

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 Kavi Consulting, Inc., (hereinafter "Consultant"), a company authorized to conduct business in the State of Texas.

WITNESSETH

WHEREAS, County desires that Consultant provide professional engineering services for the West Sycamore Road, Segment 1 Project No. 17121x under the Fort Bend County Mobility Program (hereinafter "Services") pursuant to SOQ 14-025; and

WHEREAS, County has determined Consultant is the most highly qualified provider of the desired Services on the basis of demonstrated competence and qualifications, and County and Consultant 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, Consultant 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

Consultant shall render the professional engineering services as described in Consultant's Scope of Services dated September 21, 2020, attached hereto as Exhibit A, and incorporated herein for all purposes.

Section 2. Personnel

2.1 Consultant 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 Consultant 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 Consultant shall have such knowledge and experience as will enable them to perform the duties assigned to them. Any employee of Consultant 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 Consultant'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 two hundred nineteen thousand nine hundred sixty-four dollars and 48/100 (\$219,964.48) 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 Consultant 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 Consultant based on the following procedures: Upon completion of the tasks identified in the Scope of Services, Consultant 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 Consultant 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 two hundred nineteen thousand nine hundred sixty-four dollars and 48/100 (\$219,964.48) specifically allocated to fully discharge any and all liabilities County may incur.

4.2 Consultant does further understand and agree, said understanding and agreement also being of the absolute essence of this Agreement, that the total maximum compensation that Consultant may become entitled to and the total maximum sum that County may become liable to pay to Consultant shall not under any conditions, circumstances, or interpretations thereof exceed two hundred nineteen thousand nine hundred sixty-four dollars and 48/100 (\$219,964.48).

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, 2022. Consultant 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 Consultant 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 Consultant 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 Consultant 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 Consultant 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. Consultant'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 Consultant.

Section 8. Ownership and Reuse of Documents

All documents, data, reports, research, graphic presentation materials, etc., developed by Consultant 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. Consultant shall promptly furnish all such data and material to County on request.

Section 9. Inspection of Books and Records

Consultant will permit County, or any duly authorized agent of County, to inspect and examine the books and records of Consultant 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, Consultant 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. Consultant shall provide certified copies of insurance endorsements and/or policies if requested by County. Consultant 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. Consultant 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 Consultant 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, Consultant 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 Consultant 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 Consultant 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 Consultant 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 Consultant) publicly known or is contained in a publicly available document; (b) is rightfully in Consultant'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 Consultant who can be shown to have had no access to the Confidential Information.

12.2 Consultant agrees to hold Confidential Information in strict confidence, using at least the same degree of care that Consultant 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. Consultant 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, Consultant shall advise County

immediately in the event Consultant 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 Consultant will at its expense cooperate with County in seeking injunctive or other equitable relief in the name of County or Consultant against any such person. Consultant agrees that, except as directed by County, Consultant 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, Consultant will promptly turn over to County all documents, papers, and other matter in Consultant's possession which embody Confidential Information.

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

12.5 Consultant 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 Consultant

13.1 In the performance of work or services hereunder, Consultant 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 Consultant 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, 1st Floor
Richmond, Texas 77469

Consultant: Kavi Consulting, Inc.
1011 Highway 6 South, Suite 307
Houston, Texas 77077

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

Consultant 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, Consultant shall furnish County with certification of compliance with said laws, statutes, ordinances, rules, regulations, orders, and decrees above specified.

Section 16. Standard of Care

Consultant 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, Consultant 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 Consultant 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 Consultant 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, Consultant verifies that if Consultant employs ten (10) or more full-time employees and this Agreement has a value of \$100,000 or more, Consultant 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, Consultant represents pursuant to Section 2252.152 of the Texas Government Code, that Consultant 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, CONSULTANT 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.

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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

KAVI CONSULTING, INC

KP George, County Judge



Authorized Agent – Signature

Date

Vijaya Kumar Rapolu
Authorized Agent – Printed Name

ATTEST:

President
Title

Laura Richard, County Clerk

10/14/2020
Date

APPROVED:



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

APPROVED AS TO LEGAL FORM:

Marcus D. Spencer, First Assistant County Attorney

AUDITOR'S CERTIFICATE

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

Robert Ed Sturdivant, County Auditor

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EXHIBIT A

Kavi Consulting, Inc.

September 21, 2020

Kevin Mineo, P.E.
Sr. Project Manager, BBI
1710 Seamist Drive
Houston, Texas 77008

RE: W. Sycamore Segment 1- Teal West Blvd to Teal Bend Drive

Dear Mr. Mineo:

Attached please find our fee proposal for the design of W.Sycamore Segment-1 from Teal West Blvd to Teal Bend Drive. Also attached is our level of effort spreadsheet. Our proposed fee including all subs for Design Phases of the project is \$219,964.48.

Please call me at 281-772-9643 if you have any questions. We look forward to working with BBI and Fort Bend County on this project.

Sincerely,

Vijaya Rapolu, P.E.
Kavi Consulting, Inc.

Encl:

Scope of Services
LOE (KAVI) & Subs

1011 Highway 6S, # 307
Houston TX-77077
Ph: 281.772.9643

E-Mail: rapolu.vijaya@kaviconsultinginc.com

SCOPE OF SERVICES

W.Sycamore Segment-1 from Teal Bend Blvd to Teal Estates Blvd

SCOPE OF SERVICES

This scope includes a Preliminary Design, and Final Design including Surveying and Geotechnical Study per Fort Bend County Design Standards and Manual for W. Sycamore Segment-1 from Teal Bend Blvd to Teal Estates Blvd.

Following are the basic services that will be required for this project:

Preliminary Design Phase

The preliminary design will include the following:

- MUD, Fort Bend County and other public and private agencies' coordination.
- Sub consultants (Geotech and survey) coordination.
- Field verification for proposed alignment
- Drainage will be performed per Atlas 14 or Fort Bend County Drainage District recommended rainfall.
- Perform Drainage Study
- Perform drainage impact study for additional imperviousness
- Adjustments to the public utilities if it conflicts.
- Preliminary cost estimate preparation
- Site triangles
- 30% design plan set
- Preliminary Engineering Report preparation with applicable exhibits

Final Design Phase

The final design phase will include the following:

- Preparation of construction plans that include:
Cover sheet; general notes; index; overall layout; drainage area maps, drainage calculations, drainage improvements, P&P drawings; typical sections; traffic control plan; signing and pavement markings; SWPPP; and other applicable details.
- Construction Plans submittals for 70, 95 and 100 percent.
- Coordination with TxDOT, Fort Bend County Drainage District as needed and obtain their approvals if necessary.
- Finalize the preliminary construction cost estimate
- Prepare project manual and combine with signed plans and prepare the CDs and deliver to FBC purchasing and BBI.

Bid Phase:

Provide support to Fort Bend County, including Addendums, Pre-Bid meetings, bid evaluations and recommendations as necessary.

The Design Consultant will prepare 27 compact discs, each with one project manual file and one drawing file. Of these, 25 compact discs will be delivered to the County Purchasing

Agent for advertising, and two discs will be provided to the County's Project Manager (BBI).

Construction Phase Services (Time and Material)

- a. Attend and assist the County in pre-construction conferences. Attend bi-weekly (once every two weeks) and other project meetings as requested by the County.
- b. Make periodic visits (not less than bi-weekly), as distinguished from the continuous services of a resident project representative, in order to become familiar with the progress of the work, and to determine if the work is proceeding in accordance with the contract documents.

