

STATE OF TEXAS                   §  
   §  
 COUNTY OF FORT BEND       §

### **AGREEMENT FOR PROFESSIONAL ENGINEERING SERVICES**

THIS AGREEMENT is made and entered into by and between Fort Bend County, (hereinafter "County"), a body corporate and politic under the laws of the State of Texas, and LJA Engineering, Inc., (hereinafter "Contractor"), a company authorized to conduct business in the State of Texas.

#### WITNESSETH

WHEREAS, County desires that Contractor provide professional engineering services for improvements to Bowser Road under 2020 Mobility Bond Project No. 20306 (hereinafter "Services") pursuant to SOQ 14-025; and

WHEREAS, County has determined Contractor is the most highly qualified provider of the desired Services on the basis of demonstrated competence and qualifications, and County and Contractor have negotiated to reach a fair and reasonable amount of compensation for the provision of such Services, as required under Chapter 2254 of the Texas Government Code; and

WHEREAS, Contractor represents that it is qualified and desires to perform such services.

NOW, THEREFORE, in consideration of the mutual covenants and conditions set forth below, the parties agree as follows:

#### AGREEMENT

##### **Section 1. Scope of Services**

Contractor shall render the professional engineering services as described in Contractor's proposal dated March 11, 2021, attached hereto as Exhibit A, and incorporated herein for all purposes.

##### **Section 2. Personnel**

2.1 Contractor represents that it presently has, or is able to obtain, adequate qualified personnel in its employment for the timely performance of the Scope of 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 Scope of Services when and as required and without delays.

2.2 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 who, in the opinion of County, is incompetent or by his conduct becomes detrimental to the project shall, upon request of County, immediately be removed from association with the project.

### **Section 3. Compensation and Payment**

3.1 Contractor's fees shall be calculated at the rates set forth in the attached Exhibit A. The Maximum Compensation for the performance of Services within the Scope of Services described in Exhibit A is one million two hundred eighty-six thousand two hundred seventy-five dollars and 81/100 (\$1,286,275.81) as set forth in Exhibit A. In no case shall the amount paid by County under this Agreement exceed the Maximum Compensation without a written agreement executed by the parties.

3.2 All performance of the Scope of Services by Contractor including any changes in the Scope of Services and revision of work satisfactorily performed will be performed only when approved in advance and authorized by County.

3.3 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.

### **Section 4. Limit of Appropriation**

4.1 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 two hundred eighty-six thousand two hundred seventy-five dollars and 81/100 (\$1,286,275.81) specifically allocated to fully discharge any and all liabilities County may incur.

4.2 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 shall not under any conditions, circumstances, or interpretations thereof exceed one million two hundred eighty-six thousand two hundred seventy-five dollars and 81/100 (\$1,286,275.81).

### **Section 5. Time of Performance**

Time for performance of the Scope of Services under this Agreement shall begin with receipt of the Notice to Proceed and end no later than December 31, 2025. Contractor shall complete the tasks described in the Scope of Services, within this time or within such additional time as may be extended by the County.

## **Section 6. Modifications and Waivers**

6.1 The parties may not amend or waive this Agreement, except by a written agreement executed by both parties.

6.2 No failure or delay in exercising any right or remedy or requiring the satisfaction of any condition under this Agreement, and no course of dealing between the parties, operates as a waiver or estoppel of any right, remedy, or condition.

6.3 The rights and remedies of the parties set forth in this Agreement are not exclusive of, but are cumulative to, any rights or remedies now or subsequently existing at law, in equity, or by statute.

## **Section 7. Termination**

7.1 Termination for Convenience – County may terminate this Agreement at any time upon forty-eight (48) hours written notice.

### **7.2 Termination for Default**

7.2.1 County may terminate the whole or any part of this Agreement for cause in the following circumstances:

7.2.1.1 If Contractor fails to perform services within the time specified in the Scope of Services or any extension thereof granted by the County in writing;

7.2.1.2 If Contractor materially breaches any of the covenants or terms and conditions set forth in this Agreement or fails to perform any of the other provisions of this Agreement or so fails to make progress as to endanger performance of this Agreement in accordance with its terms, and in any of these circumstances does not cure such breach or failure to County's reasonable satisfaction within a period of ten (10) calendar days after receipt of notice from County specifying such breach or failure.

7.2.2 If, after termination, it is determined for any reason whatsoever that Contractor was not in default, or that the default was excusable, the rights and obligations of the parties shall be the same as if the termination had been issued for the convenience of the County in accordance with Section 7.1 above.

7.3 Upon termination of this Agreement, County shall compensate Contractor in accordance with Section 3, 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 3 above.

7.4 If County terminates this Agreement as provided in this Section, no fees of any type, other than fees due and payable at the Termination Date, shall thereafter be paid to Contractor.

## **Section 8. 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 of this Agreement, or in the event of termination or cancellation thereof, at the time of payment under Section 3 for work performed. Contractor shall promptly furnish all such data and material to County on request.

## **Section 9. Inspection of Books and Records**

Contractor will 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 survives the termination of this Agreement for a period of four years.

## **Section 10. Insurance**

10.1 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 (or a Claims Made form for Professional Liability insurance) 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:

10.1.1 Workers' Compensation insurance. Substitutes to genuine Workers' Compensation Insurance will not be allowed.

10.1.2 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.

10.1.3 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.

10.1.4 Business Automobile Liability insurance with a combined Bodily Injury/Property Damage limit of not less than \$1,000,000 each accident. The policy shall cover liability arising from the operation of licensed vehicles by policyholder.

10.1.5 Professional Liability insurance may be made on a Claims Made form with limits not less than \$1,000,000.

10.2 County and the members of Commissioners Court shall be named as additional insured to all required coverage except for Workers' Compensation and Professional Liability. All Liability policies including Workers' Compensation written on behalf of Contractor shall contain a waiver of subrogation in favor of County and members of Commissioners Court.

10.3 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 that work under the Agreement is completed.

### **Section 11. Indemnity**

**CONTRACTOR SHALL INDEMNIFY AND HOLD HARMLESS COUNTY AGAINST LOSSES, LIABILITIES, CLAIMS, AND CAUSES OF ACTION, INCLUDING THE REIMBURSEMENT OF COUNTY'S REASONABLE ATTORNEYS FEES IN PROPORTION TO CONTRACTOR'S LIABILITY, ARISING FROM ACTIVITIES OF CONTRACTOR, ITS AGENTS, SERVANTS OR EMPLOYEES, PERFORMED UNDER THIS AGREEMENT THAT RESULT FROM THE NEGLIGENT ACT, INTENTIONAL TORT, ERROR, OR OMISSION OF CONTRACTOR OR ANY OF CONTRACTOR'S AGENTS, SERVANTS OR EMPLOYEES.**

### **Section 12. Confidential and Proprietary Information**

12.1 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.

12.2 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.

12.3 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.

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

12.5 Contractor expressly acknowledges that County is subject to the Texas Public Information Act, TEX. GOV'T CODE ANN. §§ 552.001 *et seq.*, as amended, and notwithstanding any provision in the Agreement to the contrary, County will make any information related to the Agreement, or otherwise, available to third parties in accordance with the Texas Public Information Act. Any proprietary or confidential information marked as such provided to County by Consultant shall not be disclosed to any third party, except as directed by the Texas Attorney General in response to a request for such under the Texas Public Information Act, which provides for notice to the owner of such marked information and the opportunity for the owner of such information to notify the Attorney General of the reasons why such information should not be disclosed.

### **Section 13. Independent Contractor**

13.1 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 or, where permitted, of its subcontractors.

13.2 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.

**Section 14. Notices**

14.1 Each party giving any notice or making any request, demand, or other communication (each, a “Notice”) pursuant to this Agreement shall do so in writing and shall use one of the following methods of delivery, each of which, for purposes of this Agreement, is a writing: personal delivery, registered or certified mail (in each case, return receipt requested and postage prepaid), or nationally recognized overnight courier (with all fees prepaid).

14.2 Each party giving a Notice shall address the Notice to the receiving party at the address listed below or to another address designated by a party in a Notice pursuant to this Section:

County: Fort Bend County Engineering Department  
Attn: County Engineer  
301 Jackson Street  
Richmond, Texas 77469

With a copy to: Fort Bend County  
Attn: County Judge  
401 Jackson Street, 1<sup>st</sup> Floor  
Richmond, Texas 77469

Contractor: LJA Engineering, Inc.  
1904 West Grand Parkway North, Suite 100  
Katy, Texas 77449

14.3 A Notice is effective only if the party giving or making the Notice has complied with subsections 14.1 and 14.2 and if the addressee has received the Notice. A Notice is deemed received as follows:

14.3.1 If the Notice is delivered in person, or sent by registered or certified mail or a nationally recognized overnight courier, upon receipt as indicated by the date on the signed receipt.

14.3.2 If the addressee rejects or otherwise refuses to accept the Notice, or if the Notice cannot be delivered because of a change in address for which no Notice was given, then upon the rejection, refusal, or inability to deliver.

**Section 15. Compliance with Laws**

Contractor shall comply with all federal, state, and local laws, statutes, ordinances, rules and regulations, and the orders and 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. When required by County, Contractor shall furnish County with certification of compliance with said laws, statutes, ordinances, rules, regulations, orders, and decrees above specified.

**Section 16. Standard of Care**

Contractor represents shall perform the Services to be provided under this Agreement with the professional skill and care ordinarily provided by competent engineers practicing under the same or similar circumstances and professional license. Further, Contractor shall perform the Services as expeditiously as is prudent considering the ordinary professional skill and care of a competent engineer.

**Section 17. Assignment**

17.1 Neither party may assign any of its rights under this Agreement, except with the prior written consent of the other party. That party shall not unreasonably withhold its consent. All assignments of rights are prohibited under this subsection, whether they are voluntarily or involuntarily, by merger, consolidation, dissolution, operation of law, or any other manner.

17.2 Neither party may delegate any performance under this Agreement.

17.3 Any purported assignment of rights or delegation of performance in violation of this Section is void.

**Section 18. Applicable Law**

The laws of the State of Texas govern all disputes arising out of or relating to this Agreement. The parties hereto acknowledge that venue is proper in Fort Bend County, Texas, for all legal actions or proceedings arising out of or relating to this Agreement and waive the right to sue or be sued elsewhere. Nothing in the Agreement shall be construed to waive the County's sovereign immunity.

**Section 19. Successors and Assigns**

County and Contractor bind themselves and their successors, executors, administrators and assigns to the other party of this Agreement and to the successors, executors, administrators and assigns of the other party, in respect to all covenants of this Agreement.

**Section 20. Third Party Beneficiaries**

This Agreement does not confer any enforceable rights or remedies upon any person other than the parties.

**Section 21. Severability**

If any provision of this Agreement is determined to be invalid, illegal, or unenforceable, the remaining provisions remain in full force, if the essential terms and conditions of this Agreement for each party remain valid, binding, and enforceable.

**Section 22. Publicity**

Contact with citizens of Fort Bend County, media outlets, or governmental agencies shall be the sole responsibility of County. Under no circumstances whatsoever, shall Contractor release any material or information developed or received in the performance of the Services hereunder without the express written permission of County, except where required to do so by law.

**Section 23. Captions**

The section captions used in this Agreement are for convenience of reference only and do not affect the interpretation or construction of this Agreement.

**Section 24. Conflict**

In the event there is a conflict between this Agreement and the attached exhibits, this Agreement controls.

**Section 25. Certain State Law Requirements for Contracts**

25.1 Agreement to Not Boycott Israel Chapter 2271 Texas Government Code: By signature below, Contractor verifies that if Contractor employs ten (10) or more full-time employees and this Agreement has a value of \$100,000 or more, Contractor does not boycott Israel and will not boycott Israel during the term of this Agreement.

25.2 Texas Government Code Section 2251.152 Acknowledgment: By signature below, Contractor represents pursuant to Section 2252.152 of the Texas Government Code, that Contractor is not listed on the website of the Comptroller of the State of Texas concerning the listing of companies that are identified under Section 806.051, Section 807.051 or Section 2253.153.

**Section 26. Human Trafficking**

BY ACCEPTANCE OF AGREEMENT, CONTRACTOR ACKNOWLEDGES THAT THE 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.

[THE REMAINDER OF THIS PAGE INTENTIONALLY LEFT BLANK.]

IN WITNESS WHEREOF, the parties hereto have signed or have caused their respective names to be signed to multiple counterparts to be effective on the date signed by the last party hereto.

FORT BEND COUNTY

LJA ENGINEERING, INC

*KP George*

\_\_\_\_\_  
KP George, County Judge

*Jeff Cannon*

\_\_\_\_\_  
Authorized Agent – Signature

5.25.2021

\_\_\_\_\_  
Date



Jeff Cannon, PE

\_\_\_\_\_  
Authorized Agent – Printed Name

ATTEST:

Senior Vice President

\_\_\_\_\_  
Title

*Laura Richard*

\_\_\_\_\_  
Laura Richard, County Clerk

04/30/2021

\_\_\_\_\_  
Date

APPROVED:

*J. Stacy Slawinski*

\_\_\_\_\_  
J. Stacy Slawinski, P.E., County Engineer

APPROVED AS TO LEGAL FORM:

*Marcus D. Spencer*

\_\_\_\_\_  
Marcus D. Spencer, First Assistant County Attorney

**AUDITOR'S CERTIFICATE**

I hereby certify that funds are available in the amount of \$1,286,275.81 to accomplish and pay the obligation of Fort Bend County under this contract.

