

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 improvements to Cartwright Road under 2020 Mobility Bond Project No. 20406 (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 proposal dated July 21, 2021, 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 five hundred sixty-seven thousand one hundred forty-nine dollars and no/100 (\$567,149.00) 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 five hundred sixty-seven thousand one hundred forty-nine dollars and no/100 (\$567,149.00) 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 five hundred sixty-seven thousand one hundred forty-nine dollars and no/100 (\$567,149.00).

### **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. 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**

**CONSULTANT 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 CONSULTANT'S LIABILITY, ARISING FROM ACTIVITIES OF CONSULTANT, ITS AGENTS, SERVANTS OR EMPLOYEES, PERFORMED UNDER THIS AGREEMENT THAT RESULT FROM THE NEGLIGENT ACT, INTENTIONAL TORT, ERROR, OR OMISSION OF CONSULTANT OR ANY OF CONSULTANT'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, 1<sup>st</sup> 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.

[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

KAVI CONSULTING, INC

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

*Vijaya Rapolu*  
\_\_\_\_\_  
Authorized Agent – Signature

\_\_\_\_\_  
Date

Vijaya Rapolu  
\_\_\_\_\_  
Authorized Agent – Printed Name

ATTEST:

\_\_\_\_\_  
President

\_\_\_\_\_  
Title

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

09/15/2021  
\_\_\_\_\_  
Date

APPROVED:

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

#### 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

# EXHIBIT A

# Kavi Consulting, Inc.

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July 21, 2021

Rober McBride, P.E.  
Sr. Project Manager, LJA  
3600 W. Sam Houston Parkway S,  
Suite 600  
Houston, Texas 77042

**RE: Carwright Road- 400' west of Brightwater to 400' west of FM 1092**

Dear Mr. McBride:

Attached please find our fee proposal for the design of Carwright Road- 400' west of Brightwater to 400' west of FM 1092. Also attached is our level of effort spreadsheet. Our proposed fee including all subs for Design Phases of the project is \$567,149.00.

Please call me at 281-772-9643 if you have any questions. We look forward to working with LJA 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](mailto:rapolu.vijaya@kaviconsultinginc.com)

## **SCOPE OF SERVICES**

### **Cartwright Rd from 400' West of Brightwater Dr. to 400' West of FM 1092**

#### **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 Cartwright from 400' west of Brightwater Dr. to 400' west of FM 1092.

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

#### **Preliminary Design Phase**

The preliminary design will include the following:

- MUD, City of Missouri city, Fort Bend County and other applicable 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 rainfall
- 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-roadway, drainage, sanitary and water; 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 LJA.

#### **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 (LJA).

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 (Half Associates, Inc.) firm regarding topographic survey of approximately ~4150 linear feet of main thorough fare (including side streets for 200' on each) necessary to locate visible and apparent improvements, utilities and features to a limit of ten (20) 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 90 days after Survey data received. Phase II final design will take 90 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:

<b>Phase</b>	<b>Fee</b>
Phase I (KAVI)	\$147,165.00
Phase II (KAVI)	\$299,175.00
Surveying (Half)	\$46,100.00
Geotechnical (ATL)	\$10,689.00
Construction Phase (KAVI)(T&M)	\$57,420.00
<b>Design (Total)</b>	<b>\$560,549.00</b>
Parcels (Per Parcel)	\$ 6,600.00
(Landtech)	
<b>Total</b>	<b>\$567,149.00</b>

**PHASE I BASIC SERVICES LEVEL OF EFFORT (LOE) FEE ESTIMATE**  
 Cartwright - 20406  
 KAVI Consulting, Inc.

Date: 05/12/21  
 Revision:

	Principal/ Managing Director	Project Manager	Civil / Project Engineer	Graduate Engineer	Senior Designer	Senior CADD Technician	Admin / Clerical	Total Hours	Total Cost
<b>DIRECT LABOR COST</b>									
<b>HOURLY RATE INCLUDING MULTIPLIER (3X)</b>									
	\$ 70	\$ 55	\$ 45	\$ 40	\$ 45	\$ 35	\$ 30		
	\$ 210	\$ 165	\$ 135	\$ 120	\$ 135	\$ 105	\$ 90		
<b>1. Coordination</b>									
1.1 Fort Bend/LJA Engineering (LJA)	1	2	4				4	11	\$ 1,440
1.2 Regulatory Agencies (if required)	1	2	8				12	23	\$ 2,700
1.3 Private Utilities	1	2	8			8	8	27	\$ 3,180
1.4 Survey and Geotechnical	1	6	20			12	10	49	\$ 6,060
<b>Subtotal Hours</b>	<b>4</b>	<b>12</b>	<b>40</b>			<b>20</b>	<b>34</b>	<b>110</b>	<b>\$ 13,380</b>
<b>Subtotal Fee</b>	<b>\$ 840</b>	<b>\$ 1,980</b>	<b>\$ 5,400</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 2,100</b>	<b>\$ 3,060</b>		
<b>2. Data Collection</b>									
2.2 Review Existing Conditions Data from Pre-Engineering and Supplement as Necessary	1	2	12	12			4	43	\$ 5,220
2.2 Field Verify Existing Conditions (Including a Site Visit with City PM)		4	4					8	\$ 1,200
<b>Subtotal Hours</b>	<b>1</b>	<b>6</b>	<b>16</b>	<b>12</b>			<b>4</b>	<b>51</b>	<b>\$ 6,420</b>
<b>Subtotal Fee</b>	<b>\$ 210</b>	<b>\$ 990</b>	<b>\$ 2,160</b>	<b>\$ 1,440</b>	<b>\$ -</b>	<b>\$ 1,260</b>	<b>\$ 360</b>		
<b>3. H&amp;H Analysis</b>									
<b>Existing Conditions</b>									
3.1 Review Existing Conditions Analysis and Identify Capacity and Level of Service	2	6	56	56				120	\$ 15,690
3.2 Existing Conditions Progress Meeting		8	8					16	\$ 2,400
<b>Proposed Conditions Alternative (Including Mitigation if Required)</b>									
3.3 Review and Confirm Proposed Conditions Analysis from (Based on LDAR)	1	2	6	12			12	33	\$ 4,050
3.4 Perform Proposed Drainage Analysis based on Topographic Survey	1	4	48	52			20	125	\$ 15,690
3.5 Mitigation evaluation	2	4	48	52			24	138	\$ 17,040
3.6 Proposed Conditions Progress Meeting		8	8					16	\$ 2,400
<b>Subtotal Hours</b>	<b>6</b>	<b>32</b>	<b>174</b>	<b>172</b>		<b>56</b>	<b>8</b>	<b>448</b>	
<b>Subtotal Fee</b>	<b>\$ 1,260</b>	<b>\$ 5,280</b>	<b>\$ 23,490</b>	<b>\$ 20,640</b>	<b>\$ -</b>	<b>\$ 5,880</b>	<b>\$ 720</b>		<b>\$ 57,270</b>

