



later than December 31, 2026. Contractor shall complete such tasks described in the Scope of Services, within this time or within such additional time as may be extended by County.

4. **Compensation and Payment Terms.**

- (a) Contractor's fees for the Services shall be calculated at the rate(s) set forth in Exhibit "A" attached hereto. The Maximum Compensation to Contractor for the Services performed under this Agreement is One Million Three Hundred Forty-One Thousand Six Hundred Forty-Seven and 00/100 Dollars (\$1,341,647.00). In no event shall the amount paid by County to Contractor under this Agreement exceed said Maximum Compensation without an approved change order.
- (b) Contractor understands and agrees that the Maximum Compensation stated is an all-inclusive amount and no additional fee, cost or reimbursed expense shall be added whatsoever to the fees stated in the attached Exhibit "A."
- (c) County will pay Contractor based on the following procedures: Upon completion of the tasks identified in the Scope of Services, Contractor shall submit to County staff person designated by the County Engineer, one (1) electronic (pdf) copy of the invoice showing the amounts due for services performed in a form acceptable to County. County shall review such invoices and approve them within 30 calendar days with such modifications as are consistent with this Agreement and forward same to the Auditor for processing. County shall pay each such approved invoice within thirty (30) calendar days. County reserves the right to withhold payment pending verification of satisfactory work performed.

5. **Limit of Appropriation.** Contractor understands and agrees that the Maximum Compensation for the performance of the Services within the Scope of Services described in Section 2 above is One Million Three Hundred Forty-One Thousand Six Hundred Forty-Seven and 00/100 Dollars (\$1,341,647.00). In no event shall the amount paid by County under this Agreement exceed the Maximum Compensation without a County approved change order. Contractor clearly understands and agrees, such understanding and agreement being of the absolute essence of this Agreement, that County shall have available the total maximum sum of One Million Three Hundred Forty-One Thousand Six Hundred Forty-Seven and 00/100 Dollars (\$1,341,647.00) specifically allocated to fully discharge any and all liabilities County may incur under this Agreement. Contractor does further understand and agree, said understanding and agreement also being of the absolute essence of this Agreement, that the total Maximum Compensation that Contractor may become entitled to and the total maximum sum that County may become liable to pay to Contractor under this Agreement shall not under any conditions, circumstances, or interpretations thereof exceed One Million Three Hundred Forty-One Thousand Six Hundred Forty-Seven and 00/100 Dollars (\$1,341,647.00).

6. **Non-appropriation.** Contractor understands and agrees that in the event no funds or insufficient funds are appropriated by the County under this Agreement, County shall immediately notify Contractor in writing of such occurrence and the Agreement shall thereafter terminate and be null and void on the last day of the fiscal period for which appropriations were received or made without penalty, liability or expense to the County. In no event shall said termination of this Agreement or County's failure to appropriate said funds be deemed a breach or default of this Agreement or create a debt by County in any amount(s) in excess of those previously funded.
7. **Taxes.** County is a body corporate and politic under the laws of the state of Texas and as such, is exempt from sales and use taxes. County shall furnish evidence of its tax-exempt status upon written request by Contractor.
8. **Insurance.** Prior to commencement of the Services, Contractor shall furnish County with properly executed certificates of insurance which shall evidence all insurance required and provide that such insurance shall not be canceled, except on 30 days' prior written notice to County. Contractor shall provide certified copies of insurance endorsements and/or policies if requested by County. Contractor shall maintain such insurance coverage from the time Services commence until Services are completed and provide replacement certificates, policies and/or endorsements for any such insurance expiring prior to completion of Services. Contractor shall obtain such insurance written on an Occurrence form from such companies having Best's rating of A/VII or better, licensed or approved to transact business in the State of Texas, and shall obtain such insurance of the following types and minimum limits:
- (a) Workers Compensation in accordance with the laws of the State of Texas. Substitutes to genuine Workers' Compensation Insurance will not be allowed.
  - (b) Employers' Liability insurance with limits of not less than \$1,000,000 per injury by accident, \$1,000,000 per injury by disease, and \$1,000,000 per bodily injury by disease.
  - (c) Commercial general liability insurance with a limit of not less than \$1,000,000 each occurrence and \$2,000,000 in the annual aggregate. Policy shall cover liability for bodily injury, personal injury, and property damage and products/completed operations arising out of the business operations of the policyholder.
  - (d) Business Automobile Liability coverage applying to owned, non-owned and hired automobiles with limits not less than \$1,000,000 each occurrence combined single limit for Bodily Injury and Property Damage combined.
  - (e) Professional Liability insurance with limits not less than \$1,000,000.
- County shall be named as additional insured to all required coverage except for Workers' Compensation and Professional Liability (if required). All Liability policies written on behalf of Contractor shall contain a waiver of subrogation in favor of County.

If required coverage is written on a claims-made basis, Contractor warrants that any retroactive date applicable to coverage under the policy precedes the effective date of the Contract and that continuous coverage will be maintained or an extended discovery period will be exercised for a period of 2 years beginning from the time the work under this Contract is completed.

Contractor shall not commence any portion of the work under this Contract until it has obtained the insurance required herein and certificates of such insurance have been filed with and approved by County.

No cancellation of or changes to the certificates, or the policies, may be made without thirty (30) days prior, written notification to County.

Approval of the insurance by County shall not relieve or decrease the liability of the Contractor.

9. **Indemnity.** TO THE FULLEST EXTENT PROVIDED BY APPLICABLE LAW, CONTRACTOR SHALL INDEMNIFY AND HOLD HARMLESS COUNTY, ITS OFFICIALS, OFFICERS, AND EMPLOYEES FROM AND AGAINST ALL CLAIMS, LOSSES, DAMAGES, CAUSES OF ACTION, SUITS, LIABILITY, AND COSTS, INCLUDING THE REIMBURSEMENT OF REASONABLE ATTORNEY FEES, ARISING OUT OF OR RESULTING FROM AN ACT OF NEGLIGENCE, INTENTIONAL TORT, INTELLECTUAL PROPERTY INFRINGEMENT, OR FAILURE TO PAY A SUBCONTRACTOR OR SUPPLIER COMMITTED BY CONTRACTOR OR CONTRACTOR'S AGENTS, EMPLOYEES, OR ANOTHER ENTITY OVER WHICH CONTRACTOR EXERCISES CONTROL. CONTRACTOR SHALL FURTHER PROCURE AND MAINTAIN GENERAL LIABILITY INSURANCE WITH COVERAGE AS PROVIDED IN SECTION 8 OF THIS AGREEMENT AND SHALL FURNISH A CERTIFICATE OF INSURANCE FOR THE SAME SHOWING FORT BEND COUNTY, TEXAS AS AN ADDITIONAL INSURED.
10. **Public Information Act.** Contractor expressly acknowledges and agrees that County is a public entity and as such, is subject to the provisions of the Texas Public Information Act under Chapter 552 of the Texas Government Code. In no event shall County be liable to Contractor for release of information pursuant to Chapter 552 of the Texas Government Code or any other provision of law. Except to the extent required by law or as directed by the Texas Attorney General, County agrees to maintain the confidentiality of information provided by Contractor expressly marked as proprietary or confidential. County shall not be liable to Contractor for any disclosure of any proprietary or confidential information if such information is disclosed under Texas law or at the direction of the Texas Attorney General. Contractor further acknowledges and agrees that the terms and conditions of this Agreement are not proprietary or confidential information.
11. **Compliance with Laws.** Contractor shall comply with all federal, state, and local laws, statutes, ordinances, rules, regulations, and the decrees of any courts or administrative

bodies or tribunals in any matter affecting the performance of this Agreement, including, without limitation, Worker's Compensation laws, minimum and maximum salary and wage statutes and regulations, licensing laws and regulations. Contractor in providing all services hereunder, further agrees to abide by the provisions of any applicable Federal or State Data Privacy Act.

12. **Independent Contractor.** In the performance of work or services hereunder, Contractor shall be deemed an independent Contractor, and any of its agents, employees, officers, or volunteers performing work required hereunder shall be deemed solely as employees of Contractor. Contractor and its agents, employees, officers, or volunteers shall not, by performing work pursuant to this Agreement, be deemed to be employees, agents, or servants of County and shall not be entitled to any of the privileges or benefits of County employment.
13. **Use of Customer Name.** Contractor may use County's name without County's prior written consent only in Contractor's customer lists. Any other use of County's name by Contractor must have the prior written consent of County.
14. **County/County Data.** Nothing in this Agreement shall be construed to waive the requirements of Section 205.009 of the Texas Local Government Code.
15. **Personnel.** Contractor represents that it presently has, or is able to obtain adequate qualified personnel in its employment for the timely performance of the Services required under this Agreement and that Contractor shall furnish and maintain, at its own expense, adequate and sufficient personnel, in the opinion of County, to perform the Services when and as required and without delays.

All employees of Contractor shall have such knowledge and experience as will enable them to perform the duties assigned to them. Any employee of Contractor or agent of Contractor who, in County's opinion, is incompetent or by his conduct become detrimental to providing Services pursuant to this Agreement, shall, upon request of County, immediately be removed from association with the Services required under this Agreement.

When performing Services on-site at County's facilities, Contractor shall comply with, and will require that all Contractor's Personnel comply with, all applicable rules, regulations and known policies of County that are communicated to Contractor in writing, including security procedures concerning systems and data and remote access thereto, building security procedures, including the restriction of access by County to certain areas of its premises or systems for security reasons, and general health and safety practices and procedures.

16. **Confidential and Proprietary Information.** Contractor acknowledges that it and its employees or agents may, in the course of performing their responsibilities under this

Agreement, be exposed to or acquire information that is confidential to County. Any and all information of any form obtained by Contractor or its employees or agents from County in the performance of this Agreement shall be deemed to be confidential information of County ("Confidential Information"). Any reports or other documents or items (including software) that result from the use of the Confidential Information by Contractor shall be treated with respect to confidentiality in the same manner as the Confidential Information. Confidential Information shall be deemed not to include information that (a) is or becomes (other than by disclosure by Contractor) publicly known or is contained in a publicly available document; (b) is rightfully in Contractor's possession without the obligation of nondisclosure prior to the time of its disclosure under this Agreement; or (c) is independently developed by employees or agents of Contractor who can be shown to have had no access to the Confidential Information.

Contractor agrees to hold Confidential Information in strict confidence, using at least the same degree of care that Contractor uses in maintaining the confidentiality of its own confidential information, and not to copy, reproduce, sell, assign, license, market, transfer or otherwise dispose of, give, or disclose Confidential Information to third parties or use Confidential Information for any purposes whatsoever other than the provision of Services to County hereunder, and to advise each of its employees and agents of their obligations to keep Confidential Information confidential. Contractor shall use its best efforts to assist County in identifying and preventing any unauthorized use or disclosure of any Confidential Information. Without limitation of the foregoing, Contractor shall advise County immediately in the event Contractor learns or has reason to believe that any person who has had access to Confidential Information has violated or intends to violate the terms of this Agreement and Contractor will at its expense cooperate with County in seeking injunctive or other equitable relief in the name of County or Contractor against any such person. Contractor agrees that, except as directed by County, Contractor will not at any time during or after the term of this Agreement disclose, directly or indirectly, any Confidential Information to any person, and that upon termination of this Agreement or at County's request, Contractor will promptly turn over to County all documents, papers, and other matter in Contractor's possession which embody Confidential Information.

Contractor acknowledges that a breach of this Section, including disclosure of any Confidential Information, or disclosure of other information that, at law or in equity, ought to remain confidential, will give rise to irreparable injury to County that is inadequately compensable in damages. Accordingly, County may seek and obtain injunctive relief against the breach or threatened breach of the foregoing undertakings, in addition to any other legal remedies that may be available. Contractor acknowledges and agrees that the covenants contained herein are necessary for the protection of the legitimate business interest of County and are reasonable in scope and content.

Contractor in providing all services hereunder agrees to abide by the provisions of any applicable Federal or State Data Privacy Act.

17. **Ownership and Reuse of Documents.** All documents, data, reports, research, graphic presentation materials, etc., developed by Contractor as a part of its work under this Agreement, shall become the property of County upon completion or termination of this Agreement. Contractor shall promptly furnish all such data and material to County on request.
18. **Inspection of Books and Records.** Contractor shall permit County, or any duly authorized agent of County, to inspect and examine the books and records of Contractor for the purpose of verifying the amount of work performed under the Scope of Services. County's right to inspect such books and records shall survive the termination of this Agreement for a period of four years. Notwithstanding the foregoing, Contractor shall bear no liability or responsibility for deliverables that have been modified post-delivery or used for a purpose other than that for which they were prepared under this Agreement.
19. **Termination.** County may terminate this Agreement at any time, with or without cause, upon thirty (30) days written notice to Contractor. Upon termination of this Agreement by County, Contractor shall be paid in accordance with Section 4, above, for those services which were provided under this Agreement prior to its termination and which have not been previously invoiced to County. Contractor's final invoice for said services will be presented to and paid by County in the same manner set forth in Section 4 above. No fees of any type, other than fees due and payable at the Termination Date, shall thereafter be paid to Contractor by County.
20. **Force Majeure.** Notwithstanding anything to the contrary contained herein, neither Party shall be liable to the other for any delay or inability to carry out its obligations under this Agreement if such delay or inability is the result of a Force Majeure Event. Within a reasonable time after the occurrence of such event, the Party whose obligations are affected (the "Affected Party") thereby shall notify the other in writing stating the nature of the event and the anticipated duration. The Affected Party's obligations under this Agreement shall be suspended during the continuance of any delay or inability caused by the event, but for no longer period. The Affected Party shall further endeavor to remove or overcome such delay or inability as soon as is reasonably possible.
- For purposes of this Agreement, a Force Majeure Event includes, but is not limited to: strikes or other labor disputes, severe weather disruptions, natural disasters, fire or other acts of God; riots, war, or other emergencies; failure of any governmental agency to act in a timely manner; the discovery of any hazardous substance or differing and unforeseeable site conditions; and any other incapacities of any Party, similar to those enumerated, which are not within the control of the Party claiming such inability, which such Party could not have avoided by the reasonable exercise of due diligence and care.
21. **Assignment.** Contractor may not assign this Agreement to another party without the prior written consent of County.

22. **Successors and Assigns Bound.** County and Contractor each bind themselves and their successors and assigns to the other Party and to the successors and assigns of such other Party, with respect to all covenants of this Agreement.
23. **Publicity.** Contact with citizens of Fort Bend County, media outlets, or other governmental agencies shall be the sole responsibility of County. Under no circumstances, whatsoever, shall Contractor release any material or information developed or received during the performance of Services hereunder unless Contractor obtains the express written approval of County or is required to do so by law.
24. **Notice.** Any and all notices required or permitted under this Agreement shall be in writing and shall be mailed by certified mail, return receipt requested, or personally delivered to the following addresses:

**If to County:** Fort Bend County Engineering  
Attn: County Engineer  
301 Jackson Street,  
Richmond, Texas 77469

**And**

Fort Bend County, Texas  
Attention: County Judge  
401 Jackson Street, 1<sup>st</sup> Floor  
Richmond, Texas 77469

**If to Contractor:** HJ Consulting, Inc.  
Attn: Harish Jajoo, P.E., President  
4771 Sweetwater Blvd, Suite 254  
Sugar Land, Texas 77479

25. **Performance Representation.** Contractor represents to County that Contractor has the skill and knowledge ordinarily possessed by well-informed members of its trade or profession ("Professionals") practicing in the greater Houston metropolitan area. Contractor shall provide the Services to County with the same professional skill and care ordinarily provided by such Professionals under the same or similar circumstances and professional license and as expeditiously as is prudent considering the ordinary professional skill and care of a competent Professional.
26. **Entire Agreement and Modification.** This Agreement constitutes the entire Agreement between the Parties and supersedes all previous agreements, written or oral, pertaining



to the subject matter of this Agreement. Any amendment to this Agreement must be in writing and signed by each Party to come into full force and effect.

27. **Understanding Fair Construction.** By execution of this Agreement, the Parties acknowledge that they have read and understood each provision, term, and obligation contained herein. This Agreement, although drawn by one party, shall be construed fairly and reasonably and not more strictly against the drafting Party than the non-drafting Party.
28. **Severability.** In case any 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 hereof and this Agreement shall be construed as if such invalid, illegal or unenforceable provision had never been contained herein.
29. **No Waiver of Immunity.** Neither the execution of this Agreement nor any other conduct of either party relating to this Agreement shall be considered a waiver or surrender by County of its governmental powers or immunity under the Texas Constitution or the laws of the state of Texas.
30. **Applicable Law and Venue.** This Agreement shall be construed according to the laws of the state of Texas. Venue for any claim arising out of or relating to the subject matter of this Agreement shall lie in a court of competent jurisdiction of Fort Bend County, Texas.
31. **Certain State Law Requirements for Contracts** The contents of this Section are required by Texas law and are included by County regardless of content For purposes of Sections 2252.152, 2271.002, and 2274.002, Texas Government Code, as amended, Contractor hereby verifies that Contractor and any parent company, wholly owned subsidiary, majority-owned subsidiary, and affiliate:
  - (a) Unless affirmatively declared by the United States government to be excluded from its federal sanctions regime relating to Sudan or Iran or any federal sanctions regime relating to a foreign terrorist organization, is not identified on a list prepared and maintained by the Texas Comptroller of Public Accounts under Section 806.051, 807.051, or 2252.153 of the Texas Government Code.
  - (b) If employing ten (10) or more full-time employees and this Agreement has a value of \$100,000.00 or more, Contractor does not boycott Israel and is authorized to agree in such contracts not to boycott Israel during the term of such contracts. "Boycott Israel" has the meaning provided in § 808.001 of the Texas Government Code.
  - (c) If employing ten (10) or more full-time employees and this Agreement has a value of \$100,000.00 or more, Contractor does not boycott energy companies and is

authorized to agree in such contracts not to boycott energy companies during the term of such contracts. "Boycott energy company" has the meaning provided in § 809.001 of the Texas Government Code.

