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 TEDSI Infrastructure Group, (hereinafter "Contractor"), a company authorized to conduct business in the State of Texas.

W I T N E S S E T H

WHEREAS, County desires that Contractor provide professional engineering services for improvements to Southbound SH 99 Frontage Road under 2020 Mobility Bond Project No. 20307 (hereinafter "Services") pursuant to SOQ 14-025; and

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

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

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

AGREEMENT

Section 1. Scope of Services

Contractor shall render the professional engineering services as described in Contractor's proposal dated April 21, 2021, attached hereto as Exhibit A, and incorporated herein for all purposes.

Section 2. Personnel

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

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

Section 3. Compensation and Payment

3.1 Contractor's fees shall be calculated at the rates set forth in the attached Exhibit A. The Maximum Compensation for the performance of Services within the Scope of Services described in Exhibit A is two million one hundred six thousand eight hundred forty-seven dollars and 64/100 ($2,106,847.64) 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 is two million one hundred six thousand eight hundred forty-seven dollars and 64/100 ($2,106,847.64) 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 is two million one hundred six thousand eight hundred forty-seven dollars and 64/100 ($2,106,847.64)).

Section 5. Time of Performance

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

Section 6. Modifications and Waivers

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

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

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

Section 7. Termination

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

7.2 Termination for Default

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

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

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

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

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

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

Section 8. Ownership and Reuse of Documents

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

Section 9. Inspection of Books and Records

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

Section 10. Insurance

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

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

10.1.2 Employers' Liability insurance with limits of not less than $1,000,000 per injury by accident, $1,000,000 per injury by disease, and $1,000,000 per bodily injury by disease.

10.1.3 Commercial general liability insurance with a limit of not less than $1,000,000 each occurrence and $2,000,000 in the annual aggregate. Policy shall cover liability for bodily injury, personal injury, and property damage and products/completed operations arising out of the business operations of the policyholder.

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

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

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

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

Section 11. Indemnity

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

Section 12. Confidential and Proprietary Information

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

12.2 Contractor agrees to hold Confidential Information in strict confidence, using at least the same degree of care that Contractor uses in maintaining the confidentiality of its own confidential information, and not to copy, reproduce, sell, assign, license, market, transfer or otherwise dispose of, give, or disclose Confidential Information to third parties or use Confidential Information for any purposes whatsoever other than the provision of Services to County hereunder, and to advise each of its employees and agents of their obligations to keep Confidential Information confidential. Contractor shall use its best efforts to assist County in identifying and preventing any unauthorized use or disclosure of any Confidential Information. Without limitation of the foregoing, Contractor shall advise County

immediately in the event Contractor learns or has reason to believe that any person who has had access to Confidential Information has violated or intends to violate the terms of this Agreement and Contractor will at its expense cooperate with County in seeking injunctive or other equitable relief in the name of County or Contractor against any such person. Contractor agrees that, except as directed by County, Contractor will not at any time during or after the term of this Agreement disclose, directly or indirectly, any Confidential Information to any person, and that upon termination of this Agreement or at County's request, Contractor will promptly turn over to County all documents, papers, and other matter in Contractor's possession which embody Confidential Information.

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

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

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

Section 13. <u>Independent Contractor</u>

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, 1st Floor Richmond, Texas 77469
Contractor:	TEDSI Infrastructure Group 738 Highway 6 South, Suite 430 Houston, Texas 77079

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

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

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

Section 15. Compliance with Laws

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

Section 16. Standard of Care

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

Section 17. Assignment

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

17.2 Neither party may delegate any performance under this Agreement.

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

Section 18. Applicable Law

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

Section 19. Successors and Assigns

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

Section 20. Third Party Beneficiaries

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

Section 21. Severability

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

Section 22. Publicity

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

Section 23. Captions

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

Section 24. Conflict

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

Section 25. Certain State Law Requirements for Contracts

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

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

Section 26. Human Trafficking

BY ACCEPTANCE OF AGREEMENT, CONTRACTOR ACKNOWLEDGES THAT THE COUNTY IS OPPOSED TO HUMAN TRAFFICKING AND THAT NO COUNTY FUNDS WILL BE USED IN SUPPORT OF SERVICES OR ACTIVITIES THAT VIOLATE HUMAN TRAFFICKING LAWS.

[THE REMAINDER OF THIS PAGE INTENTIONALLY LEFT BLANK.]