**PHASE I BASIC SERVICES LEVEL OF EFFORT (LOE) FEE ESTIMATE**  
 Cartwright - 20406  
 KAVI Consulting, Inc.

Date: 05/12/21  
 Revision:

	Principal / Managing Director	Project Manager	Civil / Project Engineer	Graduate Engineer	Senior Designer	Senior CADD Technician	Admin / Clerical	Total Hours	Total Cost
<b>4. Preliminary Engineering Report (PER)</b>									
<b>HOURLY RATE INCLUDING MULTIPLIER (3X)</b>									
<b>DIRECT LABOR COST</b>									
4.1 Determine ROW/Easement Acquisition Required for Recommended Alternative	2	4	8			8	4	26	\$ 3,360
4.2 Determine Utility Relocation if Required for Recommended Alternative	2	4	12			8	4	30	\$ 3,900
4.3 Prepare Preliminary Cost Estimate for Recommended Alternative	1	2	12	20			4	39	\$ 4,920
4.4 Prepare Text and Appendices for PER	1	2	12	20		4	4	43	\$ 5,340
4.4 Prepare PER Exhibits									\$ -
Project Location and Vicinity Maps		1	1			6		8	\$ 930
Right-of-Way Map		1	6			12		19	\$ 2,235
Public Utility Map		1	6			12		19	\$ 2,235
Private Utility Map		1	6			12		19	\$ 2,235
30% level plan & profiles	4	8	24	108		108		252	\$ 29,700
4.4 Internal QA/QC of Review of PER	2	4	8	12		12	8	46	\$ 5,580
4.5 Submit Draft PER (including QA/QC redlines)		1	1					2	\$ 300
4.6 Address Comments and Submit Final PER	2	4	16	24		24	8	78	\$ 9,360
<b>Subtotal Hours</b>	14	33	112	184		206	32	<b>581</b>	
<b>Subtotal Fee</b>	\$ 2,940	\$ 5,445	\$ 15,120	\$ 22,080	\$ -	\$ 21,630	\$ 2,880		<b>\$ 70,095</b>
<b>TOTAL PHASE I BASIC SERVICES HOURS</b>	25	83	342			294	78	<b>822</b>	
<b>TOTAL PHASE I BASIC SERVICES FEES</b>	\$ 5,250	\$ 13,695	\$ 46,170	\$ 44,160	\$ -	\$ 30,870	\$ 7,020		<b>\$ 147,165</b>

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

Cartwright - 20406  
KAVI Consulting, Inc.

KAVI Consulting, Inc.										
Date: 05/12/21										
Revision:										
	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				
<b>COORDINATION, DATA COLLECTION, REVIEW AND APPROVAL</b>										
Project Meetings (Kick-Off + 3 Meetings @ 3 Hrs Ea. + Meeting Minutes)	0	4	4	0	0	0	8	\$ 1,200		
Internal QA/QC ( Multiple Phase Reviews)	2	2	14	14	32	4	68	\$ 8,040		
FB QA/QC (Multi Phase Reviews)	0	2	6	6	8	4	26	\$ 3,060		
Coordinate/Approval with Private Utilities	0	2	2	8	8	4	24	\$ 2,760		
Field Visits and Data Collection	0	4	8	8	0	0	20	\$ 2,700		
<b>Subtotal Hours</b>	<b>2</b>	<b>14</b>	<b>34</b>	<b>36</b>	<b>48</b>	<b>12</b>	<b>146</b>			
<b>Subtotal Fee</b>	<b>\$ 420</b>	<b>\$ 2,310</b>	<b>\$ 4,590</b>	<b>\$ 4,320</b>	<b>\$ 5,040</b>	<b>\$ 1,080</b>		<b>\$ 17,760</b>		
<b>FRONT END DRAWINGS</b>										
Cover Sheet (Project Title: Location & Vicinity Map)	0	1	1	2	2	0	6	\$ 750		
Index Of Drawings	0	1	1	2	2	0	6	\$ 750		
General Construction, Private Utility Notes, & FBCDD Notes (If Required)	0	1	1	2	4	0	8	\$ 960		
Legends (Const. & Topo), Abbreviations & Plan & Profile Key Notes	0	1	1	2	4	0	8	\$ 960		
Project Layout - Pavement & Boring Location Plan	1	1	2	6	6	0	16	\$ 1,995		
Project Layout - Existing & Proposed Drainage Facilities	1	1	2	6	6	0	16	\$ 1,995		
Typical Sections	1	2	4	16	16	0	39	\$ 4,680		
Drainage Area & Overland Sheet Flow Map	0	1	6	8	16	0	31	\$ 3,615		
Drainage Calculations (HousStorm Inlet Analysis and SWMM Export Tables)	1	2	6	8	24	0	41	\$ 4,830		
Earthwork (Cut & Fill) & Summary Sheet	1	2	12	16	24	0	55	\$ 6,600		
<b>Subtotal Hours</b>	<b>5</b>	<b>13</b>	<b>36</b>	<b>68</b>	<b>104</b>	<b>0</b>	<b>226</b>			
<b>Subtotal Fee</b>	<b>\$ 1,050</b>	<b>\$ 2,145</b>	<b>\$ 4,860</b>	<b>\$ 14,280</b>	<b>\$ 10,920</b>	<b>\$ -</b>		<b>\$ 33,255</b>		
<b>PLAN &amp; PROFILES</b>										

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

Cartwright - 20406

KAVI Consulting, Inc.

