

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 Huitt-Zollars, Inc., (hereinafter "Contractor"), a company authorized to conduct business in the State of Texas.

WITNESSETH

WHEREAS, County desires that Contractor provide professional engineering services for the construction of a six-lane boulevard (Mason Road) from Waterside Village Drive to Lewisville Drive and additional turn lanes at Grand Parkway (SH 99) for the Mason Road Project, Numbers 17401 and 17403, under the 2017 Mobility Bond Program (hereinafter "Services") pursuant to SOQ 14-025; and

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

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

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

AGREEMENT

Section 1. Scope of Services

Contractor shall render the professional engineering services, including the preliminary engineering, final engineering, geotechnical, surveying, bidding and construction phase services for the project as described Contractor's proposal dated April 20, 2018 attached hereto as Exhibit A, and incorporated herein for all purposes.

Section 2. Personnel

2.1 Contractor represents that it presently has, or is able to obtain, adequate qualified personnel in its employment for the timely performance of the Scope of Services required under this Agreement and that Contractor shall furnish and maintain, at its own expense, adequate and sufficient personnel, in the opinion of County, to perform the Scope of Services when and as required and without delays.

2.2 All employees of Contractor shall have such knowledge and experience as will enable them to perform the duties assigned to them. Any employee of Contractor who, in the opinion of County, is incompetent or by his conduct becomes detrimental to the project shall, upon request of County, immediately be removed from association with the project.

Section 3. Compensation and Payment

3.1 Contractor's fees shall be calculated at the rates set forth in the attached Exhibit A. The Maximum Compensation for the performance of Services within the Scope of Services described in Exhibit A is three hundred sixty-two thousand nine hundred fifty-six dollars and 74/100 (\$362,956.74) as set forth in Exhibit A. In no case shall the amount paid by County under this Agreement exceed the Maximum Compensation without a written agreement executed by the parties.

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

3.3 County will pay Contractor based on the following procedures: Upon completion of the tasks identified in the Scope of Services, Contractor shall submit to County staff person designated by the County Engineer, one (1) electronic (pdf) copy of the invoice showing the amounts due for services performed in a form acceptable to County. County shall review such invoices and approve them within 30 calendar days with such modifications as are consistent with this Agreement and forward same to the Auditor for processing. County shall pay each such approved invoice within thirty (30) calendar days. County reserves the right to withhold payment pending verification of satisfactory work performed.

Section 4. Limit of Appropriation

4.1 Contractor clearly understands and agrees, such understanding and agreement being of the absolute essence of this Agreement, that County shall have available the total maximum sum of three hundred sixty-two thousand nine hundred fifty-six dollars and 74/100 (\$362,956.74) specifically allocated to fully discharge any and all liabilities County may incur.

4.2 Contractor does further understand and agree, said understanding and agreement also being of the absolute essence of this Agreement, that the total maximum compensation that Contractor may become entitled to and the total maximum sum that County may become liable to pay to Contractor shall not under any conditions, circumstances, or interpretations thereof exceed three hundred sixty-two thousand nine hundred fifty-six dollars and 74/100 (\$362,956.74).

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 July 31, 2020. Contractor shall complete

the tasks described in the Scope of Services, within this time or within such additional time as may be extended by the County.

Section 6. Modifications and Waivers

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

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

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

Section 7. Termination

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

7.2 Termination for Default

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

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

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

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

7.3 Upon termination of this Agreement, County shall compensate Contractor in accordance with Section 3, above, for those services which were provided under this Agreement prior to its termination and which have not been previously invoiced to County. Contractor's final invoice for said services will be presented to and paid by County in the same manner set forth in Section 3 above.

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

Section 8. Ownership and Reuse of Documents

All documents, data, reports, research, graphic presentation materials, etc., developed by Contractor as a part of its work under this Agreement, shall become the property of County upon completion of this Agreement, or in the event of termination or cancellation thereof, at the time of payment under Section 3 for work performed. Contractor shall promptly furnish all such data and material to County on request.

Section 9. Inspection of Books and Records

Contractor will permit County, or any duly authorized agent of County, to inspect and examine the books and records of Contractor for the purpose of verifying the amount of work performed under the Scope of Services. County's right to inspect survives the termination of this Agreement for a period of four years.

Section 10. Insurance

10.1 Prior to commencement of the Services, Contractor shall furnish County with properly executed certificates of insurance which shall evidence all insurance required and provide that such insurance shall not be canceled, except on 30 days' prior written notice to County. Contractor shall provide certified copies of insurance endorsements and/or policies if requested by County. Contractor shall maintain such insurance coverage from the time Services commence until Services are completed and provide replacement certificates, policies and/or endorsements for any such insurance expiring prior to completion of Services. Contractor shall obtain such insurance written on an Occurrence form (or a Claims Made form for Professional Liability insurance) from such companies having Best's rating of A/VII or better, licensed or approved to transact business in the State of Texas, and shall obtain such insurance of the following types and minimum limits:

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

10.1.2 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.

10.1.3 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.

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

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

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

Section 11. Indemnity

CONTRACTOR SHALL INDEMNIFY, HOLD HARMLESS, AND DEFEND COUNTY AGAINST ALL LOSSES, LIABILITIES, CLAIMS, CAUSES OF ACTION, AND OTHER EXPENSES, INCLUDING REASONABLE ATTORNEYS FEES, ARISING FROM ACTIVITIES OF CONTRACTOR, ITS AGENTS, SERVANTS OR EMPLOYEES, PERFORMED UNDER THIS AGREEMENT THAT RESULT FROM THE NEGLIGENT ACT, ERROR, OR OMISSION OF CONTRACTOR OR ANY OF CONTRACTOR'S AGENTS, SERVANTS OR EMPLOYEES.

Section 12. Confidential and Proprietary Information

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

12.2 Contractor agrees to hold Confidential Information in strict confidence, using at least the same degree of care that Contractor uses in maintaining the confidentiality of its own confidential information, and not to copy, reproduce, sell, assign, license, market, transfer or otherwise dispose of, give, or disclose Confidential Information to third parties or use Confidential Information for any purposes whatsoever other than the provision of Services to County hereunder, and to advise each of its employees and agents of their obligations to keep Confidential Information confidential. Contractor shall use its best efforts

to assist County in identifying and preventing any unauthorized use or disclosure of any Confidential Information. Without limitation of the foregoing, Contractor shall advise County immediately in the event Contractor learns or has reason to believe that any person who has had access to Confidential Information has violated or intends to violate the terms of this Agreement and Contractor will at its expense cooperate with County in seeking injunctive or other equitable relief in the name of County or Contractor against any such person. Contractor agrees that, except as directed by County, Contractor will not at any time during or after the term of this Agreement disclose, directly or indirectly, any Confidential Information to any person, and that upon termination of this Agreement or at County's request, Contractor will promptly turn over to County all documents, papers, and other matter in Contractor's possession which embody Confidential Information.

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

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

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

Section 13. Independent Contractor

13.1 In the performance of work or services hereunder, Contractor shall be deemed an independent contractor, and any of its agents, employees, officers, or volunteers performing work required hereunder shall be deemed solely as employees of contractor or, where permitted, of its subcontractors.

13.2 Contractor and its agents, employees, officers, or volunteers shall not, by performing work pursuant to this Agreement, be deemed to be employees, agents, or servants of County and shall not be entitled to any of the privileges or benefits of County employment.

Section 14. Notices

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

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

County:	Fort Bend County Engineering Department Attn: County Engineer 301 Jackson Street Richmond, Texas 77469
With a copy to:	Fort Bend County Attn: County Judge 401 Jackson Street, 1 st Floor Richmond, Texas 77469
Contractor:	Huitt-Zollars, Inc. Attn: Chaitanya Gampa, P.E. 10350 Richmond Avenue, Suite 300 Houston, Texas 77042-4248

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

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

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

Section 15. Compliance with Laws

Contractor shall comply with all federal, state, and local laws, statutes, ordinances, rules and regulations, and the orders and decrees of any courts or administrative bodies or tribunals in any matter affecting the performance of this Agreement, including, without limitation, Worker's Compensation laws, minimum and maximum salary and wage statutes and regulations, licensing laws and regulations. When required by County, Contractor shall furnish County with

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

Section 16. Standard of Care

Contractor represents to County that Contractor has the skill and knowledge ordinarily possessed by well-informed members of its trade or profession practicing in the greater Houston metropolitan area and Contractor will apply that skill and knowledge with care and diligence to ensure that the Services provided hereunder will be performed and delivered in accordance with the highest professional standards.