- (d) If employing ten (10) or more full-time employees and this Agreement has a value of \$100,000.00 or more, Contractor does not have a practice, policy, guidance, or directive that discriminates against a firearm entity or firearm trade association and is authorized to agree in such contracts not to discriminate against a firearm entity or firearm trade association during the term of such contracts. "Discriminate against a firearm entity or firearm trade association" has the meaning provided in § 2274.001(3) of the Texas Government Code. "Firearm entity" and "firearm trade association" have the meanings provided in § 2274.001(6) and (7) of the Texas Government Code.

- 32. **Human Trafficking.** BY ACCEPTANCE OF THIS AGREEMENT, CONTRACTOR ACKNOWLEDGES THAT FORT BEND COUNTY IS OPPOSED TO HUMAN TRAFFICKING AND THAT NO COUNTY FUNDS WILL BE USED IN SUPPORT OF SERVICES OR ACTIVITIES THAT VIOLATE HUMAN TRAFFICKING LAWS.
- 33. **Captions.** The section captions used in this Agreement are for convenience of reference only and do not affect the interpretation or construction of the Agreement.
- 34. **Electronic and Digital Signatures.** The Parties to this Agreement agree that any electronic and/or digital signatures of the Parties included in this Agreement are intended to authenticate this writing and shall have the same force and effect as the use of manual signatures.
- 35. **Certification.** By his or her signature below, each signatory individual certifies that he or she is the properly authorized person or officer of the applicable Party hereto and has the requisite authority necessary to execute this Agreement on behalf of such Party, and each Party hereby certifies to the other that it has obtained the appropriate approvals or authorizations from its governing body as required by law.

**{Execution Page Follows}**

IN WITNESS WHEREOF, and intending to be legally bound, County and Contractor hereto have executed this Agreement to be effective on the date signed by the last Party hereto.

**FORT BEND COUNTY, TEXAS**

KP George  
KP George, County Judge  
County Judge KP George

12/5/2023  
Date



**ATTEST:**

Laura Richard  
Laura Richard, County Clerk

**HJ CONSULTING, INC.**

Harish Jajoo  
Authorized Agent – Signature

**Harish Jajoo, PE**  
Authorized Agent- Printed Name

**President**  
Title

**11-13-23**  
Date

**APPROVED:**

J. Stacy Slawinski  
J. Stacy Slawinski, County Engineer

**AUDITOR'S CERTIFICATE**

I hereby certify that funds in the amount of \$ 1,341,647.00 are available to pay the obligation of Fort Bend County, Texas within the foregoing Agreement.

Robert Ed Sturdivant  
Robert Ed Sturdivant, County Auditor

i:\agreements\2024 agreements\engineering\h j consulting inc. (24-eng-100187)\agmt for professional engineering services.gaines rd.20429x (kcj - 10.27.2023)

# **EXHIBIT A**

(Follows Behind)



August 14, 2023

## **“EXHIBIT A” – Scope of Services**

### **Gaines Road**

Keegan’s Bayou to Fort Bend County Line, Precinct 4

### **FBC Project # 20429x**

Fort Bend County has requested a proposal to provide professional engineering services (Preliminary Engineering Phase, Design Phase, and Construction Phase Services) for the design and construction/reconstruction of the existing 2-lane asphalt roadway with roadside ditches to proposed 3-lane concrete curb & gutter boulevard section with continuous left turn lane, bridge, storm sewers, detention, drainage outfalls, modification to existing traffic signals and all necessary appurtenances from Bissonnet Street to Fort Bend County Line, utilizing the latest FBC standards.

### **PROJECT LIMITS AND DETAILS:**

1. Develop existing 2 lane roadway with roadside ditches into 3 lane curb and gutter section with storm sewers. A sidewalk is also proposed along one side of the street.
2. Modify the existing signalized intersection including signal at Beechnut Street to accommodate the new geometry.
3. Replace the existing 2 lane bridge across Keegan’s Bayou with 3 lane bridge plus sidewalk on one side.
4. Develop roundabout geometry at Forest Briar Drive and connect to the proposed roundabout at Castle Gate Drive, designed by others.
5. Tie into the existing roadway at the Fort Bend County line at the north end of the project.
6. Transition to existing 2 lane roadway south of Keegan’s Bayou or tie into future proposed 3 lane roadway south of Keegan’s Bayou.
7. The flow from the storm sewers will be directed to proposed detention pond(s), with ultimate outfall to Dry Creek.
8. Traffic analysis will be conducted to check for left turn storage at Beechnut Street intersection.

### **Civil Engineers | Construction Managers**

4771 Sweetwater Boulevard, Suite 254, Sugar Land, Texas 77479  
832-338-3202 (C) | 832-553-3103 (F) | [www.hjconsultinginc.com](http://www.hjconsultinginc.com)

## **Gaines Road, FBC Precinct 4**

Proposal for Professional Engineering Services

August 14, 2023

Page 2 of 19

---

### **ROADWAY ALIGNMENT:**

The proposed Gaines Road will generally run from Keegan's Bayou to Fort Bend County Line. The road turns east-west between Forest Briar Drive and Castle Gate Drive. Right of way restrictions posed by any structures will be considered for the design. Sight triangles will be developed at all the existing intersections. There is also a proposed roundabout at Forest Briar Drive similar to the one at Castle Gate Drive being designed by another consultant.

We propose to perform the following services as per attached submittal schedule (Exhibit B), for a contract lump sum fee of **\$1,341,647** per attached fee proposal (Exhibit C).

### **BASIC SERVICES:**

#### **PRELIMINARY DESIGN PHASE:**

The Preliminary Engineering Phase Report shall serve as a summary document that incorporates the recommendations from the supporting investigative reports, results from working meeting with Fort Bend County, necessary approvals, and final recommendations from the Consultant's efforts. The document will serve as the framework for the design phase, having addressed the major issues that affect the roadway design and supporting infrastructure.

#### **The primary goals of Preliminary Engineering Phase are:**

1. Establish a typical cross section and cross sections in non-standard areas.
2. Determine drainage system needs (Drainage Impact Study).
3. Positively determine right-of-way acquisition needs.
4. Determine potential conflicts with existing facilities.
5. Identify critical path items.
6. Identify problem areas and potential resolution(s).
7. Determine permit and regulatory requirements.
8. Prepare a reasonable construction cost estimate.
9. Prepare a "30 percent" plan set, consisting of all existing features (seen and unseen) shown in plan and profile, and proposed improvements in plan only with minor annotations.
10. Prepare preliminary design review checklist.

## **Gaines Road, FBC Precinct 4**

Proposal for Professional Engineering Services

August 14, 2023

Page 3 of 19

---

**The Preliminary Engineering Phase includes, but not limited to the following major tasks:**

- Review and Research existing conditions from the field visits and existing record drawings (to be confirmed with the topographic survey)
- Send Utility requests to the Utility companies and prepare Preliminary Utility Conflict Table
- Obtain Record Drawings from other entities as required for the project
- Creating existing Base maps
- Initiate Roadway Geometry
- Initiate Roundabout Geometry
- Initiate Bridge Design
- Approved Geotechnical Reports
- Signed and Sealed Topographic Survey
- Signed and Sealed Signal Warrant Analysis
- Exhibits and Drawings
- Construction Cost Estimate
- Coordination with sub-consultants
- Drainage Impact Study (Detention Requirements)

We will follow the latest Fort Bend County Design Guidelines and Standards for this project.

The Preliminary Engineering Phase shall include the preparation and approval of reports necessary to support the recommendations and design of the roadway and all appurtenances included, but not limited to Geotechnical Investigations, and Drainage Impact Study including a drainage report.

Environmental Site Assessments, Wetlands Assessments, Delineation, Concurrence/Permitting and associated tasks are not in the scope of this project. FBC will be responsible for these tasks, if deemed necessary.

HJ will coordinate with sub-consultants as necessary throughout the project. HJ will coordinate with adjoining project consultants for proper transitions.

The Proposed Roadway geometry will be evaluated and the preliminary alternatives for the alignment and Proposed Right-of-Way (ROW) Acquisition will be presented to Fort Bend County during the preliminary stages of the PER.

The Preliminary Engineering Phase shall include working meetings with Fort Bend County and other consultants/sub-consultants and a drainage meeting with Fort Bend

## **Gaines Road, FBC Precinct 4**

### **Proposal for Professional Engineering Services**

August 14, 2023

Page 4 of 19

---

County Drainage District prior to submitting the draft Drainage Report for the project. During this phase, a Topographic Survey will be performed, and the existing conditions will be evaluated including roadway geometrics, bridge, soils, traffic, and environmental conditions. In addition, during this phase parcels should be defined.

Utility companies within the project limits will be contacted and coordinated for obtaining the facility maps and record drawings available and a contact list for the utility companies and a Utility Conflict Table will be prepared. Roadway Schematics and Aerial Exhibits will be prepared for review.

The existing water line and sanitary sewer line along the project may need to be relocated to accommodate the project. Coordination will be made with North Mission Glen MUD, Kingsbridge MUD, and Mission Bend MUD #1 for relocation and approval process and recommendations/options will be provided in PER.

Proposed improvements will include Roadway Geometry, Roundabout Geometry, Pavement Structure, Storm Sewer system, Bridge, Detention options, Preliminary Phasic of Traffic Control Plans and Traffic Signals. A Preliminary Construction Cost Estimate will be prepared and included in the Preliminary Engineering Report.

At the Client Presentation meeting, the Consultant shall present the working draft of the Preliminary Engineering Phase Letter Report including exhibits, supporting reports, and final recommendations. Any issues identified during the Consultant's work effort to get to this project stage that require decision from Fort Bend County should be presented at this meeting for confirmation prior to finalizing the Preliminary Engineering Report such that approval can be granted upon report submittal.

#### **Exhibits/Attachments shall include:**

- **Aerial Exhibit**
  - Provide an exhibit that shows the project limits and surrounding features. Identify notable features of interest, including drainage channels, floodplains, pipelines, roadways, future roadway alignments shown on the Fort Bend County's Major Thoroughfare Plan, latest available aerial photographs, and developments.
- **Schematic Layout of Roadway**
  - Provide a plan view layout with sufficient detail to ensure that the final design can be constructed without any major issues. The schematic layout shall be as a KMZ file and identify ROW parcels to be taken. The schematic should show the pavement marking concept so that traffic movements can be considered and reviewed during the Preliminary Engineering Phase.



Provide the proposed typical sections on the schematic. Typical Sections shall be drawn at 1"=20' horizontal and 1"=2' vertical scale on 11"x17" sheets.

- **Cost Estimates**

- Provide a preliminary construction cost estimate for the final recommendation provided in the Preliminary Engineering Report.

- **Utility Tables**

- The consultant shall coordinate with utility companies that have existing facilities in or adjacent to project limits. The coordination shall include:

- Perform records research and field visits to determine the presence of underground or overhead private or public utilities during the preliminary design phase. A reasonable amount of research should be conducted, including but not limited to contact with companies identified on above-ground markers, railroad commission website research, and map requests from prominent utilities.

- **Level D SUE**

- Identify all existing utilities within the existing and proposed rights-of-way. Provide list of existing utilities with owner and contact information. Coordinate with the utility companies and provide information and schematics, as necessary.
- Identify major utilities that will potentially require relocation. Major utilities are defined pipelines, concrete incased conduits, or other utilities of this nature. Overhead power lines, small gas service lines and other lines other line of this nature as not a concern. Provide a table of the existing utilities. The table shall include ID number for the potential conflicts, stations at the left right-of-way, the centerline, and right-of-way, the owner of the utility, contact name, address, phone number, and email address, any notes such as it may be in possible conflict. The table shall also include clearances from overhead or underground utilities to the proposed roadway features noting utility diameters and clearances from the utility to proposed feature (depth top utility to proposed finished grade elevation).
- Identify any utilities that are within dedicated easements that will be within the proposed right-of-way.

## **Gaines Road, FBC Precinct 4**

Proposal for Professional Engineering Services

August 14, 2023

Page 6 of 19

---

- **Sight Distance**

- The consultant shall investigate sight distance restrictions and general operating conditions of all existing and proposed intersections along Gaines Road within the project limits.
- Sight distance restrictions will be investigated, and Approach and Departure Site Triangles will be developed for the intersections for determining the safe passing distance and stopping sight distance for the traffic.

### **Bridge Engineering Scope of Services:**

iGET Services LLC (iGET) is pleased to submit this proposal to provide professional engineering services for the referenced project. This proposal is in accordance with the scoping meeting.

- iGET will evaluate the field conditions of the creek and the situation of the existing bridge and provide optimal engineering approaches and create a concept design for the proposed bridge. The design concept of the proposed bridge will match the latest TXDOT Standards, and the Fort Bend County's latest specifications and standard drawings.
- The work scope for this project covers Preliminary Engineering, Detailed Structural Design, and Construction Plans & Specifications for a 2-lane concrete bridge on the Gains Rd at Keegans Bayou Crossing, where the creek is about 120 ft. wide from highbank to high-bank. There is a bike trail, going underneath the bridge. The proposed bridge will have a walkway, and as such the bridge deck will have a wider section than the existing.
- The general vicinity of the bridge is not in a floodplain. However, an assessment of the channel crossing for the ATLAS-14 flows, and concrete lining for the channel will be necessary to maintain the existing conditions. Geotechnical information and channel flows will be studied for scour depth assessment.
- Traffic counts are not anticipated to be required for this project.
- Proposed Plans to be provided by iGET shall include:
  - Basis of Estimate (List of Materials)
  - Existing Layout and Demolition Plans
    - Incorporation of County Record information
    - Incorporation of new survey information
  - Proposed Bridge Layout, including:

## **Gaines Road, FBC Precinct 4**

Proposal for Professional Engineering Services

August 14, 2023

Page 7 of 19

---

- Typical sections
- Bridge abutment structural concept
- Cement stabilized abutment backfill
- I-Girder or Beam-slab structural concept
- Pier and bent structural concept
- Bridge approach slab structural concept
- Foundation structural concept
- Railing
- Standard details
- General Notes for construction
- Proposed Bridge Elevation Modification
- County Bridge Standards

### **Survey Scope of Services:**

The Surveyor to provide surveying services along a portion of the Gaines Road from Bissonnet Street to Fort Bend/Harris County line, roughly 5,400 linear feet. The scope area includes ten (10) street intersections (roughly 1,200 linear feet) and one bayou crossing (600 linear feet) within the scope area. The scope area includes roughly 15.5 acres. Work to be performed under the direct supervision of a Registered Professional Land Surveyor currently registered with the Texas Board of Professional Land Surveying. Data to be collected and the methods to be employed are detailed below.

The surveyor to provide boundary surveying services to the extent necessary to generate a topographic survey map, boundary right-of-way determination, and boundary verification for proposed corner clip intersections.

#### **A. Primary Project Control/Baseline:**

- At least eight primary project control points to be established in accordance with the Texas Society of Professional Surveyors Manual of Practice and Fort Bend County Design Manual 6.1. Located within or near the project area, but in an area least likely to be disturbed, the control points to be within visible range of each other and suitable for either conventional or GPS use.
- Horizontal values for project control points to be published as northings and eastings in US Survey Feet, based on the Texas State Plane Coordinate System, established for the South Central Zone, from the North American Datum of 1983 (NA2011) epoch 2010.00, displayed in surface values with a combined adjustment factor of 1.00013 applied.

## **Gaines Road, FBC Precinct 4**

Proposal for Professional Engineering Services

August 14, 2023

Page 8 of 19

---

- Coordination with County to verify a specific project scale factor, if required.
- Vertical values for project control points to be published in US Survey Feet, based on the North American Vertical Datum of 1988, 2001 Adj. utilizing current NGS monuments (referenced to HCFRM), established by a digital level loop. Coordination with County to utilize vertical values on nearby project, if required.
- Survey control map and individual control monument detail sheet, signed and sealed by the project surveyor, to be prepared. It is to include an overall view, the horizontal and vertical datum, the surface adjustment factor as well as individual sketches of each primary control point with location ties, driving directions, right-of-way station and offset information, surface coordinates and leveled elevations.
- Once established by engineer, stake (PK nails/cut "x") design baseline at the project begin/end, begin/end of curves, and at even 1,000 foot stations.

*Note: This scope includes two (2) separate survey field trips – establish control, stake design baseline*

### **B. Utility Locates:**

- The Texas 811 system to be contacted to notify participants to locate their utility lines within the project area.
- A record of contacts and locate interactions to be maintained and provided to the project designer.
- Utility markings along with other visible evidence of utilities to be located by survey crews and represented within the topographic survey drawing.