*Robert Ed Sturdivant*

\_\_\_\_\_  
Robert Ed Sturdivant, County Auditor

# EXHIBIT A



Match 11, 2021

**PROPOSAL**

Fort Bend County Engineering  
c/o Mr. Mark Dessens, PE  
Schaumburg & Polk, Inc.  
11767 Katy Freeway, Suite 900  
Houston, TX 77079

Re: Bowser Road Widening Project No. 20306

Dear Mr. Dessens:

LJA Engineering, Inc. (LJA) is pleased to submit this proposal to provide preliminary engineering and final design services for the widening of Bowser Road in Precinct 3 from the intersection with FM 1093 south to Winding Stream Drive, approximately 2.3 miles in length. The project scope of work (further outlined in Attachment A) will be to widen Bowser Road (presently a 2-lane road with open ditches) to a 3-lane concrete curb & gutter section with continuous storm sewer and realign the FM 1093/Bowser/Pool Hill intersection to a perpendicular arrangement with new TxDOT traffic signal. The project will be constructed mainly within the existing County right-of-way (typically 60'-70') with some areas requiring new right-of-way to accommodate the typical section.

Detention will be provided to maintain or improve the existing outfall conditions throughout the project limits. We will study the drainage of the area and provide recommendations for extreme event overflow alternatives as requested by the County Commissioner as an additional service.

## COMPENSATION

Our lump sum compensation for professional services associated with the completion of the geotechnical investigations, design surveying, signal warrant, and preliminary engineering report for this project is \$492,15.25. A summarized breakdown of our team's fees is tabulated below:

<b>Preliminary Engineering Total</b>	<b>\$492,415.25</b>
Control Surveying	\$25,847.10
Topographic Surveying	\$107,647.49
Utility Locating & Mapping	\$34,906.16
Geotechnical Investigations	\$38,484.00
Preliminary Engineering Report & 30% Plans	\$280,430.50
Signal Warrant Study	\$5,100.00

Our lump sum compensation for professional services associated with the completion of the final design for this project is \$647,125.56. A summarized breakdown of our team's fees is tabulated below:

<b>Final Design Total</b>	<b>\$647,125.56</b>
Proposed ROW Surveying & Mapping	\$46,629.52
Proposed Acquisition Services	\$46,696.54
Signal Plans	\$33,000.00
Final PS&E	\$520,799.50

Additional Services will include ultimate drainage analysis of the extreme event outfall options as well as Construction Phase Services and will be used on a T&M basis not to exceed \$146,735.00 without prior approval by the County. Additional services are:

<b>Additional Services Not to Exceed Amount</b>	<b>\$146,735.00</b>
LJA - Ultimate Drainage Analysis for Extreme Event	\$60,000.00
Bidding Support & RFI's (LJA & PKI)	\$53,100.00
Construction Surveying Services	\$33,635.00

An outlined scope of work is included as Attachment A. The detailed breakdown of our expected level of effort estimate for the LJA team is included as attachment B. This level of effort was developed based on our experience with similar projects, multiple site visits to the project, and after multiple project scoping meetings. Signed professional services *proposals from* each of the assigned team members are also provided for your review as Attachment C.

## SCHEDULE

We will begin the project immediately upon receipt of notice to proceed and we expect these efforts to be completed in 12-18 months.

LJA appreciates the opportunity to continue working with Fort Bend County on this critical infrastructure project. If you have any questions regarding this proposal, please contact me on my cellphone at 713.391.7966 or by email at [JRBaker@LJA.com](mailto:JRBaker@LJA.com).

Sincerely,



James R. Baker, PE  
Vice President  
JB/pa

Attachments A,B,C

## **Attachment A Scope of Services**

The scope of work for preliminary and final design for the widening of Bowser Rd from FM 1093 to the intersection with Winding Stream Drive will include the following items on a lump sum basis:

- I. Design Studies
  - a. Field site visits and data collection for use in design.
  - b. Review County design criteria and develop project specific design summary report.
  - c. Develop preliminary total project cost opinions.
  - d. Prepare Preliminary Engineering Report (Including 30% design from sections below).
  - e. Coordination with selected Geotechnical Consultant.
- II. Utility Coordination
  - a. Utility coordination meetings.
  - b. Utility research.
  - c. Develop list of potential utility conflicts during preliminary design.
  - d. Prepare utility conflict layouts in accordance with individual utility requirements.
- III. Management
  - a. Monthly progress reporting.
  - b. Lead project status update and coordination meetings.
  - c. Prepare meeting minutes and track all action items.
  - d. Conference calls.
  - e. Schedule and implement project QAQC procedures and reviews.
  - f. Track all internal and external review comments to closure.
- IV. Survey Review
  - a. Incorporate survey control sheets.
  - b. Review all survey deliverables.
- V. Roadway Design
  - a. Develop horizontal alignment and prepare alignment plan sheets.
  - b. Develop existing and proposed typical section sheets for Bowser Rd, Pool Hill, and FM 1093.
  - c. Develop Plan and Profile Plan sheets at 1"=40' scale for Bowser Rd, Pool Hill, and FM 1093.
  - d. Prepare Intersection Layouts for Fulshear Farms, Winding Stream, and other intersecting streets.
  - e. Prepare OpenRoads model, cross sections, and cut/fill quantities.
  - f. Plan preparation:
    - i. Calculation of Quantities
    - ii. Roadway Standards
    - iii. Title Sheet
    - iv. Index of Sheets
    - v. Project Layout
    - vi. Miscellaneous Roadway Details
    - vii. Driveway Summary

- VI. Drainage Analysis and Design
  - a. Data collection and field reconnaissance
  - b. Review of surveyed data
  - c. Meetings with stakeholders
  - d. Hydrologic studies
    - i. Design methodologies
    - ii. Compute design and check flows
    - iii. Consider pre- and post-construction conditions.
    - iv. Detention requirements
    - v. SWMM model
    - vi. Drainage report per FBC Drainage District requirements.
  - e. Storm drain design
    - i. Evaluate the existing capacity.
    - ii. Geopak drainage models
    - iii. Analyze and optimize size of storm sewer system.
    - iv. Determine Hydraulic Grade Line (HGL).
  - f. Cross drainage structures
    - i. Delineate drainage areas.
    - ii. Analyze and size cross drainage structures.
  - g. Temporary drainage facilities
  - h. PS&E development
    - i. Summary of Quantities
    - ii. Hydrologic Data Sheets
    - iii. Hydraulic Data Sheets
    - iv. Culvert Layouts
    - v. Bowser NB Storm on Roadway P&P
    - vi. Bowser SB Storm on Roadway P&P
    - vii. Pool Hill Storm on Roadway P&P
    - viii. FM 1093 Storm on Roadway P&P
    - ix. Lateral Sheets
    - x. Detention Pond Layouts
    - xi. Detention Pond Details
    - xii. Ditch Design
    - xiii. Culvert Cross Sections
    - xiv. Identify limits of trench protection.
    - xv. Details for non-standard drainage appurtenances
    - xvi. Outlet protection details
    - xvii. Identify utility conflicts.
    - xviii. Drainage standards
    - xix. Miscellaneous details
- VII. Signing, Pavement Markings & Signalization
  - a. Signing and marking layouts
  - b. Sign details
  - c. Standards
- VIII. Miscellaneous PS&E Requirements
  - a. Traffic Control Plan, Detours and Sequence of Construction
    - i. Warning sign layout.

- ii. Overall phasing plan.
- iii. Construction sequence and narrative
- iv. Traffic Control Plan (TCP)
  - 1. TCP Typical Sections – Bowser/Pool Hill Ph 1
  - 2. TCP Layouts - Bowser/Pool Hill Ph 1
  - 3. TCP Typical Sections – Bowser/Pool Hill Ph 2
  - 4. TCP Layouts - Bowser/Pool Hill Ph 2
  - 5. TCP Typical Sections – FM 1093 Ph 1
  - 6. TCP Layouts – FM 1093 Ph 1
  - 7. TCP Typical Sections – FM 1093 Ph 2
  - 8. TCP Layouts – FM 1093 Ph 2
  - 9. TCP summary of quantities
  - 10. TCP standards
- b. Storm Water Pollution Prevention
  - i. SW3P Sheet
  - ii. SW3P standards
- c. Compute and tabulate quantities
- d. Estimate of Construction Costs and Bid Tabulation
- e. Specifications and General Notes.

**Attachment B**  
**LJA Team Level of Effort**

## ATTACHMENT B-FEE SCHEDULE

COMPANY	FEE
LJA Engineering, Inc. (LJA)	\$801,230.00
Landtech Surveying, Inc. (LSI)	\$261,726.81
Pacheco Koch (PKI)	\$38,100.00
HVJ	\$38,484.00
<b>Lump Sum TOTAL</b>	<b>\$1,139,540.81</b>
LJA - Ultimate Drainage Analysis for Extreme Event	\$60,000.00
LJA - Construction Phase Services	\$50,000.00
PKI - CPS (Signal only)	\$3,100.00
LSI - Construction Surveying Services	\$33,635.00
<b>Time &amp; Materials TOTAL</b>	<b>\$146,735.00</b>
<b>Contract Total</b>	<b>\$1,286,275.81</b>

### Fee Breakdown by Stage of Project Development

<b>Preliminary Engineering Total</b>	<b>\$492,415.25</b>
Control Surveying	\$25,847.10
Topographic Surveying	\$107,647.49
Utility Locating & Mapping	\$34,906.16
Geotechnical Investigations	\$38,484.00
Preliminary Engineering Report & 30% Plans	\$280,430.50
Signal Warrant Study	\$5,100.00

<b>Final Design Total</b>	<b>\$647,125.56</b>
Proposed ROW Surveying & Mapping	\$46,629.52
Proposed Acquisition Services	\$46,696.54
Signal Plans	\$33,000.00
Final PS&E	\$520,799.50

<b>Additional Services Not to Exceed Amount</b>	<b>\$146,735.00</b>
LJA - Ultimate Drainage Analysis for Extreme Event	\$60,000.00
Bidding Support & RFI's (LJA & PKI)	\$53,100.00
Construction Surveying Services	\$33,635.00

**ATTACHMENT B-FEE SCHEDULE (LJA Engineering, Inc.)**

PRIME PROVIDER NAME: LJA Engineering, Inc.

PROJECT NAME/CSJ: Bowser rd Widening

TASK DESCRIPTION	PROJECT DIRECTOR	SENIOR PROJECT MANAGER	PROJECT ENGINEER	ENGINEER IN TRAINING	ADMIN/CLERICAL	TOTAL LABOR HRS. & COSTS
<b>ROUTE AND DESIGN STUDIES (FC 110)</b>						
A. DATA COLLECTION & FIELD RECONNAISSANCE	2	2	2	4		10
B. REVIEW DESIGN CRITERIA	4	4	4	4		16
C. PRELIMINARY COST ESTIMATES	2	4	4	8		18
D. PREPARE PRELIMINARY ENGINEERING REPORT (INCLUDE 30% PLANS FROM TASKS BELOW)	16	24	60	80		180
E. COORDINATION WITH GEOTECHNICAL SUBCONSULTANT / REVIEW	4	8	8			20
HOURS SUB-TOTALS	28	42	78	96	0	244
TOTAL LABOR COSTS	\$8,400.00	\$10,290.00	\$13,260.00	\$11,520.00	\$0.00	\$43,470.00
<b>SUBTOTAL (FC 110)</b>						<b>\$43,470.00</b>

TASK DESCRIPTION	PROJECT DIRECTOR	SENIOR PROJECT MANAGER	PROJECT ENGINEER	ENGINEER IN TRAINING	ADMIN/CLERICAL	TOTAL LABOR HRS. & COSTS
<b>RIGHT-OF-WAY DATA (FC 130)</b>						
<b>A. UTILITY ENGINEERING</b>						
1. UTILITY COORDINATION (General Coordination + 2 Meetings)	2	8		8		18
2. UTILITY RESEARCH	2	2		8		12
3. UTILITY CONFLICTS	2	2		16		20
4. UTILITY LAYOUTS /EXHIBITS	2	2	16	40		60
HOURS SUB-TOTALS	8	14	16	72	0	110
TOTAL LABOR COSTS	\$2,400.00	\$3,430.00	\$2,720.00	\$8,640.00	\$0.00	\$17,190.00
<b>SUBTOTAL (FC 130)</b>						<b>\$17,190.00</b>

TASK DESCRIPTION	PROJECT DIRECTOR	SENIOR PROJECT MANAGER	PROJECT ENGINEER	ENGINEER IN TRAINING	ADMIN/CLERICAL	TOTAL LABOR HRS. & COSTS
<b>MANAGING CONTRACTED / DONATED PE (FC 145)</b>						
A. PREPARE MONTHLY PROGRESS REPORTS	8	12			12	32
B. ATTEND COORDINATION MEETINGS (ASSUME 4 MEETINGS)	8	8		8		24
C. PREPARE MEETING MINUTES	2	4		8		14
D. PROJECT COORDINATION AND CONFERENCE CALLS	8	8		8		24
E. PROJECT QUALITY CONTROL REVIEWS	8	16	24	24		72
F. REVIEW COMMENT TRACKING AND RESOLUTION	8	16	24	24		72
HOURS SUB-TOTALS	42	64	48	72	12	238
TOTAL LABOR COSTS	\$12,600.00	\$15,680.00	\$8,160.00	\$8,640.00	\$900.00	\$45,980.00
<b>SUBTOTAL (FC 145)</b>						<b>\$45,980.00</b>

TASK DESCRIPTION	PROJECT DIRECTOR	SENIOR PROJECT MANAGER	PROJECT ENGINEER	ENGINEER IN TRAINING	ADMIN/CLERICAL	TOTAL LABOR HRS. & COSTS
<b>DESIGN SURVEYS AND CONSTRUCTION SURVEYS (FC 150)</b>						
A. INCORPORATE SURVEY CONTROL SHEETS	2	2	4	4		12
B. COORDINATE/REVIEW SURVEY	2	8	8	12		30
HOURS SUB-TOTALS	4	10	12	16	0	42
TOTAL LABOR COSTS	\$1,200.00	\$2,450.00	\$2,040.00	\$1,920.00	\$0.00	\$7,610.00
<b>SUBTOTAL (FC 150)</b>						<b>\$7,610.00</b>

**ATTACHMENT B-FEE SCHEDULE (LJA Engineering, Inc.)**

PRIME PROVIDER NAME: LJA Engineering, Inc.