Date: 05/12/21		Principal / Managing Director		Project Manager		Civil / Project Engineer		Graduate Engineer		Designer / Technician		Admin / Clerical		Total Hours		Total Cost	
Revision:																	
DIRECT LABOR COST		\$	70	\$	55	\$	45	\$	40	\$	35	\$	30				
HOURLY RATE INCLUDING MULTIPLIER (3)		\$	210	\$	165	\$	135	\$	120	\$	105	\$	90				
PLAN & PROFILE - # of Sheets by Type (Main Alignment, Cross Street, etc.)			4		12		44		295		295		0		650		\$ 75,135
Base Map Preparation			0		2		8		16		16		0		42		\$ 5,010
<b>Subtotal Hours</b>			<b>4</b>		<b>14</b>		<b>52</b>		<b>311</b>		<b>311</b>		<b>0</b>		<b>692</b>		
<b>Subtotal Fee</b>		\$	<b>840</b>	\$	<b>2,310</b>	\$	<b>7,020</b>	\$	<b>65,310</b>	\$	<b>32,655</b>	\$	<b>-</b>				<b>\$ 108,135</b>
<b>STANDARD DETAILS</b>																	
Pavement Details			0		1		1		0		4		0		6		\$ 720
Excavation, Bedding, Backfill & Pavement Repair Details			0		1		2		0		4		0		7		\$ 855
Sanitary Sewer Details			0		1		1		0		4		0		6		\$ 720
Storm Sewer Details			0		1		2		0		4		0		7		\$ 855
Water Line Details			0		1		1		0		4		0		6		\$ 720
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		1		0		4		0		6		\$ 720
<b>Subtotal Hours</b>			<b>1</b>		<b>8</b>		<b>12</b>		<b>0</b>		<b>32</b>		<b>0</b>		<b>53</b>		
<b>Subtotal Fee</b>		\$	<b>210</b>	\$	<b>1,320</b>	\$	<b>1,620</b>	\$	<b>-</b>	\$	<b>3,360</b>	\$	<b>-</b>				<b>\$ 6,510</b>
<b>DESIGN SERVICES</b>																	
Storm Sewer /Drainage Ditch Facilities Design			4		16		40		88		88		0		236		\$ 28,680
Waterline & Waterline Adjustment Design			2		4		16		24		24		0		70		\$ 8,640
Traffic Control Plan			1		6		24		40		40		0		111		\$ 13,440
Traffic Control Plan Details			1		1		4		0		4		0		10		\$ 1,335
Storm Water Pollution Prevention Plan(SWPPP)			1		6		24		32		32		0		95		\$ 11,640
SWPPP Details			1		1		4		0		8		0		14		\$ 1,755
Sanitary Sewer Design			0		0		0		0		0		0		0		\$ -







July 21, 2021  
AVO/P45153.001

Kavi Consulting, Inc.  
1011 Highway 6S, #307  
Houston, TX 77077

Attn: Mr. Vijaya Rapolu  
rapolu.vijaya@kaviconsulting.com

RE: Proposal for Topographic and Boundary Surveying Services along Cartwright Road as apart of Fort Bend County, Precinct 4, 2020 Mobility Projects.

Dear Mr. Rapolu,

Halff Associates, Inc. (Halff) is pleased to submit this proposal for the professional surveying services shown above. Please see the Surveying Scope of Services Below.

The Halff Associates Survey team will perform Topographic Surveying services along a total of 3,900 linear feet (LF) of roadways in Precinct 4 of Fort Bend County within the city limits of the City of Missouri City. Survey services will be performed in accordance with Fort Bend County Engineering Design Manual (EDM) August 2020 Edition. Halff Associates will utilize Mobile LiDAR in conjunction with GPS and traditional Surveying methods to acquire data. Please see the following breakdown of each roadway and the linear footage of each.

Scope area for Surveying services:

- Main thoroughfare: Cartwright Road (approximately 2,900 LF) - Beginning on the west end at the east end of the bridge span west of Brightwater Drive. Topographic survey will extend west across the eastern channel banks to the toe of the ordinary channel flow if accessible at the time of the field survey. The eastern extent of the project is approximately 200' east of the east ROW of FM 1092 (Murphy Road.)
- Intersecting roads: (Survey to be performed to 200LF north or south of the existing ROW of Cartwright Road.) Brightwater Drive, Creek Terrace Drive, Waterford Village Blvd. and FM 1092 (Murphy Road)(north and south) for a total of 1,000LF.

Halff will perform the following Surveying services:

1. Perform cross sections at 100' intervals on all streets to 20' beyond the existing ROW except in areas where fences or sound walls are present.
2. Provide topographic survey sheets.
3. Locate all storm drain inlets and junction boxes.
4. Measure depths of all drain inlets and accessible junction boxes and obtain sizes of pipes.
5. Locate all sanitary sewer manholes.
6. Measure depths of all sanitary sewer manholes and obtain sizes of pipes.
7. Locate all significant trees within the scope limits.
8. Locate boundary corners and perform records research to define the existing Right-Of-Way and produce an existing Right-Of-Way map according to TSPS Category 1B, Condition 3 standards.
9. Locate utilities as marked by 811 locate services.
10. Draft in utilities per maps obtained from utility service providers. (SUE QL-C & D)
11. Set site control per the EDM and based on ties to City of Missouri City control marks in the area. Per the EDM, Baselines are required to be staked. Traffic control will be needed to set the baseline intersection at



HALFF ASSOCIATES, INC.

14800 ST. MARY'S LANE, STE. 160  
HOUSTON, TX 77079-2943

TEL: 713-588-2450  
FAX: 281-310-5259

WWW.HALFF.COM

FM 1092 (Murphy Road.) and will be billed at a daily rate as shown in the Optional Additional Services for Daily Traffic Control Rates.

The FEE for the above base scope of services shall be: \$46,100 LUMP SUM.

#### Optional Additional Services: Right-Of-Way Acquisition Surveys

Should it be necessary for the City to obtain additional Right-Of-Way, Halff can provide these on an as-needed basis. Said easement surveys will be performed according TSPS Category 1A, Condition 3 Land Title Surveys per Sec. 6.1.M. of the EDM. A Title Report will be included.

The FEE for this optional additional service shall be: \$3,000, LUMP SUM per Acquisition Survey.

#### Optional Additional Services: Right-Of-Way Map (for Acquisition Surveys)

Should it be necessary for the City to obtain additional Right-Of-Way, Halff can provide the Right-Of-Way Map per the EDM. This map will show the existing ROW as well as the proposed ROW Acquisition Parcel(s)

The FEE for this optional additional service shall be: \$3,600, LUMP SUM.