### **C. Right-Of-Entry:**

- One right-of-entry letter to be prepared, submitted for approval, and subsequently sent by standard first class mail and followed up if necessary to approximately ten owners of the property(s) located along of Gaines Road to obtain permission to enter the property to perform survey, geotechnical, and design related activities if necessary.
- Once received, the permission form to be provided to the project designer to share with other necessary entities. Before survey crews enter said property, the property owner to be contacted in the manner instructed on the right-of-entry permission form.
- Pape-Dawson has allocated one hour of coordination for each landowners' consent. If consent is not obtained, Pape-Dawson will not be able to perform work within the landowners' property.

**D. Topographic Survey:**

- Obtain topographic features within the apparent right-of-way of Gaines Road bounded by existing fences as discussed in scoping meeting within the unfenced areas, topographic scope will comply with Fort Bend County design manual 6.1 in conjunction with right-of-entry letters.
  - Survey crews to locate pavement edges, ditches, swales, sidewalks, paint stripes, driveways (with composition information), grade breaks, drainage structures (including pipe size, material, top and invert elevations), bridges (type, support material and sizes, construction joints, expansion joints, low chord, etc.) and roadway signs (labeled accordingly) as they occur or at 100-foot intervals.
- 2D planimetric features to be mapped within project area of Gaines Road and to include but not be limited to signs (to include size and type), pavement markings, landscape limits, sidewalks, ramps, fences, and mailboxes.
- Elevation cross sections to be obtained within the project area in 100-foot intervals.
- Elevations within said project area to be visualized at a 1"=20' scale within the AutoCAD drawing to be provided.
- If heavily silted, drainage structure flow lines to be excavated; no other excavation to be performed by survey crews.
- Trees (12-inch caliper or larger at breast height) within the right-of-way and trees within 25 feet outside of the right-of-way to be located (unfenced areas only). Trees located within heavily wooded areas will not be located.
- Topographic survey deliverables to include an AutoCAD drawing with 1-foot contours interval and labeling visualized at a 20-foot scale, a LandXML TIN file, and a text file in standard ASCII format (PNEZD comma delimited point file).

**E. Right-of-Way Surveying:**

- Boundary research and field recovery to be performed to locate and depict existing property lines and existing right-of-way line within the scope area.
- **This fee is subject to sales tax of 8.25%.**

**F. Project Management:**

- Project management activities including internal project coordination as well as quality control. Pape-Dawson is to coordinate our activities with Fort Bend

## **Gaines Road, FBC Precinct 4**

### **Proposal for Professional Engineering Services**

August 14, 2023

Page 10 of 19

---

County and other reviewing agencies as appropriate, including one kick-off meeting, four status meetings, and one final close out meeting.

#### **DELIVERABLES:**

- Survey control map and individual control monument detail sheet.
- Texas811 locate request ticket numbers.
- Utility Information Spreadsheet.
- AutoCAD topographic survey at 1" = 20' scale to include datum notes, elevations as specified above, title block, north arrow, scale, and FEMA note.
- Two (2) signed and sealed copies of the Right-of-way parcel drawings and descriptions.
- LandXML TIN file.
- Electronic text file in standard ASCII format PNEZD (Point, Northing, Easting, Elevation, Description) point file of final project points

#### **Optional Additional Services:**

##### **G. Parcel Acquisition:**

- Boundary research and field recovery to be performed in accordance with the Texas Society of Professional Surveyors Manual of Practice to generate a signed and sealed parcel acquisition drawing and description for right-of-way parcels necessary to accomplish the necessary acquisitions along Gaines Road. Pape-Dawson assumes up to (6) acquisition "corner clip" parcels to be required for this project. If additional acquisition parcels are required, an additional fee of \$2,500 each parcel will be required.
- Acquisition survey deliverables to be comprised of two signed and sealed right-of-way parcel drawings and descriptions which is to include an overall parent tract sketch, the parent tract remainder acreage, and numbered calls within the metes and bounds description.
- Pape-Dawson to coordinate with a local title company to prepare the necessary abstractors reports on the four (6) acquisition tracts. The cost is included within this scope. Any additional abstractors reports will be authorized and billed separately.
- Pape-Dawson to set property corners for the parcel drawings once approved by the County. Property corners to be set in one contiguous stage.

##### **H. Construction Staking**

- Recover or re-establish control prior to construction (within 24 months).

**Geotechnical Scope of Services:**

Furnished information indicated that the total length of the project is 1.20 miles with a bridge crossing over Keegans Bayou.

Fort Bend County Engineering Design Manual (May 2021) will be adopted for this project:

1. Drilling and sampling one (1) boring at a depth of 15 feet every 500 feet along the road alignment. A total of 11 borings will be drilling.
2. Drilling and sampling one (1) boring at a depth of 100 feet at each bridge abutment. A total of two (2) borings will be drilled.

The scope of our services was specified based on Fort Bend County and Harris County stands and specifications:

1. Total number of borings is 13 as follows:
  - Drilling and sampling (11) borings to a depth of 15-feet at proposed road alignment.
  - Drilling and sampling three (2) borings to a depth of 100-feet at the proposed bayou bridge.
2. Obtaining continuous soil samples to a depth of 10 feet.
3. Earth Engineering will perform granular soil sampling utilizing the Standard Penetration Test (split spoon sampler) by driving. Blow counts will be recorded as produced by a 140-pound weight falling 30 inches (ASTM D-1558). Cohesive soils will be sampled using a thin walled sampler (Shelby Tube) hydraulically pushed into the soil (ASTM D-1587).
4. Performing laboratory tests on selected representative soil samples to develop the engineering properties of the soil. These tests may include: pocket penetrometers, unconfined compression, present moisture content, percent passing 200 sieves, dry densities, Atterberg Limits, Unconsolidated-Undrained Triaxial test, California Bearing Ratio (CBR), and OMD Standard Compaction as deemed appropriate.
5. Utilizing the results of observations both in the field and in limited laboratory tests, Earth Engineering will author a report that will include the following subjects:
  - soil stratigraphy: soil encountered up to 100 feet
  - groundwater conditions and groundwater control during construction
  - develop design recommendations for the proposed bayou bridge foundations including bearing piles capacity curves.
  - Provide scour analysis and recommendations.
  - develop design recommendations for the underground utilities. The
  - recommendations will include buried structures such as manhole etc.

## **Gaines Road, FBC Precinct 4**

### **Proposal for Professional Engineering Services**

August 14, 2023

Page 12 of 19

---

- classify the soils types in accordance to FBC requirements based on the characteristics of the soils along the alignment
  - recommend the utilities bedding in accordance with FBC standards and specifications
  - present subgrade stabilization option such as lime/fly-ash for cohesion-less soils and lime for cohesive soils
  - recommend construction considerations, as deemed necessary
  - recommend back-fill material specifications
- Incorporating all of the above into a geotechnical engineering report which is performed under the direction of, and signed by, a professional engineer registered in the State of Texas.

We anticipate that the total project duration will be 60 working days.

### **Traffic Scope of Services:**

We have assumed for the purposes of this proposal that our services will be to conduct preliminary and final design services for the intersections of Gaines Road at Beechnut Street for the Gaines Road Preliminary Engineering Report (PER) and Final Design. The scope of this proposal is based on experience and will need to be confirmed by the agency. Based on our understanding of the project at this time, we propose the following scope of services:

The following paragraphs outline a detailed Scope of Services. MBCO will be responsible for performing the following tasks:

- Coordinating with the Client and Fort Bend County staff on the project to obtain available information on existing and planned roadway improvements.
- Conducting field reconnaissance and traffic counts for the intersections of Gaines Road at Beechnut Street.
- Capacity and Level of Services analysis (LOS) for the intersections of Gaines Road at Beechnut Street, which will be conducted by SYNCHRO.
- Preliminary Design Phase services for traffic signalization for the intersections of Gaines Road at Beechnut Street which will include construction cost estimates for any recommended improvements.
- Final Design Phase services for traffic signalization for the intersections of Gaines Road at Beechnut Street which will include basis of estimate, general notes, existing conditions, proposed signal layouts/elevations/details, standards &



## **Gaines Road, FBC Precinct 4**

Proposal for Professional Engineering Services

August 14, 2023

Page 13 of 19

---

details, final cost estimate and addressing comments & revisions from Fort Bend County

### **Task 1 – Project Coordination:**

MBCO will Coordinate with the Client and Fort Bend County staff on the project to obtain available information on existing and planned roadway improvements. This will include as-built drawings, utility records, traffic studies and existing signal timing plans.

### **Task 2 – Field Reconnaissance and Traffic Counts:**

The critical peak hours of site operations will be during the weekday during AM and PM peak hours of traffic operations. A comprehensive field reconnaissance will be undertaken to review the location and operation of the intersection(s) in the field. Traffic turning movement counts will be performed at the following intersections on typical weekday peak periods from 7:00 a.m. to 8:00 p.m.:

- Gaines Road at Beechnut Street

Additionally, 24-hour tube counts will be conducted on Gaines Road in between the two intersections of Bissonnet and Beechnut Streets.

### **Task 3 – Capacity and Level of Services analysis (LOS) Analysis:**

A traffic flow model will be developed for the intersections by utilizing traffic analysis software SYNCHRO to assist in signal timing optimization. This will include the capacity and Level of Services analysis (LOS) for the following study intersections:

- Gaines Road at Beechnut Street

### **Task 4 – Preliminary Design**

MBCO will develop layouts of the signal(s) to meet Fort Bend County and TMUTCD requirements which will include proposed controller location, pole locations, vehicle and pedestrian signal heads, vehicle detection, and proposed curb ramps. This will also include sight triangles for right turns at 15' and 25' setbacks, utility conflict table (UCT), quantities and construction cost estimates.

### **Task 5 – Engineered Plans – Final Design – Bissonnet & Beechnut Streets @ Gaines Road**

The plans will include the following sheets and will be per agency specifications:

## Gaines Road, FBC Precinct 4

Proposal for Professional Engineering Services

August 14, 2023

Page 14 of 19

---

- Basis of Estimate
- General Notes
- Existing Conditions Layout (from client provided topographic survey)
- Proposed Traffic Signal Layout & Elevations
- Proposed Traffic Signal Standards & Details
- Cost Estimate Quantities
- Address Comments/Revisions

### **Drainage (Hydraulic and Hydrologic Analysis):**

The consultant shall perform the following Hydraulic and Hydrologic support services during the preliminary design phase:

The scope of services includes the following tasks:

#### **1. Preparation of Drainage Impact and Mitigation Analysis Report for submission and approval of Fort Bend County Drainage District:**

- Determine existing and proposed condition discharge rates from the proposed roadway alignment limits. Confirm limits of the analysis with Preliminary layout for the proposed roadway. Discharge rates for proposed conditions will reflect the change in Tc and change of the drainage system from open ditch to storm sewers. Additionally, all new areas of Proposed Right-of-Way (ROW) will be accounted for in the drainage calculations.
- Develop hydrographs for existing and proposed conditions for design storms and determine required detention volume requirements to offset the increase in peak runoff rates for storm s up to the 100-year events. Storms to be evaluated for the analysis will include the 2-year and 100-year events using Atlas 14 rainfall data.
- Perform drainage area delineations for the proposed conditions and develop onsite flow calculations for proposed conditions. Perform extreme event sheet flow analysis.
- Identify all mitigation requirements, including measures needed to eliminate impacts on flow rates and floodplain storage. Such measures may include proposed detention pond, floodplain excavation, etc.
- Provide options for detention pond(s) size and location.
- Update calculations and hydrologic modeling data to reflect required mitigation measures and features.

**2. Preparation of Drainage Report:**

- Prepare a written report detailing the assumptions in the drainage study and hydraulic analysis, the obtained results and proposed mitigation recommendations. The report will summarize background information, methodology, and results regarding the existing conditions and proposed improvements. Figures, tables, appendices, etc. will be provided to convey relevant information.

Preparation of Drainage Impact and Mitigation Analysis Report for submission and approval of Fort Bend County Drainage District.

**FINAL DESIGN PHASE:**

The design phase of the project shall consist of the preparation of completely approved construction documents that reflect the approved Preliminary Engineering Report recommendation accepted by Fort Bend County.

The Design shall build upon the framework identified in the Preliminary Engineering Report and include roadway design, profiles, drainage system and appurtenances, details, and the bid documents necessary for a complete design review. The submittal shall be considered final and ready for construction, barring minor comments from Fort Bend County.

The Design Submittal shall address all comments from the Preliminary Engineering Phase of the project. The Design Submittal shall include the submittal of the construction ready Plans on 11"x17", Specifications, and a Cost Estimate (PS&E) in accordance with FBCED requirements.

The design phase shall also include the coordination of utilities. The coordination shall include, but not limited to:

- Depict utilities to a reasonable degree of accuracy on the plan and profile drawings.
- Utility Conflict Table to be updated during the Final Design Phase as required. Refer to Appendix C, Fort Bend County Utility Conflict Table template.
- Submit milestone level drawings to applicable utility companies for their review.

The design submittal includes the following milestones:

## **Gaines Road, FBC Precinct 4**

Proposal for Professional Engineering Services

August 14, 2023

Page 16 of 19

---

- **70% Submittal (1<sup>st</sup> Submittal):**

A. A digital copy (PDF) of the drawings, specifications, and estimate shall be submitted to the Program Manager.

B. The submittal shall consist of:

- Coversheet with a 70 percent interim seal
- Sheet Index
- General Notes
- Existing and Proposed Typical Sections
- Project Layout Sheet
- Survey Control
- ROW (Existing and Proposed) Sheet
- Horizontal Alignment Data
- Roadway Plan and Profile Sheets
- Bridge Layout & Details
- Drainage Area Map with Hydraulic Calculations
- Detention Plan
- Traffic Control Plan
- Traffic Signals & Details
- Signing and Striping Plan
- Storm Water Pollution Prevention Plan
- Cross Sections (100 foot intervals w/earthwork calcs)
- Specifications Table of Contents per Fort Bend County Specification Table of Contents Template (Harris County Specifications, TxDOT Specifications, and others to be used as necessary depending on the jurisdiction).
- Construction Cost Estimate (PDF and Excel Format)
- Bid Form (PDF and Excel Format)
- 70% Plans on 11"x17" Sheets with Electronic PDF files, and KMZ file of existing conditions and current design
- Submit drawings for regulatory permit and utility reviews
- 70% Review Checklist

- **95% Submittal (2<sup>nd</sup> Submittal):**

A. A digital copy (PDF) of the drawings, specifications, and estimate shall be submitted to the Program Manager.

## **Gaines Road, FBC Precinct 4**

### **Proposal for Professional Engineering Services**

August 14, 2023

Page 17 of 19

---

- B. The 95 percent submittal should be considered complete with 95 percent interim seal, and shall include all of the 70 percent requirements plus the following:
  - Responses to 70 percent comments
  - Standard Construction details per Fort Bend County construction details, and others to be used as per necessary depending on the jurisdiction.
  - Construction cost Estimate (PDF and Excel Format)
  - Project Manual with Bid Form (PDF and Excel Format), Specifications Table of Contents, Special Specifications or Conditions, and Contract Documents Excluded
  - 95% Review Checklist

- **Final Submittal:**

- A. A digital copy in PDF of the drawings (signed and sealed)
- B. The 100 percent submittal should be considered ready for project advertisement and shall include the following:
  - Responses to 95 percent comments
  - Construction cost estimate (PDF and Excel Format)
  - Project Manual with Bid Form (PDF and Excel Format), Specifications Table of Contents, Special Specifications or Conditions, and Contract Documents Excluded
  - 100% Review Checklist

The design phase shall also include the design (if needed) of any water line or sanitary sewer relocation (Optional additional services), and the coordination of private utilities. The coordination shall include, but not limited to:

- Perform records research and field visits to determine the presence of underground or overhead private or public utilities during the Preliminary Design phase. A reasonable amount of research should be conducted, including but not limited to contact with companies identified on above-ground markers, Railroad Commission website research, and map requests from prominent companies (i.e. CenterPoint Energy, AT&T, etc.)
- Send records requests to utility companies and obtain I.D. numbers (CenterPoint and AT&T)

## **Gaines Road, FBC Precinct 4**

### **Proposal for Professional Engineering Services**

August 14, 2023

Page 18 of 19

---

- Depict utilities to a reasonable degree of accuracy on the plan and profile drawing
- Prepare a conflict table during the Preliminary Design phase to highlight conflicts between existing utilities and proposed improvements, to be updated during the Final Design phase as required. Refer to Appendix C, Fort Bend County Utility Conflict Table template.
- Submit milestone-level drawings to applicable utility companies for review
- Meet with the utility companies and provide information and plans, as necessary.
- Provide any documentation as necessary and assist Fort Bend County into entering an agreement with the utility companies for the relocation of the facility.
- Obtain approval from the Fort Bend County for all requests made by utility companies prior to implementing changes.