PROJECT NAME/CSJ: Bowser rd Widening

TASK DESCRIPTION	PROJECT DIRECTOR	SENIOR PROJECT MANAGER	PROJECT ENGINEER	ENGINEER IN TRAINING	ADMIN/CLERICAL	TOTAL LABOR HRS. & COSTS
<b>ROADWAY DESIGN CONTROLS (FC160)</b>						
<b>A. ROADWAY DESIGN</b>						
1. HORIZONTAL ALIGNMENT DATA SHEET	2	4	4	12		22
<b>B. TYPICAL SECTIONS</b>						
1. EXISTING TYPICAL SECTIONS	2	4	8	8		22
2. PROPOSED TYPICAL SECTIONS	2	8	20	40		70
<b>C. PLAN PROFILES</b>						
1. BOWSER (1"=40')	8	32	110	340		490
2. POOL HILL (1"=40')	2	12	12	40		66
3. FM 1093 (1"=40')	2	12	15	80		109
<b>D. INTERSECTIONS / CROSS STREETS</b>						
1. FULSHEAR FARMS (1"=40')	2	2	4	16		24
2. WINDING STREAM (1"=40')	2	2	4	16		24
2. MISC (1"=40')	2	2	4	16		24
4. INTERSECTION LAYOUTS (1"=40')	2	16	36	70		124
<b>E. CUT AND FILL QUANTITIES (100' INTERVALS)</b>	4	24	60	100		188
<b>F. PLAN PREPARATION</b>						
1. CALCULATE QUANTITIES	2	4	4	8		18
2. ROADWAY STANDARDS	2	2	4	8		16
3. TITLE SHEET	1	2	2	8		13
4. INDEX OF SHEETS	2	4	8	8		22
5. PROJECT LAYOUT	2	4	12	24		42
6. MISCELLANEOUS ROADWAY DETAILS	4	2	4	12		22
7. DRIVEWAY SUMMARY	2	2	4	12		20
<b>HOURS SUB-TOTALS</b>	45	138	315	818	0	1,316
<b>TOTAL LABOR COSTS</b>	\$13,500.00	\$33,810.00	\$53,550.00	\$98,160.00	\$0.00	\$199,020.00
<b>SUBTOTAL (FC 160)</b>						<b>\$199,020.00</b>

TASK DESCRIPTION	PROJECT DIRECTOR	SENIOR PROJECT MANAGER	PROJECT ENGINEER	ENGINEER IN TRAINING	ADMIN/CLERICAL	TOTAL LABOR HRS. & COSTS
<b>DRAINAGE (FC161)</b>						
<b>A. DATA COLLECTION / FIELD INVESTIGATION</b>						
1. DATA COLLECTION / FIELD INVESTIGATION		2	2	2		6
<b>B. REVIEW SURVEY DATA</b>						
1. REVIEW SURVEY DATA			4	4		8
<b>C. MEET WITH STAKEHOLDERS</b>	4	4	8	8		24
<b>D. HYDROLOGIC STUDIES</b>						
1. DESIGN METHODOLOGIES	1	1	2	4		8
2. COMPUTE DESIGN FLOWS		2	4	8		14
2. CONSIDER PRE AND POST CONSTRUCTION CONDITIONS	2	4	8	16		30
3. DETENTION REQUIREMENTS	2	8	16	16		42
3. SWMM MODEL	8	16	24	60		108
4. DRAINAGE REPORT	2	8	16	40	8	74
<b>E. STORM DRAINS</b>						
1. EVALUATE EXISTING CAPACITY	1	2	4	8		15
2. GEOPAK DRAINAGE MODELS	4	24	80	120		228
3. ANALYZE AND SIZE STORM SEWER SYSTEM	2	4	8	16		30
4. DETERMINE HYDRAULIC GRADE LINE		2	4	8		14
<b>F. CROSS DRAINAGE STRUCTURES</b>						
1. DELINEATE DRAINAGE AREAS	2	4	8	24		38
2. ANALYZE AND SIZE CROSS DRAINAGE STRUCTURES	1	4	16	40		61
<b>G. TEMPORARY DRAINAGE FACILITIES</b>	2	4	8	16		30
<b>H. PLANS, SPECIFICATIONS AND ESTIMATES (PS&amp;E) DEVELOPMENT FOR HYDRAULICS</b>						
1. SUMMARY OF QUANTITIES	1	2	8	16		27
2. HYDROLOGIC DATA SHEETS	1	2	8	24		35
3. HYDRAULIC DATA SHEETS	1	4	24	48		77
4. CULVERT LAYOUTS	4	8	32	60		104
5. BOWSER NB STORM P&P (SHOWN ON ROADWAY P&P'S)	8	4	30	60		102

**ATTACHMENT B-FEE SCHEDULE (LJA Engineering, Inc.)**

**PRIME PROVIDER NAME: LJA Engineering, Inc.**

**PROJECT NAME/CSJ: Bowser rd Widening**

6. BOWSER SB STORM P&P (SHOWN ON ROADWAY P&P'S)	8	4	30	60		102
7. POOL HILL STORM P&P (SHOWN ON ROADWAY P&P'S)	2	2	8	20		32
8. FM 1093 STORM P&P (SHOWN ON ROADWAY P&P'S)	4	2	8	20		34
9. LATERAL SHEETS (SHOWN ON ROADWAY P&P'S)	1	6	12	40		59
10. DETENTION POND LAYOUTS	2	8	12	28		50
11. DETENTION POND DETAILS	1	6	10	24		41
12. DITCH DESIGN	4	16	24	120		164
13. CULVERT CROSS SECTIONS	1	2	10	24		37
14. IDENTIFY LIMITS OF TRENCH EXCAVATION PROTECTION, SHORING , AND DEWATERING		2	4	8		14
15. DETAILS FOR NON-STANDARD INLETS, MANHOLES, AND JUNCTION BOXES	1	4	8	24		37
16. OUTLET PROTECTION / DETAILS		2	4	8		14
17. IDENTIFY UTILITY CONFLICTS	2	4	8	24		38
18. DRAINAGE STANDARDS	1	2	4	12		19
19. MISCELLANEOUS DRAINAGE DETAILS	2	4	8	24		38
HOURS SUB-TOTALS	75	173	464	1,034	8	1,754
TOTAL LABOR COSTS	\$22,500.00	\$42,385.00	\$78,880.00	\$124,080.00	\$600.00	\$268,445.00
<b>SUBTOTAL (FC 161)</b>						<b>\$268,445.00</b>

TASK DESCRIPTION	PROJECT DIRECTOR	SENIOR PROJECT MANAGER	PROJECT ENGINEER	ENGINEER IN TRAINING	ADMIN/ CLERICAL	TOTAL LABOR HRS. & COSTS
<b>SIGNING, PAVEMENT MARKINGS AND SIGNALIZATION (FC 162)</b>						
A. SIGNING / PAVEMENT MARKING						
1. SIGNING AND MARKING LAYOUTS	4	16	60	160		240
2. SIGN DETAILS	2	4	8	16		30
3. SIGNING AND MARKING STANDARDS	1	1	4	4		10
HOURS SUB-TOTALS	7	21	72	180	0	280
TOTAL LABOR COSTS	\$2,100.00	\$5,145.00	\$12,240.00	\$21,600.00	\$0.00	\$41,085.00
<b>SUBTOTAL (FC 162)</b>						<b>\$41,085.00</b>

TASK DESCRIPTION	PROJECT DIRECTOR	SENIOR PROJECT MANAGER	PROJECT ENGINEER	ENGINEER IN TRAINING	ADMIN/ CLERICAL	TOTAL LABOR HRS. & COSTS
<b>MISCELLANEOUS (ROADWAY) (FC 163)</b>						
A. TRAFFIC CONTROL PLAN, DETOURS, SEQUENCE OF CONST						
1. ADVANCE WARNING SIGN LAYOUT	2	8	8	32		50
2. OVERALL PHASING LAYOUT	2	12	24	60		98
3. CONSTRUCTION SEQUENCE AND NARRATIVE	2	4	8	24		38
4. TRAFFIC CONTROL LAYOUTS						
a. TRAFFIC CONTROL TYPICAL SECTIONS - BOWSER/POOL HILL PHASE 1	2	2	4	16		24
b. TRAFFIC CONTROL PLAN LAYOUT - BOWSER/POOL HILL PHASE 1	4	18	100	170		292
c. TRAFFIC CONTROL TYPICAL SECTIONS - BOWSER/POOL HILL PHASE 2	2	2	4	16		24
d. TRAFFIC CONTROL PLAN LAYOUT - BOWSER/POOL HILL PHASE 2	4	18	100	170		292
k. TRAFFIC CONTROL TYPICAL SECTIONS - FM 1093 PHASE 1	2	2	4	16		24
l. TRAFFIC CONTROL PLAN LAYOUT - FM 1093 PHASE 1	2	4	16	60		82
k. TRAFFIC CONTROL TYPICAL SECTIONS - FM 1093 PHASE 2	2	2	4	16		24
l. TRAFFIC CONTROL PLAN LAYOUT - FM 1093 PHASE 2	2	4	16	60		82
5. TCP QUANTITIES	1	2	4	10		17
6. TCP STANDARDS	1	1	2	4		8
B. STORM WATER POLLUTION PREVENTION PLANS (SW3P)						
1. SW3P SHEET	2	2	8	12		24
2. SW3P STANDARDS	1	1	2	2		6
C. COMPUTE AND TABULATE QUANTITIES	2	4	8	20		34
D. ESTIMATE (Excel spreadsheet)	2	4	8	20		34
E. SPECIFICATIONS AND GENERAL NOTES	2	4	8	20		34
HOURS SUB-TOTALS	37	94	328	728	0	1,187
TOTAL LABOR COSTS	\$11,100.00	\$23,030.00	\$55,760.00	\$87,360.00	\$0.00	\$177,250.00
<b>SUBTOTAL (FC 163)</b>						<b>\$177,250.00</b>

**ATTACHMENT B-FEE SCHEDULE (LJA Engineering, Inc.)**

PRIME PROVIDER NAME: LJA Engineering, Inc.

PROJECT NAME/CSJ: Bowser rd Widening

DESCRIPTION					TOTAL MH BY FC	TOTAL COST BY FC
ROUTE AND DESIGN STUDIES (FC 110)					244	\$43,470.00
RIGHT-OF-WAY DATA (FC 130)					110	\$17,190.00
MANAGING CONTRACTED / DONATED PE (FC 145)					238	\$45,980.00
DESIGN SURVEYS AND CONSTRUCTION SURVEYS (FC 150)					42	\$7,610.00
ROADWAY DESIGN CONTROLS (FC160)					1,316	\$199,020.00
DRAINAGE (FC161)					1,754	\$268,445.00
SIGNING, PAVEMENT MARKINGS AND SIGNALIZATION (FC 162)					280	\$41,085.00
MISCELLANEOUS (ROADWAY) (FC 163)					1,187	\$177,250.00

OTHER DIRECT EXPENSES	# OF UNITS	COST/UNIT	UNIT		
Mileage	200	\$0.55	mile		\$110.00
Courier Services	4	\$25.00	each		\$100.00
Photocopies B/W (8 1/2" x 11")	500	\$0.10	each		\$50.00
Photocopies B/W (11" x 17")	1000	\$0.20	each		\$200.00
Photocopies Color (8 1/2" x 11")	200	\$0.75	each		\$150.00
Photocopies Color (11" x 17")	200	\$1.25	each		\$250.00
Plots (Color on Bond)	80	\$4.00	square foot		\$320.00
<b>SUBTOTAL DIRECT EXPENSES</b>					<b>\$1,180.00</b>

SUMMARY	
TOTAL COSTS FOR LJA ONLY	\$800,050.00
NON-SALARY (OTHER DIRECT EXPENSES) FOR LJA ONLY	\$1,180.00
<b>GRAND TOTAL LJA</b>	<b>\$801,230.00</b>

**Attachment C**  
**Subconsultant Proposals**



Houston	6120 S. Dairy Ashford Rd.
Austin	Houston, TX 77072-1010
Dallas	281.933.7388 Ph
San Antonio	281.933.7293 Fax
	<a href="http://www.hvj.com">www.hvj.com</a>

January 28, 2021

Mr. James R. Baker, PE  
Vice President  
LJA Engineering  
3600 W Sam Houston Pkwy, Suite 600  
Houston, Texas 77042

**BY ELECTRONIC TRANSMISSION**

Re: Geotechnical Study  
Bowser Road Reconstruction  
Fort Bend County, Texas  
Owner: Fort Bend County  
HVJ Proposal No. HG2110035

Dear Mr. Baker:

HVJ Associates, Inc. is pleased to submit this proposal for performing a geotechnical study for the above mentioned project. This proposal outlines our understanding of the scope of the project and presents our approach and our fees for providing the study.