After each visit or project meeting (including bi-weekly meetings or as specified by County), the Engineer shall prepare and distribute minutes and a written report of his observations of the progress and quality of work performed (including the traffic control plan and implementation of the storm water pollution prevention plan) pursuant to the contract documents. A copy of each report shall be submitted to the County within five (5) working days of any project visit or meeting.

- c. Consult with and advise the County, as often as requested by the County, during construction. Within three (3) working days of the request, the Engineer will issue all instructions, requests for information, and non-conformance reports as requested by the County.
- d. Review, and submit comments on all project schedules as submitted by the Contractor.
- e. Maintain the project submittal log. Review and approve or disapprove submittals. Review shop and working drawings, furnished by Contractors, for compliance with design concepts and specifications and with the information given in the contract documents.
- f. Review monthly and final estimates on forms provided by the County, for payments to the Contractor.
- g. Participate with the County's representatives in a substantial completion and/or final inspection of the Project. The Engineer must conduct inspections to determine the dates of substantial and final completion.
- h. Correct errors and omissions in the drawings and specifications as requested by the County.

The Engineer may render the following Additional Services in connection with the Project as requested by the County:

- a. Conduct alignment surveying, including the preparation of an alignment map, metes and bounds descriptions, parcel stakings, transit control line and

benchmarks. Field surveys for design, construction staking and other field investigations.

- b. Perform any necessary changes in the drawings and specifications that are outside the scope of the project.
- c. Prepare and deliver to the County one set of the record drawings in Adobe, PDF or TIFF Image on CD Rom Media, in order by page number, showing those changes made during the construction period based on change orders, marked-up prints, drawings, and other data furnished by the Contractor to the Engineer, and which the Engineer considers significant. If the project includes traffic signalization, the Engineer will also furnish the County a laminated 11" x 17" sheet showing the "signal layout" as constructed.

Coordination:

Surveying:

1. Coordinate with the Surveying (Landtech, Inc.) firm regarding topographic survey of approximately ~1,340 linear feet of roadway (including side streets) necessary to locate visible and apparent improvements, utilities and features to a limit of ten (10) feet beyond the existing right-of way lines.
2. Coordinate and obtain base map of the topographic survey and the existing right-of-way in AutoCAD at a scale enough for engineering design in AutoCAD 2013 or later.

Geotechnical:

1. Coordinate with Geotech (Associated Testing Laboratories) firm for Engineering Analysis and Report.

For detailed services for Surveying and Geotech, please see the respective proposals attached to this main proposal.

Public/private utility design, coordination, pipeline coordination/design, quantity sheet will be performed by KAVI as required.

Plans will be done in AutoCAD format. Land acquisition services are not included.

SCHEDULE

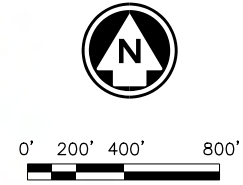
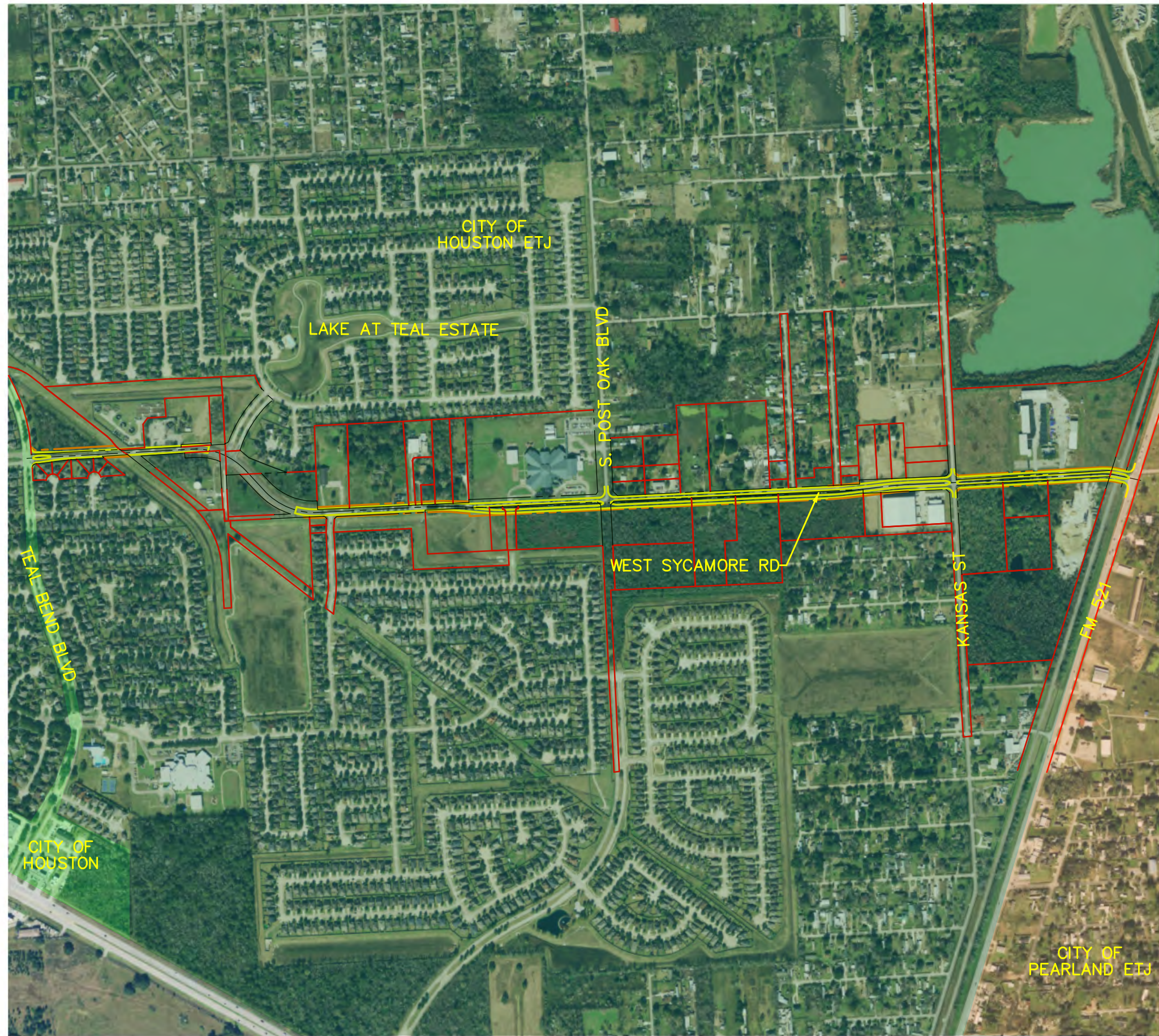
The Preliminary Design Report will be submitted for review within 60 days after Survey data received. Phase II final design will take 60 days (not including County review time).

FEE BREAKDOWN

The fees for Phase I and Phase II will be paid on a lump sum basis. The following table gives a breakdown of the total fee by phase:

Phase	Fee
Phase I (KAVI)	\$52,860.00
Phase II (KAVI)	\$68,910.00
Surveying (Landtech)	\$36,202.64
Geotechnical (ATL)	\$17,664.00
Survey CPS (T&M)	\$ 8,897.65
Construction Phase (KAVI)(T&M)	\$18,707.04
Design (Total)	\$203,241.33
Parcels (NTE) (5 Parcels)	\$ 16,723.15
(Landtech)	
Total	\$219,964.48

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PROJECT:
WEST SYCAMORE RD

PROJECT No. 20213
FROM: TEAL BEND BLVD
TO: FM 521

LENGTH: 7,255 FT

DESCRIPTION:
UPGRADE EXISTING 2 LANE ROAD TO:
4 LANE BOULEVARD FROM 521 TO IN FRONT OF THE SCHOOL AT S. POST OAK, 41' WIDE SECTION FROM SCHOOL TO S CURVE (RECENTLY COMPLETED), 41' WIDE SECTION FROM TEAL TO TEAL BEND ESTATES (R&B SECTION)

FORT BEND COUNTY
2020 MOBILITY BOND PROGRAM



PHASE I BASIC SERVICES LEVEL OF EFFORT (LOE) FEE ESTIMATE
W.Sycamore_Seg_1
KAVI Consulting, Inc.