#### **Additional Considerations for the Design Phase are:**

1. These services shall be performed in accordance with the latest Fort Bend County Design Guidelines.
2. The pavement elevation shall be set in accordance with the Fort Bend County Guidelines, or from coordination with FBCED if there are any special circumstances.
3. The pavement section shall be designed in accordance with the Guidelines. The results of the coring tests will be utilized to verify that the existing concrete pavement meets the Fort Bend County guidelines.
4. The drainage design shall be designed in accordance with FBCDD Drainage Criteria Design Manual and TxDOT (if required).
5. All the CAD work will follow Fort Bend County design standards.
6. Plan and profile sheets will be created for a scale of 1" = 40' for horizontal and 1" = 4' for vertical with all the references attached and shown as per the Fort Bend County design requirements for all submittals and the Final Submittal will be a Standard 11" x 17".
7. Standard Sheets per Fort Bend County as provided on the website.
8. Driveway width and location should match existing when feasible. Also, driveways should meet Fort Bend County Regulations for Subdivisions, Section 7 requirements.

**Gaines Road, FBC Precinct 4**

Proposal for Professional Engineering Services

August 14, 2023

Page 19 of 19

---

The centerline station and percent grade shall be indicated on the drawings for all driveways.

9. Any public utilities in conflict with the road construction will be adjusted/relocated in this phase.

**Traffic Control Plans (TCP):**

The Traffic Control Plans will be prepared per Fort Bend County Standards and per the latest Texas Manual on Uniform Traffic Control Devices.

As the project anticipates for construction of the new concrete pavement over existing pavement, the Traffic control plan can be phased to use the existing pavement for one-way traffic.

**Signing and Pavement Marking Plans (SPM):**

The Signing and Pavement Marking Plans will be prepared per Fort Bend County Engineering Department Standards and per the TxDOT Standards, if applicable.

**Storm Water Pollution Prevention Plans (SWPPP):**

The Storm Water Pollution Prevention Plans will be prepared per Fort Bend County Standards and will follow TPDES General Permit # TXR150000 requirements. The drawings will be prepared based on Fort Bend County Criteria.



Preliminary Design Schedule  
Gaines Road  
FBC Project #20429x

GAINES ROAD

Project Start: Mon, 10/2/2023

Display Week: 1

Display Week: 1						2-Oct	9-Oct	16-Oct	23-Oct	30-Oct	6-Nov	13-Nov	20-Nov	27-Nov	4-Dec	11-Dec	18-Dec	25-Dec	1-Jan	8-Jan	15-Jan	22-Jan	29-Jan	5-Feb	12-Feb	19-Feb	26-Feb	4-Mar	11-Mar	18-Mar	25-Mar	1-Apr	8-Apr	15-Apr	22-Apr	29-Apr	6-May	13-May	20-May	27-May	3-Jun	10-Jun	17-Jun	24-Jun	1-Jul		
ID	TASK	PROGRESS	DURATION	START	END	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M		
	Preliminary Design Phase	Cal Days	137	2-Oct-23	16-Feb-24																																										
1	Notice to Proceed			2-Oct-23	2-Oct-23																																										
2	Project Coordination and Meetings		4	2-Oct-23	6-Oct-23																																										
3	Data Collection/Meetings/NTP (Subconsultants)		5	3-Oct-23	10-Oct-23																																										
4	Topographic Survey & Existing ROW Maps (Signed and Sealed)		41	3-Oct-23	4-Dec-23																																										
5	FBC Review and Field Topo Survey Verification Site Visit		4	7-Dec-23	13-Dec-23																																										
6	Key Maps, Vicinity Maps and Other Maps		5	14-Dec-23	21-Dec-23																																										
7	Develop Proposed Alignment		4	7-Dec-23	13-Dec-23																																										
8	Geotechnical Investigation		50	3-Oct-23	15-Dec-23																																										
9	Evaluate Existing Pavement		5	4-Dec-23	11-Dec-23																																										
10	Evaluate Existing Conditions/Geometry		10	4-Dec-23	18-Dec-23																																										
11	30% Roadway Plans		30	5-Dec-23	22-Jan-24																																										
12	30% Bridge Plans		30	5-Dec-23	22-Jan-24																																										
13	30% Traffic Signal Plans		30	5-Dec-23	22-Jan-24																																										
14	Drainage Study		50	10-Oct-23	26-Dec-23																																										
15	Preliminary Utility Information Table		30	5-Dec-23	22-Jan-24																																										
16	Preliminary Utility Conflict List		30	5-Dec-23	22-Jan-24																																										
17	Preliminary ROW Acquisition Table		5	22-Jan-24	29-Jan-24																																										
18	Preliminary ROW Map		5	29-Jan-24	5-Feb-24																																										
19	Preliminary Construction Cost Estimate		5	22-Jan-24	29-Jan-24																																										
20	Identify Problem Areas and Potential Resolution		5	22-Jan-24	29-Jan-24																																										
21	Identify Permit and Regulatory Requirements		5	22-Jan-24	29-Jan-24																																										
22	Engineer QA/QC and Incorporate Comments		5	22-Jan-24	29-Jan-24																																										
23	Submit Draft Preliminary Engineering Report			30-Jan-24	30-Jan-24																																										
24	Client Presentation Meeting with Fort Bend County			13-Feb-24	13-Feb-24																																										
25	Fort Bend County Review (Review of Exhibits Presented)			13-Feb-24	13-Feb-24																																										
26	Incorporate Fort Bend County Comments		4	14-Feb-24	20-Feb-24																																										
27	Finalize Pending Items/Issues		2	14-Feb-24	16-Feb-24																																										
28	Submit Final Preliminary Engineering Report			16-Feb-24	16-Feb-24																																										
29	Study Phase Duration	Work Days	93	2-Oct-23	16-Feb-24																																										
30	Acceptance of Study Phase Report by Fort Bend County		10	16-Feb-24	1-Mar-24																																										





GAINES ROAD

Project Start: Mon, 3/4/2024

Display Week: 1

Display Week:							4-Mar	11-Mar	18-Mar	25-Mar	1-Apr	8-Apr	15-Apr	22-Apr	29-Apr	6-May	13-May	20-May	27-May	3-Jun	10-Jun	17-Jun	24-Jun	1-Jul	8-Jul	15-Jul	22-Jul	29-Jul	5-Aug	12-Aug	19-Aug	26-Aug	2-Sep	9-Sep	16-Sep	23-Sep	30-Sep	7-Oct	14-Oct	21-Oct	28-Oct	4-Nov	11-Nov	18-Nov	25-Nov	2-Dec		
ID	TASK	PROGRESS	DURATION	START	END	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M			
	Final Design Phase	Cal Days	241	4-Mar-24	31-Oct-24																																											
1	Notice to Proceed			4-Mar-24	4-Mar-24																																											
2	Project Coordination and Meetings		2	4-Mar-24	6-Mar-24																																											
3	Address 30% Comments		9	6-Mar-24	19-Mar-24																																											
4	Proposed ROW Maps (Metes and Bounds)		20	6-Mar-24	4-Apr-24																																											
5	Traffic Control Schematics (Develop Phases and Steps)		15	6-Mar-24	27-Mar-24																																											
6	Drainage Area Maps & Hydraulic Calculations		5	19-Mar-24	26-Mar-24																																											
7	Detention Plans and Calculations		5	26-Mar-24	3-Apr-24																																											
8	Horizontal Alignment Data Sheet		2	19-Mar-24	21-Mar-24																																											
9	Plan and Profile Sheets		25	19-Mar-24	24-Apr-24																																											
10	Bridge Design Sheets		25	19-Mar-24	24-Apr-24																																											
11	Traffic Signal Sheets		25	19-Mar-24	24-Apr-24																																											
12	Demolition Plans		25	19-Mar-24	24-Apr-24																																											
13	Traffic Control Phasing Presentation/Review Meeting (if reqd)			28-Mar-24	28-Mar-24																																											
14	Traffic Control Plans		15	28-Mar-24	19-Apr-24																																											
15	Project Layout Sheet		5	24-Apr-24	1-May-24																																											
16	Typical Sections		10	24-Apr-24	8-May-24																																											
17	Cover Sheet		2	24-Apr-24	26-Apr-24																																											
18	Index of Sheets		2	26-Apr-24	30-Apr-24																																											
19	Fort Bend County Standard Sheets		2	24-Apr-24	26-Apr-24																																											
20	Storm Water Pollution Prevention Plan		5	1-May-24	8-May-24																																											
21	Cross Sections and Earthwork Calculations		10	24-Apr-24	8-May-24																																											
22	Specification Table of Contents		3	1-May-24	6-May-24																																											
23	Bid Form with Estimated Unit and Total Costs		5	1-May-24	8-May-24																																											
24	Engineer QA/QC and Incorporate Comments		5	8-May-24	15-May-24																																											
25	1st submittal to Fort Bend County (70% Submittal)			16-May-24	16-May-24																																											
26	1st submittal to TxDOT			16-May-24	16-May-24																																											
27	Fort Bend County Review		15	17-May-24	10-Jun-24																																											



**"EXHIBIT C" - Compensation for Professional Services**

**Project Name: *Gaines Road Segment X***

**Project Limits: Keegan's Bayou to County Line**

**FBC Project # 20429x**

**BASIC SERVICES**

<b>1 Preliminary Design Phase (Lumpsum)</b>	<b>\$ 272,950.00</b>
Preliminary Design Subtotal	\$ 219,590.00
Project Management Subtotal	\$ 52,360.00
Other Expenses Subtotal	\$ 1,000.00
<b>2 Final Design Phase (Lumpsum)</b>	<b>\$ 475,335.00</b>
Drawings & Documents Subtotal	\$ 422,245.00
Project Management Subtotal	\$ 51,340.00
Other Expenses Subtotal	\$ 1,750.00
<b>3 Bid and Construction Phase (Time and Material)</b>	<b>\$ 60,000.00</b>
<b>4 Drainage Impact Study (Lumpsum)</b>	<b>\$ 124,155.00</b>
<b>5 Bridge (Subconsultant: iGET Services)</b>	<b>\$ 124,390.00</b>
Preliminary Engineering Services for Bridge Design	\$ 36,846.00
Final Engineering Services for Bridge Design	\$ 87,544.00
<b>6 Survey (Subconsultant: Pape-Dawson Engineers)</b>	<b>\$ 65,700.00</b>
Topographic Surveying and Mapping	\$ 65,700.00
<b>7 Geotechnical (Subconsultant: Earth Engineering)</b>	<b>\$ 50,756.00</b>
Geotechnical Investigation for Road Alignment and Bridge	\$ 50,756.00
<b>8 Traffic (Subconsultant: MBCO Engineering &amp; Surveying)</b>	<b>\$ 34,121.00</b>
Traffic Study	\$ 5,821.00
Preliminary Traffic Engineering	\$ 8,770.00
Final Traffic Engineering	\$ 19,530.00
<b>Sub-Total Basic Services (1-8): \$ 1,207,407.00</b>	



**"EXHIBIT C" - Compensation for Professional Services**

**Project Name: *Gaines Road Segment X***

**Project Limits: Keegan's Bayou to County Line**

**FBC Project # 20429x**

**OPTIONAL ADDITIONAL SERVICES**

<b>9 Right of Way Acquisition (Approximate) (Subconsultant: Pape-Dawson Engineers)</b>	<b>\$ 15,000.00</b>
Parcel Meets & Bounds with Abstracting and Title Research (6 Parcels (Approx) @ \$2500/Parcel)	\$ 15,000.00

<b>10 Survey Staking (Subconsultant: Pape-Dawson Engineers)</b>	<b>\$ 3,500.00</b>
Construction staking	\$ 3,500.00

<b>11 Subsurface Utility Exploration (SUE) Services (Approximate) (Subconsultant: TBD)</b>	<b>\$ 50,000.00</b>
--	---------------------

<b>12 Public Utilities Relocation Design</b>	<b>\$ 65,740.00</b>
Water Line Relocation	\$ 32,870.00
Sanitary Sewer Relocation	\$ 32,870.00

**Sub-Total Optional Additional Services (9-12) \$ 134,240.00**

**TOTAL SERVICES (BASIC & OPTIONAL ADDITIONAL): \$ 1,341,647.00**



**GAINES ROAD SEGMENT X  
KEEGAN'S BAYOU TO COUNTY LINE**

**FBC PROJECT# 20429x**

**HJ CONSULTING, INC.**

**LEVEL OF EFFORT FOR PRELIMINARY DESIGN, AUGUST 2023**

Employee Classification		No. of Sheets	Principal	Project Manager	QA/QC Engineer	Project Engineer	Graduate Engineer	CAD Technician	Admin	Subtotal Hours	Total
Labor Rate Per Hour			\$325.00	\$275.00	\$225.00	\$175.00	\$135.00	\$105.00	\$75.00		
TASK	TASK DESCRIPTION	ESTIMATED HOURS									
PRELIMINARY DESIGN											
1	Maps										
1.1	Project Location Map	1					1	4		5	\$ 555.00
1.2	Alignment Exhibit with Aerial Map	2		2	2	6	12	18		40	\$ 5,560.00
1.3	Drainage Area Map	2		2	2	6	12	18		40	\$ 5,560.00
1.4	Sight Triangle Exhibit	2		2	2	6	12	18		40	\$ 5,560.00
1.5	Right of Way Exhibit	2		2	2	6	12	18		40	\$ 5,560.00
1.6	FEMA FIRM Map	1		1	1		2	4		8	\$ 1,190.00
2	Narrative			2	4	10	30		12	58	\$ 8,150.00
2.1	Introduction, Limits, Purpose and Scope			1	1	6	6			14	\$ 2,360.00
2.2	Existing Conditions			2	2	8	12			24	\$ 4,020.00
2.3	Proposed Improvements			4	4	24	24			56	\$ 9,440.00
3	Right of Way Acquisition Needs			6	4	40	16			66	\$ 11,710.00
4	Identify Potential Conflicts with Facilities and Utilities			4	2	12	24			42	\$ 6,890.00
5	Utility Conflicts List			2	2	6	12			22	\$ 3,670.00
5.1	Public water and sewer Private utilities and pipelines				2		12			14	\$ 2,070.00
6	Identify Critical Path Items										
6.1	Level 1 schedule with Design, ROW, Bidding, and Construction			4	2	6	6			18	\$ 3,410.00



**GAINES ROAD SEGMENT X  
KEEGAN'S BAYOU TO COUNTY LINE  
FBC PROJECT# 20429x  
HJ CONSULTING, INC.**

**LEVEL OF EFFORT FOR PRELIMINARY DESIGN, AUGUST 2023**

Employee Classification		No. of Sheets	Principal	Project Manager	QA/QC Engineer	Project Engineer	Graduate Engineer	CAD Technician	Admin	Subtotal Hours	Total
Labor Rate Per Hour			\$325.00	\$275.00	\$225.00	\$175.00	\$135.00	\$105.00	\$75.00		
TASK	TASK DESCRIPTION	ESTIMATED HOURS									
7	Identify Problem Areas and Potential Resolution			4	4	12	16			36	\$ 6,260.00
8	Identify Permit and Regulatory Requirements			4	2	12	16			34	\$ 5,810.00
9	Preliminary Construction Cost Estimate			4	4	8	20	26		62	\$ 8,830.00
10	Preliminary Drainage Design		2	10	4	50	100			166	\$ 26,550.00
11	Preliminary Roadway Design		4	26	10	100	40			180	\$ 33,600.00
12	30% Plans (11"x17" Sheets)										
12.1	Existing Typical Section	1		1	1	8		16		26	\$ 3,580.00
12.2	Proposed Typical Section	1		2	2	16		16		36	\$ 5,480.00
12.3	Plan & Profile	13									
12.3.1	Existing Features in Plan & Profile			2	4	26	26	104		162	\$ 20,430.00
12.3.2	Minor Annotations		4	6	4	12	26	65		117	\$ 16,285.00
13	Incorporate review comments (Draft to Final)		4	10	6	20	26	40	6	112	\$ 17,060.00
<b>PRELIMINARY DESIGN SUBTOTAL</b>		<b>25</b>	<b>14</b>	<b>103</b>	<b>73</b>	<b>400</b>	<b>463</b>	<b>347</b>	<b>18</b>	<b>1418</b>	<b>\$ 219,590.00</b>



**GAINES ROAD SEGMENT X  
KEEGAN'S BAYOU TO COUNTY LINE  
FBC PROJECT# 20429x  
HJ CONSULTING, INC.**

**LEVEL OF EFFORT FOR PRELIMINARY DESIGN, AUGUST 2023**

Employee Classification		No. of Sheets	Principal	Project Manager	QA/QC Engineer	Project Engineer	Graduate Engineer	CAD Technician	Admin	Subtotal Hours	Total
Labor Rate Per Hour			\$325.00	\$275.00	\$225.00	\$175.00	\$135.00	\$105.00	\$75.00		
TASK	TASK DESCRIPTION	ESTIMATED HOURS									
PROJECT MANAGEMENT											
14	Field Visit (Investigations and Findings)			4		8	16			28	\$ 4,660.00
15	Coordination for Bridge		1	2		10	8			21	\$ 3,705.00
16	Coordination for Topographic Survey		2	8		12	12			34	\$ 6,570.00
17	Coordination for Geotechnical		4	4		8	10			26	\$ 5,150.00
18	Coordination for Traffic		1	1		2	4			8	\$ 1,490.00
19	Coordination with Public Utilities		2	24		12				38	\$ 9,350.00
20	Coordination with Centerpoint Energy, AT&T, Comcast and Other (Private Utilities)		1	8		16	16		8	49	\$ 8,085.00
21	Project Management and Meetings (Includes Study Phase Meetings)		4	32		16			6	58	\$ 13,350.00
PROJECT MANAGEMENT SUBTOTAL			15	83		84	66		14	262	\$ 52,360.00
OTHER EXPENSES											
22	Printing/Plotting/Copying										\$ 400.00
23	Mileage/Postage/Courier										\$ 600.00
OTHER EXPENSES SUBTOTAL											\$ 1,000.00
TOTAL HOURS			29	186	73	484	529	347	32	1680	
TOTAL ESTIMATE			\$9,425	\$51,150	\$16,425	\$84,700	\$71,415	\$36,435	\$2,400		\$ 272,950.00