### **Project Description**

The project involves construction of a 3-lane concrete roadway along Bowser Road from Winding Stream Drive to Pool Hill Road in Fort Bend County, Texas. Based on the available information, we understand that the proposed alignment is about 12,700 linear feet. The project also includes construction of storm sewers and the invert depth of the storm sewers is about 10 feet below the existing grade and will be installed using open cut techniques. The project also includes traffic signals and the location of traffic signals is not available at the time of writing this proposal.

### **Scope of Work**

The purpose of this study is to provide design and construction recommendations for the pavement reconstruction, replacement of storm sewers, and traffic signals. The geotechnical investigation shall be performed in general accordance with the Fort Bend County Engineering Design Manual.

Based on Fort Bend County guidelines, we propose to drill 26 borings to a depth of 15 feet for this project. The borings will be spaced at 500-foot intervals. The soil samples will be obtained continuously to a depth of 15 feet. The pavement will be cored at the borehole locations prior to drilling and pavement thickness information obtained from the cores will be included in the report. Traffic control will be used during the field operations. In general, the boreholes will be backfilled with cement bentonite grout by tremie method to the full depth in accordance with the design manual.

We plan to install four 15-foot piezometers to record long term water level readings. Groundwater levels in the piezometers will be obtained after 24 hours and 30 days after installation. The piezometers will be abandoned after taking the final water readings.

Mr. James R. Baker, PE  
HG2110035  
January 28, 2021

The borings will be used to determine site stratigraphy and to obtain samples for laboratory testing. The laboratory-testing program is intended to provide confirmation of the field visual soil classification and to establish properties of the subsurface materials required for design. All the field and laboratory tests will be performed according to ASTM standards, where applicable, or with other well-established procedures. Possible laboratory tests to be performed for this project include: moisture contents (ASTM D2216); Atterberg limits (ASTM D4318); minus No. 200 sieve analysis (ASTM D1140); unconsolidated undrained Triaxial (ASTM D2850), Moisture/Density Relationship (ASTM D-698) and California Bearing Ratio (ASTM D-1883). Results of the field and laboratory data will be used to develop recommendations for the proposed roadway and utilities.

### **Report**

A report of our study will be prepared by an engineer specializing in soil mechanics and foundation engineering after reviewing available structural, geological, boring, and laboratory data. In general, the following items will be included in our report:

- Boring logs and test data,
- Groundwater conditions,
- Generalized subsurface conditions,
- Piezometer installation reports,
- Rigid pavement design recommendations,
- Recommendations for installation of utilities using open cut and augering techniques,
- Boring log profiles,
- Structural fill requirements and general earthwork recommendations.

Two draft copies of each of our geotechnical reports will be delivered for review by LJA Engineering and Fort Bend County. After approval of our draft reports by LJA Engineering, two final copies of each report will be submitted.

### **Schedule**

We expect to complete this assignment in approximately six to eight weeks, following our receipt of your written notice to proceed. If requested, verbal recommendations can be provided throughout the progress of the investigation as testing is completed.

### **Fee**

Based on the scope of work outlined, the estimated fee for our services is \$38,484. A detailed cost estimate for the proposed work is attached. Our accounting procedures call for the submittal of invoices on a month-end basis or at the conclusion of project should its duration last less than a month. Our credit terms are net 30 days.

### **Conditions**

The scope of work described is appropriate for the project configuration presented to us. If anomalous conditions are encountered, or if the project configuration changes significantly, a change in work scope may be required. HVJ Associates will recommend such changes when and if

Mr. James R. Baker, PE  
HG2110035  
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it is deemed necessary. No changes will be implemented without prior authorization from Gauge Engineering.

Laboratory samples will be held for no more than a period of 6 months after completion of the draft report or 3 months after completion of the final report, whichever is less.

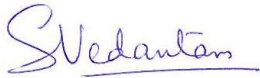
LJA Engineering will be responsible for providing a site plan suitable for use as a base map for our plan of borings. In addition, LJA Engineering will be responsible for surveying the horizontal and vertical locations upon completion of drilling. If needed, HVJ Associates will provide assistance in locating boreholes within two weeks of completion of drilling, and notification of LJA Engineering.

If this proposal meets with your approval, please forward a copy of the sub consultant agreement for our review and execution.

HVJ Associates, Inc. is pleased to be of service on this project. Please call us if you have any questions or require additional information.

Sincerely,

**HVJ ASSOCIATES, INC.**



Sharmi Vedantam, PE  
Houston Branch Manager

Agreed to this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_

By: \_\_\_\_\_

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

Firm: \_\_\_\_\_

Phone No.: \_\_\_\_\_

P.O. No.: \_\_\_\_\_

Date to Start Work: \_\_\_\_\_

**GEOTECHNICAL FEE ESTIMATE**

Bowser Road Reconstruction  
 Client: LJA Engineering  
 HVJ Proposal No. HG2110035  
 January 28, 2021

**COST BREAKDOWN FOR GEOTECHNICAL INVESTIGATION****Field Investigation**

Mobilization/Demobilization	1	@	\$340.00	lump sum	\$340.00
ATV Mobilization/Demobilization Surcharge	0	@	\$132.00	lump sum	\$0.00
Drilling and Sampling (Continuous)	390	ft @	\$21.00	per foot	\$8,190.00
Drilling and Sampling (Intermittent, 20'-50')	0	ft @	\$18.00	per foot	\$0.00
Auger Boring (6-inch diameter)	0	ft @	\$11.00	per foot	\$0.00
Boring over 100 ft Additional Surcharge	0	ft @	\$7.00	per foot	\$0.00
Boring Not Accessible by Truck Mounted Equipment, Surcharge	0	ft @	\$2.00	per	\$0.00
Piezometer Installation	60	ft @	\$16.00	per ft	\$960.00
Piezometer Abandonment	60	ft @	\$14.00	per ft	\$840.00
Grouting (Tremie Method to full depth of the borings)	330	ft @	\$7.00	per ft	\$2,310.00
Project Engineer, PE (Field Coordination)	6	hr @	\$105.00	per hour	\$630.00
Field Technician (coordination, utilities, staking, etc)	40	hr @	\$50.00	per hour	\$2,000.00
Vehicle Trips (staking, utilities, etc)	40	hr @	\$10.00	per hour	\$400.00
Concrete Coring	26	@	\$90.00	each	\$2,340.00
Reimbursable Expenses - Traffic Control (Drilling, PZ installation and plugging, Coring)	4	@	\$650.00	per day	\$2,600.00
Field Technician (PZ Readings)	8	hr @	\$50.00	per hour	\$400.00
Vehicle Trips (PZ Readings)	8	hr @	\$10.00	per hour	\$80.00
Manhole Cover for Piezometers	4	@	\$200.00	each	\$800.00
Standby time for coordination	8	@	\$146.00	per hour	\$1,168.00
				<b>Subtotal</b>	<b>\$23,058.00</b>

**Laboratory Testing \***

Moisture Content (ASTM D-2216)	98	@	\$9.00	each	\$882.00
Atterberg Limits (ASTM D-4318)	48	@	\$60.00	each	\$2,880.00
Percent Passing #200 Sieve (ASTM D-1120)	48	@	\$46.00	each	\$2,208.00
Unconsolidated Undrained (ASTM D-2850)	48	@	\$61.00	each	\$2,928.00
Moisture/Density Relationship (ASTM D-698)	1	@ \$	204.00	each	\$204.00
California Bearing Ratio (ASTM D-1883)	3	@ \$	215.00	each	\$645.00
				<b>Subtotal</b>	<b>\$8,898.00</b>

**Project Management, Engineering Analyses, Report Preparation**

Principal	4	hr @	\$210.00	per hour	\$840.00
Senior Engineer, PE	8	hr @	\$150.00	per hour	\$1,200.00
Project Engineer, PE	12	hr @	\$105.00	per hour	\$1,260.00
Staff Engineer, EIT	36	hr @	\$83.00	per hour	\$2,988.00
Support Personnel	4	hr @	\$60.00	per hour	\$240.00
				<b>Subtotal</b>	<b>\$6,528.00</b>

**TOTAL GEOTECHNICAL SERVICES****\$38,484.00**

\*Note: The number and type of tests performed will depend on the actual soil conditions encountered.

March 8, 2021

Mr. James R. Baker, PE  
LJA Engineering  
1904 West Grand Parkway North  
Suite 100  
Katy, Texas 77449

RE: Proposal to Provide Professional Surveying Services – Bowser Road  
Topographic and Right-of-Way Surveying

Dear Mr. Baker:

It is my pleasure to submit the following proposal for providing professional surveying services for the above referenced project. The route is along Bowser Road from just south of Winding Stream Drive to Pool Hill Road just north of FM 1093 (12,600 linear feet), and includes 1,000 feet of FM 1093. The Surveying Services will be performed in accordance with Chapters 6 and 7 of the August 2020 Draft version of the Fort Bend County Engineering Department Engineering Design Manual (Design Manual):

1. Perform Control Surveys and Prepare Signed and Sealed Survey Control Maps:
  - 1.1. Project Control will be established in compliance with the Design Manual. Prior to use, the project horizontal and vertical datum will be approved by the Project Design Consultant. Control points will be spaced at a maximum of 1,000 feet through the project limits.
  - 1.2. Stake the project baseline alignment in field at all PCs, PTs, PIs, and 1,000-foot stations. The baseline alignment will be provided to Landtech by LJA Engineering.
  - 1.3. Prepare a signed and sealed survey control map consisting of:
    - 1.3.1. Cover/index sheet showing the project datum statement, approximate existing right of way (ROW) lines, the baseline alignment including monumentation, alignment bearings and distances and curve data, side street construction centerlines, project control point locations, and coordinate tables for alignment monumentation and control points.
    - 1.3.2. Control monument detail sheet showing ties to planimetric features and monument details.
2. Perform Topographic Surveys and prepare CAD file deliverables:
  - 2.1. Prepare Right of Entry (ROE) letters and mail to landowners along route to request permission to enter private properties for surveying purposes. Track responses to coordinate field survey efforts on private properties. Properties without ROE will not be surveyed.
  - 2.2. Collect Topographic Survey data within the project limits along Bowser Road and along intersecting roadways 100 feet beyond proposed improvements. Cross sections will be collected along the route every 100 feet and will extend 20 feet beyond existing and proposed ROW. Survey visible surface features. Surveys within intersecting roadways will be confined to public right of way. Survey will not extend into fenced backyards of the subdivision lots along Bowser Road. In wooded areas we will survey the tree line; individual trees will not be picked up. Deliverables will consist of plan view CAD file in

- AutoCAD DWG or Microstation DGN format and Digital Terrain Model with 1-ft contours. Existing drainage channel will be surveyed at three crossings. Cross sections will be taken up and downstream at the ROW, and at 500-ft, 1000-ft, and 2000-ft beyond the ROW. Existing outfall pipes within 100-ft of the ROW will also be surveyed. Cross culverts will be surveyed including topography 200-ft up and downstream (assume 8).
- 2.3. Survey visible surface utilities. Perform field survey of the SUE Level B Utility Designation markings, and provide to SUE consultant for inclusion in their Level B mapping deliverable. Obtain pipe size and flowline elevations for sanitary and storm manholes and inlets.
  - 2.4. Determine ownership of properties along the roadway within the project limits. Approximately 120 properties adjoin the project route. Survey front property corners for right of way (ROW) location. Adjoining property ownership information and existing ROW lines will be shown in the CAD file deliverable.
  - 2.5. Survey approximately 25 Geotechnical Borings after they are drilled.
3. Perform proposed ROW surveys and prepare Proposed ROW Map and parcel document deliverables. Deliverables will conform with Texas Society of Professional Surveyors Category 1B, Condition II standards and will be signed and sealed by a Texas Registered Professional Land Surveyor.
    - 3.1. Prepare Proposed ROW Map showing existing and proposed ROW and proposed acquisition parcels. This will include field survey of back corners of parent tracts of proposed acquisition parcels. Assume 14 parcels.
    - 3.2. Prepare KMZ file showing existing ROW with ownership information, proposed takings with parcel numbers, and a preliminary roadway layout. The preliminary roadway layout will be provided to Landtech by LJA Engineering.
    - 3.3. Prepare parcel map and metes and bounds description for each proposed ROW parcel to be acquired for the project. Includes field staking of acquisition parcel corners along the proposed ROW at angle points, PCs, PTs, and intersecting property lines.
  4. Construction Surveying Services will be performed once during a single mobilization prior to commencement of construction. These services will not be performed on an ongoing basis during the construction process without additional compensation. Construction Surveying Services do not include construction layout.
    - 4.1. Recover, verify, and mark control and baseline alignment monumentation established for the project as described in item 1. above.
    - 4.2. Stake ROW lines every 100 feet, at angle points, and at the beginning and end of curves.