Date: 08/06/20
Revision: 09/21/20

	Principal / Managing Director	Project Manager	Civil / Project Engineer	Graduate Engineer	Senior Designer	Senior CADD Technician	Admin / Clerical	Total Hours	Total Cost
DIRECT LABOR COST	\$ 70	\$ 55	\$ 45	\$ 40	\$ 45	\$ 35	\$ 30		
HOURLY RATE INCLUDING MULTIPLIER (3X)	\$ 210	\$ 165	\$ 135	\$ 120	\$ 135	\$ 105	\$ 90		
1. Coordination									
1.1 Fort Bend/Binkley and Barfield (BBI)	1	2	4				2	9	\$ 1,260
1.2 Regulatory Agencies (if required)	1	2	4				2	9	\$ 1,260
1.3 Private Utilities		2	4			4		10	\$ 1,290
1.4 Survey and Geototechnical	2	4	16			12	12	46	\$ 5,580
Subtotal Hours	4	10	28			16	16	74	
Subtotal Fee	\$ 840	\$ 1,650	\$ 3,780	\$ -	\$ -	\$ 1,680	\$ 1,440		\$ 9,390
2. Data Collection									
2.2 Review Existing Conditions Data from Pre-Engineering and Supplement as Necessary	1	2	10			8		21	\$ 2,730
2.2 Field Verify Existing Conditions (Including a Site Visit with City PM)		4	4					8	\$ 1,200
Subtotal Hours	1	6	14			8		29	
Subtotal Fee	\$ 210	\$ 990	\$ 1,890	\$ -	\$ -	\$ 840	\$ -	\$ -	\$ 3,930
3. H&H Analysis									
Existing Conditions									
3.1 Review Existing Conditions Analysis (from Pre-Engineering) and Identify Capacity and Level of Service	1	2	14					17	\$ 2,430
3.2 Existing Conditions Progress Meeting		4	4					8	\$ 1,200
Proposed Conditions Alternative (Including Mitigation if Required)									
3.3 Review and Confirm Proposed Conditions Analysis from Pre-engineering (Based on LiDAR)		2	8			6		16	\$ 2,040
3.4 Perform Proposed Drainage Analysis based on Topographic Survey	1	4	16					21	\$ 3,030
3.5 Mitigation evaluation	1	4	16					21	\$ 3,030
3.6 Proposed Conditions Progress Meeting		1	1					2	\$ 300
Subtotal Hours	3	17	59			6		85	
Subtotal Fee	\$ 630	\$ 2,805	\$ 7,965	\$ -	\$ -	\$ 630	\$ -		\$ 12,030

PHASE I BASIC SERVICES LEVEL OF EFFORT (LOE) FEE ESTIMATE
W.Sycamore_Seg_1
KAVI Consulting, Inc.

Date: 08/06/20
Revision: 09/21/20

	Principal / Managing Director	Project Manager	Civil / Project Engineer	Graduate Engineer	Senior Designer	Senior CADD Technician	Admin / Clerical	Total Hours	Total Cost
DIRECT LABOR COST	\$ 70	\$ 55	\$ 45	\$ 40	\$ 45	\$ 35	\$ 30		
HOURLY RATE INCLUDING MULTIPLIER (3X)	\$ 210	\$ 165	\$ 135	\$ 120	\$ 135	\$ 105	\$ 90		
4. Preliminary Engineering Report (PER)									
4.1 Determine ROW/Easement Acquisition Required for Recommended Alternative	1	2	6			6	4	19	\$ 2,340
4.2 Determine Utility Relocation if Required for Recommended Alternative	1	2	6			6	4	19	\$ 2,340
4.3 Prepare Preliminary Cost Estimate for Recommended Alternative	1	2	16				6	25	\$ 3,240
4.4 Prepare Text and Appendices for PER	1	1	16			6	6	30	\$ 3,705
4.4 Prepare PER Exhibits									\$ -
Project Location and Vicinity Maps		1	1			4		6	\$ 720
Right-of-Way Map		1	6			10		17	\$ 2,025
Public Utility Map		1	6			10		17	\$ 2,025
Private Utility Map		1	4			10		15	\$ 1,755
30% level plan & profiles	1	2	10			28		41	\$ 4,830
4.4 Internal QA/QC of Review of PER	1	2	4			6		13	\$ 1,710
4.5 Submit Draft PER (including QA/QC redlines)		1	1					2	\$ 300
4.6 Address Comments and Submit Final PER	1	2	6			6	6	21	\$ 2,520
Subtotal Hours	7	18	82			92	26	225	
Subtotal Fee	\$ 1,470	\$ 2,970	\$ 11,070	\$ -	\$ -	\$ 9,660	\$ 2,340		\$ 27,510
TOTAL PHASE I BASIC SERVICES HOURS	15	51	183			122	42	413	
TOTAL PHASE I BASIC SERVICES FEES	\$ 3,150	\$ 8,415	\$ 24,705	\$ -	\$ -	\$ 12,810	\$ 3,780		\$ 52,860

PHASE II BASIC SERVICES LEVEL OF EFFORT (LOE) FEE ESTIMATE

W.Sycamore_Seg_1

KAVI Consulting, Inc.

Date: 08/06/20

Revision: 09/21/20

	Principal / Managing Director	Project Manager	Civil / Project Engineer	Graduate Engineer	Designer / Technician	Admin / Clerical	Total Hours	Total Cost
DIRECT LABOR COST	\$ 70	\$ 55	\$ 45	\$ 40	\$ 35	\$ 30		
HOURLY RATE INCLUDING MULTIPLIER (3)	\$ 210	\$ 165	\$ 135	\$ 120	\$ 105	\$ 90		
COORDINATION, DATA COLLECTION, REVIEW AND APPROVAL								
Project Meetings (Kick-Off + 3 Meetings @ 3 Hrs Ea. + Meeting Minutes)	0	3	3	0	0	0	6	\$ 900
Internal QA/QC (Multiple Phase Reviews)	1	1	4	0	4	2	12	\$ 1,515
FB QA/QC (Multi Phase Reviews)	0	1	4	0	4	2	11	\$ 1,305
Coordinate/Approval with Private Utilities	0	2	8	0	6	0	16	\$ 2,040
Field Visits and Data Collection	0	2	6	0	0	0	8	\$ 1,140
Subtotal Hours	1	9	25	0	14	4	53	
Subtotal Fee	\$ 210	\$ 1,485	\$ 3,375	\$ -	\$ 1,470	\$ 360		\$ 6,900
FRONT END DRAWINGS								
Cover Sheet (Project Title; Location & Vicinity Map)	0	1	1	0	2	0	4	\$ 510
Index Of Drawings	0	1	1	0	2	0	4	\$ 510
General Construction, Private Utility Notes, & FBCDD Notes (If Required)	0	1	1	0	2	0	4	\$ 510
Legends (Const. & Topo), Abbreviations & Plan & Profile Key Notes	0	1	2	0	2	0	5	\$ 645
Project Layout - Pavement & Boring Location Plan	1	2	2	0	2	0	7	\$ 1,020
Project Layout – Existing & Proposed Drainage Facilities	1	2	2	0	4	0	9	\$ 1,230
Typical Sections	1	2	4	0	8	0	15	\$ 1,920
Drainage Area & Overland Sheet Flow Map	0	1	6	0	8	0	15	\$ 1,815
Drainage Calculations (HouStorm Inlet Analysis and SWMM Export Tables)	0	2	8	0	4	0	14	\$ 1,830
Earthwork (Cut & Fill) & Summary Sheet	1	1	12	0	12	0	26	\$ 3,255
Subtotal Hours	4	14	39	0	46	0	103	
Subtotal Fee	\$ 840	\$ 2,310	\$ 5,265	\$ -	\$ 4,830	\$ -		\$ 13,245
PLAN & PROFILES								
PLAN & PROFILE - # of Sheets by Type (Main Alignment, Cross Street, etc.)	5	10	12	0	30	0	57	\$ 7,470
Base Map Preparation	0	1	2	0	8	0	11	\$ 1,275