#### Optional Additional Services: SUE Level 'B' Utility Location

Should Fort Bend County require SUE Level 'B' Utility Locations, Halff can provide these services. There are an estimated 65,000 linear feet of underground utilities. Halff will perform these services in accordance with ASCE CI/ASCE 38-02. See attached SUE Scope of Services (Exhibit A).

The FEE for this optional additional service shall be: \$75,980, LUMP SUM.

#### Optional Additional Services: SUE Level 'A' Utility Location (Test Holes)

Should Fort Bend County require SUE Level 'A' Utility Locations, Halff can provide these services. The fee below is a per Test Hole fee. Halff will perform these services in accordance with ASCE CI/ASCE 38-02. See attached SUE Scope of Services (Exhibit A).

The FEE for this optional additional service shall be: \$1,500 LUMP SUM (per Test Hole.)

#### Optional Additional Services: Daily Traffic Control Rates


For activities that require traffic control Halff will contract with a local Traffic Control Contractor.

The FEE for this optional additional service shall be: \$1,600 LUMP SUM (per day.)



We trust this proposal is satisfactory and appreciate the opportunity to be of service to you. If this proposal meets with your approval, please sign, initial and date in the spaces provided below and return one copy as your order to proceed and approval of the budget.

Yours very truly,  
HALFF ASSOCIATES, INC.

  
John Mark Otto, RPLS  
Survey Team Leader  
TBPLS FIRM No. 10029606

## **OPTIONAL ADDITIONAL: SUE SCOPE OF SERVICES (EXHIBIT A)**

Client: Kavi Consulting, Inc. (Kavi)

City/County Name: Missouri City/Fort Bend

Project: Cartwright Road

Halff will perform SUE in accordance with ASCE CI/ASCE 38-02 “Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data.” This standard defines the following Quality Levels:

**Quality Level-A:** Precise horizontal and vertical location of utilities obtained by the actual exposure (or verification of previously exposed and surveyed utilities) and subsequent measurement of subsurface utilities, usually at a specific point. Minimally intrusive excavation equipment is typically used to minimize the potential for utility damage. A precise horizontal and vertical location, as well as other utility attributes, is shown on plan documents.

**Quality Level-B:** Information obtained through the application of appropriate surface geophysical methods to determine the existence and approximate horizontal position of subsurface utilities. Quality Level-B data should be reproducible by surface geophysics at any point of their depiction. This information is surveyed to applicable tolerances defined by the project and reduced onto plan documents.

**Quality Level-C:** Information obtained by surveying and plotting visible above-ground utility features and by using professional judgment in correlating this information to Quality Level-D information.

**Quality Level-D:** Information derived from existing records or oral recollections.

### **Quality Level-A Utility Test Holes (Vacuum Excavation):**

Up to ten (10) test holes will be performed on various utilities at locations specified by Kavi. Halff will cut up to a 12” square test hole, excavate down to utility, record the depth to top of utility, backfill & compact the hole, and restore the surface to its original condition. An iron rod with cap or “x-cut” will be set to mark the approximate centerline location of the utility. A jackhammer will be utilized for work to be performed in asphalt and concrete areas. This Scope of Services includes all test holes being performed under one (1) mobilization.

If test holes are requested on non-conductive/untonable utilities depicted as Quality Level-D where the horizontal location is assumed, Halff will coordinate with Client and respective utility owner, on-site personnel if private property and available records to pinpoint the location to perform the test hole. Due to the concrete/ground conditions, one (1) attempt shall be made, which may or may not expose the subject utility. Should the utility not be exposed, Halff will coordinate with Kavi for direction on digging additional test holes if required and shall be compensated for each test hole dug.

### **Quality Level-B Utility Designating:**

Halff will designate the approximate horizontal position of conductive/tonable utilities within the project limits using geophysical prospecting equipment and mark using paint and/or pin flags. We

anticipate the designation of approximately 65,000 linear feet of utilities including buried communication, electric, natural gas, petroleum pipeline, traffic signal, water, waste water/sanitary sewer, and storm drain/storm sewer. Designation of irrigation lines, HDPE lines, gathering lines, asbestos concrete and/or pvc lines, as well as pvc lines without tracer wire or access are not part of this Scope of Services.

Because of limited utility record information and the possibility of non-conductive/un-toneable utilities, Halff cannot guarantee all utilities will be found and marked within the project limits.

**Quality Level-C Surveying:**

Quality Level-C, survey of above ground utility appurtenances, will be included in the survey scope.

Quality Level B Utility Designation paint markings, pin flags, and above ground utility appurtenances as well the iron rod with cap or “x-cut” for Quality Level-A Test Holes will be surveyed and tied utilizing project survey control provided by Kavi.

**Quality Level-D Records Research:**

Any available Records will be provided to Halff by Kavi. Halff will perform additional utility record research as needed to successfully complete the project.

As utilities will be depicted based on surveyed appurtenances and provided utility records for Quality Level C/D efforts, Halff will notify Kavi if records are not available or received from respective utility owner.

Because there are situations where the utility does not have a metallic composition, a metallic tracer line attached, or access to insert a tracer line, the approximate location of the utility may be determined by the use of utility records and direct correspondence with the utility owner/representative. In these areas, the information will be considered Quality Level-D, depicted according to utility record information only.

**SUE Field Manager / Professional Engineer:**

A SUE Field Manager will be on-site for a portion of this project for field crew supervision, field quality control, and coordination with on-site personnel. A Professional Engineer will be responsible for QA/QC, management of the contract, coordination with the project team and signing the final deliverables if required.

**SUE Deliverables / CADD:**

The Quality Level-B 2D Utility Designation data will be referenced into the survey plans and will be color coded. Deliverables for the Quality Level-A Test Hole excavations will be an 8.5-in. x 11-in. Test Hole Data Form for each Test Hole performed indicating depth, size, location, and other notable characteristics of the utility. Electronic files will be provided in MicroStation and/or AutoCAD format along with PDFs and photos.

**Right-of-Entry:**

Right-of-Entry is not part of this Scope of Services as work is anticipated within the existing road right-of-way. If right-of-entry is required, it will be performed and provided to Halff by Kavi. Halff will coordinate with property owner(s) once right-of-entry has been obtained.

**Permitting:**

Street Cut permits will be coordinated with Fort Bend County and/or TxDOT as required.