Fees for the above described services are as follows (see attached spreadsheet 'Bowser Rd\_2021-02-02.pdf' for breakdown of tasks, hours, and rates):

1. Control Surveying (Lump Sum)	=	\$ 25,847.10
2. Topographic Surveying and Mapping (Lump Sum)	=	\$107,647.49
3.1./3.2. Proposed ROW Surveying & Mapping (Lump Sum)	=	\$ 46,629.52
3.3. Proposed Acquisition Parcels (Lump Sum Per Parcel)	=	\$ 46,696.54
4. Construction Surveying Services (Time & Materials)	=	<u>\$ 33,635.00</u>
 Total Estimated Fee Tasks 1-4 based on estimated 14 Parcels	=	 \$260,455.65

Additional Services – Subsurface Utility Engineering:

Landtech will obtain the services of a Subsurface Utility Engineer to provide SUE Level D, C and B Services as follows:

1. One Call & Records Research
2. SUE Field Designation of Above Ground Utility Features
3. CADD Utility Base Map
4. Utility Conflict Table
5. Existing Utility Plan & Profile Sheets
6. QA/QC

The Lump Sum Fee for this Additional Service will be \$34,906.16. Please see attached proposal by RODS Subsurface Utility Engineering for a complete SUE scope of work and breakdown of fee by tasks and unit cost.

Total Fee – All Tasks and Services: \$295,361.81

Thank you for the opportunity to submit this proposal. We look forward to working with you.

Sincerely,  
Landtech, Inc.



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Dennis Chalaire, R.P.L.S.

Bowser Rd\_2021-03-08.docx

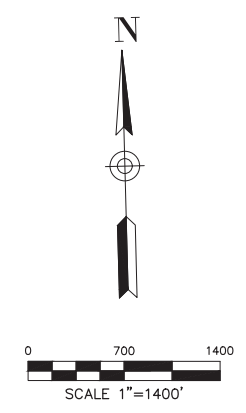
Attachments: Spreadsheet 'Bowser Rd\_2021-03-08.pdf'  
20306 Bowser Road.pdf  
2021-02-02\_RODSSUE\_FBC BOWSER RD\_PROPOSAL.pdf

LANDTECH, INC.  
 PROPOSAL FOR TOPOGRAPHIC, RIGHT-OF-WAY, AND CONSTRUCTION SURVEYING SERVICES  
 CLIENT: LJA Engineering  
 PROJECT: Bowser Road - Fort Bend County  
 DATE: 3/08/2021  
 LENGTH (ft): Bowser Road 12,600  
 FM 1093 1,000  
 Winding Stream Drive 200  
 Pool Hill Road 250  
 Fulshear Farms Road / Lake Village Drive 200  
 Total = 14,250 ft

Notes:  
 1. Surveys will be performed per Chapters 6 and 7 of the Fort Bend County Mobility Bond Design Manual  
 2. Please refer to Letter of Proposal of same date for detailed scope of work.

DIRECT EXPENSES		Project Manager (RPLS)	Project Surveyor (RPLS)	Survey Tech	CADD Tech	Abstractor	Admin/ Clerical	2-Person Crew	3-Person Crew	TOTAL HR PER TASK	TOTAL FEE PER TASK
		\$204.00	\$148.11	\$105.41	\$103.00	\$75.93	\$68.23	\$150.00	\$180.00		
<b>1. CONTROL SURVEYS</b>											
1.1.	Project Control will be established in compliance with Design Manual and tied in to existing control in the vicinity of the project if available. If existing control is not available, the project will be tied to an NGS monument. Use of existing control and project horizontal and vertical datum is subject to approval by the Project Design Consultant. Control points will be spaced at a maximum of 1,000 feet through the project limits.	4	8	24				64		100	\$14,130.72
1.2.	Stake the project baseline alignment in field at all PCs, PTs, Pls, and 1,000-foot stations. The baseline alignment will be provided to Landtech by LJA Engineering.		2	4				24		30	\$4,317.86
1.3.	Prepare a signed and sealed survey control map		4	8	40					52	\$5,555.72
SUBTOTAL HOURS		4	14	36	40	0	0	88	0	182	
REIMBURSABLE EXPENSES											
	GPS Receiver	6	days	x	\$225.00	=		\$1,350.00			
	Mileage	880	miles	x	\$0.560	=		\$492.80			
										SubTotal Reimbursable Expenses	\$1,842.80
										SUBTOTAL LUMP SUM FEE TASK 1	\$25,847.10
<b>2. TOPOGRAPHIC SURVEYING AND MAPPING</b>											
2.1.	Prepare Right of Entry Letters and mail them to affected property owners. Track responses.		4	8		24	4			40	\$3,530.96
2.2.	Collect Topographic Survey data within the project limits along Bowser Road and along intersecting roadways 100 feet beyond proposed improvements. Cross sections will be collected along the route every 100 feet and will extend 20 feet beyond existing and proposed ROW. Survey visible surface features. Surveys within intersecting roadways will be confined to public right of way. Survey will not extend into fenced backyards of the subdivision lots along Bowser Road. In wooded areas we will survey the tree line; individual trees will not be picked up. Deliverables will consist of plan view CAD file in DWG or DGN format and Digital Terrain Model with 1-ft contours.	4	12	40	136			136		328	\$41,217.72
	Existing drainage channel will be surveyed at three crossings. Cross sections will be taken up and downstream at the ROW, and at 500-ft, 1000-ft, and 2000-ft beyond the ROW. Existing outfall pipes within 100-ft of the ROW will also be surveyed. Cross culverts will be surveyed including topography 200-ft up and downstream (assume 8).		6	16	24			80		126	\$17,047.22
2.3.	Survey visible surface utilities. Request One Call marking of utilities. Field survey resulting markings and SUE Level B Utility designation markings, and provide to SUE consultant for inclusion in their Level B mapping. Obtain pipe size and flowline elevations for sanitary and storm manholes and inlets.		2	4	24			40		70	\$9,189.86
2.4.	Perform Property Title Abstracting for preliminary ownership determination (approximately 120 adjoining parcels). Survey front property corners for right of way (ROW) location. Adjoining property ownership information and existing ROW lines will be shown in the CAD file deliverable.	8	24	56	48	56	4	48		244	\$27,758.60
2.5.	Survey 25 Geotechnical Borings after drilling.		1	2	1			8		12	\$1,661.93
SUBTOTAL HOURS		12	49	126	233	80	8	312		820	
REIMBURSABLE EXPENSES											
	GPS Receiver	16	days	x	\$225.00	=		\$3,600.00			
	Mileage	3120	miles	x	\$0.560	=		\$1,747.20			
	Certified Letter Return Receipt	60	letters	x	\$7.40	=		\$444.00			
	Deed Copies	600	pages	x	\$2.00	=		\$1,200.00			
	Plat Copies	50	sheets	x	\$5.00	=		\$250.00			
										SubTotal Reimbursable Expenses	\$7,241.20
										SUBTOTAL LUMP SUM FEE TASK 2	\$107,647.49
<b>3. PROPOSED RIGHT-OF-WAY SURVEYS</b>											
3.1.	Prepare Proposed ROW Map showing existing and proposed ROW and proposed acquisition parcels. Assume 14 parcels.	32	72	80	176	8				368	\$44,360.16
3.2.	Prepare KMZ file showing existing ROW with ownership information, proposed takings with parcel numbers, and a preliminary roadway layout. The preliminary roadway layout will be provided to Landtech by LJA Engineering.		4	12	4					20	\$2,269.36
										SUBTOTAL LUMP SUM FEE TASKS 3.1. & 3.2.	\$46,629.52

3.3.	Prepare parcel map and metes and bounds description for each proposed ROW parcel to be acquired for the project. ROW map and proposed acquisition parcel deliverables will conform with Texas Society of Professional Surveyors Category 1B, Condition II standards and will be signed and sealed by a Texas Registered Professional Land Surveyor. Includes field survey of back corners of parent tracts of proposed acquisition parcels and field staking of acquisition parcel corners along the proposed ROW at angle points, PCs, PTs, and intersecting property lines.	56	56	98	98	8		32		340	\$44,942.34
SUBTOTAL HOURS		88	132	190	278	8		32		728	
<b>REIMBURSABLE PARCEL EXHIBIT EXPENSES</b>											
	GPS Receiver	7	days x	\$225.00	=			\$1,575.00			
	Mileage	320	miles x	\$0.560	=			\$179.20			
								SubTotal Reimbursable Expenses		\$1,754.20	
								Per Parcel Expenses		\$125.30	
										SUBTOTAL LUMP SUM PARCEL FEES TASK 3.3	\$46,696.54
										LUMP SUM PER PARCEL FEES (14 PARCELS)	\$3,335.47
<b>4. CONSTRUCTION SURVEYING SERVICES</b>											
4.1.	Recover, verify and mark control and baseline alignment monumentation established for the project as described in item 1. above.		4	8				32		44	\$6,235.72
4.2.	Stake ROW lines every 100 feet, at angle points, and at the beginning and end of curves.		16	32				112		160	\$22,542.88
SUBTOTAL HOURS		0	20	40	0	0	0	144		204	
<b>REIMBURSABLE EXPENSES</b>											
	GPS Receiver	18	days x	\$225.00	=			\$4,050.00			
	Mileage	1440	miles x	\$0.560	=			\$806.40			
								SubTotal Reimbursable Expenses		\$4,856.40	
										SUBTOTAL TIME & MATERIALS FEE TASK 4	\$33,635.00
										<b>TOTAL ESTIMATED FEE TASKS 1-4:</b>	<b>\$260,455.65</b>
<b>5. ADDITIONAL SERVICES</b>											
5.1.	Coordination and management of subcontractor	1	8	8	8					25	\$3,056.16
SUBTOTAL HOURS		1	8	8	8	0	0	0		25	
<b>REIMBURSABLE EXPENSES</b>											
	RODS SUBSURFACE UTILITY ENGINEERING	\$31,850.00			=			\$31,850.00			
								SubTotal Reimbursable Expenses		\$31,850.00	
										SUBTOTAL ADDITIONAL SERVICES TASK 5	\$34,906.16
										<b>TOTAL ESTIMATED FEE ALL TASKS AND SERVICES:</b>	<b>\$295,361.81</b>



**PROJECT:**

**BOWSER ROAD**

PROJECT No. 20306

FROM: Winding Stream Dr

TO: Pool Hill Rd

Weston Lakes ETJ  
12,700 LF

**DESCRIPTION:**

Design and construct 3-lane concrete roadway with storm sewer in existing 60-70 ft ROW, including the realignment of Pool Hill Rd.

**LEGEND:**

— PROP EOP

- - - EXIST ROW

- - - PROP ROW

FORT BEND COUNTY  
2020 MOBILITY BOND PROGRAM



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DETAIL A  
SCALE 1" = 200'



MATCHLINE A

PROJECT:

**BOWSER ROAD**

PROJECT No. 20306

FROM: Winding Stream Dr

TO: Pool Hill Rd

Weston Lakes ETJ  
12,700 LF

DESCRIPTION:

Design and construct 3-lane concrete roadway with storm sewer in existing 60-70 ft ROW, including the realignment of Pool Hill Rd.

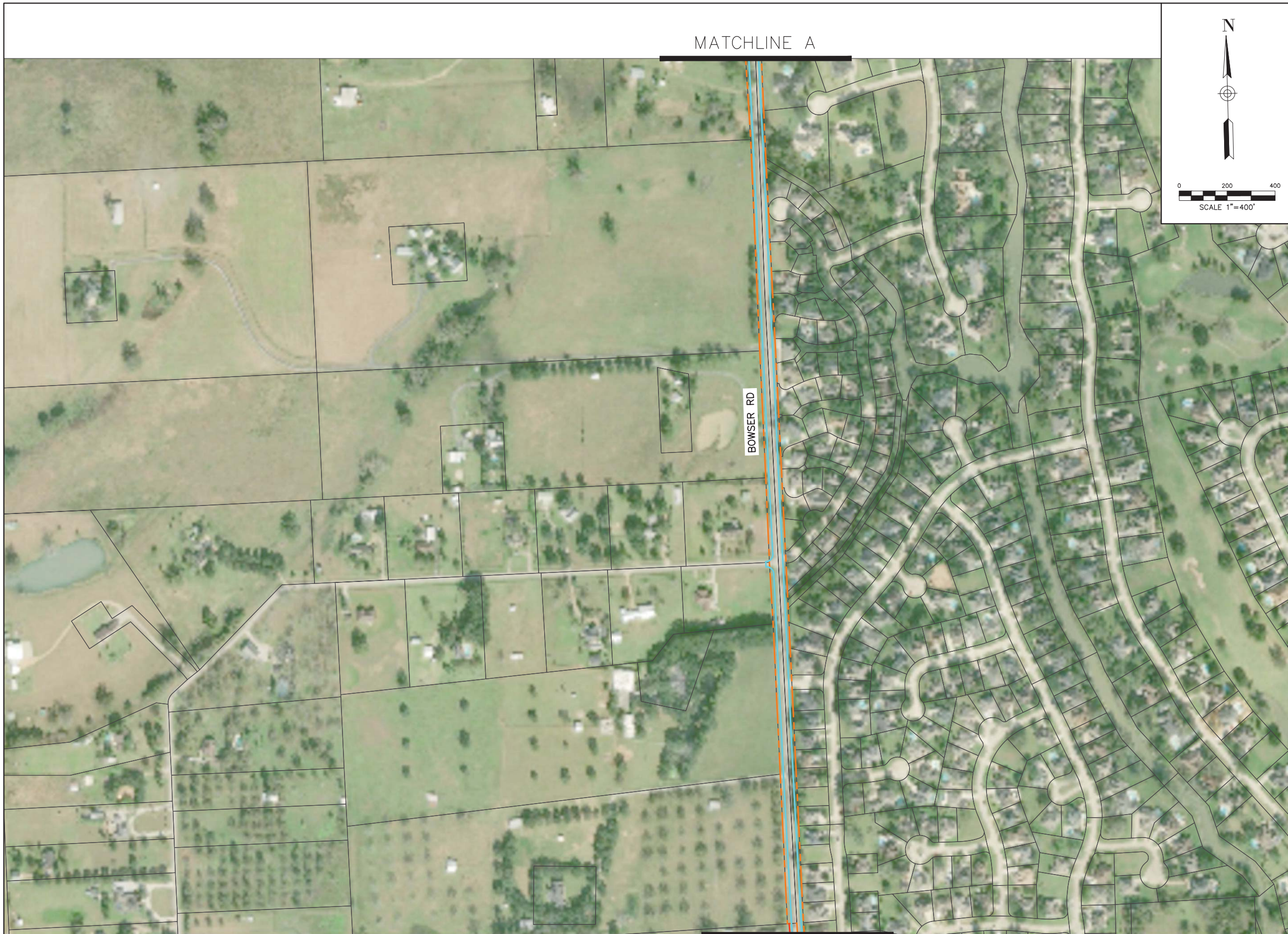
LEGEND:

-  PROP EOP
-  EXIST ROW
-  PROP ROW

FORT BEND COUNTY  
2020 MOBILITY BOND PROGRAM

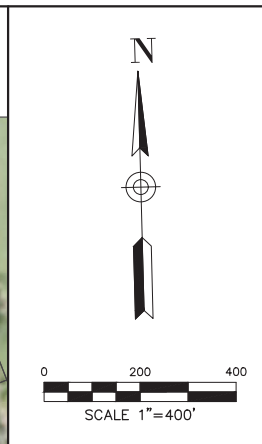


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MATCHLINE A

MATCHLINE B



**PROJECT:**  
**BOWSER ROAD**  
 PROJECT No. 20306  
 FROM: Winding Stream Dr  
 TO: Pool Hill Rd  
 Weston Lakes ETJ  
 12,700 LF

**DESCRIPTION:**  
 Design and construct 3-lane concrete roadway with storm sewer in existing 60-70 ft ROW, including the realignment of Pool Hill Rd.

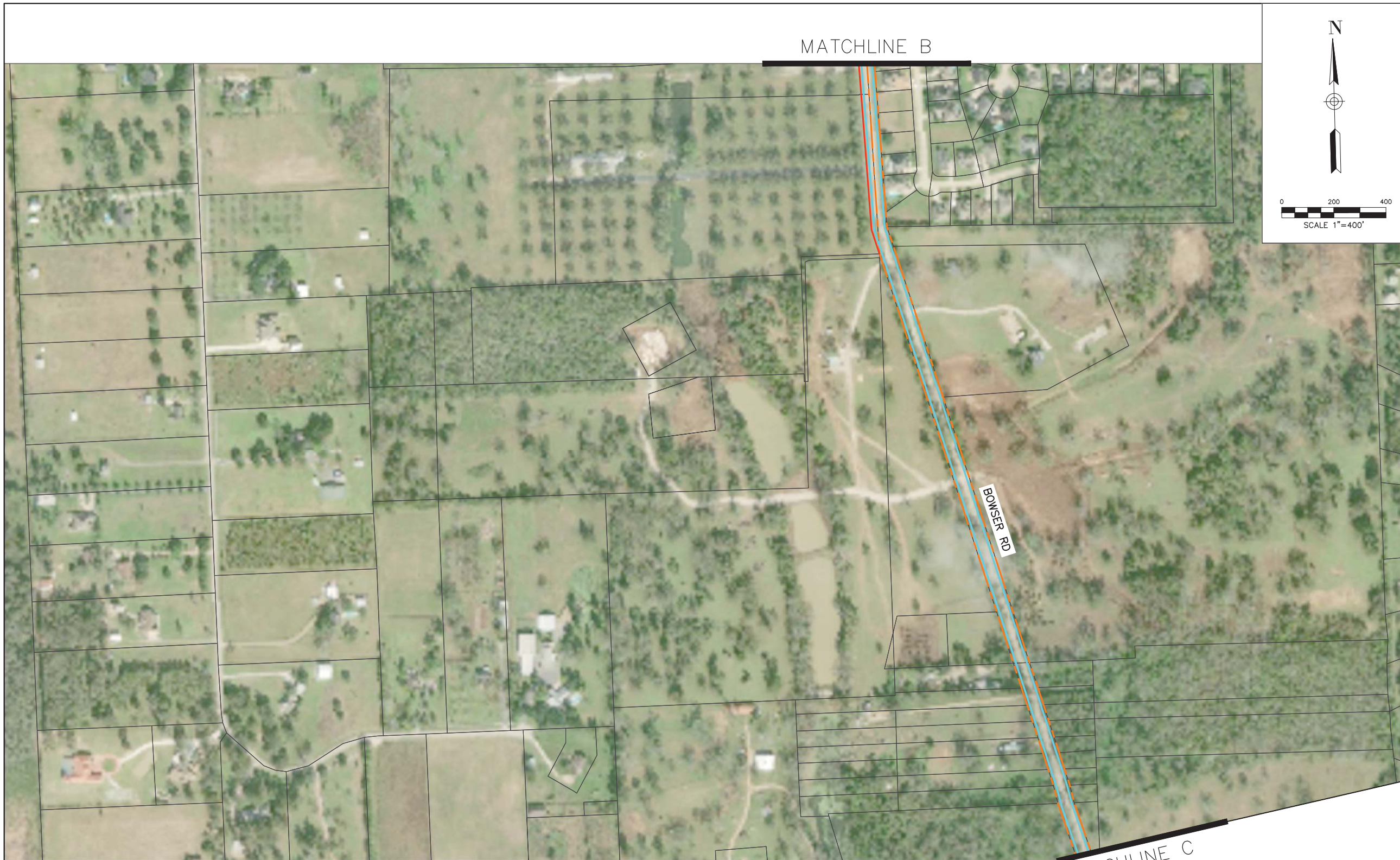
**LEGEND:**

- PROP EOP
- - - EXIST ROW
- - - PROP ROW

FORT BEND COUNTY  
 2020 MOBILITY BOND PROGRAM



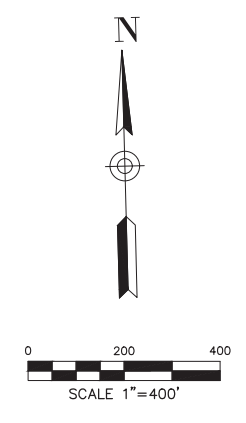
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MATCHLINE B

MATCHLINE C

BOWSER RD



**PROJECT:**

**BOWSER ROAD**

PROJECT No. 20306

FROM: Winding Stream Dr

TO: Pool Hill Rd

Weston Lakes ETJ  
12,700 LF

**DESCRIPTION:**

Design and construct 3-lane concrete roadway with storm sewer in existing 60-70 ft ROW, including the realignment of Pool Hill Rd.

**LEGEND:**

— PROP EOP

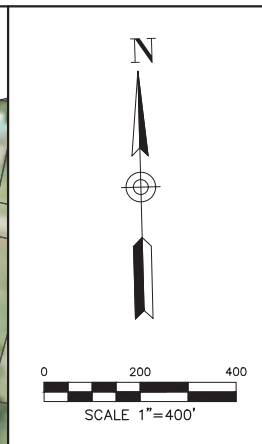
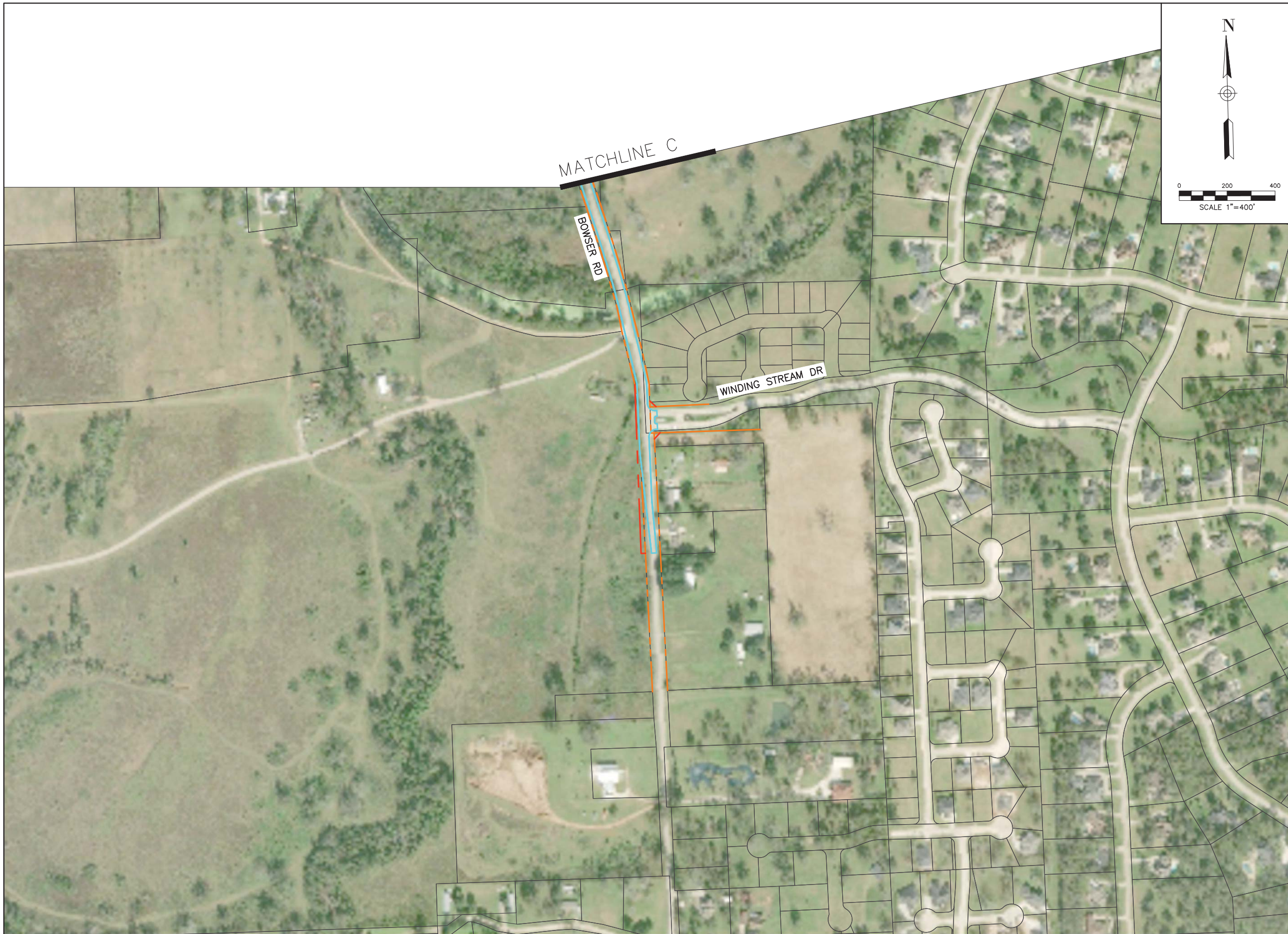
- - - EXIST ROW

- - - PROP ROW

FORT BEND COUNTY  
2020 MOBILITY BOND PROGRAM



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**PROJECT:**

**BOWSER ROAD**

PROJECT No. 20306

FROM: Winding Stream Dr

TO: Pool Hill Rd

Weston Lakes ETJ  
12,700 LF

**DESCRIPTION:**

Design and construct 3-lane concrete roadway with storm sewer in existing 60-70 ft ROW, including the realignment of Pool Hill Rd.

**LEGEND:**

- PROP EOP
- - - EXIST ROW
- - - PROP ROW

FORT BEND COUNTY  
2020 MOBILITY BOND PROGRAM





February 2, 2021

Dennis Chalaire, R.P.L.S.  
Landtech Surveying, Inc.  
2525 North Loop West, Suite 300  
Houston, Texas 77008  
Email: dchalaire@landtech-inc.com  
Phone: 713-861-7068

RE: Proposal for Quality Levels – D, C & B SUE  
Fort Bend County - Bowser Rd

Dear Mr. Chalaire:

We are pleased to submit the following proposal for the referenced project.