Section 17. Assignment

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

17.2 Neither party may delegate any performance under this Agreement.

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

Section 18. Applicable Law

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

Section 19. Successors and Assigns

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

Section 20. Third Party Beneficiaries

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

Section 21. Severability

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

Section 22. Publicity

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

Section 23. Captions

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

Section 24. Conflict

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

Section 25. Certain State Law Requirements for Contracts

25.1 Agreement to Not Boycott Israel Chapter 2270 Texas Government Code: By signature below, Contractor verifies Contractor does not boycott Israel and will not boycott Israel during the term of this Agreement.

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

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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

HUITT-ZOLLARS, INC

Robert E. Hebert, County Judge



Gregory R. Wine, P.E., LEED AP
Senior Vice President

Date

April 22, 2018
Date

ATTEST:

Laura Richard, County Clerk

APPROVED:



Richard W. Stolleis, 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

HUITT-ZOLLARS

HUITT-ZOLLARS, INC. | 10350 Richmond Ave. | Suite 300 | Houston, TX 77042-4248 | 281.496.0066 phone | 281.496.0220 fax | huitt-zollars.com

April 20, 2018

Robert W. Barnett, P.E.
C/O Fort Bend County Engineering
Vice President
LJA Engineering, Inc.
2929 Briarpark Drive Suite 600
Houston, Texas 77042-3703

Reference: Mason Road from Waterside Village Dr to Lewisville Dr & turn lanes at SH99
Fort Bend County 2017 Mobility Bond Program

Subject: Proposal – Preliminary Engineering, Final Engineering, Bid & Construction phase

Dear Mr. Barnett,

Enclosed are Huitt-Zollars, Inc.'s proposed budget, manpower and direct expense breakdown and scope of services for completing the Preliminary Engineering, Final Engineering, Geotechnical, Surveying, Bidding & Construction phase Services for the above referenced project based on the scope exhibits provided to Huitt-Zollars by LJA Engineering, Inc. on March 1st, 2018.

Huitt-Zollars, Inc.'s proposed budgets for referenced project follow:

Phase 1 – Preliminary Design Services	\$ 60,480.00
Phase 2 – Final Design Services	\$ 185,115.99
Phase 3 – Construction Phase Services	\$ 22,480.00
Total Basic Services Fee	\$ 268,075.99


Additional Services

1) Route Topographic Survey	\$ 35,280.95
2) Proposed ROW Maps, Metes & Bounds	\$ 43,899.80
3) Geotechnical Investigation	\$ 15,700.00
Total Additional Services Fee	\$ 94,880.75

Our total proposed budget for the above services is estimated to be \$ 362,956.74. Detailed scope of services and level of effort on the basic services and additional services are attached. Also attached are the proposals from Sub consultants for the additional services. Should you have any questions, or require additional information, please call. Thank you.

Upon receipt of a written notice to proceed, we will commence work. Thank you.

Sincerely,
Huitt-Zollars, Inc.


Chaitanya Gampa, P.E., PMP
Vice President



Daniel Menendez, P.E., PWLF
Vice President

EXHIBIT A

Scope of Engineering Services

Mason Rd from Waterside Village Dr to Lewisville Dr

The following Engineering services will be provided in connection with this project:

PROJECT DESCRIPTION: The work to be performed by the Engineer shall consist of the development of Preliminary engineering report, detailed plans, specifications and estimates (PS&E) for the re-construction of Mason Rd from Waterside Village Dr to Lewisville Dr. The roadway design will consist of reconstruction Mason Rd as a 6-lane Boulevard section from Waterside Village Dr to Lewisville Dr. and additional turn lanes at Grand Parkway (SH 99). ROW purchase as required for the roadway widening. The project also includes additional right turn lanes on eastbound and on westbound Grand Parkway (SH 99). The project will be designed to meet county design criteria along Mason Rd and TxDOT standards for the improvements along Grand parkway.

I. PRELIMINARY ENGINEERING REPORT

A Preliminary Engineering Report will be prepared for preliminary design, and the purpose of the report is to document the goals as stated. (1) establish a typical cross section and cross sections in non-standard areas, (2) determine drainage system needs (drainage report and/or preliminary roadway drainage design), (3) positively determine right-of-way acquisition needs, (4) determine potential conflicts with existing facilities, (5) identify critical path items, (6) identify problem areas and potential resolution(s), (7) determine permit and regulatory requirements, and (8) prepare a reasonable construction cost estimate.

A "30 percent" plan set will be prepared, consisting of all existing features (seen and unseen) shown in plan and profile, and proposed improvements in plan only with minor annotation. These plans, along with a typical section sheet, are the only drawings that will be prepared as part of the PER.

The report shall include a narrative, applicable plans, a drainage report, a construction cost estimate, a geotechnical report, and an environmental report, if applicable. Any further requirements can be discussed in a scoping meeting.

Geotechnical investigations and reporting will be completed during preliminary design, in accordance with Harris County criteria. Standard TxDOT criteria with boring depths based on the depth of the outfall channel. The geotechnical engineer should calculate the equivalent single axle load (ESAL) for the County's standard pavement design (8-inches of concrete with 8-inches of lime stabilized subgrade).

Preliminary wetlands investigations and project notification to the Texas Historical Commission will be performed by the County on a program-wide basis, so these efforts should not be needed on a project level. The Design Consultant will be notified in a scoping meeting if further efforts are needed for a particular project. The Design Consultant will also be notified if a Phase 1

Environmental Site Assessment is needed for the project, which can be performed by the geotechnical consultant.

An appropriate attempt shall be made to depict underground utilities accurately in the plan and profile drawings, and potential conflicts between existing utilities and proposed features shall be identified. Any subsurface utility investigation (SUI) shall be at the expense of the utility company. Contact with utility companies (both overhead and underground) to coordinate the adjustment of existing utilities will be made by the County and/or its project management consultant.

The Design Consultant will:

- Perform records research and field visits to determine the presence of underground or overhead private or public utilities during the Preliminary Design phase
- Send records requests to utility companies and obtain I.D. numbers (CenterPoint and AT&T)
- Depict utilities to a reasonable degree of accuracy on the plan and profile drawings
- Prepare a conflict table during the Preliminary Design phase to highlight conflicts between existing utilities and proposed improvements, to be updated during the Final Design phase as required
- Submit milestone-level drawings to applicable utility companies for their review

The Project Manager from the client will:

- Assist the Design Consultant in identifying major utilities, and providing contact information for various utilities as needed
- Coordinate directly with utility companies to facilitate utility adjustments required by the proposed improvements
- Coordinate with utility companies during the Construction phase as required

The typical completion period for the Preliminary Design is 90-120 days.

II. FINAL DESIGN

The goal is to prepare construction drawings and specifications accurately and efficiently. Interim submittals will be made at 70 percent and 95 percent completion, and includes drawings, a specification table of contents (and/or special specifications, as applicable), and a construction cost estimate.

Applicable design criteria include, in order of priority, (1) Any Fort Bend County Engineering or Drainage District criteria/standards, including the Fort Bend County Drainage Criteria Manual (Fort Bend County Drainage District, November 1987, revised April 1999), (2) municipal design criteria if the project is located within the limits of a municipality and/or ETJ that has design criteria, (3) Guidelines for Engineers Having Contracts with Harris County, Texas (Harris County Public Infrastructure Department, 1987), (4) applicable Texas Department of Transportation design criteria (all County-maintained traffic signals, other items as applicable), and (5) the Infrastructure Design Manual (City of Houston Department of Public Works and Engineering,

current version, used for infrastructure for which design criteria do not exist in the preceding criteria documents). Municipalities contributing funds to the project may review the submittals

A. PLANS

Revise Horizontal/Vertical Alignment

Roadway horizontal alignments, vertical alignments, cross-slopes, crossovers, and other related geometric design features established for the PER will be finalized.

- a. Prepare cover sheet (Fort Bend County name and seal, project name with limits, vicinity and location maps, names of County Judge and Commissioners, signature line for County Engineer, design firm name and registration number)
- b. Index of sheets
- c. Typical and non-standard cross sections (not-to-scale proposed sections with station limits for each section; show pavement/subgrade material and thickness, right-of-way and roadway width, applicable dimensions, profile grade line, and general location of existing and proposed utilities)
- d. Overall project layout (scale as appropriate with sheet references left blank since they are subject to change in subsequent submittals)
- e. Survey control map
- f. Develop plan and plan/profile sheets, which depict the proposed improvements. These sheets will contain topographic information, existing utilities, demolition items, roadway baselines, proposed pavement curb elevations, and roadway pavement contours where necessary for construction, drainage structures, limits of barriers and other information necessary for construction. Profile sheets will show existing ground lines at the right of way line, existing ditch lines, and existing paving elevations, and other elevations necessary to describe the profile elevations.
- g. Plan and profile sheets (1"=20' plan scale but printed half-size for a 1"=40' scale; all existing and proposed facilities correctly shown in plan and profile; separate drawings for roadway and storm sewer are not necessary; detailed callouts not required at 70%)
- h. The plan package will be complete and suitable for bidding and award of a construction contract.
- i. Show existing utilities in plan and profiles. Prepare plans to minimize utility adjustment where practical.