**GAINES ROAD SEGMENT X**  
**KEEGAN'S BAYOU TO COUNTY LINE**  
**FBC PROJECT# 20429x**  
**HJ CONSULTING, INC.**  
**LEVEL OF EFFORT FOR FINAL DESIGN, AUGUST 2023**

Employee Classification		No. of Sheets	Principal	Project Manager	QA/QC Engineer	Project Engineer	Graduate Engineer	CAD Technician	Admin	Subtotal Hours	Total
Labor Rate Per Hour			\$325.00	\$275.00	\$225.00	\$175.00	\$135.00	\$105.00	\$75.00		
TASK	TASK DESCRIPTION	ESTIMATED HOURS									
FINAL DESIGN											
DRAWINGS & DOCUMENTS											
1	Cover Sheet	1		1	1	1		4		7	\$ 1,095.00
2	Sheet Index	1		1	1	2	4	16		24	\$ 3,070.00
3	General Notes	2		1	2	4	4	16		27	\$ 3,645.00
4	Typical Sections	4		8	4	8	16	32		68	\$ 10,020.00
5	Drainage Area Maps	4		8	2	8	12	26		56	\$ 8,400.00
6	Plan and Profile Sheets (Roadway)	13		6	6	12	39	78		141	\$ 18,555.00
6.1	Roadway Design			6	6	36	52	78		178	\$ 24,510.00
6.2	Intersection Details/Layouts	9		18	18	54	108	164		362	\$ 50,250.00
6.2	Street/Driveway Connection Details and Calculations	1		4	4	8	36	36		88	\$ 12,040.00
6.3	Drainage Design & Calculations	4		8	8	48	64	96		224	\$ 31,120.00
7	Demolition Plans	5		5	5	20	40	60		130	\$ 17,700.00



**GAINES ROAD SEGMENT X  
KEEGAN'S BAYOU TO COUNTY LINE  
FBC PROJECT# 20429x  
HJ CONSULTING, INC.  
LEVEL OF EFFORT FOR FINAL DESIGN, AUGUST 2023**

Employee Classification		No. of Sheets	Principal	Project Manager	QA/QC Engineer	Project Engineer	Graduate Engineer	CAD Technician	Admin	Subtotal Hours	Total
Labor Rate Per Hour			\$325.00	\$275.00	\$225.00	\$175.00	\$135.00	\$105.00	\$75.00		
TASK	TASK DESCRIPTION	ESTIMATED HOURS									
<b>8</b>	<b>Traffic Control Plans &amp; Details</b>										
8.1	Project Approach Signing and Notes	1		1	1	4	4	8		18	\$ 2,580.00
8.2	Phasing Layout	3		3	3	6	18	36		66	\$ 8,760.00
8.3	Phasing Description and Typical Sections	3		3	3	9	18	36		69	\$ 9,285.00
8.4	TCP Phase I (Proposed Half Section)	4		4	4	16	32	48		104	\$ 14,160.00
8.5	TCP Phase II (Proposed Remaining Section)	4		4	4	16	32	48		104	\$ 14,160.00
8.6	TCP Phase II Step 2 Tie-ins	1		2	1	3	7	12		25	\$ 3,505.00
8.7	TCP Beechnut Intersection	4		4	4	12	24	48		92	\$ 12,380.00
8.8	TCP Construction Cost Estimate			1	1	4	4			10	\$ 1,740.00
8.9	TCP Details/Standards	8		2	2		8	16		28	\$ 3,760.00
11.1	TCP Project Management and Meetings		2	16		8				26	\$ 6,450.00
<b>9</b>	<b>Storm Water Pollution Prevention Plans &amp; Details</b>										
9.1	Storm Water Pollution Prevention Plans	6		3	3	12	28	80		126	\$ 15,780.00
9.2	SWPPP Specifications and Construction Cost Estimate			1	1	3	6			11	\$ 1,835.00
9.3	SWPPP Details	1				1		2		3	\$ 385.00
<b>10</b>	<b>Signing and Pavment Marking Plans &amp; Details</b>										
10.1	Signing and Striping Plans	6		3	3	12	40	80		138	\$ 17,400.00
10.2	Summary of Small Signs	2		2	2	8	16	32		60	\$ 7,920.00
10.3	SPM Construction Cost Estimate			1	2	5	10			18	\$ 2,950.00
10.4	SPM Details	2		1	1	2	4	8		16	\$ 2,230.00
<b>11</b>	<b>Cross Sections &amp; Earthwork Calculations</b>	20		6	6	40	60	200		312	\$ 39,100.00
<b>12</b>	<b>Engineers Estimate and Special Specs</b>										
12.1	Engineers Estimate			4	2	12	40	16		74	\$ 10,730.00
12.2	Special Specifications or Conditions			2	2	4	8			16	\$ 2,780.00
<b>13</b>	<b>Fort Bend County Standard Sheets</b>	4		2	2	4	8	12		28	\$ 4,040.00
<b>14</b>	<b>Incorporate review comments (70% to 95%)</b>		2	24	8	48	64	120	4	270	\$ 38,990.00
<b>15</b>	<b>Incorporate review comments (95% to Final)</b>		2	16	4	24	32	60	2	140	\$ 20,920.00
<b>DRAWINGS &amp; DOCUMENTS SUBTOTAL</b>		<b>113</b>	<b>6</b>	<b>171</b>	<b>116</b>	<b>454</b>	<b>838</b>	<b>1468</b>	<b>6</b>	<b>3059</b>	<b>\$ 422,245.00</b>





**GAINES ROAD SEGMENT X**  
**KEEGAN'S BAYOU TO COUNTY LINE**  
**FBC PROJECT# 20429x**  
**HJ CONSULTING, INC.**  
**LEVEL OF EFFORT FOR FINAL DESIGN, AUGUST 2023**

Employee Classification		No. of Sheets	Principal	Project Manager	QA/QC Engineer	Project Engineer	Graduate Engineer	CAD Technician	Admin	Subtotal Hours	Total
Labor Rate Per Hour			\$325.00	\$275.00	\$225.00	\$175.00	\$135.00	\$105.00	\$75.00		
TASK	TASK DESCRIPTION	ESTIMATED HOURS									
PROJECT MANAGEMENT											
1	Field Visit (Investigations and Findings)			8		24	24		8	64	\$ 10,240.00
2	Coordination for Survey ROW acquisition			2		4			6	12	\$ 1,700.00
3	Coordination for Bridge		2	8		16	20		6	52	\$ 8,800.00
4	Coordination for Traffic		1	1		2	4		6	14	\$ 1,940.00
5	Coordination with Other Consultants		2	4		8	16		6	36	\$ 5,760.00
6	Coordination with Centerpoint Energy, AT&T, Comcast and Other Private Utilities			8		16			4	28	\$ 5,300.00
7	Project Management and Meetings		8	32		32			8	80	\$ 17,600.00
PROJECT MANAGEMENT SUBTOTAL			13	63		102	64		44	286	\$ 51,340.00
OTHER EXPENSES											
1	Printing/Plotting/Copying										\$ 750.00
2	Mileage/Postage/Courier										\$ 1,000.00
OTHER EXPENSES SUBTOTAL											\$ 1,750.00
TOTAL HOURS			19	234	116	556	902	1468	50	3345	
TOTAL ESTIMATE			\$6,175	\$64,350	\$26,100	\$97,300	\$121,770	\$154,140	\$3,750		\$ 475,335.00

**GAINES ROAD SEGMENT X  
KEEGAN'S BAYOU TO COUNTY LINE  
FBC PROJECT# 20429x  
HJ CONSULTING, INC.  
LEVEL OF EFFORT FOR DRAINAGE IMPACT STUDY, AUGUST 2023**

Employee Classification	No. of Sheets	Principal	Project Manager	QA/QC Engineer	Project Engineer	Graduate Engineer	CAD Technician	Admin	Subtotal Hours	Total
Labor Rate Per Hour		\$325.00	\$275.00	\$225.00	\$175.00	\$135.00	\$105.00	\$75.00		
TASK TASK DESCRIPTION	ESTIMATED HOURS									
DRAINAGE IMPACT STUDY										
1	Review of data including survey, record drawings, site visits, reports, and other information Coordination with the Fort Bend County Engineering Department/Drainage District/MUDs/City of Houston/Consultant for Southern Segment of the Project		2	2	8	24			36	\$ 5,640.00
2	Delineate all sub-drainage areas contributing to project limits	2	8		8				18	\$ 4,250.00
3	Perform Hydrologic calculations for Existing Conditions based on Atlas 14 data		1	1	16	24	12		54	\$ 7,800.00
4	Develop Hydraulic model for Existing Conditions based on Atlas 14 data		1	2	8	26			37	\$ 5,635.00
5	Determine Change in 5-yr and 100-yr flows for change in TC and New Imperviousness Outside Existing ROW, Validate Drainage Boundaries and hydrologic calculations		2	4	12	28	4		50	\$ 7,750.00
6	Determine Detention Volume based on ROW, hydrographs and physical constraints			1	4	8			13	\$ 2,005.00
7	Develop Preliminary Proposed Alternatives and Hydraulic models		2	6	12	24			44	\$ 7,240.00
8	Perform Mitigation Analysis and Finalize models		1	4	16	28			49	\$ 7,755.00
9	Existing Bridge Hydraulic Analysis including existing model reviews			2	4	8			14	\$ 2,230.00
10	Develop Revised Existing Conditions Model for the Bridge			2	8	12			22	\$ 3,470.00
11	Develop Proposed Conditions Model for the Bridge Including Mitigation Requirement for No Rise		2	4	16	32			54	\$ 8,570.00
12	Bridge Scour Analysis (If requested by County)			4	12	24			40	\$ 6,240.00
13	Bridge Scour Analysis Report (If requested by County)		2	4	8	32	16		62	\$ 8,850.00
14	Prepare Opinion of Probable Construction Cost								0	\$ -
15	Prepare and Present Preliminary Findings to Fort Bend County Engineering Department/Drainage District	2	8	4	8	16			38	\$ 7,310.00
16	Prepare Exhibits and Appendices required for the Drainage Report		2	4	6	12	24		48	\$ 6,640.00
17	Prepare Drainage Impact and Mitigation Analysis Report for Fort Bend County Engineering Department/Drainage District Submittal		4	6	20	60		16	106	\$ 15,250.00
18	Submit the Drainage Report with Roadway to Fort Bend County Engineering Department and Fort Bend County Drainage District	1	2						3	\$ 875.00
19	Finalize Drainage Report after review from FBC & FBDD		4	6	8	24	12		54	\$ 8,350.00
TOTAL HOURS		5	42	60	190	414	68	16	795	
TOTAL ESTIMATE		\$1,625	\$11,550	\$13,500	\$33,250	\$55,890	\$7,140	\$1,200	\$0	\$ 124,155.00

**GAINES ROAD SEGMENT X  
KEEGAN'S BAYOU TO COUNTY LINE  
FBC PROJECT# 20429x  
HJ CONSULTING, INC.  
LEVEL OF EFFORT FOR PUBLIC UTILITIES RELOCATION DESIGN, AUGUST 2023**

Employee Classification		No. of Sheets	Principal	Project Manager	QA/QC Engineer	Project Engineer	Graduate Engineer	CAD Technician	Admin	Subtotal Hours	Total
Labor Rate Per Hour			\$325.00	\$275.00	\$225.00	\$175.00	\$135.00	\$105.00	\$75.00		
TASK	TASK DESCRIPTION	ESTIMATED HOURS									
PUBLIC UTILITIES RELOCATION DESIGN											
EXISTING WATER LINE RELOCATION											
1	Existing Water Line Relocation (Included with Roadway Plan & Profile Sheets)			8	8	32	48	120	8	224	\$ 29,280.00
2	Standard Details/Drawings	2		1	1	2	4	6		14	\$ 2,020.00
3	Specifications and Construction Cost Estimate			1	1	2	3	3		10	\$ 1,570.00
EXISTING WATER LINE RELOCATION SUBTOTAL			0	10	10	36	55	129	8	248	\$ 32,870.00
EXISTING SANITARY SEWER RELOCATION											
1	Existing Sanitary Sewer Relocation (Included with Roadway Plan & Profile Sheets)			8	8	32	48	120	8	224	\$ 29,280.00
2	Standard Details/Drawings	2		1	1	2	4	6		14	\$ 2,020.00
3	Specifications and Construction Cost Estimate			1	1	2	3	3		10	\$ 1,570.00
EXISTING SANITARY SEWER RELOCATION SUBTOTAL			0	10	10	36	55	129	8	248	\$ 32,870.00
TOTAL HOURS			0	20	20	72	110	258	16	496	
TOTAL ESTIMATE			\$0	\$5,500	\$4,500	\$12,600	\$14,850	\$27,090	\$1,200	\$0	\$ 65,740.00



July 13, 2023

Mr. Harish Jajoo, P.E., CFM  
President, HJ Consulting, Inc.  
Civil Engineers-Construction Managers  
4471 Sweetwater Blvd. #254  
Sugar Land, TX 77479

Re: Professional Engineering Services for the Structural design of a 2-lane bridge with walkway on Gains Rd at Keegans Bayou in Mission Bend, Fort Bend County Precinct 4.

Dear Harish:

In response to HJ Consulting, Inc's request to perform Preliminary Engineering, and Detailed Structural Design for the bridge and appurtenances on the Gains Street, across Keegans Bayou, iGET Services LLC (iGET) is pleased to submit this proposal to provide professional engineering services for the referenced project. This proposal is in accordance with the scoping meeting held with HJ Consulting, Inc. on June 7, 2023.

### **Basic Services**

- iGET will evaluate the field conditions of the creek and the situation of the existing bridge and provide optimal engineering approaches and create a concept design for the proposed bridge. The design concept of the proposed bridge will match the latest TXDOT Standards, and the Fort Bend County's latest specifications and standard drawings.
- The work scope for this project covers Preliminary Engineering, Detailed Structural Design, and Construction Plans & Specifications for a 2-lane concrete bridge on the Gains Rd at Keegans Bayou Crossing, where the creek is about 120 ft. wide from high-bank to high-bank. There is a bike trail, going underneath the bridge. The proposed bridge will have a walkway, and as such the bridge deck will have a wider section than the existing.
- The general vicinity of the bridge is not in a floodplain. However, an assessment of the channel crossing for the ATLAS-14 flows, and concrete lining for the channel will be necessary to maintain the existing conditions. Geotechnical information and channel flows will be studied for scour depth assessment.
- Traffic counts are not anticipated to be required for this project.
- Proposed Plans to be provided by iGET shall include:

- Basis of Estimate (List of Materials)
  - Existing Layout and Demolition Plans
    - Incorporation of County Record information
    - Incorporation of new survey information
  - Proposed Bridge Layout, including:
    - Typical sections
    - Bridge abutment structural concept
    - Cement stabilized abutment backfill
    - I-Girder or Beam-slab structural concept
    - Pier and bent structural concept
    - Bridge approach slab structural concept
    - Foundation structural concept
    - Railing
    - Standard details
    - General Notes for construction
  - Proposed Bridge Elevation Modification
  - County Bridge Standards
- iGET will closely work with HJ Consulting, Inc to develop the proposed concepts
  - iGET will coordinate with HJ Consulting, Inc for developing a schedule for the Bridge design of this project

## Compensation

Engineering Fee Basis of Estimate (BOE) is given in Appendix A and is based on lump sum basis as follows:

- At PER (30% of design complete), a total amount of **\$36,846.00**
- At Final Design (100% design complete), a total amount of **\$124,390.00**

Please contact me at (832) 858-3982 or via email at [drsatyapilla@igetservices.com](mailto:drsatyapilla@igetservices.com) if you have any questions or require additional information.

Thank you for your time and we look forward to working with you on this important project.