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

FORT BEND COUNTY	TEDSI INFRASTRUCTURE GROUP
_____	_____
KP George, County Judge	Authorized Agent – Signature
_____	Jules M. Morris, Jr, P.E.
Date	Authorized Agent – Printed Name
ATTEST:	Vice President
	Title
_____	5/20/21
Laura Richard, County Clerk	Date

APPROVED:

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

APPROVED AS TO LEGAL FORM:

_____
Marcus D. Spencer, First Assistant County Attorney

AUDITOR'S CERTIFICATE

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

_____
Robert Ed Sturdivant, County Auditor

I:\Marcus\Agreements\Engineering\Road Construction\Grand Parkway (SH 99)\Southbound SH 99 Frontage Road\Agreement - Pro Eng Svcs.TIG.docx.5/17/2021. 21-Eng-100776

EXHIBIT A

TEDSI INFRASTRUCTURE GROUP
TEDSI
TBPE F-1640
Consulting Engineers
738 Highway 6 South ♦ Suite 430 ♦ Houston, Texas 77079
Tel: (832) 619-1000
Fax: (832) 619-1018

April 21, 2021

Mr. J. Stacy Slawinski, P.E.
Fort Bend County Engineer
301 Jackson Street, 4th Floor
Richmond, Texas 77469

Re: Fort Bend County 2020 Mobility Bond Projects
SH 99 Grand Parkway Southbound Frontage Road Engineering Proposal
Westheimer Parkway to Fry Road

Dear Mr. Slawinski:

TEDSI Infrastructure Group (TEDSI) appreciates the opportunity to submit for your approval this fee proposal and associated scope of services for the above referenced project.

TEDSI will serve as Design Lead for our team on this project. Our design effort will a team of professional sub-consultants that together will provide Field Surveys, Geotechnical Engineering, Right of Way Mapping, Roadway Schematic Development, Drainage Studies, and final PS&E preparation.

Attached please find our Fee Proposal (Attachment A) and Scope of Services (Attachment B) for this project.

In the event of questions or if you request additional information, please contact me at 832/619-1000. We are very pleased to be at your service.

Sincerely,

TEDSI INFRASTRUCTURE GROUP

Jules M. (Jay) Morris, Jr., P.E.
Vice President

SH 99 GRAND PARKWAY SOUTHBOUND FRONTAGE RD **ATTACHMENT A**
WESTHEIMER PARKWAY TO FRY ROAD **MAY 2021**

WORK ELEMENT	Engineering Fees 05/19/2021
Advanced Planning/Preliminary Engineering	
Schematic Design (TEDSI)	$413,880.30
Environmental Study (TEDSI)	$18,769.98
ROW Data	$12,566.22
Surveying (TEDSI)	$10,902.46
Management (TEDSI)	$102,101.16
Management & Final PS&E Engineering	
Roadway Design (TEDSI)	$140,877.06
Drainage Design / SWPPP (TEDSI)	$226,378.48
Traffic - Signing & Pvmt Markings / Signals (TEDSI)	$41,582.28
Misc and TCP (TEDSI)	$226,496.26
Bridge Design Coordination (TEDSI)	$22,189.12
Management (TEDSI)	$278,591.32
Subs / Expenses	
Geotechnical (Murillo)	$89,500.00
Environmental (SWCA)	$190,550.00
Existing ROW Mapping (Weisser)	$32,100.00
Topo Survey (Weisser)	$36,085.00
Subsurface Utility Engineering - Level B (Weisser)	$7,800.00
Additional ROW and SUE Services (Weisser)	$19,200.00
Bridge Design (Sirrus)	$226,988.00
Direct Expenses (TEDSI)	$10,290.00
Total Management & Engineering Fees	$2,106,847.64

Notes

1. Proposed ROW Mapping assumes parcel surveying of five (5) parcels.
2. Level A SUE Services assume five (5) at 5 to 10' with two field crew days

FEE SCHEDULE (TEDSI)
METHOD OF PAYMENT: LUMP SUM

PRIME PROVIDER NAME: TEDSI
CONTRACT NUMBER:
PROJECT NAME: SH99 Southbound Frontage Road
PROJECT LIMITS: Westheimer Parkway to Fry Road