- j. Provide to the County information and/or exhibits on driveways for the purpose of preparing temporary construction easements where practical.
- k. Develop cut and fill quantities for the proposed sections.
- l. Earthwork quantities with cross sections at 100-foot intervals (only non-standard sections should be included in plans)

B. HYDROLOGY AND HYDRAULICS

- 1. Design storm sewer/ditch systems for 2 year storm. Design using WinStorm drainage software.
- 2. Detail the following:
 - a) Drainage Area maps with Hydraulic calculations
 - b) Hydraulic data
 - c) Drainage structure plan view layout sheet.
 - d) Storm sewer/ditch systems. Information to include elevation view and details for inlets, manholes, etc.
 - e) Miscellaneous details
 - f) Determination of standards
 - g) Identification of bid items and quantities
 - h) Develop summaries
- 3. Review utility information to determine potential utility conflicts.

C. TRAFFIC CONTROL PLAN (TCP)

Upon approval of Preliminary TCP submittal, Develop TCP sheets by phase/step/step. Avoid detours unless approved by the County; use of construction zone standards is encouraged

Details to include:

- a) The sequence of construction and method of handling traffic during each phase.
- b) The existing and proposed traffic control devices that will be used to handle traffic during each construction sequence. Include regulatory signs, warning signs, construction warning signs, guide signs, route markers, construction pavement markings, channelizing devices, portable changeable message signs, flashing arrow boards, barricades and barriers.
- c) The proposed traffic control devices (stop signs, no temporary signals are anticipated, flag person, etc.) at grade intersections during each construction sequence.

- d) Where detours are approved by the County, typical and design cross sections shall be shown and/or provided.
- e) Road construction work hours shall be directed by the County and specified for all phases of the TCP.
- f) Temporary drainage structures
- g) Miscellaneous details
- h) Narrative
- i) Determination of standards
- j) Identification of bid items and quantities
- k) Develop summaries by phase with overall total

D. TRAFFIC SIGNAL PLANS

upon approval of Preliminary report develop traffic signal plans identifying the modifications to the existing traffic signal at the intersection of Mason Rd & SH 99. The traffic signal plans to be designed per TxDOT criteria.

Submittal to include

- a) Traffic Signal general notes
- b) Existing conditions Sheet
- c) Proposed signal layout with phasing diagram
- d) Proposed signal details
- e) Proposed signal elevation layout
- f) Temporary signal layout with phasing diagram
- g) Temporary signal details and temporary signal elevation.

E. STORM WATER POLLUTION PREVENTION PLANS (SWPPP)

SW3P will be developed utilizing and consistent with the TCP plan. Plan sheets will be developed on 11" x 17" plan sheets, double stacked as applicable. Project will consist of two phases. Harris County and Texas Department of Transportation standards will be used where applicable. Details to include:

- 1. Develop SW3P Plans for each phase of construction. SW3P controls may include but are not limited to:
 - a) Temporary sediment fence
 - b) Rock Berms
 - c) Construction entrance/exits
- 2. Determination of standards
- 3. Identification of bid items and quantities
- 4. Develop summaries by phase with overall total

F. SIGNING AND PAVEMENT MARKING DESIGN

Permanent small signing and markings will be designed in accordance with the County and the Texas Manual on Uniform Traffic Control Devices (TMUTCD) for Streets and Highways (latest revision). Inventory of all existing signage will be performed throughout the Project. This inventory shall be used as a basis for determining all required proposed signing. After a full review of the final proposed roadway plans, the location and type of all necessary proposed warning and regulatory signs shall be determined. All required specifications, general notes and estimates would be included.

1. Prepare drawings depicting all proposed pavement markings, and all proposed small signing for the Project. Plan layouts shall be prepared at 1"=100' scale, on 11"x17" drawings. Permanent signing and marking design shall consist of the following drawings for the entire Project:
 - a) Existing Small Sign Inventory (to identify all existing signs).
 - b) Signing and Marking Layouts (to identify all existing signs to remain, signs to be removed or relocated, all proposed small signs and all proposed marking).
 - c) Signing and Marking Details (for all special signs and marking as required for the Project).
 - d) Small Sign Summary (to identify all proposed small signs and mounting materials).
 - e) Pavement Marking Summary (to identify all proposed pavement markings and delineators).
 - f) Standard Detail Drawings (to provide guidance to the contractor during construction of all small and large signing).

G. GENERAL NOTES, SPECIFICATIONS, AND STANDARD DRAWINGS

1. Develop required general notes and assemble specifications and special provisions that may be required.
2. Prepare additional special provisions or specifications as may be required.
3. Prepare general notes, specification data and project estimate on a CD disk for submission to the County.
4. Select the Standard County drawings applicable to the project, modify as required, and fill in the title blocks.

H. QUANTITIES AND COST ESTIMATES

1. Prepare list of construction bid items
2. Compute estimated quantities for all bid items.
3. Develop basis of estimate

4. Compute estimated cost of construction work based on current unit prices and estimated quantities. Fort Bend County/PMC to provide current unit prices if needed.

I. PROVIDE TO THE COUNTY FOR REVIEW THE PS&E PACKAGE AT THE FOLLOWING STAGES OF COMPLETION:

- a. Stage 70% Cover Sheet, typical sections, overall layout sheet, survey control map, drainage area map with hydraulic calculations, plan & profile sheets, Traffic control plan sheets, traffic signal plans, SWPPP sheets, details, quantities, cost estimates, technical specifications and perform QA/QC. Review plan sets to be provided on 11"x17" paper.
- b. Stage 95% Cover Sheet, General Notes, Specifications, Typical Section Sheets, Layout Sheets, Drainage Area Maps, Plan & Profiles, Traffic Control Plans, Traffic signal plans, Cross Sections, SWPPP, Signing & Pavement Markings, Details, Quantities, Cost Estimates, Prepare project manual (bid form, specification table of contents, any special specifications or conditions; contract documents excluded) and perform QA/QC. Responses to 70 percent comments
- c. Final Stage Cover sheet, General Notes, Typical Sections, Layout sheet, Drainage Area Map, Plan & Profiles, Traffic Control plans, Cross Sections, SWPPP, Signing & Pavement Marking, Details, Quantities, Cost Estimates, Prepare complete project manual and perform QA/QC. Final plan sheets to be provided on 22"x34" mylars.

J. TOPOGRAPHIC SURVEY AND PROPOSED ROW ACQUISITION

Topographic survey shall be completed during preliminary design, right-of-way acquisition will be required for road expansions, and part of preliminary design includes determining where to expand. To cover all options, topographic survey shall be performed within existing right-of-way and then at least 20 feet beyond the right-of-way on each side, or as determined in a scoping meeting. Temporary benchmarks and baseline control shall be set, both with 1,000-foot maximum spacing between points. Abstracting shall be performed to gain a preliminary determination of property ownership and existing right-of-way widths. During topographic survey, found property corners shall be documented so that the approximate location of the right-of-way can be determined. Structures in clear view and within 100 feet of the existing right-of-way shall be surveyed.

Once right-of-way needs have been determined and approved by the County, a Category 1A survey will be performed to produce a parcel map and metes-and-bounds description for each parcel to be acquired in the project. These documents will be submitted separately from other design documents, and will be paid for as a lump sum, based upon the number of parcels

determined by the consultant and their sub-consultants to accurately determine the parcels that are affected prior to contract agreement.

Reference attached Transystems proposal dated April 11 2018.

K. GEOTECHNICAL INVESTIGATION

Reference attached Consultants proposal from Tolunay- Wong Engineers, Inc. for the Geotechnical services. The Surveyor shall survey the station, offset, and elevations of each soil boring and provide them to TWE, Inc for their use.

L. QA/QC

The Engineer will provide quality assurance and quality control throughout the process and will include:

1. Routine checking of PS&E documents by the PM.
2. Close collaboration between the task leader and PM to make sure all County procedures for the project are met and to ensure that final documents are complete and accurate.
3. Regular internal review of projects deliverables by the QA/QC leader.
4. Maintain documentation of the QA/QC process.