Sincerely,



Dr. Satya Pilla, P.E., PMP, ENV SP

Principal

**iGET Services LLC**

## APPENDIX A - Engineering Fee (BOE)

Fort Bend County Precinct 4								
Bridge on Gains Rd @ Keegans Bayou Crossing - Mission Bend, TX								
Engineering Fee for PER - Basis of Estimate								
Prime Consultant: HJ Consulting Inc. Bridge Design SubConsultant: iGET Services LLC				Bridge Length: 120 ft Bridge Width: 50 ft				
FUNCTION CODE / TASK DESCRIPTION	No. of sheets	Principal	Project Manager	Engineer- in-Training	QA/QC Engineer	Senior CADD Operator	Clerical/ Admin	Total
Burdened Rate		\$ 230.00	\$ 200.00	\$ 120.00	\$ 180.00	\$ 100.00	\$ 55.00	
<b>BASIC SERVICES FOR PER</b>								
<b>Preliminary Engineering and Design Phase Services</b>								
<b>Bridge Layout</b>		8	48	48	10	64	10	\$ 25,950.00
General Notes & Design Criteria	2							
Bridge Layout and Profile	1							
Bridge Typical Section	1							
Quantities & Bearing Seat Elevations								
Preliminary Design Calcs								
Scouring Protection								
<b>Bridge Structural Design</b>		12	80	120	16	120	16	\$ 48,920.00
Bridge Foundation Design	1							
Bridge Foundation Details	2							
Bridge Framing Plan	1							
Bridge Abutments	2							
Bridge Abutment Details	2							
Bridge Pier and Bent Details	3							
Prestresses Beam Slab Details	3							
Beam-Slab End Details	3							
Misc Deck Details	2							
Approach Slab	1							
Railings, Flex Beam Guardrails	2							
Sealed Expansion Joints	1							
Elastometric Bearing and End Details	1							
Erection and Bracing Details	2							
Delineator & Object Marker	1							
Bridge Lighting Details	1							
Bridge Plaque	1							
Slope Protection	1							
Scouring Protection Design	1							
Engineering Calcs, Reports								
Reviews								
<b>Project Coordination</b>		16	40	40		16	12	\$ 18,740.00
<b>SUBTOTAL</b>								\$ 93,610.00
<b>ADDITIONAL SERVICES</b>								
<b>H&amp;H Impact Assessments and Erosion Protection</b>								
<b>Hydrology, Bridge Hydraulics, Scouring Estimation</b>		4	24	40	6	8	0	\$ 12,400.00
<b>Bike Trail, Skirting Design</b>		4	24	40	6	16		\$ 13,200.00
<b>Coordination Meetings and AJD Approvals</b>		2	8	12	6	6	0	\$ 5,180.00
<b>SUBTOTAL</b>								\$ 17,580.00
Total Sheets/Labor Hours/Tasks	35	46	224	300	44	230	38	
Burdened Rate		\$ 230.00	\$ 200.00	\$ 120.00	\$ 180.00	\$ 100.00	\$ 55.00	
<b>Bridge Design &amp; Fees</b>		\$ 10,580.00	\$ 44,800.00	\$ 36,000.00	\$ 7,920.00	\$ 23,000.00	\$ 2,090.00	<b>\$ 124,390.00</b>
<b>Preliminary Engineering at 30% Design Complete</b>								
Basic Services								\$ 25,950.00
Additional Services @ 30%								\$ 5,274.00
Project Coordination @ 30%								\$ 5,622.00
<b>TOTAL</b>								<b>\$ 36,846.00</b>

June 16, 2023

**Revised: August 3, 2023**

Mr. Harish Jajoo, P.E., CFM  
HJ Consulting, Inc.  
4471 Sweetwater Blvd. #254  
Sugar Land, Texas 77479

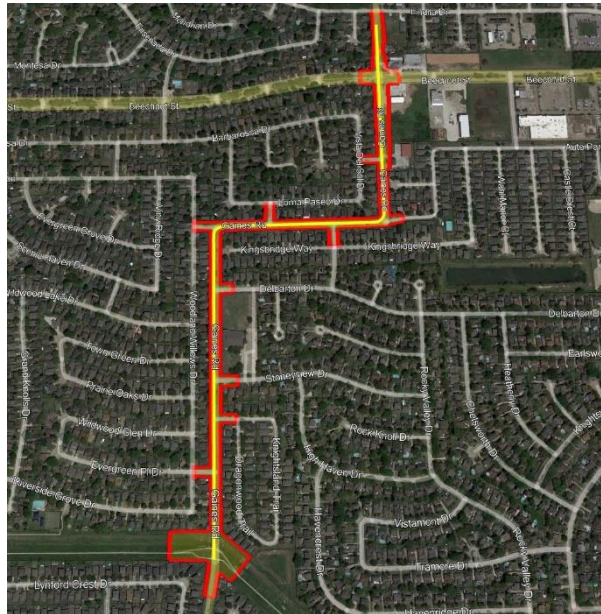
Re:      Gaines Road Improvements  
            Fort Bend County, Texas

Dear Mr. Jajoo:

We are pleased to present this proposal for providing surveying services in connection with the above referenced project. Our proposed scope of services and associated fees are as follows:

The Surveyor to provide surveying services along a portion of the Gaines Road from Keegan Bayou to Fort Bend/Harris County line, roughly 5,400 linear feet. The scope area includes ten (10) street intersections (roughly 1,200 linear feet) and one bayou crossing (600 linear feet) within the scope area. The scope area includes roughly 13.2 acres. Work to be performed under the direct supervision of a Registered Professional Land Surveyor currently registered with the Texas Board of Professional Land Surveying. Data to be collected and the methods to be employed are detailed below.

The surveyor to provide boundary surveying services to the extent necessary to generate a topographic survey map, boundary right-of-way determination, and boundary verification for proposed corner clip intersections.



*Approximate Project Area*

- I. PRIMARY PROJECT CONTROL/BASELINE (TASK 190) \$10,500**
- At least eight primary project control points to be established in accordance with the Texas Society of Professional Surveyors Manual of Practice and Fort Bend County Design Manual 6.1. Located within or near the project area, but in an area least likely to be disturbed, the control points to be within visible range of each other and suitable for either conventional or GPS use.
  - Horizontal values for project control points to be published as northings and eastings in US Survey Feet, based on the Texas State Plane Coordinate System, established for the South Central Zone, from the North American Datum of 1983 (NA2011) epoch 2010.00, displayed in surface values with a combined adjustment factor of 1.00013 applied. Coordination with County to verify a specific project scale factor, if required.
  - Vertical values for project control points to be published in US Survey Feet, based on the North American Vertical Datum of 1988, 2001 Adj. utilizing current NGS monuments (referenced to HCFRM), established by a digital level loop. Coordination with County to utilize vertical values on nearby project, if required.
  - Survey control map and individual control monument detail sheet, signed and sealed by the project surveyor, to be prepared. It is to include an overall view, the horizontal and vertical datum, the surface adjustment factor as well as individual sketches of each primary control point with location ties, driving directions, right-of-way station and offset information, surface coordinates and leveled elevations.
  - Once established by engineer, stake (PK nails/cut "x") design baseline at the project begin/end, begin/end of curves, and at even 1,000 foot stations.
- Note: This scope includes two (2) separate survey field trips - establish control, stake design baseline.*
- II. UTILITY LOCATES (TASK 218) \$1,950**
- The Texas 811 system to be contacted to notify participants to locate their utility lines within the project area.
  - A record of contacts and locate interactions to be maintained and provided to the project designer.
  - Utility markings along with other visible evidence of utilities to be located by survey crews and represented within the topographic survey drawing.
- III. RIGHT-OF-ENTRY (TASK 191) \$4,150**
- One right-of-entry letter to be prepared, submitted for approval, and subsequently sent by standard first class mail and followed up if necessary to approximately eight (8) owners of the property(s) located along of Gaines Road to obtain permission to enter the property to perform survey, geotechnical, and design related activities if necessary.
  - Once received, the permission form to be provided to the project designer to share with other necessary entities. Before survey crews enter said property, the property owner to be contacted in the manner instructed on the right-of-entry permission form.
  - Pape-Dawson has allocated one hour of coordination for each landowners' consent. If consent is not obtained, Pape-Dawson will not be able to perform work within the landowners' property.



**IV. TOPOGRAPHIC SURVEY (TASK 105) \$34,200**

- Obtain topographic features within the apparent right-of-way of Gaines Road bounded by existing fences as discussed in scoping meeting within the unfenced areas, topographic scope will comply with Fort Bend County design manual 6.1 in conjunction with right-of-entry letters.
  - Survey crews to locate pavement edges, ditches, swales, sidewalks, paint stripes, driveways (with composition information), grade breaks, drainage structures (including pipe size, material, top and invert elevations), bridges (type, support material and sizes, construction joints, expansion joints, low chord, etc.) and roadway signs (labeled accordingly) as they occur or at 100-foot intervals.
- 2D planimetric features to be mapped within project area of Gaines Road and to include but not be limited to signs (to include size and type), pavement markings, landscape limits, sidewalks, ramps, fences, and mailboxes.
- Elevation cross sections to be obtained within the project area in 100-foot intervals.
- Elevations within said project area to be visualized at a 1" = 20' scale within the AutoCAD drawing to be provided.
- If heavily silted, drainage structure flow lines to be excavated; no other excavation to be performed by survey crews.
- Trees (12-inch caliper or larger at breast height) within the right-of-way and trees within 25 feet outside of the right-of-way to be located (unfenced areas only). Trees located within heavily wooded areas will not be located.
- Topographic survey deliverables to include an AutoCAD drawing with 1-foot contours interval and labeling visualized at a 20-foot scale, a LandXML TIN file, and a text file in standard ASCII format (PNEZD comma delimited point file).

**V. RIGHT-OF-WAY SURVEYING (TASK 104) \$11,400**

- Boundary research and field recovery to be performed to locate and depict existing property lines and existing right-of-way line within the scope area.
- **This fee is subject to sales tax of 8.25%.**

**VI. PROJECT MANAGEMENT (TASK 501) \$3,500**

Project management activities including internal project coordination as well as quality control. Pape-Dawson is to coordinate our activities with Fort Bend County and other reviewing agencies as appropriate, including one kick-off meeting, four status meetings, and one final close out meeting.

**DELIVERABLES:**

- Survey control map and individual control monument detail sheet.
- Texas811 locate request ticket numbers.
- Utility Information Spreadsheet.
- AutoCAD topographic survey at 1" = 20' scale to include datum notes, elevations as specified above, title block, north arrow, scale, and FEMA note.
- Two (2) signed and sealed copies of the Right-of-way parcel drawings and descriptions.
- LandXML TIN file.
- Electronic text file in standard ASCII format PNEZD (Point, Northing, Easting, Elevation, Description) point file of final project points.

**OPTIONAL ADDITIONAL SERVICES:**

<b>VII.</b>	<b>PARCEL ACQUISITION (TASK 191)</b>	<b>\$15,000</b>
	<ul style="list-style-type: none"> <li>Boundary research and field recovery to be performed in accordance with the Texas Society of Professional Surveyors Manual of Practice to generate a signed and sealed parcel acquisition drawing and description for right-of-way parcels necessary to accomplish the necessary acquisitions along Gaines Road. Pape-Dawson assumes up to (6) acquisition "corner clip" parcels to be required for this project. If additional acquisition parcels are required an additional fee of \$2,500 each parcel will be required.</li> <li>Acquisition survey deliverables to be comprised of two signed and sealed right-of-way parcel drawings and descriptions which is to include an overall parent tract sketch, the parent tract remainder acreage, and numbered calls within the metes and bounds description.</li> <li>Pape-Dawson to coordinate with a local title company to prepare the necessary abstractors reports on the four (6) acquisition tracts. The cost is included within this scope. Any additional abstractors reports will be authorized and billed separately.</li> <li>Pape-Dawson to set property corners for the parcel drawings once approved by the County. Property corners to be set in one contiguous stage.</li> </ul>	
<b>VIII.</b>	<b>CONSTRUCTION STAKING (TASK 101)</b>	<b>\$3,500</b>
	<ul style="list-style-type: none"> <li>Recover or re-establish control prior to construction (within 24 months).</li> </ul>	

**SUMMARY OF SCOPE AND SERVICES**

I.	Primary Project Control/Baseline	Task 190		\$10,500
II.	Utility Locates	Task 218		\$1,950
III.	Right-Of Entry	Task 191		\$4,150
IV.	Topographic Survey	Task 105		\$34,200
V.	Right-of-Way Survey	Task 104	<i>Taxable</i>	\$11,400
VI.	Project Management	Task 501		\$3,500
<b>Total:</b>				<b>\$65,700</b>

***Optional Additional Services***

VII.	Parcel Acquisition	Task 192		\$15,000
VIII.	Construction Staking	Task 101		\$3,500
<b>Total:</b>				<b>\$18,500</b>

**BASIS OF COMPENSATION**

Pape-Dawson's compensation for the above services is a lump sum in the amount of **\$65,700** for the services identified above. This budget figure includes any Direct Expenses (defined below) and applicable sales tax on services. If this budget figure is exceeded, Pape-Dawson may request modification of this Agreement.

Direct Expenses include reproduction, travel, express mail, special deliveries, and subcontractor expenses related to these services.

### **AGREEMENT**

Upon the signing of this Proposal by Client, this Proposal to be governed by the attached Master Agreement for Professional Engineering Services by and between Client and Engineer, with the same force and effect as if all of the terms of such Master Agreement were recited verbatim herein. Conflicts between the Master Agreement and this Proposal to be governed and controlled by this Proposal.

The costs, fees, budget, and scope of work set out herein are valid for ninety (90) days from the date of this Proposal. If Pape-Dawson does not receive an executed Proposal from the Client within ninety (90) days from the date of this Proposal, the costs, fees, budget, and scope of work are subject to revision at Pape-Dawson's sole discretion. Pape-Dawson will provide a revised Proposal with the modified costs, budget, and scope of work should revisions be made.

We appreciate the opportunity to work with you on this project.

Sincerely,  
Pape-Dawson Consulting Engineers, LLC

**HJ CONSULTING, INC.**



Brian Nawara, R.P.L.S.  
Associate Vice President

Signature: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_



Robert "Michael" Preiss, P.E.  
Managing Principal, Greater Houston

### **Attachments**

- Pape-Dawson Terms & Conditions

O:\Marketing\Proposals\Letters\2023\06\230614c6 (P2599-23) HOU R2.docx

**PAPE-DAWSON CONSULTING ENGINEERS, LLC**  
**RE: Gaines Road Improvements (the "Project")**  
**TERMS AND CONDITIONS**

PAPE-DAWSON CONSULTING ENGINEERS, LLC, a Texas limited liability company, 2000 NW Loop 410, San Antonio, Texas, 78213-2251, hereinafter referred to as "Engineer", has agreed to provide Professional Services to HJ Consulting, Inc., hereinafter referred to as "Client," pursuant to the terms set out in a "Proposal - Scope of Services and Compensation" (the "Proposal") executed by Client and these Terms and Conditions.

**ARTICLE 1: SERVICES**

Engineer agrees to perform Professional Services (the "Services") in conformance with the descriptions, definitions, terms and conditions as set forth herein and on the Proposal and any Exhibits, rate sheets, and Additional Services Requests subsequently attached hereto or incorporated hereto by reference. This description of Services is intended to be general in nature and is neither a complete description of Engineer's Services nor a limitation on the Services that Engineer is to provide under this Agreement.

**ARTICLE 2: PROPOSAL AND ADDITIONAL SERVICES REQUESTS**

2.1 These Terms and Conditions, the Proposal and any Exhibits, rate sheets, and Additional Services Requests for this Project are hereby incorporated by reference and are collectively referred to herein as the "Agreement."

2.2 The Proposal, as amended or modified by any Additional Services Requests, shall identify the specific Scope of Services to be performed and the amount and type of compensation for the specific services.

2.3 Client shall authorize and Engineer shall commence work set out in the Proposal and any Additional Services Requests upon Client's execution of the Proposal.

**ARTICLE 3: CHANGES**

3.1 The Client may at any time, by written Additional Service Request, make changes within the general scope of the Proposal relating to services to be performed for this Project. If such changes cause an increase or decrease in the Engineer's cost of, or time required for, performance of any services, an equitable adjustment shall be made and reflected in a properly executed Amendment.

3.2 The Engineer is not obligated to begin work on a change of scope or deliver that work product until a properly executed Additional Services Request is signed by the Client.

3.3 This Agreement is based on laws and regulations in effect as of the date of execution of this Agreement by Client. Changes after this date to these laws and regulations may be the basis for modifications to Engineer's scope of Services, times of performance, or compensation. In the event that there are modifications and/or additions to legal or regulatory requirements relating to the Services to be performed under this Agreement after the date of execution of this Proposal, the scope of Services, times of performance, and compensation provided for in these Terms and Conditions, the Proposal, and any subsequent Additional Services Requests shall be reflected in an appropriate Additional Services Request.

3.4 Should any of the individual tasks or services set out in the Proposal not be initiated within twelve (12) months of the date of execution of the Proposal by Client, Engineer reserves the right to revise the costs, fees, and scope of work for any such tasks or services not yet initiated.

**ARTICLE 4: THE TERM**

4.1 **Term.** Engineer shall be retained by Client as of the date Client executes the Proposal, Engineer shall complete its Services within a reasonable time, and this Agreement shall remain in effect until the Services have been fully performed or until the Engineer's Services are terminated under provisions of the Agreement.

**ARTICLE 5: DUTIES**

5.1 **Access.** Client will provide Engineer with access to the Property or to any other site as required by Engineer for performance of the Services.

5.2 **Client-furnished Data.** Client shall provide all criteria and full information as to Client's requirements for the Project; designate a person to act with authority on Client's behalf in respect to all aspects of the Project, examine and respond promptly to Engineer's submissions, and give prompt written notice to Engineer whenever he observes or otherwise becomes aware of any defect in the work.