PART 1 - PRELIMINARY ENGINEERING

TASK DESCRIPTION	PROJECT MANAGER	SENIOR ENGINEER	PROJECT ENGINEER	PROJECT DESIGNER	SENIOR ENGINEER TECH	EIT	CADD OPERATOR	CLERICAL	TOTAL LABOR HRS. & COSTS	NO OF DWGS	LABOR HRS PER SHEET
ROUTE & DESIGN STUDIES (FC 110)											
DATA COLLECTION	4	4	8		16	8	0	2	42	1	N/A
DEVELOP BASE MAPS	4	4	16		40	40	80	1	185		N/A
ANALYZE EXISTING CONDITIONS	8	8	24		24	16	12	2	94		N/A
GEOTECHNICAL BORINGS AND INVESTIGATIONS	4	4		4	8				20		N/A
DESIGN CONCEPT CONFERENCE (FORM & MTG)	8	8	8		8	0	0	2	34		N/A
CONCEPTUAL DESIGN SCHEMATICS	4	8	8	8	32		40		100		N/A
GEOMETRIC DESIGN SCHEMATICS	8	8	24	40	60	0	40	2	182	2	N/A
TYPICAL SECTIONS	4	8	16		24	0	24	2	78		N/A
ENVIRONMENTAL CONSTRAINTS	2	2	8		16	16	8	0	52	1	N/A
DRAINAGE STUDY									0		N/A
DRAINAGE AREA MAPS	4	8	32	8	16	32	40		140		N/A
COMPUTE PEAK FLOWS	2	24	40	40	16	16	8		146		N/A
COMPUTE STORAGE VOLUMES	2	16	40	40	40	16	16		170		N/A
PREPARE HYDROGRAPHS	2	16	32	40	40	16	16		162		N/A
CONSTRUCTION COST ESTIMATES	2	4	16	8	8				38		N/A
MITIGATATION STUDY REPORT	8	24	80	8	16	40	16	12	204		N/A
SCOUR ANALYSIS / REPORT	4	24	60	8	16	40	16	16	184		N/A
DITCH HYDRAULIC COMPUTATIONS	4	16	40	8	16	24	16	16	140		N/A
ROW REQUIREMENTS	2	2	8		8	8	16	2	46	1	N/A
TRAFFIC DATA COLLECTION									0		N/A
TRAFFIC STUDIES									0	1	N/A
BICYCLE AND PEDESTRIAN ACCOMODATIONS									0	1	N/A
CROSS SECTIONS	2	2	8	60	24	24	0	2	122	1	N/A
PRELIMINARY CONSTRUCTION SEQUENCE	2	8	8		8	16	0	2	44	1	N/A
PRELIMINARY COST ESTIMATE	4	8	24		0	24	4	1	65	1	N/A
ENGINEERING SUMMARY REPORT	8	16	40		24	16	4	1	109	1	N/A
PREPARE DELIVERABLES	4	4	8		16	24	40		96		
DETERMINATION OF DESIGN EXCEPTIONS/WAIVERS	2	2	8		8	0	0	2	22	1	22
HOURS SUB-TOTALS	98	228	556	272	484	376	396	65	2475		
CONTRACT RATE PER HOUR	$274.94	$246.74	$200.92	$169.20	$144.52	$137.47	$112.79	$102.22			
TOTAL LABOR COSTS	$26,944.12	$56,256.72	$111,711.52	$46,022.40	$69,947.68	$51,688.72	$44,664.84	$6,644.30	$413,880.30		
SUBTOTAL (FC 110)									**$413,880.30**		

TASK DESCRIPTION	PROJECT MANAGER	SENIOR ENGINEER	PROJECT ENGINEER	PROJECT DESIGNER	SENIOR ENGINEER TECH	EIT	CADD OPERATOR	CLERICAL	TOTAL LABOR HRS. & COSTS	NO OF DWGS	LABOR HRS PER SHEET
ENVIRONMENTAL STUDIES & PUBLIC INVOLVEMENT (FC 120)											
PROVIDE EXHIBITS AND DATA FOR ENVIRONMENTAL STUDY (by SWCA)	8	8	16	0	40	40	0	1	113	N/A	N/A
HOURS SUB-TOTALS	8	8	16	0	40	40	0	1	113		
CONTRACT RATE PER HOUR	$274.94	$246.74	$200.92	$169.20	$144.52	$137.47	$112.79	$102.22			
TOTAL LABOR COSTS	$2,199.52	$1,973.92	$3,214.72	$0.00	$5,780.80	$5,498.80	$0.00	$102.22	$18,769.98		
SUBTOTAL (FC120)									**$18,769.98**		