III. BID AND CONSTRUCTION PHASE SERVICES

Upon completion of final design services, the County will determine an advertisement and bid opening schedule. All administrative project manual documents (cover page, Notice to Bidders, etc.) will be prepared by the County and provided to the design consultant in Adobe Acrobat (pdf) format. Huitt-Zollars shall prepare a single project manual file in Adobe Acrobat format, consisting of (1) administrative documents, (2) the bid form (prepared by the design consultant), (3) a sealed specification table of contents, and (4) applicable specifications and documents. Except for the cover sheet, which contains approval signature(s), all drawings may be printed directly to Adobe Acrobat format with electronic seal and signature.

- 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 management consultant. Hard copy documents are not required.
- Attend a pre-bid meeting at the County Purchasing Office. It is not necessary to prepare for the meeting, other than to be able to briefly describe the project.
- The Purchasing Agent will forward bidder questions to the design consultant. Answers to questions, as well as any other required changes, will be included in an addendum, prepared by HZ if necessary. The Purchasing Agent will distribute the addendum. After

the bid, the County's project management consultant will prepare a bid tabulation and provide a copy to the design consultant for filing.

- Attend a pre-construction meeting with the County, project management consultant, general contractor, and construction materials testing contractor. Prior to the meeting, the project management consultant will inform the design consultant of how many drawing and project manual sets are required, and the design consultant will provide these documents at the pre-construction meeting.
- Review contractor submittals and respond to Requests for Information.
- Field visits and progress meetings will not be conducted unless requested by the County.
- Participate in a substantial completion walkthrough.
- Prepare record drawings based on contractor as-built markups. The record drawings may be printed on paper and delivered to the County.

All bid and construction phase services will be paid on a time-and-materials basis. The not-to-exceed fee for these services will be determined by the County and/or its Project Manager and the Design Consultant. Monthly billing will include a breakdown of hours spent by personnel in the various employee categories, at billing rates agreed to by the County and the Design Consultant.

EXCLUSIONS FROM THE SCOPE OF SERVICES

1. Any other services not specifically included within the description of the Services as described above.
2. Illumination design and plans preparation.
3. Landscaping and Irrigation plans
4. Construction Management

HUUTT-ZOLARS PROJECT BUDGET WORKSHEET - Houston 2018

Client: Fort Bend County Engineering
Project Name: Neuen Rd & 5899
Contract No.: 2017 Mobility Bond Program
Project No.: R309079.01

Date: #VALUE!
Project Number:
Project Template:
Labor Code Schedule: H017

Phase Number		1	2	2	3	3	3	3	3	3	3	3	3	3	3	7	RMB
Phase Description	Survey	Survey	PRELIMINARY ENGINEERING REPORT	PRELIMINARY ENGINEERING REPORT	DESIGN PHASE	DESIGN PHASE	DESIGN PHASE	DESIGN PHASE	DESIGN PHASE	DESIGN PHASE	DESIGN PHASE	DESIGN PHASE	DESIGN PHASE	DESIGN PHASE	DESIGN PHASE	BID & CONSTRUCTION PHASE	Reimbursable Expenses
Task Number	A	B	A	B	C	A	B	C	B	C	D	E	F	G	H	I	
Task Description	TOPOGRAPHIC ROUTE SURVEY	PARCEL ACQUISITION	UTILITY COORDINATION	DRAINAGE AREA MAP & CALCULATION SHEETS	PLAN & PROFILE DRAWINGS	SIGNING & MARKING	TRAFFIC CONTROL PLANS	TRAFFIC SIGNAL PLANS	SWPPP	STANDARD DETAILS	PROJECT SPECIFICATIONS	QUANTITIES & COST ESTIMATES	QUANTITIES & COST ESTIMATES	PROJECT MANAGEMENT	PROJECT MANAGEMENT		
Phase/Task Manager																	
Lump Sum or Hourly																	
Labor Code	Labor Classification	Hourly Rate	Column Total	Column Total	Column Total	Column Total	Column Total	Column Total	Column Total	Column Total	Column Total	Column Total	Column Total	Column Total	Column Total	Column Total	TOTAL BUDGET
PIC	Principal-In-Charge	\$ 245.00															0 \$
DPX	Design Principal	\$ 210.00															0 \$
SPM	Sr. Project Manager	\$ 210.00	4	8	4	1	2	2	1			8			60	4	138 \$ 28,980.00
PMX	Project Manager	\$ 185.00															0 \$
QAM	QA Manager	\$ 190.00			4	2											10 \$ 1,900.00
SCE	Sr. Civil Engineer	\$ 180.00	12	4	48	16	40	16	8	8	24	24			24	8	428 \$ 77,040.00
CEX	Civil Engineer	\$ 175.00			40												40 \$ 7,000.00
EIT	Engineer Intern	\$ 120.00	8	12	40	20	160	24	12	24	40	40			40	80	640 \$ 76,800.00
SCIT	Sr. CAD Technician	\$ 130.00			80	120	20	48	8	40						40	395 \$ 51,480.00
CTX	CADD Technician	\$ 90.00															0 \$
PSS	Senior Project Support	\$ 95.00															0 \$
PRO	Project Support	\$ 70.00	10	24	16	8				8	30						96 \$ 6,720.00
Total Manhours per Phase/Task			34	24	328	108	48	86	106	29	72	62	84	12	176	1748	
HZ Labor per Phase/Task			\$ 4,660.00	\$ 3,840.00	\$ 45,400.00	\$ 6,680.00	\$ 11,940.00	\$ 15,700.00	\$ 4,130.00	\$ 9,520.00	\$ 8,100.00	\$ 16,920.00	\$ 2,280.00	\$ 25,360.00	\$ 249,520.00		
Direct Expenses (Distribute among Phases/Tasks as applicable)			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Direct Consultants (Distribute among Phases/Tasks as applicable)			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
RMB Expenses																	
RMB Consultants (Distribute among Phases/Tasks as applicable)			\$ 58,491.65	\$ 37,104.70	\$ -	\$ -	\$ -	\$ -	\$ 39,956.55	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	149,751.90
Total Fee per Phase/Task			\$ 63,151.65	\$ 40,944.70	\$ 45,400.00	\$ 6,680.00	\$ 11,940.00	\$ 15,700.00	\$ 44,086.55	\$ 9,520.00	\$ 8,100.00	\$ 16,920.00	\$ 16,480.00	\$ 25,360.00	\$ 399,672.90		

**TranSystems**

2777 Allen Parkway
Suite 500
Houston, TX 77019
Tel 713-807-0600
TBPLS Firm Reg. No. 100383
www.transystems.com

April 11, 2018

Ms. Chaitanya Gampa, PE, PMP
Huitt-Zollars, Inc.
10350 Richmond Avenue, Suite 300
Houston, TX 77042

**Re: Proposal for Professional Surveying Services
Fort Bend County 2017 Mobility Projects – Mason Road (4-01 & 4-03) (the “Project”)**

Dear Ms. Gampa:

TranSystems Corporation dba TranSystems Corporation Consultants (TranSystems) appreciates the opportunity to submit this proposal to perform professional surveying services to Huitt-Zollars, Inc. (Client) for the above listed project.

The scope of services and related deliverables is based on the information outlined in the 2017 Mobility Bond Program Summary of Design Process document provided to TranSystems by Client via email on March 22, 2018 and subsequent discussions, the following represents our understanding of the requirements for this project.

PROJECT LOCATION (See Exhibit A)

Project 4-01 Mason Road from 300' south of Lewisville Drive to 300' north of Waterside Village Drive. Lewisville Drive to 100' east of Mason Road and Waterside Drive to 100' east of Mason Road. Total 2,450 LF.

Project 4-03 Grand Parkway (SH 99) at Mason Road. Eastbound frontage road from 525' west of Mason Road to 150' east of Mason Road and the westbound frontage road from 525' east of Mason Road to 150' west of Mason Road. Total 1,350 LF.

The bridge over Mason Road will be surveyed to include location of columns, low chord elevations and U-turn lanes;

This proposal does not include surveys of the Grand Parkway (SH 99) mainlanes.

