The standard of care for all related services performed or furnished by Terracon under this agreement will be performed in a manner consistent with the level of

care and skill ordinarily exercised and used by members of the subject profession practicing under similar circumstances at the same time and in the same locality.

Consultant shall perform the services described in this Agreement in accordance with all applicable federal, state, county, city and/or other governmental entity statutes, regulations, standards, codes and ordinances, including but not limited to all Federal Specifications and Standards and the City Code of the City of Galveston, and all applicable requirements of the current edition reference standards of the AASHTO, ACI, AISC, ASTM, and AWS. No pleas of misunderstanding will be considered on account of ignorance thereof. Consultant shall likewise impose the same obligations contained in this Agreement upon all of its sub-consultants, if any. The Consultant shall be responsible for the accuracy of its services and shall promptly make necessary revisions resulting from its errors, omissions or negligent acts without compensation.

6. Access to Information and Site Access: It is agreed that all information, data, reports and records and maps as are existing, available and necessary for the carrying out of the work outlined above shall be furnished to Terracon by the City and its agencies. The City and its agencies will cooperate with Terracon in every way possible to facilitate the performance of the work described in the Agreement.
7. Appropriations: The obligations of the City to make payment under this Agreement are expressly subject to appropriations by the City of funds that are lawfully available to be applied to such purpose.
8. Compensation: The maximum amount of compensation and reimbursement to be paid hereunder shall not exceed **Two-Hundred Twenty-Four Thousand Six Hundred Ninety Dollars (\$224,690)**. Invoices are submitted by Terracon each month (not necessarily falling on the first or last day of the month). City shall notify Terracon in writing, of any and all objections, if any, to an invoice within ten (10) days of the date of invoice. Otherwise, the invoice shall be deemed proper and acceptable by the City. Amounts indicated on invoices are due and payable immediately upon receipt. City's account will be considered delinquent if Terracon does not receive full payment within thirty (30) days after the invoice date. Parties shall attempt to resolve any payment disputes within sixty (60) days or the matter may be submitted to mediation.
9. The compensation sum includes reimbursement for all labor, administrative, overhead, and all other expenses associated with the Project, including (but not limited to) all expenses incurred by Consultant in the performance of the work. The City shall not be responsible for payment to Terracon for any additional services or expenses not specifically included in **Exhibit "A"**, except upon execution of an amendment to this Agreement in writing by both parties.

10. INDEMNIFICATION: FOR CONSIDERATION RECEIVED, Terracon shall, to the extent permitted by law, indemnify, save and hold the City of Galveston harmless, including City's officers, and employees, from any claims, actions, lawsuits, proceedings, damages, loss, judgments, liabilities or expense on account of damage to property and injuries, including death, to the extent caused by any negligent act, error or omission of Terracon or those acting under Terracon's supervision or control. Terracon shall not be responsible, however, for any loss, damage, liability or expense on account of damage to property and injuries, including death, by which may arise from the negligence of the City. **Terracon shall comply with the requirements of all current applicable laws, rules and regulations and shall indemnify and hold harmless the City and its agency members from and against the failure to comply with those laws, and shall assume full responsibility for payments of Federal, State and local taxes on contributions imposed or required under the Social Security, worker's compensation and income tax laws.**
11. Construction: This Agreement shall be construed under and in accord with the laws of the State of Texas, and all obligations of the parties created hereunder are performable in Galveston County, Texas. Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective heirs, executors, administrators, legal representatives, successors and assigns where permitted by this Agreement. In any case, if one or more of the provisions contained in this Agreement shall for any reason be held to be invalid, illegal or unenforceable in any respect, such invalidity, illegality, or unenforceability shall not affect any other provision thereof and this Agreement shall be construed as if such invalid, illegal, or unenforceable provision had never been contained herein.
12. Termination of Agreement for Cause: If, through any cause, Terracon shall fail to fulfill in a timely and proper manner its obligations under this Agreement, or if Terracon shall violate any of the covenants, agreements, or stipulations of this Agreement, the City shall thereupon have the right to terminate this Agreement by giving written notice to Terracon of such termination and specifying the effective date thereof, at least five days before the effective date of such termination. In such event, all finished or unfinished documents, data, studies, surveys, drawings, maps, models, photographs and reports prepared by Terracon under this Agreement shall, at the option of the City, become property of the City and Terracon shall be entitled to receive just and equitable compensation for any work satisfactorily completed hereunder. Notwithstanding the above, Terracon shall not be relieved of liability to the City for damages sustained by the City by virtue of any breach of the Agreement by Terracon, and the City may withhold any payments to Terracon for the purpose of set-off until such time as the exact amount of damages due the City from Terracon is determined.
13. Termination for Convenience of the City: The City may terminate this Agreement at any time by giving at least ten (10) days' notice in writing to Terracon. If the Agreement is

terminated by the City as provided herein, Terracon will be paid for the time provided and expenses incurred up to the termination date. If this Agreement is terminated due to the fault of Terracon, Paragraph eleven shall apply.