TASK DESCRIPTION	PROJECT MANAGER	SENIOR ENGINEER	PROJECT ENGINEER	PROJECT DESIGNER	SENIOR ENGINEER TECH	EIT	CADD OPERATOR	CLERICAL	TOTAL LABOR HRS. & COSTS	NO OF DWGS	LABOR HRS PER SHEET
RIGHT OF WAY DATA (FC 130)											
ROW DELINEATION (REVIEW SURVEY PROVIDED BY OTHERS)	4	8	24	0	24	8	0	1	69	N/A	N/A
HOURS SUB-TOTALS	4	8	24	0	24	8	0	1	69		
CONTRACT RATE PER HOUR	$274.94	$246.74	$200.92	$169.20	$144.52	$137.47	$112.79	$102.22			
TOTAL LABOR COSTS	$1,099.76	$1,973.92	$4,822.08	$0.00	$3,468.48	$1,099.76	$0.00	$102.22	$12,566.22		
SUBTOTAL (FC130)									**$12,566.22**		

TASK DESCRIPTION	PROJECT MANAGER	SENIOR ENGINEER	PROJECT ENGINEER	PROJECT DESIGNER	SENIOR ENGINEER TECH	EIT	CADD OPERATOR	CLERICAL	TOTAL LABOR HRS. & COSTS	NO OF DWGS	LABOR HRS PER SHEET
PROJECT MANAGEMENT (FC 145)											
PROGRESS REPORTS AND INVOICES	24	24						12	60	N/A	N/A
COORDINATION/ADMINISTRATION	40	40						26	106	N/A	N/A
QUALITY CONTROL/ASSURANCE	16	80						12	108	N/A	N/A
SUB-CONSULTANT MANAGEMENT	96	48						12	156	N/A	N/A
HOURS SUB-TOTALS	176	192	0	0	0	0	0	62	430		
CONTRACT RATE PER HOUR	$274.94	$246.74	$200.92	$169.20	$144.52	$137.47	$112.79	$102.22			
TOTAL LABOR COSTS	$48,389.44	$47,374.08	$0.00	$0.00	$0.00	$0.00	$0.00	$6,337.64	$102,101.16		
SUBTOTAL (FC150)									**$102,101.16**		

TASK DESCRIPTION	PROJECT MANAGER	SENIOR ENGINEER	PROJECT ENGINEER	PROJECT DESIGNER	SENIOR ENGINEER TECH	EIT	CADD OPERATOR	CLERICAL	TOTAL LABOR HRS. & COSTS	NO OF DWGS	LABOR HRS PER SHEET
SURVEYING (FC 150)											
SURVEYING (REVIEW SURVEY PROVIDED BY OTHERS)	4	8	16	0	16	16	0	1	61	N/A	N/A
HOURS SUB-TOTALS	4	8	16	0	16	16	0	1	61		
CONTRACT RATE PER HOUR	$274.94	$246.74	$200.92	$169.20	$144.52	$137.47	$112.79	$102.22			
TOTAL LABOR COSTS	$1,099.76	$1,973.92	$3,214.72	$0.00	$2,312.32	$2,199.52	$0.00	$102.22	$10,902.46		
SUBTOTAL (FC150)									**$10,902.46**		

DESCRIPTION								TOTAL MH BY FC	TOTAL COSTS BY FC
ROUTE & DESIGN STUDIES (FC 110)								2475	$413,880.30
ENVIRONMENTAL STUDIES & PUBLIC INVOLVEMENT (FC 120)								113	$18,769.98
RIGHT OF WAY DATA (FC 130)								69	$12,566.22
PROJECT MANAGEMENT (FC 145)								430	$102,101.16
SURVEYING (FC 150)								61	$10,902.46
SUBTOTAL LABOR EXPENSES								3148	**$558,220.12**
OTHER DIRECT EXPENSES	**QUANTITY**	**RATE**	**UNIT**						
Mileage (# of miles)	1,500	$0.545	MI						$817.50
Courier Services	5	$30.00	EACH						$150.00
Photocopies 8.5x11	1,000	$0.10	EACH						$100.00
Photocopies 11x17	1,000	$0.25	EACH						$250.00
Plot (Color on Bond)	200	$3.50	SF						$700.00
Mylars 11x17	0	$4.00	SHEET						$0.00
CD Archive	0	$5.00	EACH						$0.00
TRAFFIC COUNTS	10	$650.00	EACH						$6,500.00
SUBTOTAL DIRECT EXPENSES									**$8,517.50**