SURVEY DATUM

Horizontal datum will be referenced to the Texas Coordinate System, South Central Zone (4204), North American Datum of 1983 (NAD83) (2011 adjustment) (Epoch 2010.0000) and based on existing National Geodetic Survey (NGS) monuments;

Vertical datum will be referenced to the North American Vertical Datum of 1988 (NAVD88) (GEOID12A) and based on existing National Geodetic Survey (NGS) monuments;

All survey data will be surface values in US Survey Feet;

PRELIMINARY DESIGN

SCOPE OF SERVICES

- Research county records to obtain current vesting deeds, subdivision plats and easement documents along the proposed Mason Road alignment;
- Contact Texas 811 to identify and locate existing underground utilities within the project limits;
- Establish temporary benchmarks along proposed Mason Road at 1,000' intervals;
- Establish project control points along proposed Mason Road at 1,000' intervals;
- Recover and tie existing right-of-way monumentation and property corners;
- Cross section proposed Mason Road at 100' intervals from right-of-way to right-of-way plus 25' where possible;
- Survey Lewisville Drive and Waterside Village Drive to 100' east of existing Mason Road ROW;
- Locate and detail existing storm and sanitary sewer facilities within project limits;
- Locate and identify existing trees within existing and proposed Mason Road right-of-way;

DELIVERABLES

- Copies of vesting deeds, subdivision plats and easement documents in pdf format;
- Survey Control map with horizontal and vertical data and reference sketches for each control point;
- 2D design file with approximate location of existing right-of-way lines and property lines;
- 2D planimetric design file;
- 3D DTM design file;

RIGHT-OF-WAY MAPPING

SCOPE OF SERVICES

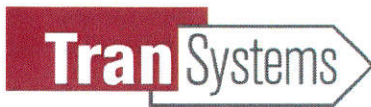
- Perform final analysis of existing right-of-way lines, property lines;
- Determine proposed right-of-way acquisition parcel boundaries;
- Prepare an overall project map showing the existing and proposed right-of-way lines
- Prepare parcel plat for each right-of-way acquisition parcel;
- Prepare metes and bounds description for each right-of-way acquisition parcel;
- Prepare a kmz file showing existing right-of-way with ownership information, proposed takings with parcel numbers;

DELIVERABLES

- Overall project map showing existing and proposed right-of-way lines, ownership information, existing easements and other matters of record;
- Parcel plat and metes and bounds description of each parcel to be acquired;
- KMZ file showing existing right-of-way with ownership information, proposed takings and parcel numbers;

Design files, right-of-way map and parcel plats will be prepared in MicroStation V8i with Geopak;
Metes and bounds descriptions will be prepared in Microsoft Word 2013;
KMZ files will be prepared in Google Earth Pro version 7.174.1529;

Please note that no meetings have been included in this scope of services. Preparation for and attendance at meetings will be billed as Additional Services on a time and materials basis in accordance with the general provisions of this Proposal.

**COMPENSATION****PRELIMINARY DESIGN**

Abstracting Research / Abstract Map	\$ 6,880.00
Establish control and control map	\$ 8,770.00
Cross-sections, topographic survey, utility ties	\$19,600.00
Right-of-way monument, property corner ties	\$ 8,920.00
Planimetric (2D), DTM (3D) and existing right-of-way design files	\$13,360.00
Expenses (mileage, deed and plat copies)	<u>\$ 961.65</u>
Total lump sum fee	\$58,491.65

RIGHT-OF-WAY MAPPING (13 Parcels)

Final right-of-way map and parcel plats	\$18,880.00
Metes and bounds descriptions	\$ 2,720.00
QA/QC right-of-way maps, parcel plats, metes and bounds descriptions	\$ 4,240.00
Final right-of-way monumentation	\$11,040.00
Expenses (mileage)	<u>\$ 224.70</u>
Total lump sum fee	\$37,104.70

Invoices will be submitted monthly by a date to be determined and will be based on TranSystems' estimate of the total Services completed as of the time of billing.

ASSUMPTIONS

This proposal and TranSystems' agreement to perform the Services is based upon, and subject to, the following assumptions:

- Client will provide the proposed Mason Road alignment and right-of-way in electronic format prior to work beginning on project;
- Client will provide TranSystems with existing construction drawings/plans of roadways, storm sewer, sanitary sewer and waterlines within the project limits;
- Client will provide TranSystems with existing utility drawings/plans within the project limits;
- Client will provide TranSystems with CAD files of sheet borders for survey control map and parcel plats;
- Client will provide TranSystems with examples of preferred formats of survey control map, parcel plats and metes and bounds descriptions;
- This proposal assumes that right of entry to private property has been obtained by Client or Fort Bend County prior to commencement of survey;

ADDITIONAL SERVICES

Any special surveying services not required to complete the original scope of service which may be requested by the Client. Payment to TranSystems as compensation for these services will be in addition to the contract amount identified above in the Compensation section. TranSystems will be reimbursed by the Client for these services at a cost to be determined under a separate proposal.

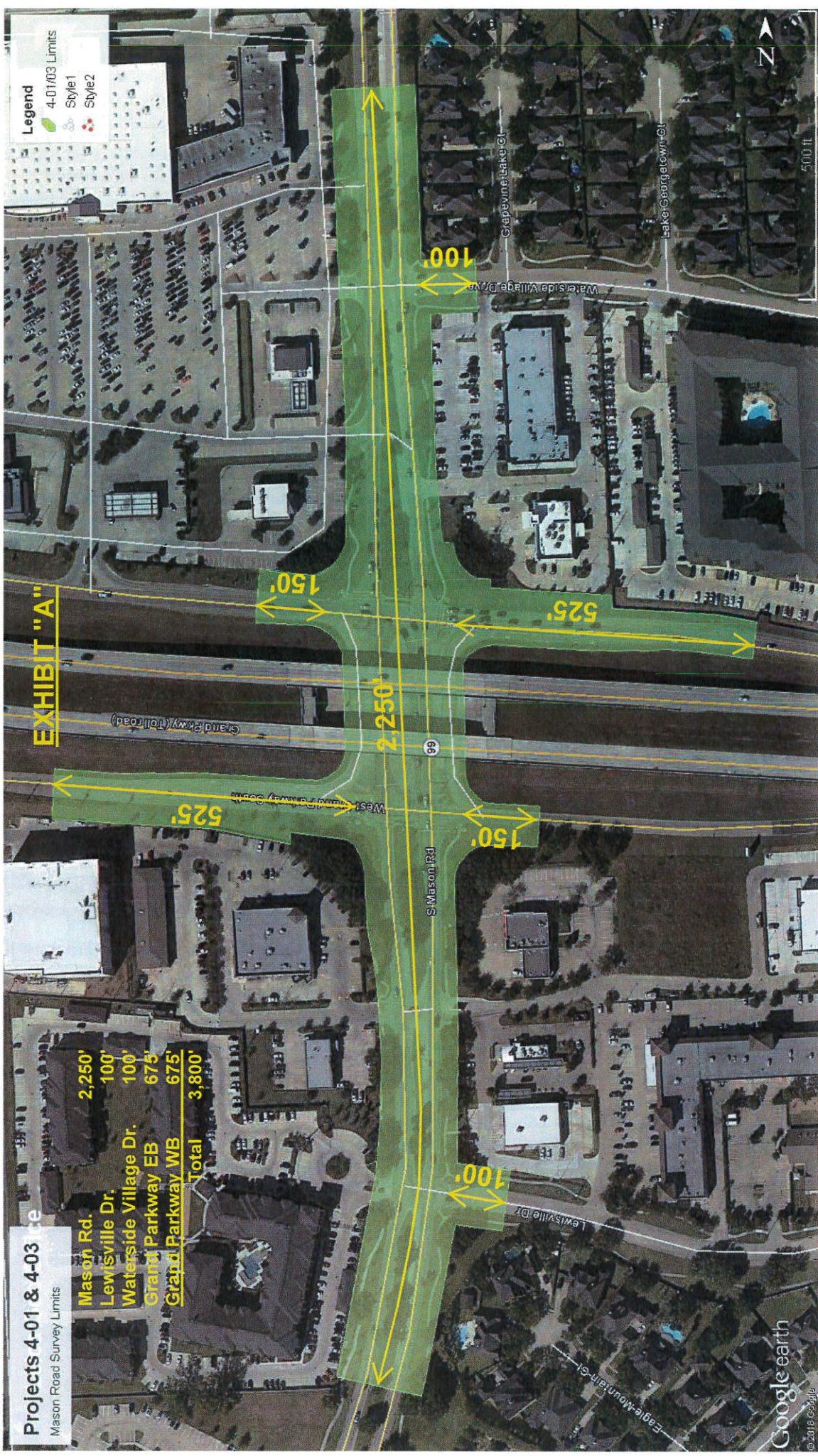


Please do not hesitate to contact me at 713-807-4416 if you have any questions or require additional information regarding this proposal.