PHASE II BASIC SERVICES LEVEL OF EFFORT (LOE) FEE ESTIMATE

W.Sycamore_Seg_1

KAVI Consulting, Inc.

Date: 08/06/20

Revision: 09/21/20

	Principal / Managing Director	Project Manager	Civil / Project Engineer	Graduate Engineer	Designer / Technician	Admin / Clerical	Total Hours	Total Cost
DIRECT LABOR COST	\$ 70	\$ 55	\$ 45	\$ 40	\$ 35	\$ 30		
HOURLY RATE INCLUDING MULTIPLIER (3)	\$ 210	\$ 165	\$ 135	\$ 120	\$ 105	\$ 90		
Subtotal Hours	5	11	14	0	38	0	68	
Subtotal Fee	\$ 1,050	\$ 1,815	\$ 1,890	\$ -	\$ 3,990	\$ -		\$ 8,745
STANDARD DETAILS								
Pavement Details	0	1	1	0	2	0	4	\$ 510
Excavation, Bedding, Backfill & Pavement Repair Details	0	1	1	0	2	0	4	\$ 510
Sanitary Sewer Details	0	1	1	0	2	0	4	\$ 510
Storm Sewer Details	0	1	1	0	2	0	4	\$ 510
Water Line Details	0	1	1	0	2	0	4	\$ 510
Special Details	0	1	2	0	4	0	7	\$ 855
Pavement Markings	1	1	2	0	4	0	8	\$ 1,065
Project Sign	0	1	2	0	4	0	7	\$ 855
Subtotal Hours	1	8	11	0	22	0	42	
Subtotal Fee	\$ 210	\$ 1,320	\$ 1,485	\$ -	\$ 2,310	\$ -		\$ 5,325
DESIGN SERVICES								
Storm Sewer /Drainage Ditch Facilities Design	2	4	12	0	12	0	30	\$ 3,960
Waterline & Waterline Adjustment Design	2	4	8	0	8	0	22	\$ 3,000
Traffic Control Plan	1	6	24	0	40	0	71	\$ 8,640
Traffic Control Plan Details	1	1	4	0	4	0	10	\$ 1,335
Storm Water Pollution Prevention Planv(SWPPP)	1	6	16	0	24	0	47	\$ 5,880
SWPPP Details	1	1	4	0	8	0	14	\$ 1,755
Sanitary Sewer Design	0	0	0	0	0	0	0	\$ -
Subtotal Hours	8	22	68	0	96	0	194	
Subtotal Fee	\$ 1,680	\$ 3,630	\$ 9,180	\$ -	\$ 10,080	\$ -		\$ 24,570
DESIGN - PROJECT MANUAL (70%, 95%, & 100%)								
Sheet by Sheet Quantity Take-off and Cost Estimate	1	2	12	0	12	8	35	\$ 4,140
Contract Documents (TOC, Intro Info, Bid Reqmt, Contract Reqmt)	2	2	2	0	0	0	6	\$ 1,020

PHASE II BASIC SERVICES LEVEL OF EFFORT (LOE) FEE ESTIMATE

W.Sycamore_Seg_1

KAVI Consulting, Inc.

Date: 08/06/20

Revision: 09/21/20

	Principal / Managing Director	Project Manager	Civil / Project Engineer	Graduate Engineer	Designer / Technician	Admin / Clerical	Total Hours	Total Cost
DIRECT LABOR COST	\$ 70	\$ 55	\$ 45	\$ 40	\$ 35	\$ 30		
HOURLY RATE INCLUDING MULTIPLIER (3)	\$ 210	\$ 165	\$ 135	\$ 120	\$ 105	\$ 90		
Specifications (Applicable)	1	2	3	0	0	0	6	\$ 945
Subtotal Hours	4	6	17	0	12	8	47	
Subtotal Fee	\$ 840	\$ 990	\$ 2,295	\$ -	\$ 1,260	\$ 720		\$ 6,105
BID PHASE SERVICES								
Pre-Bid Meeting		2	2	0	0	0	4	\$ 600
Answer Contractor Inquiries, Draft And Issue Addendums	2	4	4	0	0	2	12	\$ 1,800
Bid Tabulation	1	2	2	0	0	0	5	\$ 810
Research Low Bid Contractor, Issue Letter Of Recommendation	1	2	2	0	0	0	5	\$ 810
Subtotal Hours	4	10	10	0	0	2	26	
Subtotal Fee	\$ 840	\$ 1,650	\$ 1,350	\$ -	\$ -	\$ 180		\$ 4,020
TOTAL BASIC SERVICES HOURS	27	80	184	0	228	14	533	
TOTAL BASIC SERVICES FEE	\$5,670.00	\$13,200.00	\$24,840.00	\$0.00	\$23,940.00	\$1,260.00		\$68,910.00

PHASE III SERVICES LEVEL OF EFFORT (T&M)

W. Sycamore Segment 1

KAVI Consulting, Inc.