SUBCONTRACTS:									
Murillo (Geotech)									$89,500.00
SWCA (Environmental)									$190,550.00
Weisser Engineering (Exist ROW Mapping)									$32,100.00
Weisser Engineering (Topo Surveying)									$36,085.00
Weisser Engineering (Subsurface Utility Engineering Level B)									$7,800.00
Weisser Engineering Add. Services - (Prop. ROW Parcels and Level A SUE)									$19,200.00
Sirrus Engineering (Bridge Design)									$45,397.60
SUBCONTRACT SUB-TOTAL									**$420,632.60**

SUMMARY	
TOTAL COSTS FOR PRIME ONLY(includes multiplier)	$558,220.12
NON-SALARY (OTHER DIRECT EXPENSES)	$8,517.50
SUBCONTRACTS (includes labor costs and direct expenses)	$420,632.60
GRAND TOTAL - PRELIMINARY ENGINEERING	**$987,370.22**

ATTACHMENT A
FEE SCHEDULE (TEDSI)
METHOD OF PAYMENT: LUMP SUM

PRIME PROVIDER NAME: TEDSI
CONTRACT NUMBER:
PROJECT NAME: SH99 Southbound Frontage Road
PROJECT LIMITS: Westheimer Parkway to Fry Road

PART 2 - PS&E SERVICES

TASK DESCRIPTION	PROJECT MANAGER	SENIOR ENGINEER	PROJECT ENGINEER	PROJECT DESIGNER	SENIOR ENGINEER TECH	EIT	CADD OPERATOR	CLERICAL	TOTAL LABOR HRS. & COSTS	NO OF DWGS	LABOR HRS PER SHEET
PROJECT MANAGEMENT (FC 164)											
PROGRESS REPORTS AND INVOICES	40	40	0			0		60	140	N/A	N/A
COORDINATION/ADMINISTRATION	80	80	0			0		40	200	N/A	N/A
TxDOT DISTRICT DESIGN REVIEW (30%/60%/90%/95%)	40	40	16			8		0	104	N/A	N/A
DESIGN CONCEPT CONFERENCE (1 meeting)	8	8	4			4		0	24	N/A	N/A
DESIGN REVIEW MEETINGS (6 meetings with FBC/GEC)	18	18	12			12		0	60	N/A	N/A
DSRT (2 meetings)	16	16	8		16	8		0	64	N/A	N/A
PAVEMENT DESIGN CONFERENCE (1 meeting)	8	8	4			4		0	24	N/A	N/A
QUALITY CONTROL/ASSURANCE	16	160	0			0		0	176	N/A	N/A
SUB-CONSULTANT MANAGEMENT	120	80	16			0		24	240	N/A	N/A
MONTHLY PROGRESS MEETINGS (12 meetings)	48	48	48			24		24	192	N/A	N/A
HOURS SUB-TOTALS	394	498	108	0	16	60	0	148	1224		
CONTRACT RATE PER HOUR	$274.94	$246.74	$200.92	$169.20	$144.52	$137.47	$112.79	$102.22			
TOTAL LABOR COSTS	$108,326.36	$122,876.52	$21,699.36	$0.00	$2,312.32	$8,248.20	$0.00	$15,128.56	$278,591.32		
SUBTOTAL (FC150)									**$278,591.32**		