Sincerely,
TranSystems Corporation dba
TranSystems Corporation Consultants

A handwritten signature in blue ink, appearing to read "Richard R. Dorr".

Richard R. Dorr, RPLS
Survey Division Leader
Assistant Vice President



Projects 4-01 & 4-03
 Mason Road Survey Limits

Mason Rd.
 Lewisville Dr.
 Waterside Village Dr.
 Grand Parkway EB
 Grand Parkway WB
 Total

Tolunay-Wong Engineers, Inc.

10710 South Sam Houston Parkway West, Suite 100 * Houston, Texas 77031 * 713-722-7064 * Fax 713-777-0341

April 5, 2018

Huitt-Zollars

10350 Richmond Avenue, Suite 300
Houston, Texas 77042

Attn: Chaitanya Gampa, P.E., PMP, Vice President

Ref: Proposal for Geotechnical Consulting Services

2017 Fort Bend County Mobility Bond Program Project
Widening of Mason Road from Lewisville Drive to Waterside Village Drive
Fort Bend County, Texas
TWE Proposal No. P18-G064 (Revision 1)

Dear Ms. Gampa,

We appreciate the opportunity to submit this proposal to conduct a geotechnical study for the referenced project. This proposal presents a general description of the project, our proposed scope of services and the cost for these services.

Project Description

The proposed Mason Road widening is approximately 2,200 feet long from Lewisville Drive to Waterside Village Drive at Grand Parkway (TX-99) in Fort Bend County, Texas. The general are of the project site is illustrated in Plate 1.



Plate 1 – Proposed Mason Road Widening in Fort Bend County, Texas

The project calls for widening of the existing 4-lane concrete pavement to 6-lane boulevard and additional turn lanes at Grand Parkway (SH 99) (Right turn lanes on eastbound and on westbound Grand Parkway). We were provided a schematic exhibit of the proposed alignment in a kmz file (Google Earth) and summary of design process via e-mail transmittal by Huitt-Zollars on March 23, 2018. The proposed soil test boring locations are indicated in Plate 2.



Plate 2 – Widening Plan of Mason Road at Texas State Highway 99 in Fort Bend County, Texas

We understand the exploration and recommendations should be in accordance with Harris County and TxDOT Standards.

The scope of work developed for this proposal assumes that nominal (24 inches or less) of fill and/or cut of the existing site grades will be required for roadway construction. We will need to revisit the proposed soil test boring depths if the above is not the case.

Scope of Services

The proposed scope of services consists of field exploration, laboratory testing and the preparation of a geotechnical engineering report. This proposal assumes that field exploration activities will not require any special work permits, excavation permits or on-site boring spoil disposal permissions from the land owner, federal, state or local agency or jurisdiction.

The field work will require the temporary blockage of traffic flow, 100 feet in front and behind the equipment and personnel, at each test location during work performance in accordance with Texas Manual of Uniform Traffic Control Devices, including safety cones and signs.

Field Exploration - We propose to perform six soil test borings at an approximate spacing of 500 feet to depths of 10 to 20 feet along the proposed roadway widening. Subsurface soils will be sampled continuously to the boring termination depths. The boring locations will be offset as necessary so as to be readily accessible to TWE geotechnical drilling equipment and personnel. The boring data will assist the evaluation of the subsurface soil and groundwater conditions.

Borehole drilling and soil sampling will be performed in accordance with ASTM standards. We will transport representative portions of the recovered samples to our geotechnical laboratory for testing. Open boreholes will be backfilled with soil cuttings after completion of sampling and after obtaining groundwater level readings.

Subsurface exploration activities will be performed so as to result in minimal collateral damage to existing site features. Cuttings and fluids from the drilling and sampling operations will be spread at the ground surface adjacent to the soil boring locations. This proposal does not include any provisions for containment of soil cuttings and/or drilling fluids.

The existing pavements will be cored at four test locations to determine the existing pavement thickness. The exploration work will include sampling and descriptions of the base course and subgrade soils over the entire exploration depths. Representative portions of recovered soil samples will be transported to the geotechnical laboratory for testing. The open boreholes will be grouted with Quikrete concrete to the surface.

Laboratory Testing - We will perform index and strength laboratory tests on selected representative soil samples. The test types and quantities will be selected by the geotechnical engineer based on the boring findings. The testing could include unit weight, moisture content, swell, fines content, plasticity and unconfined compression strength. The physical characteristics of the concrete cores will be documented and the cores will be tested for unconfined compressive strength.

Laboratory tests will be performed in accordance with ASTM standards. Boring logs will be prepared to summarize the field and laboratory data. Samples will be kept in storage for 90 days after completion of the laboratory testing, at which time they will be discarded unless instructed otherwise.

Engineering Report - We will prepare a geotechnical report that will present the exploration findings and provide geotechnical design/construction recommendations including:

- Subsurface stratigraphy and groundwater conditions
- Geotechnical considerations for pavement design and construction
- Rigid pavement design recommendations
- Pavement subgrade preparation
- Pavement thickness, minimum reinforcing and subgrade preparation
- Construction-phase QA/QC

Work Site Safety and Underground Utilities

TWE will provide the personnel, equipment and materials necessary to complete the proposed scope of services in a safe and timely manner. Our field personnel will have the appropriate safety training and personal protection equipment (hard hats, steel toe shoes, safety glasses, safety gloves) required during the field exploration activities.

TWE will stake the soil boring sites in the field at the locations selected by the geotechnical engineer. TWE will use hand-held GPS equipment to document the boring coordinates. This proposal does not include the services of a professional land surveyor to establish survey control at the test sites. It is assumed that survey control (coordinates and elevation) at the boring sites will be established by others and will be provided to TWE. The boring locations will be selected so as to be readily accessible to TWE geotechnical drilling equipment and personnel.

We will notify the Texas 811 One Call System for identification of known subsurface utilities and/or pipelines in the project area prior to equipment/personnel mobilization.

Work Schedule

Upon receipt of authorization to proceed we will schedule the start of the field work activities including the soil boring layout and utility clearance process. We will wait to mobilize equipment to the project site until receipt of confirmation that site access is available. **We anticipate the geotechnical project duration at approximately 6 weeks from receipt of authorization to the delivery of the geotechnical report.**

Compensation

We propose to perform the geotechnical and geological fault studies for a **lump sum fee of \$14,200**. We will not exceed this fee without prior written authorization. **The cost for this geotechnical study assumes that the boring sites are accessible to a truck-mounted drill rig.**

Acceptance of Proposal

The proposed services and compensation could be authorized via a Huitt-Zollars Purchase Order or similar contract instrument, or by signing on the following page and returning one copy to our office. The Terms and Conditions of this proposal are included in the attached Exhibit A.

Closing

We appreciate the opportunity to assist Huitt-Zollars and LJA Engineering with geotechnical engineering matters on this phase of the project. Please do not hesitate to contact our office with any questions or if we can be of further assistance.

Sincerely,

TOLUNAY-WONG ENGINEERS, INC.

TBPE Firm Registration No. F-124



Sean K. Kim, P.E.
Geotechnical Project Manager



David Barreiro, P.E.
Senior Manager

Attachments: Exhibit A - Terms and Conditions (2 sheets)

APPROVED WITH RESPECT TO SCOPE AND COMPENSATION:

Huitt-Zollars

Accepted by: _____

Name: _____

Title: _____

Date: _____

EXHIBIT A

TERMS FOR GEOTECHNICAL ENGINEERING SERVICES

THE AGREEMENT

This AGREEMENT is made by and between TOLUNAY-WONG ENGINEERS, INC., hereinafter referred to as GEOTECHNICAL ENGINEER, and the CLIENT of the attached PROPOSAL. This AGREEMENT between the parties consists of these TERMS, the attached PROPOSAL and any exhibits or attachments noted in the PROPOSAL will constitute the entire AGREEMENT. Any changes to this AGREEMENT must be mutually agreed to in writing.

STANDARD OF CARE

The CLIENT recognizes that subsurface conditions vary from those observed at locations where borings, surveys, or explorations are made, and that site conditions may change with time. Data, interpretations, and recommendations by the GEOTECHNICAL ENGINEER will be based solely on information available to the GEOTECHNICAL ENGINEER. The GEOTECHNICAL ENGINEER is responsible for those data, interpretations, and recommendations, but will not be responsible for other parties' interpretations or use of the information developed.

Services performed by the GEOTECHNICAL ENGINEER under this AGREEMENT are expected by the CLIENT to be conducted in a manner consistent with the level of care and skill ordinarily exercised by members of the engineering profession practicing contemporaneously under similar conditions in the locality of the project. No other warranty, expressed or implied, is made.