Client shall also do the following and pay all costs incident thereto: Furnish to Engineer core borings, probings and subsurface exploration, hydrographic surveys, laboratory tests and inspections of samples, materials and equipment and similar data; appropriate professional interpretations of all of the foregoing; environmental assessment and impact statements, and any other information previously made available to the Client, which may be required by Engineer, all of which Engineer may rely upon in performing its services.

Provide such legal, accounting, independent cost estimating and insurance counseling services as may be required for the Project, any auditing service required in respect of constructor(s)' applications for payment, and any inspection services to determine if constructor(s) are performing the work legally.

5.3 **Other Information.** Engineer will rely upon commonly used sources of data, including database searches and agency contacts. Engineer does not warrant the accuracy of the information obtained from those sources and has not been requested to independently verify such information.

5.4 **Indemnity.** The Engineer agrees, to the fullest extent permitted by law, to indemnify and hold the Client harmless for damages and losses arising from the negligent acts, errors or omissions of the Engineer in the performance of the professional services under this Agreement, to the extent that the Engineer is responsible for such damages and losses on a comparative basis of fault and responsibility between the Engineer and the Client. The Engineer is not obligated to indemnify the Client for the Client's own negligence.

Notwithstanding the foregoing, to the fullest extent permitted by law, engineer shall indemnify and hold the client harmless from and against all claims arising out of or resulting from bodily injury to, or sickness, disease or death of, any employee, agent or representative of engineer or any of its subcontractors.

To the fullest extent permitted by law, Client and Engineer waive against each other, and the other's employees, officers, directors, members, agents, insurers, partners, and consultants or subconsultants, any and all claims for or entitlement to special, incidental, indirect, or consequential damages arising out of, resulting from, or in any way related to the Project.

**5.5 Ownership of Documents.** All designs, drawings, specifications, documents, and other work products of the Engineer, whether in hard copy or in electronic form, are instruments of service for the Services, whether Services are completed or not. Reuse, change or alteration by the Client or by others acting through or on behalf of the Client of any such instruments or service without the written permission of the Engineer will be at the Client's sole risk. Client agrees to indemnify the Engineer, its officers, partners, employees, and subcontractors from all claims, damages, losses, and costs, including, but not limited to, litigation expenses and attorney's fees, arising out of or related to such unauthorized reuse, change or alteration.

**5.6 Reporting Obligations.** Client has responsibility for complying with all legal reporting obligations. Nothing in the Agreement precludes Engineer from providing any notices or reports that it may be required by law to give to governmental entities.

**5.7 Laboratory Services.** In performing environmental services, Engineer may make use of an independent testing laboratory. Engineer will not, and Client shall not rely upon Engineer to, check the quality or accuracy of the testing laboratory's services.

**5.8 Changed Conditions.** The Client shall rely on the Engineer's judgment as to the continued adequacy of the Agreement in light of occurrences or discoveries that were not originally contemplated by or known to the Engineer. Should Engineer call for contract renegotiation, the Engineer shall identify the changed conditions necessitating renegotiation and the Engineer and the Client shall promptly and in good faith enter into renegotiation of this Agreement. If terms cannot be agreed to, the parties agree that either party has the right to terminate the Agreement.

**5.9 Opinions of Cost.** Should Engineer provide any cost opinions, it is understood that those opinions are based on the experience and judgment of Engineer and are merely opinions. Engineer does not warrant that actual costs will not vary from those opinions because, among other things, Engineer has no control over market conditions.

**5.10 Construction Observation.** If construction phase services are included in the basic services, the Engineer shall visit the project at appropriate intervals during construction to become generally familiar with the progress and quality of the contractors' work and to determine if the work is proceeding in general accordance with the Contract Documents. The Client has not retained the Engineer to make detailed inspections or to provide exhaustive or continuous project review and observation services. The Engineer does not guarantee the performance of, and shall have no responsibility for, the acts or omissions of any contractor, subcontractor, supplier or any other entity furnishing materials or performing any work on the project. Engineer shall not be responsible for the means, methods, techniques, sequences or procedures of construction selected by Contractor(s) or the safety precautions and programs incident to the work of Contractor(s).

**5.11 Subconsultants.** Engineer may employ such Subconsultants as Engineer deems necessary to assist in the performance or furnishing of the Services, subject to reasonable, timely, and substantive objections by Client.

## **ARTICLE 6: COMPENSATION OF SERVICES**

**6.1 Compensation of Services.** Engineer's compensation for services shall be set forth in the Proposal and any subsequent Additional Services Requests.

**Compensation.** Client agrees to pay Engineer for Professional Services in accordance with the descriptions, definitions, terms and conditions as set forth herein and in the Proposal and any Additional Services Requests, or Amendments subsequently attached hereto or incorporated herein by reference. Expenses directly related to these services, including reproduction, travel, long distance telephone bill, express mail, special deliveries and subcontractor expenses shall include a 10% markup on cost.

Engineer reserves the right to adjust the hourly billing rates set out in the Proposal, Additional Service Requests, and/or Amendments thereto on an annual basis. Engineer shall notify Client of any hourly billing rate adjustments when they go into effect.

**Payments.** Engineer will invoice Client monthly in accordance with the terms and conditions of this Agreement, the Proposal, and any subsequent Additional Services Requests for Services and reimbursables. Client agrees to promptly pay Engineer at his office at 2000 NW Loop 410, San Antonio, Texas 78213-2251, the full amount of each such invoice upon receipt. In no event shall Engineer's failure to bill monthly constitute default under the terms and conditions of this Agreement.

**6.2 Sales and Use Tax.** Effective July 1, 1990, a State, City and MTA Sales Tax must be collected on Surveying Fees for the establishment of Real Property Boundaries and determining the location of structures or improvements in relation to the boundaries. Charges for prints and reproductions are also subject to a Sales Tax. Client agrees to pay Engineer the applicable Sales Tax on services and said tax is not considered a part of Engineer's compensation for services. In the event subsequent taxes are levied by Federal, State or Local authorities, relating to the services in writing and such modifications as are required shall be made a part of this Agreement.

**6.3 Right to Stop Performance.** If Client does not pay any amount due to Engineer within thirty (30) days after the invoice date, Engineer may, upon three (3) additional days' verbal or written notice to Client, stop performance of the Services until payment of the amount owed has been received.

**6.4 Interest.** Payments due and unpaid to Engineer under the Agreement shall bear interest at the rate of twelve percent (12%) per annum, or lesser if required by law, calculated from the date of the invoice, if the payment is not made within thirty (30) days of the date of the invoice.

**6.5 Attorney's Fees:** In the event Engineers' invoices for services are given to an attorney for collection, or if suit is brought for collection, or if they are collected through probate, bankruptcy, or other judicial proceeding, then Client shall pay Engineer all costs of collection, including the maximum attorney's fees allowed by Law and court costs, in addition to other amounts due.

## **ARTICLE 7: TERMINATION OF SERVICES**

**7.1 Termination.** This Agreement may be terminated without cause at any time prior to completion of Engineer's services, either by Client or by Engineer, upon written notice to the other at the address of record. Upon receipt of written notice from Client to discontinue

work, the Engineer shall discontinue work under this Agreement immediately. In the event Client terminates the Agreement based on Client's reasonable opinion the Engineer has failed or refused to prosecute the work efficiently, promptly or with diligence, the Engineer shall have ten (10) days, from the receipt of written notification by Client, to cure such failure to perform in accordance with the terms of this Agreement.

**7.2 Compensation in Event of Termination.** On termination, by either Client or Engineer, Client shall pay Engineer with respect to all contracted services rendered and expenses incurred before termination an amount fixed by applying the Engineer's Standard Hourly Rates, in force at the time of termination, to all services performed to date, in addition to termination settlement costs the Engineer reasonably incurs relating to commitments which had become firm before the termination.

## **ARTICLE 8: RELATIONSHIP OF PARTIES**

**8.1 Independent Contractor:** It is understood that the relationship of Engineer to Client shall be that of an independent contractor. Neither Engineer nor employees of Engineer shall be deemed to be employees of Client.

## **ARTICLE 9. LIMITATION OF LIABILITY**

**9.1 Limitation of Liability.** To the fullest extent permitted by law, the total liability of Engineer and its subconsultants and subcontractors to Client for any and all injuries, claims, losses, expenses, or damages whatsoever from any cause or causes, including, but not limited to, strict liability, breach of contract, breach of warranty, negligence, or errors or omissions (collectively "Claims") shall not exceed the Engineer's total fee. In no event will Engineer, its subconsultants or subcontractors be liable for punitive, special, incidental, or consequential damages.

**9.2 No Certification.** Engineer shall not be required to sign any documents, no matter by whom requested, that would result in Engineer having to certify, guarantee, or warrant the existence of conditions whose existence Engineer cannot ascertain. The Client also agrees not to make resolution of any dispute with Engineer or payments of any amount due to Engineer in any way contingent upon Engineer's signing any such certification.

**9.3 Execution of Documents.** The Engineer shall not be required to execute any documents subsequent to the signing of this Agreement that in any way might, in the sole judgment of the Engineer, increase the Engineer's risk or the availability or cost of its professional or general liability insurance.

**9.4 No Supervision of Contractors.** Engineer shall not at any time supervise, direct, control, or have authority over any contractor work, nor shall Engineer have authority over or be responsible for the means, methods, techniques, sequences, or procedures of construction selected or used by any contractor, or the safety precautions and programs incident thereto, for security or safety at the Project site, nor for any failure of a contractor to comply with laws and regulations applicable to such contractor's furnishing and performing of its work.

**9.5** Engineer shall not be responsible for the acts or omissions of any contractor, subcontractor, or supplier, or of any of their agents or employees or of any other persons (except Engineer's own agents, employees, and Subconsultants) at the Project site or otherwise furnishing or performing any work for the Project.

## **ARTICLE 10: MISCELLANEOUS**

**10.1 Entire Agreement.** The Agreement (including any exhibits) contains the entire agreement between Engineer and Client, and no oral statements or prior written matter shall be of any force or effect. The Agreement may be modified only by a written document executed by both parties.

**10.2 Governing Law.** The Agreement shall be governed by and construed in accordance with the laws of the State of Texas.

**10.3 Venue.** Venue of any action under the Agreement shall be exclusively in Bexar County, Texas.

**10.4 Severability.** If any provision of the Agreement is held to be illegal, invalid or unenforceable under present or future laws, such provision shall be fully severable and the Agreement shall be construed and enforced as if such illegal, invalid or unenforceable provision is not a part hereof, and the remaining provisions shall remain in full force and effect. In lieu of any illegal, invalid or unenforceable provision, there shall be added automatically as a part of the Agreement, a provision as similar in its terms to such illegal, invalid or unenforceable provision as may be possible and be legal, valid and enforceable.

**10.5 Construction of Agreement.** The parties acknowledge that each party and, if it so chooses, its counsel have reviewed and revised the Agreement and that the normal rule of construction to the effect that any ambiguities are to be resolved against the drafting party shall not be employed in the interpretation of the Agreement or any amendments or exhibits.

**10.6 Successor and Assigns: Third Party Beneficiary.** The Agreement shall be binding upon Engineer, Client and their respective legal representatives, successors and permitted assigns. Neither Engineer nor Client may assign the Agreement nor any right or obligation under it without the prior written consent of the other party. Nothing in the Agreement restricts Engineer's ability to hire subcontractors in connection with the Services. The Services and any report prepared under this Agreement are for the sole benefit and sole use of Client and are not for the use of any other person. Only Client may rely upon the Agreement and the Services, unless Engineer gives Client prior and specific written approval.

**10.7 Dispute Resolution.** Any claim, dispute or other matter in question arising out of or related to the Agreement of the Services provided thereunder shall be subject to arbitration. Prior to arbitration, the parties shall endeavor to resolve disputes by mediation. Claims, disputes and other matters in question between the parties that are not resolved by mediation shall be decided by arbitration which, unless the parties mutually agree otherwise, shall be in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association currently in effect. The demand for arbitration shall be filed in writing with the other Party to this Agreement and with the American Arbitration Association. No arbitration arising out of or relating to the Agreement shall include, by consolidation or joinder or in any other manner, an additional person or entity not a party to this Agreement. The foregoing agreement to arbitration shall be specifically enforceable in accordance with applicable law in any court having jurisdiction. The award rendered by the arbitrator or arbitrators shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction.

10.8 **Mediation:** Any claim, dispute or other matter in question arising out of or related to this Agreement shall be subject to non-binding mediation as a condition precedent to the institution of legal proceedings by either party. If such matter relates to or is the subject of a lien arising out of the Engineer's services, the Engineer may proceed in accordance with applicable law to comply with the lien notice or filing deadlines prior to resolution of the matter by mediation or other legal proceedings.

Each party agrees to include a similar mediation provision in all agreements with independent contractors and consultants retained for the Project and to require all independent contractors and consultants also to include a similar mediation provision in all agreements with their respective subcontractors, suppliers, and subconsultants, thereby providing for mediation as the initial method for dispute resolution between the parties to all those agreements.

The parties shall share the mediator's fee and any filing fees equally. The mediation shall be held in the county where the project is located, unless another location is mutually agreed upon. Agreements reached in mediation shall be enforceable as settlement agreements in any court having jurisdiction thereof.

10.9 **No Warranty.** Engineer makes no warranty, either expressed or implied, as to Engineer's findings, recommendations, plans, specifications, or professional advice. Engineer has endeavored to perform its services in accordance with generally accepted standards of practice by recognized professional firms in performing services of a similar nature in the same locality, under similar circumstances. Client recognizes that neither Engineer nor any of Engineer's subconsultants or subcontractors owes any fiduciary responsibility to Client.

10.10 **Survival of Provisions.** Termination of the Services for any reason whatsoever shall not affect (a) any right or obligation of any party that is accrued or vested prior to such termination, and any provision of the Agreement relating to any such right or obligation shall be deemed to survive the termination of the Services or (b) any continuing obligation, liability or responsibility of Engineer and of Client which would otherwise Survive termination of the Services.

10.11 Complaints regarding surveying may be filed with the Texas Board of Professional Land Surveying, Building A, Suite 156, 12100 Park 35 Circle, Austin, TX 78753.



## **EARTH ENGINEERING, INC.**

*Geotechnical, Materials Testing & Environmental Consultants*  
4877 Langfield Road • Houston, TX 77040 • T: (713) 681-5311 • F: (713) 681-5411 • [www.eartheng.com](http://www.eartheng.com)

June 14, 2022

Mr. Harish Jajoo, P.E., CFM P.E.  
President  
HJ Consulting, Inc.  
4771 Sweetwater Boulevard  
Suite 254  
Sugar Land, Texas 77479

Proposal No.: P-EE2317406-G  
Sent Via E-Mail: [harish@hjconsultinginc.com](mailto:harish@hjconsultinginc.com)

832-338-3202 mobile  
832-553-3103 fax

**GEOTECHNICAL EXPLORATION FOR A BRIDGE AND  
CONCRETE PAVEMENT AT GAINES ROAD AND WINKELMAN ROAD FROM  
KEEGANS BAYOU TRAIL TO BISSONNET STREET AND LINDITA DRIVE (FBC  
LIMITS) IN FORT BEND COUNTY, TX**

Dear Mr. Jajoo,

**Earth Engineering, Inc.** is pleased to present this proposal to perform geotechnical investigation for the above project in Fort Bend County, Texas.

Furnished information indicated that the total length of the project is 1.20 miles. with a bridge crossing over Keegans Bayou.

Fort Bend County Engineering Design Manual (May 2021) will be adopted for this project:

1. Drilling and sampling one (1) boring at a depth of 15 feet every 500 feet along the road alignment. A total of 11 borings will be drilling.
2. Drilling and sampling one (1) boring at a depth of 100 feet at each bridge abutment. A total of two (2) borings will be drilled.



## SCOPE OF WORK

The scope of our services was specified based on Fort Bend County and Harris County standards and specifications:

1. Total number of borings is 13 as follows:

Drilling and sampling (11) borings to a depth of 15-feet at proposed road alignment.

Drilling and sampling three (2) borings to a depth of 100-feet at the proposed bayou bridge.

2. Obtaining continuous soil samples to a depth of 10 feet.
3. Earth Engineering will perform granular soil sampling utilizing the Standard Penetration Test (split spoon sampler) by driving. Blow counts will be recorded as produced by a 140-pound weight falling 30 inches (ASTM D-1558). Cohesive soils will be sampled using a thin walled sampler (Shelby Tube) hydraulically pushed into the soil (ASTM D-1587).
4. Performing laboratory tests on selected representative soil samples to develop the engineering properties of the soil. These tests may include: pocket penetrometers, unconfined compression, present moisture content, percent passing 200 sieves, dry densities, Atterberg Limits, Unconsolidated-Undrained Triaxial test, California Bearing Ratio (CBR), and OMD Standard Compaction as deemed appropriate.
5. Utilizing the results of observations both in the field and in limited laboratory tests, Earth Engineering will author a report that will include the following subjects:
  - soil stratigraphy: soil encountered up to 100 feet
  - groundwater conditions and groundwater control during construction
  - develop design recommendations for the proposed bayou bridge foundations including bearing piles capacity curves.
  - Provide scour analysis and recommendations.
  - develop design recommendations for the underground utilities. The recommendations will include buried structures such as manhole etc.
  - classify the soils types in accordance to FBC requirements based on the characteristics of the soils along the alignment
  - recommend the utilities bedding in accordance with FBC standards and specifications



- present subgrade stabilization option such as lime/fly-ash for cohesion-less soils and lime for cohesive soils
  - recommend construction considerations, as deemed necessary
  - recommend back-fill material specifications
- 
- Incorporating all of the above into a geotechnical engineering report which is performed under the direction of, and signed by, a professional engineer registered in the State of Texas.