**Work Zone Traffic Control:**

Halff will provide standard temporary work zone traffic control consisting of cones and free-standing signage for this project in accordance with the TMUTCD. As exact test holes locations are unknown, certified traffic control such as lane closure(s), flag person(s), changeable message board(s), and/or arrow board(s), if needed or required by Fort Bend County, will be provided by a certified traffic control provider such as Houston Barricade and Supply.

This Scope of Services does not include an engineered traffic control plan and if required for permit approval, Halff will notify Kavi and submit a supplemental agreement for authorization prior to proceeding with additional work.

**Schedule:**

Halff will complete the Quality Level-C/D records research investigation within Forty-Five (45) calendar days upon receipt of written notice to proceed from Fort Bend County.

Halff will complete the Quality Level-B Utility Designation investigation within Sixty (60) calendar days upon receipt of written notice to proceed from Kavi.

Halff will complete the Quality Level-A Test Hole services within Thirty (30) calendar days upon receipt of the test hole layout from Kavi and approved permits from Fort Bend County and/or TxDOT.

Due to uncontrollable factors such as ground conditions, weather, and safety hazards, Halff reserves the right to request more time to facilitate field efforts should one of these circumstances exist.

Work performed in the right-of-way shall be performed Monday through Friday, 9 am to 4 pm and Saturday and Sunday, 7 am to 7 pm barring foul weather.

EXHIBIT A  
STANDARD FORM OF AGREEMENT FOR PROFESSIONAL SERVICES  
BETWEEN  
***KAVI CONSULTING, INC. (CLIENT) AND HALFF ASSOCIATES, INC. (ENGINEER)***

---

I. SCOPE. Halff Associates, Inc. (hereinafter "Engineer") agrees to perform the professional services described in the attached Scope of Services which incorporates these terms and conditions. Unless modified in writing by the Parties hereto (i.e. Client and Engineer), the duties of Halff shall not be construed to exceed those services specifically set forth in the Scope of Services. The Scope of Services and this Standard Form of Agreement (hereinafter referred to jointly as "Agreement"), when executed by Kavi Consulting, Inc. a Texas Corporation (hereinafter "Client"), shall constitute a binding Agreement on both Parties. Engineer shall perform its obligations under this agreement as an independent contractor and not as an agent or fiduciary of any other Party.

II. COMPENSATION. Client agrees to pay monthly invoices or their undisputed portions within 30 days of receipt. Payment later than 30 days shall include interest at 1-1/2 percent per month or lesser maximum enforceable interest rate, from the date the Client received the invoice until the date Engineer receives payment. Such interest is due and payable when the overdue payment is made.

It is understood and agreed by the Parties that Engineer's receipt of payment(s) from Client is not contingent upon Client's receipt of payment, funding, reimbursement or any other remuneration from others.

Time-related charges will be billed as specified in this Agreement. Unless stated otherwise in this Agreement, direct expenses, subcontracted services and direct costs will be billed at actual cost plus a service charge of 10 percent. Mileage will be billed at current IRS rates.

III. RESPONSIBILITY. Engineer is employed to render a professional service only, and any payments made by Client are compensation solely for the services rendered and the recommendations made in carrying out the work. Engineer agrees to follow the standard practices of the engineering profession to make findings, provide opinions, make factual presentations, and provide professional advice and recommendations. Nothing contained herein shall be argued to have created any warranty or certification, and Engineer shall not be required to provide any certification, assignment or warranty of its work, but upon request and for a separate mutually agreed fee and fully executed contract amendment and at Engineer's sole discretion, Engineer may agree to provide certain specific written statements regarding its services. Such statements shall be in a form prepared by and acceptable to Engineer and shall be requested with sufficient advance notice to allow Engineer to review the documents and prepare a suitable statement.

Engineer's review or supervision of work prepared or performed by Client or by other individuals or firms employed by Client shall not relieve Client or those individuals or firms of complete responsibility for the adequacy of their work. It is understood that any resident engineering or inspection services provided or performed by Engineer shall be for the sole and exclusive purpose of reviewing the general compliance of such activities with respect to the technical provisions of the project specifications and such services by Engineer shall not constitute any form of guarantee with respect to the performance of any contractor. Engineer does not assume responsibility for methods or appliances used by a contractor, for safety conditions, or for compliance by contractors with applicable laws, rules and regulations.

IV. SCOPE OF CLIENT SERVICES. Client agrees to provide site access, and to provide those services described in the attached Scope of Services.

V. OWNERSHIP OF DOCUMENTS. Upon Engineer's completion of services and receipt of payment in full, Engineer shall grant to Client a non-exclusive license to possess the final drawings and instruments produced in connection with Engineer's performance of the work under this Agreement, if any. Said drawings and instruments may be copied, duplicated, reproduced and used by Client for the purpose of constructing, operating and maintaining the improvements. Client agrees that such documents are not intended or represented to be suitable for reuse by Client or others for purposes outside the Scope of Services of this Agreement. Notwithstanding the foregoing, Client understands and agrees that any and all computer programs, GIS applications, proprietary data or processes, and certain other items related to the services performable under this Agreement are and shall remain the sole and exclusive property of Engineer and may not be used or reused, in any form, by Client without the express written authorization of Engineer. Client agrees that any reuse by Client, or by those who obtain said information from or through Client, without written verification or adaptation by Engineer, will be at Client's sole risk and without liability or legal exposure to Engineer or to Engineer's employees, agents, representatives, officers, directors, affiliates, shareholders, owners, members, managers, attorneys, subsidiary entities, advisors, subconsultants or independent contractors or associates. Client agrees to indemnify Engineer, Engineer's subconsultants and independent associates for all damages, liability or cost arising from such reuse. Engineer may reuse all drawings, reports, data and other information developed in performing the services described by this Agreement in Engineer's other activities.

VI. INSURANCE. Engineer agrees to maintain during the life of the Agreement the following minimum insurance:

- A. Commercial general liability insurance, including personal injury liability, blanket contractual liability, and broad form property damage liability in an amount of not less than \$1,000,000.
- B. Automobile bodily injury and property damage liability insurance with a limit of not less than \$1,000,000.
- C. Statutory workers' compensation and employers' liability insurance as required by state law.
- D. Professional liability insurance (Errors and Omissions) with a limit of \$1,000,000 per claim/annual aggregate.
- E. Excess or Umbrella insurance with a limit not less than \$2,000,000 per occurrence/general aggregate.