SITE ACCESS AND SITE CONDITIONS

CLIENT will grant or obtain free access to the site for all equipment and personnel necessary for the GEOTECHNICAL ENGINEER to perform the work set forth in this AGREEMENT. The CLIENT will notify any and all possessors of the project site that CLIENT has granted GEOTECHNICAL ENGINEER free access to the site. The GEOTECHNICAL ENGINEER will take reasonable precautions to minimize damage to the site, but it is understood by CLIENT that, in the normal course of work, some damage may occur and the correction of such damage is not part of this AGREEMENT unless so specified in the PROPOSAL.

SAMPLE DISPOSAL

The GEOTECHNICAL ENGINEER will dispose of all soil and rock samples 30 days after submission of report covering those samples. Further storage or transfer of samples can be made at Client's expense upon CLIENT'S prior written request. All hazardous materials will be returned to CLIENT for disposal, unless other arrangements have been made by CLIENT.

CONSTRUCTION MONITORING

If the GEOTECHNICAL ENGINEER is retained by the CLIENT to provide a site representative for the purpose of monitoring specific portions of the construction work as set forth in the PROPOSAL then this phrase applies. For the specified assignment, the GEOTECHNICAL ENGINEER will report observations and professional opinions to the CLIENT. No action of the GEOTECHNICAL ENGINEER or GEOTECHNICAL ENGINEER's site representative can be construed as altering my AGREEMENT between the CLIENT and others. The GEOTECHNICAL ENGINEER will report any observed work to the CLIENT which, in the GEOTECHNICAL ENGINEER's professional opinion, does not conform with plans and specifications. The GEOTECHNICAL ENGINEER has no right to reject or stop work of any agent of the CLIENT. Such rights are reserved solely for the CLIENT. Furthermore, the GEOTECHNICAL ENGINEER's presence on site does not in any way guarantee the completion or quality of the performance of the work of any party retained by the CLIENT to provide construction related services.

The GEOTECHNICAL ENGINEER will not be responsible for and will not have control or charge of specific means, methods, techniques, sequences or procedures of construction selected by any agent or AGREEMENT of the CLIENT, or safety precautions and programs incident thereto.

BILLING AND PAYMENT

CLIENT will pay GEOTECHNICAL ENGINEER the lump sum amount indicated in the PROPOSAL or, if no lump sum amount is indicated, in accordance with the Schedule of Fees, as shown in the PROPOSAL and its attachments. Invoices will be submitted to CLIENT by GEOTECHNICAL ENGINEER, and will be due and payable upon presentation. If CLIENT objects to all or any portion of any invoice, CLIENT will so notify GEOTECHNICAL ENGINEER in writing within fourteen (14) calendar days of the invoice date, identify the cause of disagreement, and pay when due that portion of the invoice not in dispute. The parties will immediately make every effort to settle the disputed portion of the invoice. In the absence of written notification described above, the balance as stated on the invoice will be paid.

Invoices are delinquent if payment has not been received within thirty (30) days from date of invoice. CLIENT will pay an additional charge of 1-1/2 (1.5) percent per month (or the maximum percentage allowed by law, whichever is lower) on any delinquent amount, excepting any portion of the invoiced amount in dispute and resolved in favor of CLIENT. Payment thereafter will first be applied to accrued interest and then to the principal unpaid amount. All time spent and expenses incurred (including any attorney's fees) in connection with collection of any delinquent amount will be paid by the CLIENT to GEOTECHNICAL ENGINEER per GEOTECHNICAL ENGINEER's current fee schedule. In the event CLIENT fails to pay GEOTECHNICAL ENGINEER within sixty (60) days after invoices are rendered, CLIENT agrees that GEOTECHNICAL ENGINEER will have the right to consider the failure to pay the GEOTECHNICAL ENGINEER's invoice as a breach of this AGREEMENT.

TERMINATION

The AGREEMENT may be terminated by either party seven (7) days after written notice. In the event of termination, GEOTECHNICAL ENGINEER will be paid for services performed prior to the date of termination.

INDEMNIFICATION

Except for the gross negligence or intentional misconduct of the GEOTECHNICAL ENGINEER, CLIENT will indemnify and hold the GEOTECHNICAL ENGINEER harmless from any claim by or liability from a third party for injury or loss, arising out of the GEOTECHNICAL ENGINEER's performance of the services described in this AGREEMENT. This indemnity shall not limit, restrict or prevent CLIENT from asserting any claims for liability against the GEOTECHNICAL ENGINEER, under any one or more theories of recovery, including breach of contract, negligence, strict or statutory liability or any other cause of action.

LIMITATION OF LIABILITY

The CLIENT will limit any and all liability or claim for damages, cost of defense, or expenses to be levied against GEOTECHNICAL ENGINEER to a sum not to exceed \$50,000, or the amount of his fee, whichever is greater, on account of any design defect, error, omission, or professional negligence. The CLIENT agrees to notify any contractor who perform work in connection with the study prepared by the GEOTECHNICAL ENGINEER of such limitation of liability and require a like limitation on their part in favor of the GEOTECHNICAL ENGINEER. In the event the CLIENT fails to obtain a like limitation of liability provision, the liability of the CLIENT and the GEOTECHNICAL ENGINEER to such contractor shall be allocated between the CLIENT and the GEOTECHNICAL ENGINEER such that the aggregate liability of the GEOTECHNICAL ENGINEER to all parties, including the CLIENT, shall not to exceed \$50,000 or the amount of the GEOTECHNICAL ENGINEER's fee, whichever is greater. The GEOTECHNICAL ENGINEER makes no warranties, either expressed or implied, except as set forth above.

DISCOVERY OF UNANTICIPATED HAZARDOUS MATERIALS

CLIENT warrants a reasonable effort to inform GEOTECHNICAL ENGINEER of known or suspected hazardous materials on or near the project site.

Hazardous materials may exist at a site where there is no reason to believe they could or should be present. GEOTECHNICAL ENGINEER and CLIENT agree that the discovery of hazardous materials constitutes a changed condition mandating a renegotiation of the scope of work or termination of services. GEOTECHNICAL ENGINEER and CLIENT also agree that the discovery of hazardous materials may make it necessary for GEOTECHNICAL ENGINEER to take immediate measures to protect health and safety. CLIENT agrees to compensate GEOTECHNICAL ENGINEER for any equipment decontamination or other costs incident to the discovery of hazardous waste.

GEOTECHNICAL ENGINEER agrees to notify CLIENT when hazardous materials or suspected hazardous materials are encountered. CLIENT agrees to make any disclosures required by law to the appropriate governing agencies. CLIENT also agrees to hold GEOTECHNICAL ENGINEER harmless for any and all consequences of disclosure made by GEOTECHNICAL ENGINEER which are required by governing law. In the event the project site is not owned by CLIENT, CLIENT recognizes that it is the CLIENT's responsibility to inform the property owner of the discovery of hazardous materials or suspected hazardous materials.

Notwithstanding any other provisions of the AGREEMENT, CLIENT waives any claim against GEOTECHNICAL ENGINEER, and to the maximum extent permitted by law, agrees to defend, indemnify, and save GEOTECHNICAL ENGINEER harmless from any claim, liability, and/or defense costs for injury or loss arising from GEOTECHNICAL ENGINEER's discovery of hazardous materials or suspected hazardous materials including any costs created by delay of the project and any costs associated with possible reduction of the property's value. CLIENT will be responsible for ultimate disposal of any samples secured by the GEOTECHNICAL ENGINEER which are found to be contaminated.

GOVERNING LAW AND SURVIVAL

The law of the State of Texas will govern the validity of these TERMS, their interpretation and performance.

If any of the provisions contained in this AGREEMENT are held illegal, invalid, or unenforceable, the enforceability of the remaining provisions will not be impaired. Limitations of liability and indemnities will survive termination of the AGREEMENT for any cause.

April 10, 2018

Ms. Chaitanya Gampa, P.E., PMP
Vice President
Huitt-Zollars, Inc.
10350 Richmond Avenue, Suite 300
Houston, TX 77042

**Re: Proposal for Traffic Signal Design Services – State Highway 99 (SH 99) at
Mason Road**

Dear Ms. Gampa:

TEDSI INFRASTRUCTURE GROUP (TEDSI) appreciates the opportunity to submit this proposal to Huitt-Zollars, Inc. (H-Z) to perform professional engineering design services for Modifications of Existing Permanent Traffic Signal and Temporary Signal Design at the intersection of SH 99 and Mason Road.

The Scope of Services is found in **Attachment A**.