Date: 08/06/2020

Revision: 09/21/20

BASED ON 4 MONTH CONSTRUCTION PERIOD

TASK No.	TASK DESCRIPTION	BASIS OF MANHOUR ESTIMATE		TOTAL MANHOURS PER WORK TASK BY STAFF CLASSIFICATION					TOTAL MH'S PER WORK TASK	TOTAL COSTS WITH 3.0 MULT. PER WORK TASK
		QNTY	UNIT	PRINC.	PROJ. ENGR	CIVIL/ PROJ ENGR	SENR ENGR TECH	ADMIN		
				\$137.01	\$123.51	\$114.00	\$97.50	\$60.00	TASK	
1	PRE-CONSTRUCTION									
	ATTEND PRE-CONSTRUCTION CONFERENCE	1	MH	0.00	2.00	2.00	0.00	0.00	4.00	\$ 475.02
2	CONTRACTOR SUBMITTALS									
	REVIEW SUBMITTALS & PREPARE RESPONSES (Estimate # of SUBMITTALS)	1	MH	1.00	2.00	4.00	0.00	2.00	9.00	\$ 960.03
3	REQUESTS FOR INFORMATION									
	PROJECT COORDINATION w/ COUNTY, CONTRACTOR, ETC.	1	MH	1.00	2.00	4.00	0.00	4.00	11.00	\$ 1,080.03
	REVIEW & RESPOND TO RFIs OR CLARIFICATIONS (Estimate # of RFIs)	1	MH	2.00	4.00	8.00	8.00	8.00	30.00	\$ 2,940.06
4	DESIGN CHANGES									
	REVIEW & RESPOND TO PROPOSALS, MODIFICATIONS AND CHANGE ORDERS (Estimate # of Change Orders)	1	MH	2.00	4.00	10.00	10.00	8.00	34.00	\$ 3,363.06
5	MEETINGS AND SITE VISITS									
	MONTHLY STATUS MEETINGS & SITE INSPECTIONS (3 @ 4 HRS EA)	1	MH	1.00	5.00	6.00	0.00	0.00	12.00	\$ 1,438.56
	SITE INSPECTION REPORTS (4)	1	MH	1.00	4.00	8.00	0.00	0.00	13.00	\$ 1,543.05
	ADD'L MEETINGS-CONTRACTOR, PUBLIC, COUNTY, ETC. (1 @ 4HRS)	1	MH	0.00	2.00	2.00	0.00	0.00	4.00	\$ 475.02
6	PROJECT CLOSE-OUT									
	SUBSTANTIAL COMPLETION INSPECTION	1	MH	0.00	4.00	4.00	0.00	0.00	8.00	\$ 950.04
	FINAL COMPLETION INSPECTION	1	MH	0.00	4.00	4.00	0.00	0.00	8.00	\$ 950.04
	REVIEW & COMMENT ON PUNCH LIST	1	MH	1.00	4.00	2.00	0.00	2.00	9.00	\$ 979.05
	TDLR POST CONSTRUCTION INSPECTION (SITE WALK-THRU & CERITIFCATION)	1	MH	0.00	4.00	4.00	0.00	0.00	8.00	\$ 950.04
	FORT BEND COUNTY INSPECTION, WALK THROUGH, & PUNCH LIST (if required)	1	MH	0.00	4.00	4.00	0.00	0.00	8.00	
7	RECORD DRAWINGS									
	PREPARE RECORD DRAWINGS & RETURN SUBMIT ELECTRONICALLY TO COUNTY	1	MH	2.00	2.00	8.00	12.00	0.00	24.00	\$ 2,603.04
SUBTOTAL ESTIMATED MANHOURS				11	47	70	30	24	182	\$ 18,707.04

\$ 18,707.04

SUBCONSULTANTS		CONSTRUCTION PHASE ADDITIONAL SERVICES	FEE ESTIMATE		
1		Drug Testing	\$ -		\$ -
2		Expenses - Mileage, in-house printing, deliveries, etc.	\$ -		\$ -
TOTAL ADD'L SERVICE FEES					\$ -

\$ 18,707.04

September 9, 2020

Mr. Vijaya Rapolu, PE
Kavi Consulting, Inc.
27822 Acacia Glen Lane
Katy, TX 77494

RE: Proposal to Provide Professional Surveying Services for Fort Bend County 2020 Mobility Bond Program W Sycamore Road Project Segment 1 – Topographic and Right-of-Way Surveying

Dear Mr. Rapolu:

It is my pleasure to submit the following proposal for providing professional surveying services for the above referenced project. The route is along West Sycamore Road from Teal Bend Boulevard to Eaglewood Trail. The Surveying Services will be performed in accordance with Chapters 6 and 7 of the Fort Bend County Mobility Bond Design Manual:

1. Perform Control Surveys and Prepare Signed and Sealed Survey Control Maps:
 - 1.1. Project Control will be tied to and based on existing control established for adjacent projects. Existing control will be provided to Landtech by Kavi Consulting or Fort bend County. 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.
 - 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 Kavi Consulting.
 - 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 West Sycamore Road and along intersecting roadways 100 feet beyond proposed improvements. Cross sections will be collected along the route every 100 feet and will extend 50 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 West Sycamore Road. Survey will not extend into fenced WWTP on the north side of W. Sycamore Rd. 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.
- 2.3. Survey visible surface utilities. Request One Call marking of utilities, survey resulting flags and paint marks. Obtain pipe size and flowline elevations for sanitary and storm manholes and inlets.
 - 2.4. Perform Property Title Abstracting for preliminary ownership determination. 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 6 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. Includes field survey of back corners of parent tracts of proposed acquisition 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 Kavi Consulting.
 - 3.3. Prepare parcel map and metes and bounds description for each proposed ROW parcel to be acquired for the project. There are an estimated five (5) proposed acquisition parcels. 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 'W Sycamore_2020-09-01 x.pdf' for breakdown of tasks, hours, and rates):

1. Control Surveying (Lump Sum)	=	\$ 6,083.45
2. Topographic Surveying and Mapping (Lump Sum)	=	\$ 19,697.08
3.1./3.2. Proposed ROW Surveying & Mapping (Lump Sum)	=	\$ 10,422.11
3.3. Proposed Acquisition Parcels (Lump Sum Per Parcel)	=	\$ 3,344.63
4. Construction Surveying Services (Time & Materials)	=	<u>\$ 8,897.65</u>
Total Estimated Project Fees based on estimated 5 Parcels		= \$ 61,823.44

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

Sincerely,
Landtech, Inc.



Dennis Chalaire, R.P.L.S.

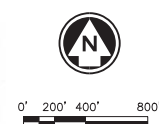
W Sycamore Seg 1 2020-09-09.docx

Attachments: Spreadsheet 'W Sycamore_2020-09-09 x.pdf'
20200603-WestSycamore_Exhibit.pdf