14. Modification: No change in the terms of this Agreement shall be binding unless it is in writing and signed by an authorized representative of both parties.
15. Force Majeure: No party to this agreement shall be deemed in violation if it is prevented from timely performing any of its obligations by reason of labor disputes, acts of God, acts of the public enemy, acts of superior governmental authority, or other circumstances for which the party is not responsible or which is not in its control.
16. Proof of Insurance: Terracon shall maintain certain types of insurance protection throughout the duration of the project. All insurance policies are to be issued by an insurance Terracon authorized to do business in the State of Texas, using an insurance Company with an A.M. Best rating of a B+ or better.
17. Required Insurance: Commercial general liability insurance, naming the City of Galveston as an additional insured and as certificate holder, and waiving subrogation per the contractual requirements of this project; Automobile Liability Insurance, Worker's Compensation Insurance and Professional Liability Insurance. Limits are to be equal to or greater than:
  - a. **Commercial general liability insurance:**
    - \$2,000,000 general liability (includes products and personal, etc.)
    - \$1,000,000 fire damage
    - \$1,000,000 automobile damage
    - \$500,000 workers compensation employers' liability
    - Statutory limits for workers compensationInsurance coverage shall be on an "occurrence basis"
  - b. **Professional Liability Insurance: \$1,000,000** per claim and **\$2,000,000** Aggregate. Consultant shall submit evidence at the time of execution of this Agreement that it has in full force and effect professional liability errors and omissions insurance. Consultant shall maintain such insurance in full force and effect throughout the duration of this Agreement and thereafter for a period of one year.
18. Assignability: Terracon shall not assign any interest on this Agreement, and shall not transfer any interest in the same (whether by assignment or novation), without the prior written consent of the City. Unless specifically stated to the contrary in any written consent to assignment, no assignment will release or discharge the assignor from any duty or responsibility under this Agreement.

19. Reports and Information: Terracon, at such times and in such forms as the City may require, shall furnish the City such periodic reports as it may request pertaining to the work or services undertaken pursuant to this Agreement, the costs and obligations incurred or to be incurred in connection therewith, and any other matters covered by this Agreement. Any reuse of the work product on extensions of this project or on any other project without Terracon's prior written consent shall be at the re-user's sole risk and without liability to Terracon.
  
20. Consultant shall submit written reports to the City including a general description of the inspections and tests performed with identification of the specific Project area/materials involved, all data required to be recorded under AASHTO, ACI, AISC, ASTM and AWS Standards and other standard test methods employed, identification of the standard sampling and test methods utilized, all findings and test results, and an appendix of terminology and symbols used, and in accordance with **Exhibit A**.
  
21. Findings Confidential: To the extent permitted by law, all of the reports, information, data, etc., prepared or assembled by Terracon under this Agreement are confidential and Terracon agrees that they shall not be made available to any individual or organization without the prior written approval of the City.
  
22. Copyright: No report, maps, or other documents produced in whole or in part under this Agreement shall be the subject of an application for copyright by or on behalf of Terracon.
  
23. Compliance with Local, State and Federal Laws: This Agreement shall be construed under and in accordance with the laws of the State of Texas, with jurisdiction in the courts of the State of Texas and venue in Galveston, County regardless of where the obligations of the parties were performed. By execution of this Agreement, the parties agree to subject themselves to the jurisdiction of the Courts of the State of Texas in all matters relating to or arising out of this Agreement or the Work.
  
24. Notices: All notices required or permitted under this Agreement shall be in writing and shall be deemed given when delivered in person or three days after deposit in the United States Mail, postage prepaid, addressed to the party's address reflected at the end of this Agreement. A party's notice address may be changed from time to time by that party's providing written notice to the other. A copy of the notice(s) shall be sent to:

City Attorney  
City of Galveston  
823 Rosenberg, Room 203  
P.O. Box 779  
Galveston, Texas 77553

Terracon Consultants, Inc.  
551 League City Pkwy, Ste F  
League City, Texas 77573  
\_\_\_\_\_  
\_\_\_\_\_

**CITY OF GALVESTON, TEXAS**

**TERRACON CONSULTANTS, INC.**

BY: \_\_\_\_\_  
NAME: Brian Maxwell  
TITLE: City Manager  
DATE: \_\_\_\_\_

BY:   
NAME: Sean Barber  
TITLE: Materials Services Manager  
DATE: 7/3/2019

ATTEST:

By: \_\_\_\_\_  
Janelle Williams,  
City Secretary

APPROVED AS TO FORM:

\_\_\_\_\_  
City Attorney's Office

**THE STATE OF TEXAS     §**  
  §  
**COUNTY OF GALVESTON   §**

BEFORE ME, a Notary Public in and for the State of Texas, on this day personally appeared Sean P. Barber, known to me to be the person and officer whose name is subscribed to the foregoing instrument and acknowledged to me that he executed same for and as the act and deed of Terracon Consultants, Inc. as the Regional Manager thereof, and for the purposes and consideration therein expressed and in the capacity thereon stated.

GIVEN UNDER MY HAND AND SEAL OF OFFICE this the 3 day of July, 2019.



  
Notary Public In and For  
The State of Texas