VII. SUBCONTRACTS. Engineer shall be entitled to subcontract any portion of the work described in the Scope of Services.

VIII. ASSIGNMENT. This Agreement is binding on the heirs, successors, and assigns of the Parties hereto. Neither this Agreement, nor any claims, rights, obligations, suits or duties associated hereto, shall be assigned or assignable by either Client or Engineer without the prior written consent of the other Party.

IX. INTEGRATION. This Standard Form of Agreement and the Scope of Services, including fee and schedule are fully incorporated herein and represent the entire understanding of Client and Engineer. No prior oral or written understanding shall be of any force or effect with respect to those matters covered herein. The Agreement may not be modified or altered except in writing signed by both Parties.

X. JURISDICTION AND VENUE. This Agreement shall be administered under the substantive laws of the State of Texas (and not its conflicts of law principles) which shall be used to govern all matters arising out of, or relating to, this Agreement and all of the transactions it contemplates, including without limitation, its validity, interpretation, construction, performance and enforcement. Exclusive venue shall lie in any court of competent jurisdiction in Fort Bend County, Texas.

XI. SUSPENSION OF SERVICES. If work under this Agreement is suspended for more than thirty (30) calendar days in the aggregate, the Engineer shall be compensated for services performed and charges incurred prior to receipt of notice to suspend, including an equitable adjustment in fees resulting from the demobilization and, as appropriate, remobilization. Additionally, Client agrees to equitably adjust the work schedule based on the delay caused by the suspension. If work under this Agreement is suspended for more than ninety (90) calendar days in the aggregate, the Engineer may, at its option, terminate this Agreement upon giving notice in writing to the Client. Further, Engineer may request that the work be suspended by notifying Client, in writing, of circumstances or conditions interfering with normal progress of the work. If the Client fails to make timely payments to Engineer or is otherwise in breach of this Agreement, the Engineer may suspend performance of services upon five (5) calendar days' notice to the Client. The Engineer shall have no liability to the Client for any costs or damages resulting from a suspension occasioned by any breach or perceived breach of this Agreement by Client.

XII. TERMINATION OF WORK. Either the Client or the Engineer may terminate this Agreement at any time with or without cause upon giving the other Party ten (10) calendar days' prior written notice. Client agrees that termination of Engineer for Client's convenience shall only be utilized in good faith and shall not be utilized if either the purpose or the result of such termination is the performance of all or part of Engineer's services under this Agreement by Client or by another service provider. Following Engineer's receipt of such termination notice the Client shall, within ten (10) calendar days of Client's receipt of Engineer's final invoice, pay the Engineer for all services rendered and all costs incurred up to the date of Engineer's receipt of such notice of termination.

XIII. TAXES. The fees and costs stated in this Agreement, unless stated otherwise, exclude all sales, consumer, use and other taxes. Client agrees to fully reimburse Engineer and its subconsultants for taxes paid or assessed in association with the work under this Agreement, whether those taxes were in effect as of the date of this Agreement or were promulgated after the date of this Agreement. This clause shall not apply to taxes associated with reimbursable or other project related expenses, which shall be identified in the applicable invoice for reimbursement by Client.

XIV. ALTERNATIVE DISPUTE RESOLUTION. Any conflicts or disputes that arise under or through this Agreement or that may exist following the completion thereof shall be discussed at a meeting of one senior management person from Client and one from Engineer. This meeting shall be a condition precedent to the institution of any legal or equitable proceedings, unless such meeting will infringe upon schedules defined by applicable statutes of limitation or repose. Should such a situation arise, the Parties agree that such meeting shall still be required, but the institution of said proceedings shall not be precluded for failure to meet this specific meeting requirement.

XV. MERGER AND SEVERABILITY. This Agreement constitutes, represents and is intended by the Parties to be the complete and final statement and expression of all of the terms and arrangements between the Parties to this Agreement with respect to the matters provided for in this Agreement. This Agreement supersedes any and all prior or contemporaneous agreements, understandings, negotiations, and discussions between the Parties and all such matters are merged into this Agreement. Should any one or more of the provisions contained in this Agreement be determined by a court of competent jurisdiction or by legislative pronouncement to be void, invalid, illegal, or unenforceable in any respect, such voiding, invalidity, illegality, or unenforceability shall not affect any other provision hereof, and this Agreement shall be considered as if the entirety of such void, invalid, illegal, or unenforceable provision had never been contained in this Agreement.

XVI. EXCLUSIVITY OF REMEDIES. The Parties acknowledge and agree that the remedies set forth in this Agreement (Agreed Remedies) are and shall remain the Parties' sole and exclusive remedy with respect to any claim arising from, or out of, or related to, the subject matter of this Agreement. The Parties agree that Engineer is to have no liability or responsibility whatsoever to Client for any claim(s) or loss(es) of any nature, except as set forth in this Agreement. No Party shall be able to avoid the limitations expressly set forth in this Agreement by electing to pursue some other remedy.

XVII. TIMELINESS OF PERFORMANCE. Engineer shall perform its professional services with due and reasonable diligence consistent with sound professional practices.

XVIII. PROJECT ENHANCEMENT/BETTERMENT. IF A COMPONENT OF THE CLIENT'S PROJECT IS OMITTED FROM THE ENGINEER'S CONTRACT DOCUMENTS DUE TO THE BREACH OF CONTRACT OR NEGLIGENCE OF THE ENGINEER, THE ENGINEER WILL NOT BE LIABLE TO THE CLIENT TO THE EXTENT OF ANY BETTERMENT OR ADDED VALUE TO THE PROJECT. SPECIFICALLY, THE CLIENT WILL BE RESPONSIBLE FOR THE AMOUNT IT WOULD HAVE PAID TO THE CONSTRUCTION CONTRACTOR (OR SUPPLIER OR SUBCONTRACTOR OR OTHER) FOR THE COMPONENT AS IF SUCH HAD BEEN INCLUDED IN THE ENGINEER'S CONTRACT DOCUMENTS. NOTWITHSTANDING THE FOREGOING, THE ENGINEER WILL BE RESPONSIBLE, TO THE EXTENT REASONABLE AND NECESSARY TO PLACE CLIENT IN THE SAME POSITION IT WOULD HAVE BEEN BUT FOR SUCH BREACH OR NEGLIGENCE, FOR THE REASONABLE (I) RETROFIT EXPENSE, (II) WASTE, OR (II) INTERVENING INCREASE IN THE COST OF THE COMPONENT FURNISHED THROUGH A CHANGE ORDER FROM THE CONTRACTOR. TO THE EXTENT THAT CONTRACTOR PROVIDED UNIT PRICING THE CLIENT UNDERSTANDS AND AGREES THAT THE ISSUE OF INTERVENING UNIT COST INCREASES WOULD ONLY BE APPLICABLE TO NEWLY IDENTIFIED ITEMS, NOT INCREASES IN QUANTITY OF EXISTING ITEMS.