PROJECT UNDERSTANDING

Fort Bend County has plans to widen the existing pavement of Mason Road to a six-lane boulevard from Lewisville Drive to Waterside Village. This proposed widening includes additional turn lanes at the currently signalized intersection of SH 99 and Mason Road. Thus, the existing traffic signal system at this intersection will be modified as required in conjunction with the proposed roadway improvement. Design of the wheelchair ramps at the intersection will be included in the roadway design and will not be part of the traffic signal design task.

SCHEDULE

The work defined in the Scope of Services can be completed within 60 calendar days for the Design Phase after receiving authorization to proceed from H-Z. Although this schedule does not include the time required for agency's review, we are prepared to help expedite all necessary reviews to ensure a timely completion of the project.

COMPENSATION

The work as defined in the Scope of Services will be performed at a lump sum fee as follows:

1. Modifications of Existing Permanent Traffic Signal Design = **\$28,734.51**
2. Temporary Traffic Signal Design = **\$11,006.04**
3. Direct Expenses = **\$216.00**

Ms. Chaitanya Gampa, P.E., PMP
April 10, 2018
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The total fee for the project is set at **\$39,956.55** and is shown in **Attachment B**.

This proposal is valid for ninety (90) calendar days and does not constitute a binding contract. We trust that the information provided is sufficient for you to complete your evaluation of this proposal. However, should you have any questions, please advise.

Thank you for considering TEDSI INFRASTRUCTURE GROUP for this project. We look forward to working with you on this project to serve Fort Bend County.

Sincerely,

TEDSI INFRASTRUCTURE GROUP

Yohannes Tadesse, P.E.
Project Manager

Enclosures: As Noted

ATTACHMENT A SCOPE OF ENGINEERING SERVICES

GENERAL:

Traffic Signal Design Services will be provided at the following location:

SH 99 at Mason Road

The scope of services and associated fees are based on the following: 1) TEDSI Infrastructure Group (TEDSI) will coordinate all of its work with Huitt-Zollars, Inc. (H-Z), 2) If applicable, TEDSI will obtain service outlet location and data statement from the power company for the required electrical service, 3) This project will be designed to be incorporated into overall Mason Road improvement PS&E as designed by H-Z, 4) The traffic signal design task includes Modifications of Existing Permanent Traffic Signal Design and Temporary Traffic Signal Design 5) Traffic signal design will be in accordance with the Texas Manual on Uniform Traffic Control Devices (TMUTCD), TxDOT and Fort Bend County Criteria. Of note – this scope of services does not include traffic signal warrant study, curb ramp design, signing and striping design or special drilled shaft foundation design.

TEDSI will prepare full detailed PS&E for the modifications of the existing traffic signal, including relocation of poles that are in conflict, layout out of conduits and cables, inclusion of additional signal heads etc. The traffic signal detection system at the intersection will be updated if required. The existing traffic signal controller cabinet will not be affected by the proposed roadway widening based on roadway design information received at the time this scope of services was prepared. Therefore, it will remain in place.

TEDSI will prepare full detailed PS&E for the temporary traffic signal system per criteria. The existing signal system and hardware except the items that will be in conflict with the proposed roadway widening will be used for the temporary traffic signal system. Temporary wood poles with span wires will also be included as required. The plans will illustrate traffic operation at the intersection during different phases and steps of construction. Multiple layouts will be displayed on one (1) or two (2) sheets as required at an appropriate scale.

PHASE 1 – TRAFFIC SIGNAL DESIGN SERVICES

- A. Obtain all required information relative to the design of this project from state, county, city, municipalities and utility companies (water districts, telephone, gas, electric, pipelines, etc.)
- B. Make field surveys and verify proposed locations of all proposed signal poles, controller, pull boxes, and other traffic control devices to avoid any conflicts during construction.

- C. Obtain electrical service locations for each intersection from applicable power company.
- D. Provide traffic signal design drawings for the intersection utilizing TxDOT standard details and specifications.
- E. TxDOT signal standards will be used to design traffic signal foundations.
- F. Provide final construction drawings, details, specifications, and bid items.
- G. Provide a preliminary cost estimate for the construction package.

Task 1: Base Plan Preparation

- a. Develop traffic signal preliminary layouts with locations of traffic signal poles and controller.
- b. Coordinate pole locations with H-Z.

Deliverables: Base Plans

- i. One 11"x17" PDF.

Task 2: Utility Documentation

- a. Show existing utility information on existing and proposed signal plans.
- b. Identify utility conflicts and coordinate with H-Z for utility information.
- c. Coordinate pole locations with H-Z.

Task 3: Preliminary (75%) Plan Preparation

- a. Develop traffic signal layouts including wiring, notes, quantities, utility information, ROW and any applicable additional ROW requirements.
- b. Coordinate pole locations with H-Z.
- c. Prepare Draft bid proposal document.

Deliverables: Preliminary (75%) Plans

- i. One 11"x17" PDF.
- ii. One electronic bid quantities proposal form (PDF).
- iii. Draft project proposal including special specifications, special Provisions and Notice to Bidders.
- iv. List of standard detail Drawings

Task 4: Utility Coordination

- a. Coordinate with H-Z to resolve utility conflict issues.
- b. Plan revisions to avoid utility conflicts.
- c. Documenting additional utility information.

Task 5: Final Plan and Proposal Preparation

- a. Incorporate 75% review comments and finalize design.
- b. Finalize estimate of quantities, construction cost estimate, notes special provisions and special specifications.
- c. Finalize project bid package. Coordinate with H-Z as necessary and provide traffic signal documents.
- d. Coordinate pole locations with H-Z.

Deliverables: Final Plan and Proposal Preparation

- i. 11"x17" PDF of final signal plans signed and sealed.
- ii. One (1) Electronic CADD files for signal plans (CD).
- iii. Final electronic bid proposal document including supporting documents (PDF) and editable electronic files of the same.
- iv. List of standard detail Drawings.

ATTACHMENT B - TEDSI Fee Proposal

PROJECT NAME: SH 99 at Mason Road
PRIME PROVIDER NAME: Huitt-Zollars, Inc.

TASK DESCRIPTION	PRINCIPAL	PROJECT MANAGER	PROJECT ENGINEER	E.I.T.	CADD OPERATOR	ADMIN./ CLERICAL	TOTAL LABOR HRS. & COSTS	NO OF DWGS	LABOR HRS PER SHEET
FC 162 - PERMANENT TRAFFIC SIGNAL			2	4	4		10	N/A	N/A
EXISTING SIGNAL INVENTORY			2	5	9	2	22	2	11
TRAFFIC SIGNAL EXISTING CONDITIONS		4	20	35	55	2	123	4	31
PERMANENT TRAFFIC SIGNAL PROPOSED CONDITIONS	1	10	4	6	10	2	24	1	24
PERMANENT TRAFFIC SIGNAL SUMMARY OF TRAFFIC SIGNAL QUANTITIES		2	2	4	4	2	12	1	12
PERMANENT TRAFFIC SIGNAL GENERAL NOTES			1	4	5		10	10	1
PERMANENT TRAFFIC SIGNAL STANDARDS	2	2	2			3	9	N/A	N/A
MEETINGS AND COORDINATION									\$28,734.51
FC 162 - TEMPORARY TRAFFIC SIGNAL DESIGN									
TEMPORARY TRAFFIC SIGNAL LAYOUTS	1	2	9	15	25	2	54	2	27
TEMPORARY SIGNAL NOTES			2	4	4	2	12	1	12
TEMPORARY SIGNAL BASIS OF ESTIMATE			2	4	9	2	17	1	17
TEMPORARY SIGNAL STANDARDS				2	2		4	2	2
SHEET SUBTOTALS	4	20	46	83	127	17	297	24	\$11,008.04
HOURS SUB-TOTALS	\$27,411	\$251,611	\$183,871	\$125,801	\$103,221	\$93,551			
LABOR RATE PER HOUR	\$1,109.64	\$5,032.20	\$8,458.02	\$10,441.40	\$13,108.94	\$1,500.35	\$39,740.55		
TOTAL LABOR COSTS									
DIRECT EXPENSES									
MILEAGE (\$0.55 per mile)	160						\$88.00		
BOND PLOTS (11" x 17", \$0.20 EA)	40						\$8.00		
MYLAR PLOTS (11" x 17", \$2.00 EA)	0						\$0.00		
DELIVERY (\$30.00 PER DELIVERY)	4						\$120.00		
TOTAL DIRECT EXPENSES							\$216.00		
TOTAL (LABOR + DIRECT EXPENSES)							\$39,956.55		