**Scope & Limits**

We understand the scope of work to consist of performing Quality Levels D, C & B SUE investigation per ASCE Standard 38-02. This includes:

- SUE Quality Level D involves preliminary site visit, research to determine utility owners, contacting the utility companies to request the existing utility records, and drawing the information obtained into a utility base map.
- SUE Quality Level C involves correlating the Quality Level D information obtained from existing utility record investigation with the visible surface features obtained from a topographic survey performed by Landtech Surveying. Limitations of a C&D investigation include utilities that have been sold or abandoned with no record or surface features.
- SUE Quality Level B involves the designation, recording, and marking the horizontal location of the existing utility facilities using non-destructive surface geophysical techniques, per APWA color standards. When data is reliable, cover shots indicating top of utility will be included at every 100 feet. Limitations of designation include signal bleed over due to congested utilities or utilities made of non-conductive material such as PVC or concrete. The Level B SUE marks will then be surveyed in by Landtech Surveying, and added to the utility base map, with utilities distinguished by quality level. Quality Level B incorporates information from Quality Levels C & D.
- Utility Conflict Table will be developed per Fort Bend County Engineering Department standards.
- Existing Utility Plan & Profile Sheets will be created showing the horizontal and vertical location of the utilities. Will utilize CADD file produced from SUE Quality Levels D, C & B investigations, and if no vertical information is available, will use typical utility depths per the Utility Accommodation section of the Texas Administrative Code (Title 43, Part 1, Chapter 21, Subchapter C, Rule 21.40).



**ATTACHMENT B - FEE SCHEDULE**

**FORT BEND COUNTY - BOWSER RD - SUE QUALITY LEVELS D, C & B**

**PRIME PROVIDER NAME:** Landtech Surveying, Inc.

February 2, 2021

**SUBCONSULTANT NAME:** RODS Subsurface Utility Engineering, Inc.

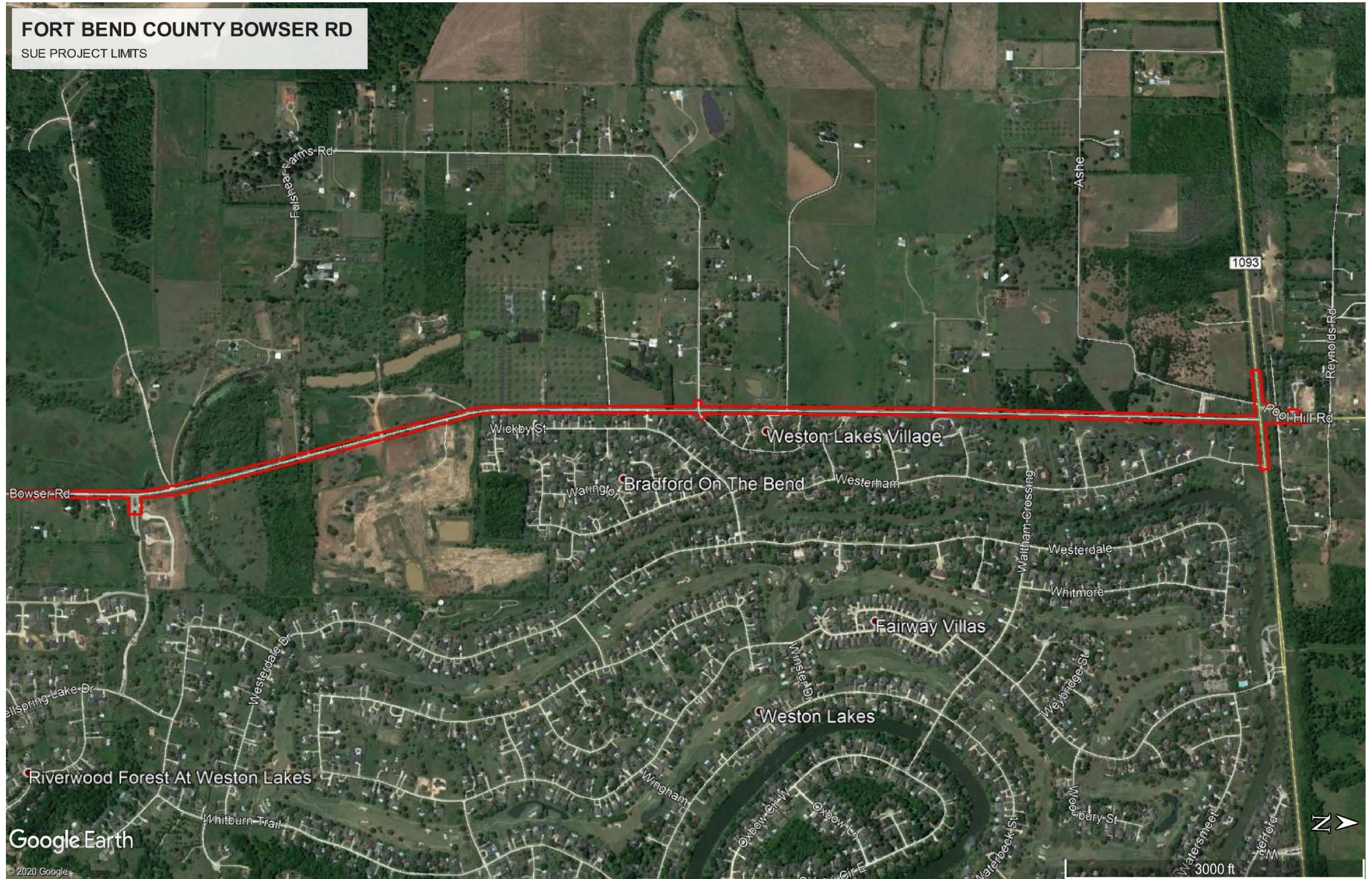
TASK DESCRIPTION	SUE PROJECT MANAGER	SUE SUPPORT ENGINEER	SUE GRADUATE ENGINEER	SUE ENGINEERING TECHNICIAN	2-MAN DESIGNATION CREW	TOTAL LABOR HOURS & COSTS
<b>SUE Quality Levels D, C &amp; B Services</b>						
1. One Call, Site Visit & Records Research	2	4	8	16		\$3,390
2. SUE Field Designation of Above Ground Utility Features		4			50	\$10,100
3. CADD Utility Base Map	1	4	20	40		\$6,875
4. Utility Conflict Table	1	4	12	20		\$4,035
5. Existing Utility Plan & Profile Sheets		4	16	30		\$5,280
6. QA/QC	2	4	4	8		\$2,170
<b>HOURLY SUBTOTALS</b>	6	24	60	114	50	254
<b>LABOR RATE PER HOUR</b>	\$175.00	\$150.00	\$105.00	\$100.00	\$190.00	
<b>TOTAL LABOR COSTS</b>	\$1,050.00	\$3,600.00	\$6,300.00	\$11,400.00	\$9,500.00	\$31,850.00
<b>TOTAL FOR QL D, C &amp; B SERVICES</b>						<b>\$31,850.00</b>

Notes:

1. Project to be invoiced on a lump sum basis not to exceed total shown above.
2. Survey of QLB markings to be performed by Landtech Surveying, not included in this estimate.

# FORT BEND COUNTY BOWSER RD

SUE PROJECT LIMITS





February 3, 2021 (Revised)  
PK No.: 0100

**FORT BEND COUNTY ENGINEERING**

**c/o Mr. James R. Baker, P.E.**

*Vice President*

**LJA ENGINEERING**

2929 Briarpark Drive, Suite 600

Houston, Texas 77042

Re: Professional Civil Engineering Services  
**FM 1093 AT BOWSER ROAD/POOL HILL ROAD**  
**Traffic Signal Warrant and Traffic Signal Design**  
*Simonton, Fort Bend County, Texas*

Dear Mr. Baker:

**Pacheco Koch Consulting Engineers, Inc.** is pleased to submit this proposal to provide professional civil engineering services relating to the referenced project. It is our understanding the project consists of signal design services located at the intersection of FM 1093 at Bowser Road and Pool Hill Road in Simonton, Texas.

**SCOPE OF SERVICES**

Based on our preliminary discussions and review of the information received to date, the following is our perception of the services to be provided by Pacheco Koch for the referenced project:

*TRAFFIC SIGNAL WARRANT ANALYSIS:* Pacheco Koch will prepare a Traffic Signal Warrant Analysis at the subject intersection(s) based upon industry standards and in accordance with requirements of the Approving Agency. [NOTE: For purposes of this proposal, the Approving Agency refers to TxDOT.]

*Included in this item:*

- Contact the Approving Agency representative to confirm the specific study parameters and other aspects of the required study.
- Collect current traffic volumes on subject roadways sufficient for the study.
- Apply appropriate adjustments (if any) to the current traffic volumes to represent anticipated, future conditions with the proposed traffic signal.
- Analyze the traffic-volume-related warrants (Warrants 1, 2 and/or 3) from the *Texas Manual On Uniform Traffic Control Devices* for the subject intersection to determine if the criteria of one or more warrants are satisfied.
- As needed, recommend physical modifications to the subject intersection to better facilitate a traffic signal including storage length for left turn lanes. (Recommendations shall be conceptual only and is not considered a detailed design.)
- Prepare a Technical Memorandum summarizing the background, analyses, findings, and recommendations of the Traffic Signal Warrant Analysis for submittal to the Approving Agency.

TRAFFIC SIGNAL DESIGN SERVICES: Pacheco Koch will provide Traffic Signal Design Services in accordance with requirements of the Approving Agency. [NOTE: For purposes of this proposal, the Approving Agency refers to TxDOT.]

*Included in this item:*

- Contact the Approving Agency representative to confirm the specific design parameters and other instructions.
- Coordination with local electric service provider to obtain transformer location for proposed traffic signal.
- Conduct site visit to review existing conditions and location specific constraints.
- Develop a set of traffic signal construction plans for the subject intersection. The plan set will include:
  - The type, location, and quantity summary of the traffic signal poles, mast arms, controller cabinets, detection equipment, conduit runs, wiring, signal head types, pedestrian components, etc.
  - Appropriate construction details and specifications.
  - Quantities for Prime to include in bid documents.
  - Engineer's Opinion of Probable Construction Cost (OPCC).
- Submittals to the Approving Agency include:
  - Preliminary plan set.
  - Preliminary plan set with revisions (as needed).
  - Final plan set.
  - Record Drawings.
- Assistance with responses to any signal related Bid questions.

NOTES:

- Prime will provide a detailed field survey (in AutoCAD format) of the public right-of-way on all four quadrants of the intersection (up to 100 feet in all directions) that shows: topography, property and right-of-way lines, infrastructure and utilities (including below grade), existing and/or approved, future sidewalks including any barrier-free ramps. Prime will provide the design of the intersection with proposed turn lanes, signing (not located on signal equipment) and pavement marking as well as any ADA ramps/sidewalks.
- This does not include any signal timing services as all the work will be performed by TxDOT.

BID PHASE SERVICE & CONSTRUCTION ADMINISTRATION: During the Bid Phase, Pacheco Koch will be available to provide coordination as required with prospective bidders. During Construction Administration, Pacheco Koch will prepare record drawings upon completion of the project. The contractor will provide Pacheco Koch redlines of any changes to the 100% design plans.

Based on our understanding of the scope of services, the following items are not included in this proposal:

1. Geotechnical investigation
2. Environmental investigation
3. Wetlands determination and permitting
4. Floodplain studies and permitting
5. Boundary and topographic surveying
6. Preliminary and final platting
7. Zoning change assistance
8. Site Plan layout
9. Demolition Plan
10. Coordination of gas, electric, telephone and cable television service
11. Retaining wall design
12. Design of screening walls, light pole bases, transformer or generator pads, hardscape features, pavers and/or site signage.
13. Detailed layout of walks and hardscape areas, including scoring patterns.
14. Design of any underfloor drainage systems or grading.
15. Design of french drain systems around the building perimeters.
16. Dedications of easements and/or right-of-way by separate instrument
17. Landscape Plan and Irrigation Plan
18. Site Lighting Plan
19. Signage and Pavement Marking Plan
20. Off-site roadway, drainage, and utility extensions/improvements
21. LEED pursuit
22. Construction staking
23. Application, review and filing fees

## **SCHEDULE**

Pacheco Koch acknowledges the importance to CLIENT of the project schedule and agrees to put forth its best professional efforts to perform its services under this Agreement in a manner consistent with that schedule. CLIENT understands, however, that Pacheco Koch's performance must be governed by sound professional practices. If, through no fault of Pacheco Koch, such periods of times or dates are changed, or the orderly and continuous progress of Pacheco Koch's services is impaired or Pacheco Koch's services are delayed or suspended, then the time for completion of Pacheco Koch's services, and the rates and amounts of Pacheco Koch's compensation, shall be adjusted equitably. If requested, Pacheco Koch would be pleased to develop a project schedule outlining each of the items included previously described in the Scope of Services.

## **COMPENSATION**

Pacheco Koch proposes to provide the services described above on a Fixed Fee basis for a total fee, exclusive of direct reimbursable costs, as follows:

<i>TRAFFIC SIGNAL WARRANT ANALYSIS</i>	\$ 5,100.00
<i>TRAFFIC SIGNAL DESIGN SERVICES</i>	\$ 33,000.00
<i>BID PHASE SERVICE &amp; CONSTRUCTION ADMISTRATION</i>	\$ <u>3,100.00</u> *(NTE)
<b>TOTAL</b>	<b>\$ 41,200.00</b>

\*Pacheco Koch proposes to provide the services listed above which are noted as "Hourly" on an Hourly, not to exceed basis. A copy of our "Standard Schedule of Hourly Rates" is attached for your reference.