LANDTECH, INC.
 PROPOSAL FOR TOPOGRAPHIC, RIGHT-OF-WAY, AND CONSTRUCTION SURVEYING SERVICES
 CLIENT: HJ Consulting
 PROJECT: Fort Bend County 2020 Mobility Bond Program West Sycamore Road Project
 DATE: 9/9/2020
 LENGTH (ft): West Sycamore 2,150
 Teal Bend Blvd 200
 Rabb Road 200
 Teal Estates Blvd 100
 Total = 2,650 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
TASKS	DESCRIPTION	\$204.00	\$148.11	\$105.41	\$103.00	\$75.93	\$68.23	\$150.00	\$180.00		
1. CONTROL SURVEYS											
1.1.	Project Control will be tied to and based on existing control established for adjacent projects. Existing control will be provided to Landtech by Kavi Consulting or Fort bend County. If existing control is not available, the project will be tied to an NG& 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.	1	1	4				8	4	18	\$2,693.75
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 Kavi Consulting.		1	1					5	7	\$1,153.52
1.3.	Prepare a signed and sealed survey control map		1	3	12					16	\$1,700.34
SUBTOTAL HOURS		1	3	8	12	0	0	8	9	41	
REIMBURSABLE EXPENSES											
	GPS Receiver		2 days x	\$225.00	=			\$450.00			
	Mileage	148 miles x		\$0.580	=			\$85.84			
								SubTotal Reimbursable Expenses			\$535.84
SUBTOTAL LUMP SUM FEE TASK 1											\$6,083.45
2. TOPOGRAPHIC SURVEYING AND MAPPING											
2.1.	Prepare Right of Entry Letters and mail them to affected property owners. Track responses.		1	2		4	1			8	\$730.88
2.2.	Collect Topographic Survey data within the project limits along West Sycamore Road and along intersecting roadways 100 feet beyond proposed improvements. Cross sections will be collected along the route every 100 feet and will extend 50 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 West Sycamore Road. Survey will not extend into fenced WWTP. 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 format and Digital Terrain Model with 1-ft contours in Civil3D format. Brush cutting for line of sight through heavy vegetation/woods along W. Sycamore	1	1	6	32			40		80	\$10,280.57
2.3.	Survey visible surface utilities. Request One Call marking of utilities, field survey resulting markings.				4			8		8	\$1,200.00
2.4.	Perform Property Title Abstracting for preliminary ownership determination. 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. Survey 5 Geotechnical Borings after drilling.		1	8	8	8	1	8		34	\$3,691.06
				1	1			4		6	\$808.41
SUBTOTAL HOURS		1	3	17	45	12	2	70		150	
REIMBURSABLE EXPENSES											
	GPS Receiver		2 days x	\$225.00	=			\$450.00			
	Mileage	612 miles x		\$0.580	=			\$354.96			
	Certified Letter Return Receipt	8 letters x		\$7.40	=			\$59.20			
	Deed Copies	80 pages x		\$2.00	=			\$160.00			
	Plat Copies	10 sheets x		\$5.00	=			\$50.00			
								SubTotal Reimbursable Expenses			\$1,074.16
SUBTOTAL LUMP SUM FEE TASK 2											\$19,697.08
3. PROPOSED RIGHT-OF-WAY SURVEYS											
3.1.	Prepare Proposed ROW Map showing existing and proposed ROW and proposed acquisition parcels.	8	16	16	40	2				82	\$9,960.18
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 HJ Consulting.		1	2	1					4	\$461.93
SUBTOTAL LUMP SUM FEE TASKS 3.1. & 3.2.											\$10,422.11
3.3.	Prepare parcel map and metes and bounds description for each proposed ROW parcel to be acquired for the project. There are an estimated five (5) proposed acquisition parcels. 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.	5	25	40	40			20		130	\$16,059.15
SUBTOTAL HOURS		13	42	58	81	2		20		216	
REIMBURSABLE PARCEL EXHIBIT EXPENSES											
	GPS Receiver		2.5 days x	\$225.00	=			\$562.50			
	Mileage	175 miles x		\$0.580	=			\$101.50			
								SubTotal Reimbursable Expenses			\$664.00
								Per Parcel Expenses			\$47.43
SUBTOTAL LUMP SUM PARCEL FEES TASK 3.3.											\$16,723.15
LUMP SUM PER PARCEL FEES (5 PARCELS)											\$3,344.63
4. CONSTRUCTION SURVEYING SERVICES											
4.1.	Recover, verify and mark control and baseline alignment monumentation established for the project as described in item 1. above.		1	2				10		13	\$1,858.93
4.2.	Stake ROW lines every 100 feet, at angle points, and at the beginning and end of curves. Includes brush cutting for line of sight in heavy vegetation/wooded areas along the route.		4	8				30		42	\$5,935.72
SUBTOTAL HOURS		0	5	10	0	0	0	40		55	
REIMBURSABLE EXPENSES											
	GPS Receiver		4 days x	\$225.00	=			\$900.00			
	Mileage	350 miles x		\$0.580	=			\$203.00			
								SubTotal Reimbursable Expenses			\$1,103.00
SUBTOTAL TIME & MATERIALS FEE TASK 4											\$8,897.65
TOTAL ESTIMATED FEE ALL TASKS											\$61,823.44



PROJECT:
WEST SYCAMORE RD

PROJECT No. 20213
FROM: TEAL BEND BLVD
TO: FM 521

LENGTH: 7,255 FT

DESCRIPTION:
UPGRADE EXISTING 2 LANE ROAD TO:
4 LANE BOULEVARD FROM 521 TO IN FRONT OF THE SCHOOL AT S. POST OAK, 41' WIDE SECTION FROM SCHOOL TO S CURVE (RECENTLY COMPLETED), 41' WIDE SECTION FROM TEAL TO TEAL BEND ESTATES (R&B SECTION)

FORT BEND COUNTY
2020 MOBILITY BOND PROGRAM



August 18, 2020
Proposal No: GP2020-0808

**Mr. Vijaya Rapolu, P. E.
Kavi Consulting, Inc.
Houston, Texas**

**Reference: Proposal for Geotechnical Investigation
W Sycamore Road-Between Teal Bend Blvd. to Teal Estates. Blvd.
Fort Bent County, Texas**

Dear Mr. Rapolu,

Associated Testing Laboratories, Inc. (ATL) is pleased to submit the proposal for the above-referenced project. The scope of work entails a Geotechnical Investigation in accordance with procedures and guidelines of Fort Bend County Engineering Guidelines. The project alignment is approximately 1,340-linear ft in length, see **Figure 1: Project Vicinity Map**.

PROJECT DESCRIPTION

The scope of the project includes the following:

- Construct the Concrete Pavement 4-lane boulevard section with 2-lane on each side for West Sycamore Road from Teal Bend Blvd. to Teal Estates. Blvd.
- Storm Sewer System.

SCOPE OF WORK:

The proposed scope of this geotechnical investigation will entail conducting a geotechnical investigation involving four (4) at 15-ft to 20 deep soil borings for the road improvements. Install one (1) at 20-ft deep piezometer for the channel section.

The scope of the project includes roadway improvements installations along the W Sycamore Rd starting between Teal Bend Blvd. to Teal Estates Blvd., approximately 1,320 linear feet. We observed a channel crossing at the project alignment. At this crossing, culvert should be modified with road improvements.

GEOTECHNICAL INVESTIGATION

Field Exploration

ATL performed site reconnaissance. Project alignment will be accessible with our truck-mounted drill rig, and Peace officer and flag man with control signs and cones will be at site during drilling operation for work personnel safety.

Based on the Boring Depth and Frequency Requirements provided, ATL proposes the following borings to investigate the subsurface soils and groundwater conditions along the site boring location plan as presented in **Figure 2: Proposed Boring Location**.

Boring	Total No	Depth (ft)	Total Depth (ft)
Borings B-1 & B-4	2	15	30
Borings: B-2 & B-3	2	20	40
Piezometers: PZ-1	1	20	20

Soil samples will be obtained continuously to a depth of 20-ft. Standard Penetration Tests (SPT) will be performed in sands, if encountered, and clays will be sampled by Shelby tube. Shear strengths of the clays will be measured in the field with a hand penetrometer and correlations between this data and laboratory shear strength data will be made during analysis.

Depth to ground water will be important for the design and construction of this project. For this reason, the borings will be drilled dry and the depth at which groundwater is encountered will be recorded. The boreholes will be grouted with cement-bentonite slurry after the completion of drilling and sampling.

Laboratory Testing

Laboratory tests will be assigned corresponding to the types of soils encountered, with the objective of classifying the soils physical and index properties, moisture contents, unconfined compressive strength, undrained unconsolidated compressive strength, Atterberg limits, percent finer than No. 200 sieve, and total unit weight tests. Consolidated-undrained Triaxial test, and soil dispersiveness tests (double hydrometer Test, Crumb Tests) are required at channel cross section..

All laboratory tests will be performed in accordance with appropriate ASTM standards. We will keep the samples for 30 days after the final report is presented. We will discard the samples after that time, unless instructed otherwise.

Engineering Analyses and Reporting

The field and laboratory data will be summarized in an engineering report. Analyses of these data will be presented, and recommendations made in accordance with the Fort Bend County Engineering Guidelines. The following geotechnical information and recommendations will be provided:

The field and laboratory data will be presented in a geotechnical report. Geotechnical analyses will be conducted using the field and laboratory test data to provide geotechnical data for the design and construction of the proposed improvements, including (but not limited to) the following:

- Generalized soils stratigraphy
- Piezometer installation and groundwater measurements
- Preliminary fault review based on the review of the available fault maps
- Excavation and trench construction and safety requirements
- Recommendations regarding bedding and backfill for utilities construction
- Loads on buried pipes including dead and live loads (vehicle loads)
- Recommendations regarding paving including thickness and reinforcement design, subgrade preparation and stabilization, pavement construction
- Construction consideration
- Culvert – Slope Stability Analyses will be performed for the channel/culvert improvement alignment, and evaluating global and local slope stability in terms of End of Construction, Long Term and Rapid Drawdown conditions.