### **SCHEDULING**

We anticipate that the total project duration will be 60 working days.



## ESTIMATED FEES

- (11) borings @15' each along the road alignment.
- Two (2) borings @100' each (Bridge)

The total cost for the geotechnical study is estimated to be **\$ 50,756.00.**

<i><b>SERVICE DESCRIPTION</b></i>	<i><b>UNIT FEE</b></i>	<i><b>AMOUNT</b></i>	<i><b>UNIT</b></i>	<i><b>ESTIMATED COST</b></i>
<b>Field Exploration</b>				
Mobilization/Demobilization	\$350	2	Mob	\$700.00
Drilling and sampling (0-50) feet	\$20	100	feet	\$2,000.00
Drilling and sampling below 50 feet	\$26	265	LS	\$6,890.00
One (1) Piezometers io a depth of 35 feet	N/A	1,500	LS	\$1,500.00
Boring grout	\$10	365		\$3,650.00
Field Engineer supervision and layout	\$90.00	14	hours	\$1,260.00
Vehicle Charge	\$10.00	14	hours	\$140.00
		<b>Subtotal:</b>		<b>\$16,140.00</b>
<b>Laboratory Testing</b>				
Atterberg Limits (LL, Pi's)	\$71.00	40	tests	\$2,840.00
Moisture Contents	\$11.00	50	tests	\$550.00
Percent Finer than No. 200 Sieve	\$55.00	8	tests	\$440.00
Unconsolidated undrained	\$72.00	8	tests	\$576.00
Consolidated undrained	\$1,500.00	6	tests	\$9,000.00
Sieve analysis (D50)	\$145.00	6	tests	\$870.00
		<b>Subtotal:</b>		<b>\$14,276.00</b>
<b>Engineering and Report Writing</b>				
Principal Engineer, P.E.	\$250.00	15	hours	\$3,750.00
Senior Geotechnical Engineer	\$205.00	78	hours	\$15,990.00
Support Personnel	\$60.00	10	hours	\$600.00
		<b>Subtotal</b>		<b>\$20,340.00</b>
<b>TOTAL</b>				<b>\$50,756.00</b>

## INSURANCE

Earth Engineering inc. maintains the following insurance:

- Professional Liability (errors and omissions): one **million**.
- General Liability: **two million**.
- Workman's Compensation: **one million**.
- Commercial Auto Insurance: **one million**.
- Umbrella Insurance: **five million**

## CLIENT RESPONSIBILITIES

Earth Engineering, Inc. requests that you provide the following information prior to the site visit and our site activities:

- Formal written authorization.
- Name and telephone number of a responsible client contact, if other than yourself.
- Any geotechnical, environmental, geologic, and hydrological report previously prepared for the study area, to which you have access, as well as information regarding any similar report currently being undertaken.
- Any restrictions or limitations to, or requirements for site access to be adhered to by Earth Engineering personnel.

Should you have any questions concerning this proposal or other services we may provide, please feel free to contact us at (713) 681-5311 or by e-mail at [moes@eartheng.com](mailto:moes@eartheng.com). We will be pleased to discuss them with you.

Yours very truly,  
**EARTH ENGINEERING, INC.**

*Moe A. Shihadeh*

Moe A. Shihadeh, P.E., D.GE  
Principal - Diplomate Geotechnical Engineering



August 4, 2023

Harish Jajoo, P.E., CFM  
President  
HJ Consulting, Inc.  
4471 Sweetwater Blvd., #254  
Sugar Land, TX 7479

**Re: Gaines Road from Braes Bayou to Fort Bend County Line, Fort Bend County, TX**

Mr. Jajoo,

MBCO Engineering, LLC is pleased to provide this proposal to HJ Consulting, Inc. (Client) for traffic engineering services for the above referenced site. We have assumed for the purposes of this proposal that our services will be to conduct preliminary and final design services for the intersections of Gaines Road at Beechnut Street for the Gaines Road Preliminary Engineering Report (PER) and Final Design. The scope of this proposal is based on experience and will need to be confirmed by the agency. Based on our understanding of the project at this time, we propose the following scope of services:

**SCOPE OF SERVICES**

The following paragraphs outline a detailed Scope of Services. MBCO will be responsible for performing the following tasks:

- Coordinating with the Client and Fort Bend County staff on the project to obtain available information on existing and planned roadway improvements.
- Conducting field reconnaissance and traffic counts for the intersections of Gaines Road at Beechnut Street.
- Capacity and Level of Services analysis (LOS) for the intersections of Gaines Road at Beechnut Street, which will be conducted by SYNCHRO.
- Preliminary Design Phase services for traffic signalization for the intersections of Gaines Road at Beechnut Street which will include construction cost estimates for any recommended improvements.
- Final Design Phase services for traffic signalization for the intersections of Gaines Road at Beechnut Street which will include basis of estimate, general notes, existing conditions, proposed signal layouts/elevations/details, standards & details, final cost estimate and addressing comments & revisions from Fort Bend County.



### **Task 1 – Project Coordination**

MBCO will Coordinate with the Client and Fort Bend County staff on the project to obtain available information on existing and planned roadway improvements. This will include as-built drawings, utility records, traffic studies and existing signal timing plans.

### **Task 2 – Field Reconnaissance and Traffic Counts**

The critical peak hours of site operations will be during the weekday during AM and PM peak hours of traffic operations. A comprehensive field reconnaissance will be undertaken to review the location and operation of the intersection(s) in the field. Traffic turning movement counts will be performed at the following intersections on typical weekday peak periods from 7:00 a.m. to 8:00 p.m.:

- Gaines Road at Beechnut Street

Additionally, 24-hour tube counts will be conducted on Gaines Road in between the two intersections of Bissonnet and Beechnut Streets.

### **Task 3 - Capacity and Level of Services analysis (LOS) Analysis**

A traffic flow model will be developed for the intersections by utilizing traffic analysis software SYNCHRO to assist in signal timing optimization. This will include the capacity and Level of Services analysis (LOS) for the following study intersections:

- Gaines Road at Beechnut Street

### **Task 4 – Preliminary Design**

MBCO will develop layouts of the signal(s) to meet Fort Bend County and TMUTCD requirements which will include proposed controller location, pole locations, vehicle and pedestrian signal heads, vehicle detection, and proposed curb ramps. This will also include sight triangles for right turns at 15' and 25' setbacks, utility conflict table (UCT), quantities and construction cost estimates.

### **Task 5 – Engineered Plans – Final Design – Beechnut Street @ Gaines Road**

The plans will include the following sheets and will be per agency specifications:

- Basis of Estimate
- General Notes

- Existing Conditions Layout (from client provided topographic survey)
- Proposed Traffic Signal Layout & Elevations
- Proposed Traffic Signal Standards & Details
- Cost Estimate Quantities
- Address Comments/Revisions

#### **FEE SCHEDULE**

We propose to provide you the scope of services described above on a lump sum fee basis as follows:

<b>Description</b>	<b>Fee Basis</b>	<b>Fee</b>
Project Coordination		\$1,745
Field Reconnaissance		\$1,750
Capacity and Level of Services analysis (LOS) Analysis		\$3,005
Preliminary Signal Design – 30% for PER Phase		\$7,570
Engineered Plans – Final Design – Beechnut Street @ Gaines Road		\$18,985
Expenses (traffic counts included)		\$1,066
	<b>Lump Sum</b>	<b>\$34,121</b>

Please note that the above fees are based on smooth project implementation and have assumed no major changes to the scope of services. Fees shown for the hourly basis elements are for budgeting purposes only and invoices will reflect the actual time incurred. Should work outside the above scope of services be required, a separate proposal will be submitted to the Client for approval prior to our beginning the additional services.

We appreciate the opportunity to submit this proposal and look forward to working with you on this project. If you should have any questions or require additional information, please do not hesitate to call me at 281.638.1042.

Sincerely,



Bonnie Moss, P.E.  
President

**FEE SCHEDULE (MBCO)**  
**METHOD OF PAYMENT: LUMP SUM**

**PRIME PROVIDER NAME:** HJ Consulting

**PROJECT NAME:** Gaines Road PER & Final Design - Traffic Engineering

RATES:	\$215.00	\$175.00	\$160.00	\$150.00	\$130.00	\$185.00	\$125.00	\$130.00	\$90.00	\$100.00	\$70.00	
TASK DESCRIPTION	PRINCIPAL	SENIOR PROJECT MANAGER	PROJECT MANAGER	RPLS	PROJECT ENGINEER	SURVEY CREW	SIT	DESIGNER	EIT	CADD OPERATOR	ADMIN/ CLERICAL	TOTAL LABOR HRS. & COSTS
<b>Task #1 - Project Coordination</b>												
Project Coordination	1	2	2		3			2			3	\$1,745.00
HOURS SUB-TOTALS	1	2	2	0	3	0	0	2	0	0	3	13
TOTAL LABOR COSTS	\$215.00	\$350.00	\$320.00	\$0.00	\$390.00	\$0.00	\$0.00	\$260.00	\$0.00	\$0.00	\$210.00	\$1,745.00
% DISTRIBUTION OF STAFFING	7.7%	15.4%	15.4%	0.0%	23.1%	0.0%	0.0%	15.4%	0.0%	0.0%	23.1%	
<b>SUBTOTAL</b>												<b>\$1,745.00</b>
<b>Task #2 - Field Reconnaissance and Traffic Counts</b>												
Gaines Road at Beechnut Street					5			5	5			\$1,750.00
HOURS SUB-TOTALS	0	0	0	0	5	0	0	5	5	0	0	15
TOTAL LABOR COSTS	\$0.00	\$0.00	\$0.00	\$0.00	\$650.00	\$0.00	\$0.00	\$650.00	\$450.00	\$0.00	\$0.00	\$1,750.00
% DISTRIBUTION OF STAFFING	0.0%	0.0%	0.0%	0.0%	33.3%	0.0%	0.0%	33.3%	33.3%	0.0%	0.0%	
<b>SUBTOTAL</b>												<b>\$1,750.00</b>
<b>Task #3 - Capacity and Level of Services analysis (LOS) Analysis</b>												
Gaines Road at Beechnut Street	1	2	2		8				12			\$3,005.00
HOURS SUB-TOTALS	1	2	2	0	8	0	0	0	12	0	0	25
TOTAL LABOR COSTS	\$215.00	\$350.00	\$320.00	\$0.00	\$1,040.00	\$0.00	\$0.00	\$0.00	\$1,080.00	\$0.00	\$0.00	\$3,005.00
% DISTRIBUTION OF STAFFING	4.0%	8.0%	8.0%	0.0%	32.0%	0.0%	0.0%	0.0%	48.0%	0.0%	0.0%	
<b>SUBTOTAL</b>												<b>\$3,005.00</b>
<b>Task #4 - Preliminary Signal Design - 30% for PER Phase</b>												
Gaines Road at Beechnut Street	2		8		10				24	24		\$7,570.00
HOURS SUB-TOTALS	2	0	8	0	10	0	0	0	24	24	0	68
TOTAL LABOR COSTS	\$430.00	\$0.00	\$1,280.00	\$0.00	\$1,300.00	\$0.00	\$0.00	\$0.00	\$2,160.00	\$2,400.00	\$0.00	\$7,570.00
% DISTRIBUTION OF STAFFING	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.3%	0.3%	0.0%	
<b>SUBTOTAL</b>												<b>\$7,570.00</b>
<b>Task #5 - Engineered Plans - Final Design - Beechnut Street @ Gaines Road</b>												
Basis of Estimate			1		1			1		2		\$620.00
General Notes			1		2			2		8		\$1,480.00
Existing Conditions Layout	1		1		2			4		8		\$1,955.00
Proposed Traffic Signal Layout	1		2		4			6	6	16	1	\$4,045.00
Proposed Traffic Signal Elevation	1		2		4			1	4	8		\$2,345.00
Proposed Traffic Signal Details	1		1		3			1	4	2		\$1,455.00
Standards & Details	1		1		2			2	8	14		\$3,015.00
Cost Estimate			1		4			1	6	2	1	\$1,620.00
Address Comments/Revisions			2		8			1	4	6		\$2,450.00
HOURS SUB-TOTALS	5	0	12	0	26	0	0	19	32	66	2	166



**FEE SCHEDULE (MBCO)**  
**METHOD OF PAYMENT: LUMP SUM**

**PRIME PROVIDER NAME:** HJ Consulting

**PROJECT NAME:** Gaines Road PER & Final Design - Traffic Engineering

RATES:	\$215.00	\$175.00	\$160.00	\$150.00	\$130.00	\$185.00	\$125.00	\$130.00	\$90.00	\$100.00	\$70.00	
CONTRACT RATE PER HOUR (FOR REFERENCE ONLY, FORMULAS USE RATES IN ROW 1)	\$215.00	\$175.00	\$160.00	\$150.00	\$130.00	\$185.00	\$125.00	\$130.00	\$90.00	\$100.00	\$70.00	
TOTAL LABOR COSTS	\$1,075.00	\$0.00	\$1,920.00	\$0.00	\$3,900.00	\$0.00	\$0.00	\$2,470.00	\$2,880.00	\$6,600.00	\$140.00	\$18,985.00
% DISTRIBUTION OF STAFFING	2.9%	0.0%	11.8%	0.0%	14.7%	0.0%	0.0%	0.0%	35.3%	35.3%	0.0%	
<b>SUBTOTAL</b>												<b>\$18,985.00</b>
DESCRIPTION											TOTAL MH BY TASK	TOTAL COSTS BY FC
<b>Gaines Road PER &amp; Final Design - Traffic Engineering</b>												
Task #1 - Project Coordination											13	\$1,745.00
Task #2 - Field Reconnaissance and Traffic Counts											15	\$1,750.00
Task #3 - Capacity and Level of Services analysis (LOS) Analysis											25	\$3,005.00
Task #4 - Preliminary Signal Design - 30% for PER Phase											68	\$7,570.00
Task #5 - Engineered Plans - Final Design - Beechnut Street @ Gaines Road											166	\$18,985.00
Expenses											-	\$1,066.00
<b>TOTAL</b>												<b>\$34,121.00</b>

EXPENSES	# OF UNITS	COST/UNIT	TOTAL
MILEAGE (# of miles) (current State rate)	90	\$0.65	\$58.50
CADD PLOTS		\$7.50	\$0.00
11 X 17 MYLARS		\$2.00	\$0.00
8.5 X 11 B/W PAPER COPIES	30	\$0.10	\$3.00
11 X 17 B/W PAPER COPIES	30	\$0.15	\$4.50
8.5 X 11 COLOR PAPER COPIES		\$1.00	\$0.00
11 X 17 COLOR PAPER COPIES		\$1.20	\$0.00
STANDARD POSTAGE		\$0.47	\$0.00
LOCAL DELIVERY		\$30.00	\$0.00
PARKING		\$10.00	\$0.00
REPRODUCTION OF CD/DVD		\$3.00	\$0.00
TOLL CHARGES		\$5.00	\$0.00
TRAFFIC VOLUME COUNTS (PER COUNTER/24 HOURS)	1	\$1,000.00	\$1,000.00
SURVEY EQUIPMENT CHARGE		\$200.00	\$0.00
SURVEY EQUIPMENT CHARGE		\$200.00	\$0.00
<b>SUBTOTAL EXPENSES</b>			<b>\$1,066.00</b>

# CERTIFICATE OF INTERESTED PARTIES

**FORM 1295**

1 of 1

Complete Nos. 1 - 4 and 6 if there are interested parties.  
Complete Nos. 1, 2, 3, 5, and 6 if there are no interested parties.

**OFFICE USE ONLY  
CERTIFICATION OF FILING****1 Name of business entity filing form, and the city, state and country of the business entity's place of business.**

HJ Consulting, Inc.  
Sugar Land, TX United States

**Certificate Number:**  
2023-1093969

**Date Filed:**  
11/13/2023

**Date Acknowledged:**  
12/05/2023

**2 Name of governmental entity or state agency that is a party to the contract for which the form is being filed.**

Fort Bend County

**3 Provide the identification number used by the governmental entity or state agency to track or identify the contract, and provide a description of the services, goods, or other property to be provided under the contract.**

SOQ 14-025 FBC Project #20429x  
Design Services for a mobility project in Precinct 4- Gaines Road from Kegan's Bayou to FBC Line.

4	Name of Interested Party	City, State, Country (place of business)	Nature of interest (check applicable)	
			Controlling	Intermediary
	Jajoo, Harish	Sugar Land, TX United States	X	

**5 Check only if there is NO Interested Party.**☐**6 UNSWORN DECLARATION**

My name is \_\_\_\_\_, and my date of birth is \_\_\_\_\_.

My address is \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_.  
(street) (city) (state) (zip code) (country)

I declare under penalty of perjury that the foregoing is true and correct.

Executed in \_\_\_\_\_ County, State of \_\_\_\_\_, on the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.  
(month) (year)

\_\_\_\_\_  
Signature of authorized agent of contracting business entity  
(Declarant)