IF IT IS NECESSARY TO REPLACE A COMPONENT OF THE PROJECT DUE TO THE BREACH OF CONTRACT OR NEGLIGENCE OF THE ENGINEER, THE ENGINEER WILL NOT BE LIABLE TO THE CLIENT FOR THE ENHANCEMENT OR UPGRADE OF THE COMPONENT BEYOND THAT ORIGINALLY INCLUDED IN THE CONTRACT DOCUMENTS. IN ADDITION, IF THE COMPONENT HAS AN IDENTIFIABLE USEFUL LIFE THAT IS LESS THAN THE SYSTEM/STRUCTURE/IMPROVEMENT ITSELF, THE DAMAGES OF THE OWNER SHALL BE REDUCED TO THE EXTENT THAT THE USEFUL LIFE OF THE COMPONENT WILL BE EXTENDED BY THE REPLACEMENT THEREOF.

XIX. AGREED REMEDIES.

A. IT IS THE INTENT OF THE PARTIES TO THIS AGREEMENT THAT ENGINEER'S SERVICES UNDER THIS AGREEMENT SHALL NOT SUBJECT ENGINEER'S INDIVIDUAL EMPLOYEES, OFFICERS OR DIRECTORS TO ANY PERSONAL LEGAL EXPOSURE FOR CLAIMS AND RISKS ASSOCIATED WITH THE SERVICES THAT ARE EITHER PERFORMED OR PERFORMABLE UNDER THIS AGREEMENT. FOR PROJECTS/SERVICES PERFORMED IN FLORIDA OR PURSUANT TO FLORIDA LAW, FLORIDA STATUTE 558.0035 STATES THAT, AN INDIVIDUAL EMPLOYEE OR AGENT MAY NOT BE HELD INDIVIDUALLY LIABLE FOR NEGLIGENCE.

B. IN RECOGNITION OF THE RELATIVE RISKS AND BENEFITS OF THE PROJECT TO BOTH THE CLIENT AND THE ENGINEER, AND ACKNOWLEDGING THAT THE ALLOCATION OF RISKS AND LIMITATIONS OF REMEDIES ARE BUSINESS UNDERSTANDINGS BETWEEN THE PARTIES AND THESE RISKS AND REMEDIES SHALL APPLY TO ALL POSSIBLE LEGAL THEORIES OF RECOVERY. CLIENT FURTHER AGREES, TO THE FULLEST EXTENT PERMITTED BY LAW, AND NOTWITHSTANDING ANY OTHER PROVISIONS OF THIS AGREEMENT OR ANY REFERENCE TO INSURANCE OR THE EXISTENCE OF APPLICABLE INSURANCE COVERAGE, THAT THE TOTAL LIABILITY, IN THE AGGREGATE, OF THE ENGINEER AND ENGINEER'S OFFICERS, DIRECTORS, EMPLOYEES, AGENTS, AND SUBCONSULTANTS TO THE CLIENT OR TO ANYONE CLAIMING BY, THROUGH OR UNDER THE CLIENT, FOR ANY AND ALL CLAIMS, LOSSES, COSTS OR DAMAGES WHATSOEVER ARISING OUT OF, RESULTING FROM, OR IN ANY WAY RELATED TO, THE SERVICES UNDER THIS AGREEMENT FROM ANY CAUSE OR CAUSES OF THE ENGINEER OR THE ENGINEER'S OFFICERS, DIRECTORS, EMPLOYEES, AGENTS, AND SUBCONSULTANTS, SHALL NOT EXCEED THE ENGINEER'S FEE RECEIVED FOR THE SERVICES PERFORMED UNDER THIS AGREEMENT OR \$50,000, WHICHEVER IS GREATER. INCREASED LIMITS MAY BE NEGOTIATED FOR ADDITIONAL FEE.

C. NOTWITHSTANDING ANY OTHER PROVISION OF THIS AGREEMENT, ENGINEER SHALL HAVE NO LIABILITY TO THE CLIENT FOR CONTINGENT, CONSEQUENTIAL OR OTHER INDIRECT DAMAGES INCLUDING, WITHOUT LIMITATION, DAMAGES FOR LOSS OF USE, REVENUE OR PROFIT; OPERATING COSTS AND FACILITY DOWNTIME; OR OTHER SIMILAR BUSINESS INTERRUPTION LOSSES, HOWEVER, THE SAME MAY BE CAUSED.

D. CLIENT MAY NOT ASSERT ANY CLAIM AGAINST ENGINEER AFTER THE SHORTER OF (1) 3 YEARS FROM SUBSTANTIAL COMPLETION OF SERVICES GIVING RISE TO THE CLAIM, OR (2) THE STATUTE OF LIMITATION PROVIDED BY LAW.

E. IT IS UNDERSTOOD AND AGREED BY BOTH PARTIES TO THIS AGREEMENT THAT THE FIRST TEN DOLLARS (\$10.00) OF REMUNERATION PAID TO ENGINEER UNDER THIS AGREEMENT SHALL BE IN CONSIDERATION FOR INDEMNITY/INDEMNIFICATION PROVIDED FOR IN THIS AGREEMENT.

XX. WAIVER. Any failure by Engineer to require strict compliance with any provision of this Agreement shall not be construed as a waiver of such provision, and Engineer may subsequently require strict compliance at any time, notwithstanding any prior failure to do so.

[SIGNATURE PAGE TO FOLLOW]

Representation on Authority of Parties/Signatories. Each person signing this Agreement represents and warrants that he or she is duly authorized and has legal capacity to execute and deliver this Agreement. Each party represents and warrants to the other that the execution and delivery of the Agreement and the performance of such party's obligations hereunder have been duly authorized and that the Agreement is a valid and legal agreement binding on such party and enforceable in accordance with its terms.

APPROVED:

Engineer: HALFF ASSOCIATES, INC.