One (1) electronic PDF copy of the draft geotechnical report will be submitted. Once we have received the review comments, a final report addressing the review comments will be issued. One (1) copy of final report and an electronic copy (PDF) of the final report will also be issued.

COST ESTIMATE

Based on the scope of work outlined above, we estimate the cost for field, laboratory, and engineering services for the geotechnical services presented in this proposal is **\$17,664.00** (including cost of coring of pavement, flagman, Peace Officer).

The cost estimates using the estimated project quantities and requirements are presented in the enclosed **Itemized Geotechnical Fee Estimate** spreadsheets. This estimate assumes: underground utilities at proposed boring locations will be cleared by One Call Service and/or private property maintenance personnel; boring locations and elevations will be surveyed by others; and that the sites will be accessible to our truck-mounted equipment; and, environmental sampling/ handling/ transportation/ disposal are not in the scope of this project.

TIME SCHEDULES

We estimated that the fieldwork can be started shortly after authorization is received. The actual drilling work is expected to take about 1 week, assuming no delays in permission to access the sites. The laboratory testing will take approximately 1 to 2 weeks. Weather permitting, we anticipate submitting a draft report about 2 weeks after completion of all laboratory testing. A final report will be issued about 1 week after receiving your review comments.

We appreciate the opportunity to submit this proposal and look forward to being of service to you on this project.

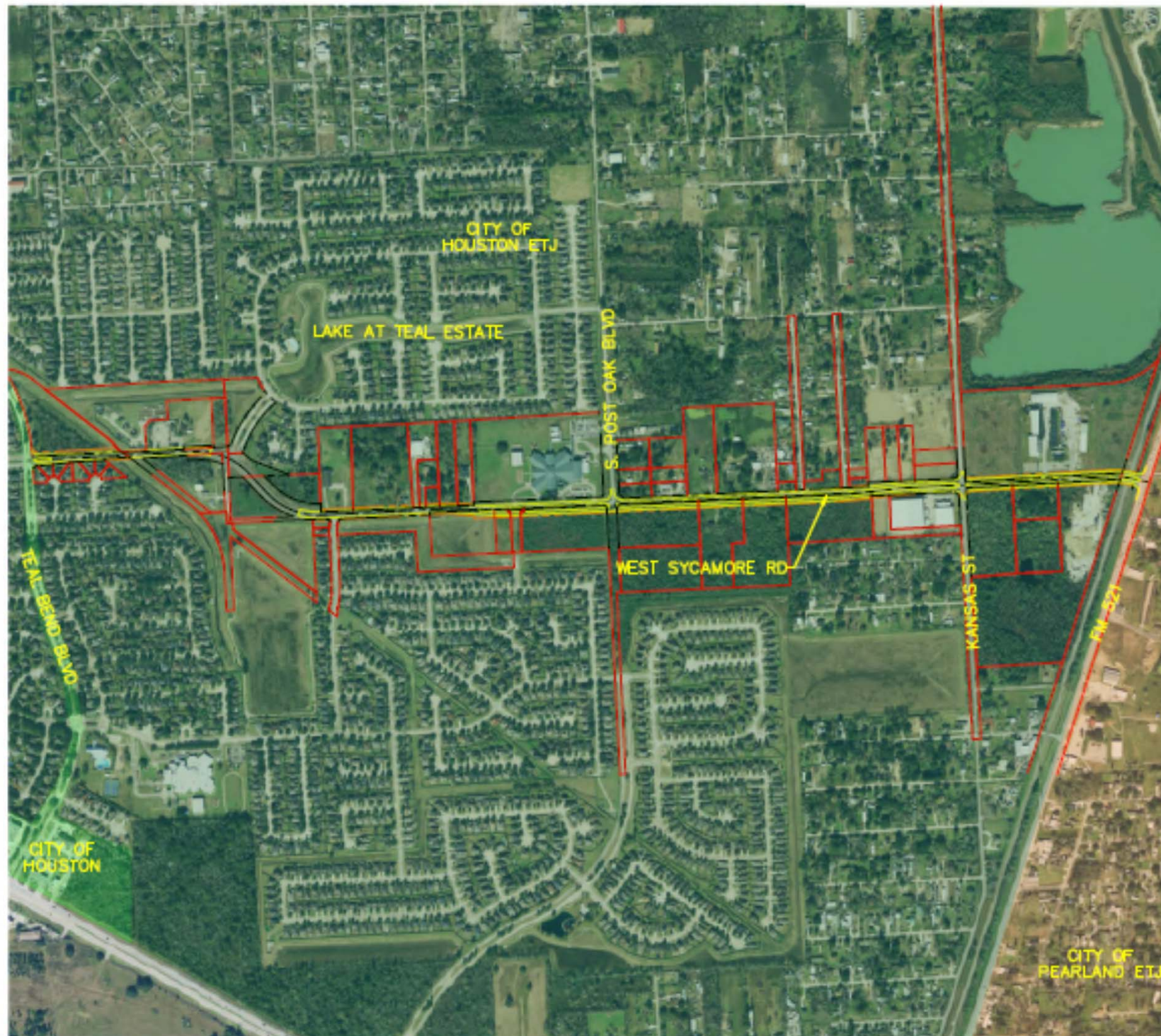
Very truly yours,
ASSOCIATED TESTING LABORATORIES, INC.



Nutan V. Palla, Ph.D., P.E.
Director, Geotechnical Services

Enclosures:

- Figure 1: Project Vicinity Map
- Figure 2: Proposed Boring Location
- Itemized Geotechnical Fee Estimates – W Sycamore Road



PROJECT:
WEST SYCAMORE RD

PROJECT No. 20213
FROM: TEAL BEND BLVD
TO: FM 521

LENGTH: 7,255 FT

DESCRIPTION:
UPGRADE EXISTING 2 LANE ROAD TO:
4 LANE BOULEVARD FROM 521 TO IN FRONT OF THE SCHOOL AT S. POST OAK, 41' WIDE SECTION FROM SCHOOL TO S CURVE (RECENTLY COMPLETED), 41' WIDE SECTION FROM TEAL TO TEAL BEND ESTATES (R&B SECTION)

FORT BEND COUNTY
2020 MOBILITY BOND PROGRAM



Project Proposal:

W Sycamore Rd (Between Teal Bend Blvd to
Teal Estates Blvd)
Fort Bend County, Texas

Client:

Kavi Consulting, Inc
Houston, Texas

**ASSOCIATED
TESTING**
LABORATORIES

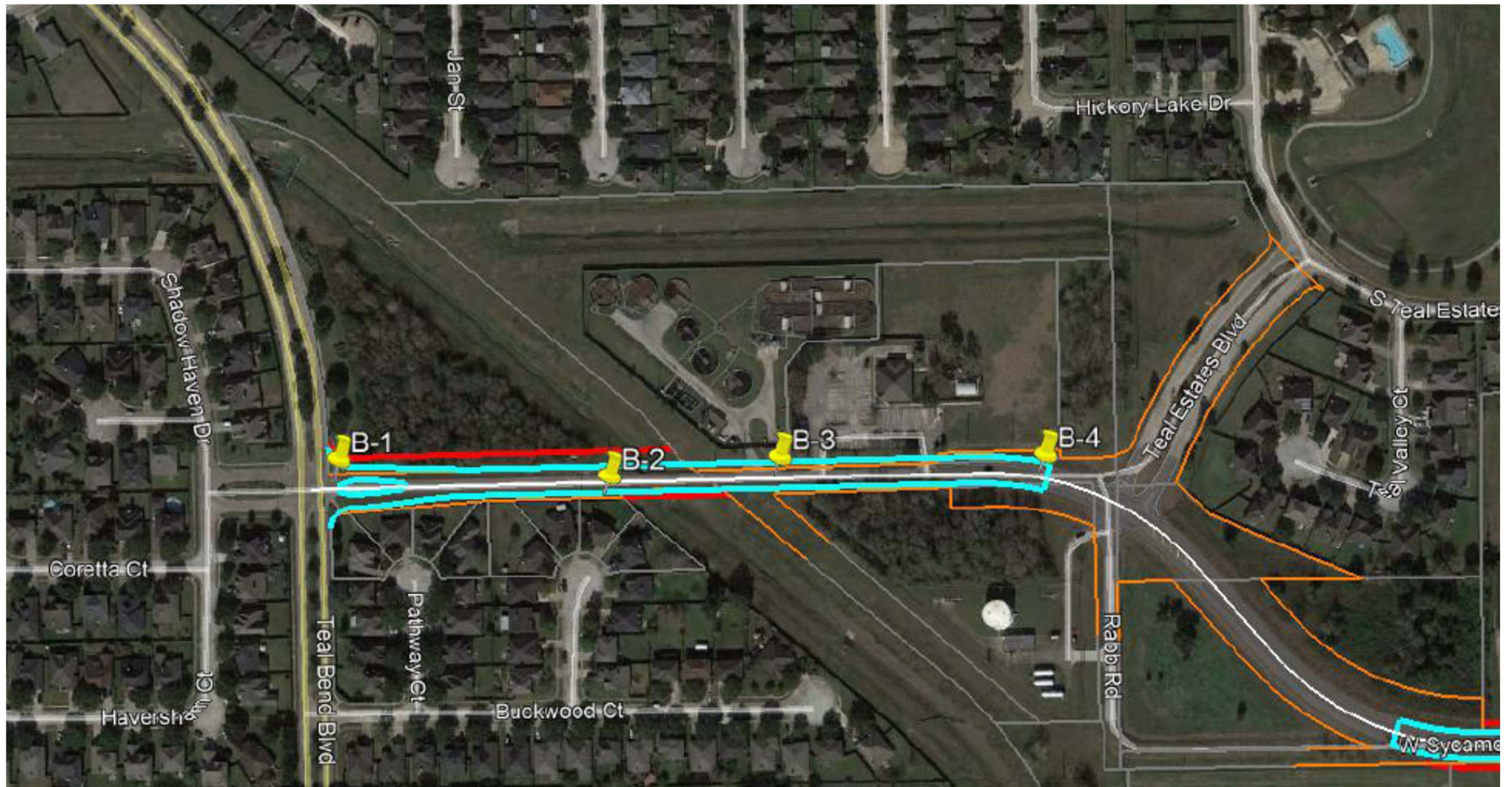


Vicinity Map

Proposal No.: GP2020-0808

Not to Scale

FIGURE 1



Notes:

1. Borings B-1 & B-4 are 15-ft deep
2. Borings B-2 & B-3 are 20-ft deep,
3. After drilling and sampling B-2, we install Piezometers (PZ-1)

Project Proposal:

W Sycamore Rd (Between Teal Bend Blvd to
Teal Estates Blvd)
Fort Bend County, Texas

Client:

Kavi Consulting, Inc
Houston, Texas



Proposed Boring Location

Proposal No.: GP2020-0808

Scale: 1 inch : 300 feet

FIGURE 2

Geotechnical Investigation Proposal

W Sycamore Road - (Between Teal Bend Blvd to Teal Estates Blvd)

ATL Proposal No. GP2020-0808

August 18, 2020

ITEMIZED GEOTECHNICAL FEE ESTIMATE

Borings: 2@15', 2@20'; [70 LF], Piezometer: 1@20' [20LF]

A. FIELD EXPLORATION	Qty.	Unit	Unit Rate	Amount
Mobilization/Demobilization (Truck Rig)	1	LS	\$500.00	\$500.00
Technician for Staking, Utilities Clearance, Coordination	8	hrs.	\$50.00	\$400.00
Soil Drilling and Sampling (continuous; <50')	70	ft.	\$21.00	\$1,470.00
Soil Drilling and Sampling (continuous; >50')	0	ft.	\$24.00	\$0.00
Soil Drilling and Sampling (<50' intermittent)	0	ft.	\$18.00	\$0.00
Soil Drilling and Sampling (intermittent; over 50')	0	ft.	\$21.00	\$0.00
Grouting Holes	70	ft.	\$7.00	\$490.00
Piezometer Installation	20	ft.	\$16.00	\$320.00
Piezometer Abandonment	20	ft.	\$14.00	\$280.00
24-Hour, 7- and 30-day PZ Water Level Readings	8	hrs.	\$50.00	\$400.00
Vehicle Charge	8	hrs.	\$10.00	\$80.00
Mobilization/Demobilization (ATVrig), Surcharge	0	LS	\$132.00	\$0.00
Soil Drilling and Sampling (Surcharge for drilling using ATV rig)	0	ft.	\$6.00	\$0.00
Pavement Coring and Patching (up to 6 inches thick)	4	ea.	\$150.00	\$600.00
Pavement Coring and Patching (>6 inches thick)	24	in.	\$9.00	\$216.00
				\$4,756.00
B. GEOTECHNICAL LABORATORY TESTING	Qty.	Unit	Unit Rate	Amount
Moisture Content (ASTM D-2216)	36	ea.	\$9.00	\$324.00
Atterberg Limits (ASTM D-4318)	18	ea.	\$60.00	\$1,080.00
Passing No. 200 Sieve (ASTM D-1140)	12	ea.	\$46.00	\$552.00
Unconfined Compression (ASTM D-2166)	4	ea.	\$44.00	\$176.00
Unconsolidated-Undrained Triaxial Test (ASTM D-2850)	12	ea.	\$61.00	\$732.00
Double Hydrometer Tests (ASTM D-4221), with D ₉₀ and D ₅₀	2	ea.	\$177.00	\$354.00
Crumb Tests (ASTM D-6572)	8	ea.	\$38.00	\$304.00
Consolidated-Undrained Triaxial Test (ASTM D-4767) *3-stage w/3 samples/set	1	set	\$1,500.00	\$1,500.00
			SUBTOTAL	\$5,022.00
C. ANALYSES & REPORT PREPARATION	Qty.	Unit	Unit Rate	Amount
Senior Engineer-Project Manager (P.E.)	4	hrs.	\$150.00	\$600.00
Project Engineer (P.E.)	16	hrs.	\$105.00	\$1,680.00
Civil Engineer	24	hrs.	\$83.00	\$1,992.00
Draftsman	24	hrs.	\$60.00	\$1,440.00
Word Processor	24	hrs.	\$60.00	\$1,440.00
			SUBTOTAL	\$7,152.00
D. ALLOWANCES	Qty.	Unit	Unit Rate	Amount
Traffic Control Equipment (low volume traffic)	1	days	\$122.00	\$122.00
Peace Officer	8	hrs.	\$50.00	\$400.00
Flagman	8	hrs.	\$26.50	\$212.00
			SUBTOTAL	\$734.00
TOTAL ESTIMATED FEE				\$17,664.00