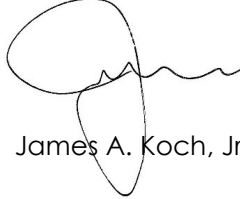
Please note that the fees above are based on the assumption that Pacheco Koch will perform the above services all together for this project. In the event any item is deleted from the scope of work, Pacheco Koch reserves the right to adjust the fees for other items as appropriate.

## SUMMARY

This proposal, unless otherwise noted, constitutes our understanding of the services to be provided by Pacheco Koch Consulting Engineers, Inc. on the project described above. This proposal is offered for a period of thirty (30) days after which, if said proposal has not been executed, said proposal should no longer be valid.

**Pacheco Koch Consulting Engineers, Inc. is pleased to have this opportunity to submit this proposal and looks forward to working with you on this project.** If the proposal and accompanying agreement is acceptable to you as presented, please execute one copy of the agreement form and return one original copy to our office. Upon receipt of notice to proceed, either in writing or verbally, it will be assumed said agreement is accepted by all parties and services will be provided accordingly. If you have any questions or would like any additional information, please do not hesitate to call us at your convenience.

Sincerely,

A handwritten signature in black ink, appearing to read 'James A. Koch, Jr.', with a large, stylized initial 'J' and a long, wavy horizontal stroke extending to the right.

James A. Koch, Jr., P.E., R.P.L.S.

CBL/jjb  
01-19254R2

Project No.: 0100  
 Client: Fort Bend County  
 Project Title: Bowser Road Signal

FEE BUDGET ESTIMATE  
 BASIC DESIGN & CONSTRUCTION SERVICES

February 2, 2021

DESCRIPTION OF WORK TASK	BASIS OF EFFORT ESTIMATE		LEVEL OF EFFORT BY CLASSIFICATION								TOTAL MH'S PER TASK	TOTAL FEE PER TASK	
			PRINCIPAL	ASSOC. PRIN.	SR. PROJECT MGR	PROJECT ENGR	DESIGN TECH/EIT	TECH. CADD	QA/QC REVIEW	ADMIN ASST.			
	QNTY	UNIT	\$245.00	\$210.00	\$170.00	\$100.00	\$85.00	\$80.00	\$200.00	\$70.00			
<b>I. ROADWAY DESIGN</b>													
<b>SIGNAL WARRANT STUDY</b>													
Data collection					2.0			2.0				4.0	\$ 510.00
TIA review and future traffic analysis					2.0			12.0				14.0	1,360.00
Signal Warrant Analysis					2.0			6.0				8.0	850.00
Memorandum			1.0				6.0	18.0				25.0	2,375.00
<b>SUB-TOTAL =</b>												<b>\$ 5,095.00</b>	
<b>SIGNAL DESIGN</b>													
Task Management	6	MTH		6.0								6.0	\$ 1,260.00
Kick-Off meeting				2.0				4.0				6.0	760.00
Site Visit				12.0				12.0				24.0	3,540.00
60% Submittal			1.0	12.0	8.0			60.0				81.0	9,225.00
Initial Review Meeting (virtual)				2.0				2.0				4.0	590.00
90% Submittal			1.0	12.0	8.0			60.0				81.0	9,225.00
Final Review Meeting (virtual)				2.0				2.0				4.0	590.00
100% Submittal			1.0	8.0	4.0			40.0				53.0	6,005.00
<b>SUB-TOTAL =</b>												<b>\$ 31,195.00</b>	
<b>BID PHASE &amp; CONSTRUCTION ADMINISTRATION SERVICES</b>													
Bid Advertisement												0.0	\$ -
Bid Document Distribution												0.0	-
Bid assistance (Answer Bidding questions)					8.0							8.0	1,360.00
Bid Analysis												0.0	-
Construction Documents												0.0	-
Record Drawings			1.0		2.0			14.0				17.0	1,705.00
Final Review Meeting												0.0	-
<b>SUB-TOTAL =</b>												<b>\$ 3,065.00</b>	
<b>INITIAL SIGNAL TIMING SERVICES</b>													
Basic Signal timing and Y&R calcs												0.0	-
Timing memo												0.0	-
Field programming												0.0	-
Fine-tuning visit												0.0	-
<b>SUB-TOTAL =</b>												<b>\$ -</b>	
<b>HOURS SUB-TOTALS</b>			5.0	56.0	36.0	6.0	218.0	14.0	0.0	0.0	335.0		\$ 39,355.00
<b>TOTAL LABOR COSTS</b>			1,225.00	11,760.00	6,120.00	600.00	18,530.00	1,120.00	-	-	\$ 39,355.00		
<b>% OF TOTAL HOURS</b>			1.5%	16.7%	10.7%	1.8%	65.1%	4.2%	0.0%	0.0%	100.0%		

PRINTING & REPRODUCTION EXPENSES								ENGINEERING				
	QTY	UNIT		QUANTITY	UNIT PRICE	AMOUNT						
PRINTING - 11 X 17 PLANS (REVIEW SETS)	6	SETS	15	PLOTS/SET	90	1.00	90.00	LABOR COSTS:				\$ 39,355.00
PRINTING - 22 X 34 PLANS (REVIEW SETS)	0	SETS	15	PLOTS/SET	0	1.50	-	DIRECT EXPENSES				1,810.00
PRINTING - 22 X 34 PLANS (UTILITY CLEARANCE SETS)	0	SETS	15	PLOTS/SET	0	1.50	-	<b>TOTAL ENGINEERING (Basic Services)</b>				<b>\$ 41,165.00</b>
PLOTTING - 22 X 34 PAPER PLOTS	0	SETS	15	PLOTS/SET	0	3.00	-					
PRINTING - 22 X 34 PLANS (BID SETS)	0	SETS	15	PLOTS/SET	0	1.50	-					
PRINTING - 11 X 17 PLANS (BID SETS)	2	SETS	15	PLOTS/SET	30	1.00	30.00	<b>OTHER DIRECT COSTS - (Special Services)</b>				
PRINTING - 22 X 34 PLANS (AS-BUILT SETS)	0	SETS	15	PLOTS/SET	0	3.00	-	J. DATA COLLECTION				
PRINTING - 11 X 17 PLANS (AS-BUILT SETS)	2	SETS	15	PLOTS/SET	30	1.00	30.00					

Project No.: 0100  
 Client: Fort Bend County  
 Project Title: Bowser Road Signal

FEE BUDGET ESTIMATE  
 BASIC DESIGN & CONSTRUCTION SERVICES

February 2, 2021

DESCRIPTION OF WORK TASK	BASIS OF EFFORT ESTIMATE		LEVEL OF EFFORT BY CLASSIFICATION								TOTAL MH'S PER TASK	TOTAL FEE PER TASK
			PRINCIPAL	ASSOC. PRIN.	SR. PROJECT MGR	PROJECT ENGR	DESIGN TECH/EIT	TECH. CADD	QA/QC REVIEW	ADMIN ASST.		
	QNTY	UNIT	\$245.00	\$210.00	\$170.00	\$100.00	\$85.00	\$80.00	\$200.00	\$70.00		
<b>I. ROADWAY DESIGN</b>												
MYLAR PREPARATION	2	SETS	15	PLOTS/SET	30		4.00	120.00				
PDF PREPARATION	1	SETS	15	PLOTS/SET	15		8.00	120.00				
SPECIFICATIONS - 8.5 X 11 PAPER COPIES	6	SETS	50	COPIES/SET	300		0.10	30.00				
SPECIFICATIONS - 8.5 X 11 PAPER COPIES (BID SETS)	1	SETS	100	COPIES/SET	100		0.10	10.00				
<b>TOTAL PRINTING &amp; REPRODUCTION EXPENSES</b>								<b>\$ 430.00</b>				
<b>DIRECT EXPENSES</b>												
PLOTTING - 11 X 17 PAPER PLOTS	3	SETS	15	PLOTS/SET			1.00	-				
TMC	2	INT	12	HRS			52.09	800.00				
24-hr TUB counts	0	CNTS	0	DAYS			200.00	-				
REPRODUCTION - 8.5 X 11 PAPER COPIES		COPIES					0.10	-				
DELIVERY SERVICE	2	PKGS					15.00	30.00				
AUTO EXPENSE	2	TRIPS	500	MI /TRIP			0.55	550.00				
<b>TOTAL PER PHASE DIRECT EXPENSES</b>								<b>\$ 1,380.00</b>				
<b>TOTAL ENGINEERING (Special Services)</b>											<b>\$</b>	<b>-</b>
<b>TOTAL DESIGN FEE</b>											<b>\$</b>	<b>41,165.00</b>



**SCHEDULE OF STANDARD HOURLY BILLING RATES**  
(Our hourly rates are subject to change at any time.)

**ENGINEERING**

Principal.....	\$245.00/Hr.
Associate Principal.....	\$210.00/Hr.
Director.....	\$210.00/Hr.
Senior Project Manager .....	\$170.00/Hr.
Senior Project Coordinator .....	\$170.00/Hr.
Project Manager.....	\$125.00/Hr.
Project Coordinator.....	\$125.00/Hr.
Project Engineer.....	\$100.00/Hr.
Senior Technician.....	\$115.00/Hr.
Technician .....	\$85.00/Hr.
Drafter .....	\$80.00/Hr.
Research Manager.....	\$100.00/Hr.
Research Coordinator.....	\$65.00/Hr.
Research Assistant .....	\$55.00/Hr.
Executive Assistant.....	\$100.00/Hr.
Senior Administrative Assistant .....	\$90.00/Hr.
Administrative Assistant .....	\$75.00/Hr.
Expert Witness Testimony.....	\$350.00/Hr.

**LANDSCAPE ARCHITECTURE**

Principal.....	\$245.00/Hr.
Associate Principal.....	\$210.00/Hr.
Director.....	\$210.00/Hr.
Senior Project Manager .....	\$160.00/Hr.
Project Manager.....	\$120.00/Hr.
Project Landscape Architect .....	\$100.00/Hr.
Landscape Task Lead .....	\$95.00/Hr.
Technician .....	\$85.00/Hr.
Landscape Designer .....	\$80.00/Hr.
Drafter .....	\$80.00/Hr.
Executive Assistant.....	\$100.00/Hr.
Senior Administrative Assistant .....	\$90.00/Hr.
Administrative Assistant .....	\$75.00/Hr.
Expert Witness Testimony.....	\$350.00/Hr.

**SURVEYING**

Principal .....	\$245.00/Hr.
Associate Principal .....	\$210.00/Hr.
Director .....	\$210.00/Hr.
Senior Project Manager .....	\$165.00/Hr.
Senior Project Coordinator .....	\$165.00/Hr.
Project Manager.....	\$120.00/Hr.
Project Coordinator.....	\$120.00/Hr.
Project Surveyor .....	\$100.00/Hr.
Survey Intern .....	\$95.00/Hr.
Senior Technician.....	\$95.00/Hr.
Technician .....	\$85.00/Hr.
Drafter .....	\$80.00/Hr.
Research Manager.....	\$100.00/Hr.
Research Coordinator.....	\$65.00/Hr.
Research Assistant .....	\$55.00/Hr.
Executive Assistant.....	\$100.00/Hr.
Senior Administrative Assistant .....	\$90.00/Hr.
Administrative Assistant.....	\$75.00/Hr.
Expert Witness Testimony.....	\$350.00/Hr.
Survey Field Crew (1-person) .....	\$100.00/Hr.
Survey Field Crew (2-person) .....	\$150.00/Hr.
Survey Field Crew (3-person) .....	\$210.00/Hr.
Survey Field Crew (4-person) .....	\$270.00/Hr.
Survey Scanner Crew (1-person) ..	\$180.00/Hr.
Survey Scanner Crew (2-person) ..	\$225.00/Hr.
Survey Scanner Crew (3-person) ..	\$310.00/Hr.

**STANDARD BILLING RATES FOR IN HOUSE REIMBURSABLE CHARGES**

*(Rates are subject to change at any time.)*

*Reproduction:*

Black Line Bond Prints.....	\$ 0.50/sf
Black Line Mylar Prints .....	\$ 2.00/sf
Color Bond Plots .....	\$ 3.00/sf
Color Prints (8 1/2" x 11") .....	\$ 1.00/ea
Photocopies (8 1/2" x 11") .....	\$ 0.10/ea

*Monumentation (Materials Only):*

3" Aluminum Disks.....	\$25.00/ea
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*Mounting:*

Foam-core (3/16") .....	\$4.00/sf
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*Binding Services:*

Punch & Bind.....	\$2.00/ea
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*Storage Media:*

CD/Flash Drive .....	\$ 8.00/ea
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*Travel Expenses:*

Per Diem (Lodging/Meals) .....	\$ 125.00/Day/Person
Mileage .....	Current IRS Rate per mile

# 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**

**Certificate Number:**  
 2021-747422

**Date Filed:**  
 05/04/2021

**Date Acknowledged:**  
 05/25/2021

**1 Name of business entity filing form, and the city, state and country of the business entity's place of business.**  
 LJA Engineering, Inc.  
 Houston, TX United States

**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 Engineering

**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.**  
 20306  
 Engineering and design services for the reconstruction of 2 miles of Bowser Road in Fort Bend County.

4	Name of Interested Party	City, State, Country (place of business)	Nature of interest (check applicable)	
			Controlling	Intermediary
	Shackett, John D	Houston, TX United States	X	
	Collins, Jeff P	Houston, TX United States	X	
	Ross, James D	Houston, 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)