Signature: 

Name: John Mark Otto

Title: Survey Team Leader

Date: 21 July 2021

APPROVED:

Client: KAVI CONSULTING, INC.

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

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

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

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

April 30, 2021  
Proposal No: GP2021-0417

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

**Reference: Proposal for Geotechnical Investigation  
Cartwright Pavement Replacement and Drainage Improvements.  
Fort Bend 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 2,200-linear ft in length.

### **PROJECT DESCRIPTION**

The scope of the project includes the following:

- Reconstruct the existing asphalt concrete (AC) pavement, a 4-lane with a median boulevard, 2-lane on each side for Cartwright Road from 400 ft west of the intersection of Brightwater Blvd. to 300 ft west of the Murphy Road (FM 1092) intersection, Missouri City, Texas.
- Storm Sewer System.

### **SCOPE OF WORK:**

The proposed scope of this geotechnical investigation will entail conducting a geotechnical investigation involving five (5) at 15-ft deep soil borings for the road and drainage improvements.

The scope of the project includes roadway improvements installations along the Cartwright Rd starting approximately 2,200 linear feet.

### **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 1: Proposed Boring Location.**

<b>Boring</b>	<b>Total No</b>	<b>Depth (ft)</b>	<b>Total Depth (ft)</b>
Borings B-1 & B-5	5	15	75

Soil samples will be obtained continuously to a depth of 15-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.

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:

- Generalized soils stratigraphy.
- 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

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 **\$10,689.00** (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 4 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.

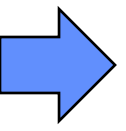
Very truly yours,  
ASSOCIATED TESTING LABORATORIES, INC.



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

Enclosures:

- Figure 1: Proposed Boring Location
- Itemized Geotechnical Fee Estimates – Cartwright Road



NORTH

**Notes:**

**Borings B-1 through B-5 are 15-ft. deep**

**Total Depth = 75-ft**

**Guidelines:**

**Fort Bend County**



**Cartwright Road**  
 PROJECT NO. 20406  
 FROM: 400' WEST OF BRIGHTWATER DRIVE TO 400' WEST OF FM 1092  
 2,200 LF Barton Ln

**DESCRIPTION:**  
 PAVEMENT REPLACEMENT AND DRAINAGE IMPROVEMENTS ALONG CARTWRIGHT INTERSECTION IMPROVEMENTS AT FM 1092.

**LEGEND:**  
 PROPOSED ROADWAY  
 ROAD CENTRAL LINE  
 EXISTING ROW  
 PROPOSED ROW

**QUALITY ASSURANCE**  
 FORT BEND COUNTY  
 2020 MOBILITY BOND PROGRAM

**Project:**  
 Cartwright Pavement Replacement & Drainage Improvements, Fort Bend County, Texas

**Client:**  
 Kavi Consulting, Inc.  
 Houston, Texas

**ASSOCIATED TESTING LABORATORIES**

Proposed Boring Location Plan

Proposal No.: GP21-0417

FIGURE 1

Scale: 0 500 ft 1000 ft

**Geotechnical Investigation Proposal**

Cartwright Pavement Replacement &amp; Drainage improvements

Fort Bend County, Texas

ATL Proposal No. GP2021-0417

April 30, 2021

**ITEMIZED GEOTECHNICAL FEE ESTIMATE****Cartwright Pavement Replacement & Drainage improvements**

Borings: 5@15', [75 LF]

<b>A. FIELD EXPLORATION</b>	<b>Qty.</b>	<b>Unit</b>	<b>Unit Rate</b>	<b>Amount</b>
Mobilization/Demobilization (Truck Rig)	1	LS	\$500.00	\$500.00
Technician for Staking, Utilities Clearance, Coordination	4	hrs.	\$50.00	\$200.00
Soil Drilling and Sampling (continuous; <50')	75	ft.	\$21.00	\$1,575.00
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	75	ft.	\$7.00	\$525.00
Piezometer Installation	0	ft.	\$16.00	\$0.00
Piezometer Abandonment	0	ft.	\$14.00	\$0.00
24-Hour, 7- and 30-day PZ Water Level Readings	0	hrs.	\$50.00	\$0.00
Vehicle Charge	0	hrs.	\$10.00	\$0.00
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)	5	ea.	\$90.00	\$450.00
Pavement Coring and Patching (>6 inches thick)	6	in.	\$9.00	\$54.00
				<b>\$3,304.00</b>
<b>B. GEOTECHNICAL LABORATORY TESTING</b>	<b>Qty.</b>	<b>Unit</b>	<b>Unit Rate</b>	<b>Amount</b>
Moisture Content (ASTM D-2216)	40	ea.	\$9.00	\$360.00
Atterberg Limits (ASTM D-4318)	15	ea.	\$60.00	\$900.00
Passing No. 200 Sieve (ASTM D-1140)	10	ea.	\$46.00	\$460.00
Unconfined Compression (ASTM D-2166)	10	ea.	\$44.00	\$440.00
Unconsolidated-Undrained Triaxial Test (ASTM D-2850)	15	ea.	\$61.00	\$915.00
Double Hydrometer Tests (ASTM D-4221), with D <sub>90</sub> and D50	0	ea.	\$177.00	\$0.00
Crumb Tests (ASTM D-6572)	0	ea.	\$38.00	\$0.00
Consolidated-Undrained Triaxial Test (ASTM D-4767) *3-stage w/3 samples/set	0	set	\$1,500.00	\$0.00
		<b>0</b>		<b>\$3,075.00</b>
<b>C. ANALYSES &amp; REPORT PREPARATION</b>	<b>Qty.</b>	<b>Unit</b>	<b>Unit Rate</b>	<b>Amount</b>
Senior Engineer-Project Manager (P.E.)	2	hrs.	\$150.00	\$300.00
Project Engineer (P.E.)	8	hrs.	\$105.00	\$840.00
Civil Engineer	12	hrs.	\$83.00	\$996.00
Draftsman	12	hrs.	\$60.00	\$720.00
Word Processor	12	hrs.	\$60.00	\$720.00
			<b>SUBTOTAL</b>	<b>\$3,576.00</b>
<b>D. ALLOWANCES</b>	<b>Qty.</b>	<b>Unit</b>	<b>Unit Rate</b>	<b>Amount</b>
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
			<b>SUBTOTAL</b>	<b>\$734.00</b>
			<b>TOTAL ESTIMATED FEE</b>	<b>\$10,689.00</b>