TASK DESCRIPTION	PROJECT MANAGER	SENIOR ENGINEER	PROJECT ENGINEER	PROJECT DESIGNER	SENIOR ENGINEER TECH	EIT	CADD OPERATOR	CLERICAL	TOTAL LABOR HRS. & COSTS	NO OF DWGS	LABOR HRS PER SHEET
ROADWAY DESIGN CONTROLS (FC160)											
ROADWAY DESIGN	8	8	24		40	20	40	1	141	0	
TYPICAL SECTIONS (2 EXIST/4 PROPOSED)	8	8	12		24	24	40	0	116	6	19
CROSS STREETS									0	0	
CUT AND FILL QUANTITIES	4	8	40		80	0	0	0	132	0	
ROADWAY PLAN AND PROFILE (SCALE: H 1"=100' V 1"=10')	8	8	16		24	24	80	1	161	5	32
RAMP PLAN AND PROFILE (SCALE: H 1"=100' V 1"=10')									0		
INTERSECTION LAYOUTS & GRADING									0		
DRIVEWAY DETAIL AND SUMMARY									0		
MISCELLANEOUS ROADWAY DETAILS	2	2	4		8	16	32	1	65	2	33
REMOVAL PLANS	2	2	8		16	40	60	0	128	5	26
EARTHWORK CROSS SECTIONS	2	2	8		40	0	40	1	93	5	19
ROADWAY STANDARDS	2	2	8		0	0	8	1	21	20	1
ROADWAY QUANTITY SHEETS	1	1	8		8	16	4	1	39	1	39
REMOVAL QUANTITY SHEETS	1	1	8		8	16	4	1	39	1	39
HOURS SUB-TOTALS	38	42	136	0	248	156	308	7	935	45	
CONTRACT RATE PER HOUR	$274.94	$246.74	$200.92	$169.20	$144.52	$137.47	$112.79	$102.22			
TOTAL LABOR COSTS	$10,447.72	$10,363.08	$27,325.12	$0.00	$35,840.96	$21,445.32	$34,739.32	$715.54	$140,877.06		
SUBTOTAL (FC 160)									**$140,877.06**		

TASK DESCRIPTION	PROJECT MANAGER	SENIOR ENGINEER	PROJECT ENGINEER	PROJECT DESIGNER	SENIOR ENGINEER TECH	EIT	CADD OPERATOR	CLERICAL	TOTAL LABOR HRS. & COSTS	NO OF DWGS	LABOR HRS PER SHEET
DRAINAGE (FC161)											
REVIEW DRAINAGE IMPACT ANALYSIS	4	4	8		0	0	0	0	16	0	
DRAINAGE AREA MAPS - OVERALL	2	2	4		8	8	8		32	1	32
DRAINAGE AREA MAPS - INTERNAL	8	8	16		16	40	80		168	5	34
HYDROLOGIC DATA SHEETS	4	4	8		16	16	16		64	2	32
STORM SEWER PLAN AND PROFILES	8	8	16		40	40	80	1	193	5	39
STORM SEWER LATERALS	4	4	8		16	24	40		96	3	32
STORM SEWER COMPUTATIONS	4	4	16		24	24	40		112	4	28
STORM SEWER QUANTITIES AND SUMMARY	2	2	8		8	16	8		44	1	44
BCS SHEET	2	2	8		16	0	8		36	1	36
DRAINAGE DETAILS	4	4	8		16	24	80		136	4	34
DRAINAGE STANDARDS	1	1	4		0	0	8	1	15	15	1
DETENTION / MITIGATION LAYOUTS	8	8	16		16	40	80		168		#DIV/0!
DITCH HYDRAULIC COMPUTATIONS	2	2	24		8	16	16		68	2	34
DITCH STORAGE VOLUME CALCULATIONS (VERIFY DRAINAGE IMPACT REPORT)	2	2	8		8	16	16		52	1	52
SW3P LAYOUT (2 PHASES FOR TCP)	8	8	40		40	60	80	0	236	10	24
SW3P INDEX	2	8	16		4	0	8	0	38	1	38
SW3P SUMMARIES	2	2	8		8	8	0	0	28	1	28
SW3P STANDARDS	1	1	2		0	0	4	0	8	10	1
HOURS SUB-TOTALS	68	74	218	0	244	332	572	2	1,510	66	
CONTRACT RATE PER HOUR	$274.94	$246.74	$200.92	$169.20	$144.52	$137.47	$112.79	$102.22			
TOTAL LABOR COSTS	$18,695.92	$18,258.76	$43,800.56	$0.00	$35,262.88	$45,640.04	$64,515.88	$204.44	$226,378.48		
SUBTOTAL (FC 161)									**$226,378.48**		

TASK DESCRIPTION	PROJECT MANAGER	SENIOR ENGINEER	PROJECT ENGINEER	PROJECT DESIGNER	SENIOR ENGINEER TECH	EIT	CADD OPERATOR	CLERICAL	TOTAL LABOR HRS. & COSTS	NO OF DWGS	LABOR HRS PER SHEET
SIGNING, PVMT. MARKING, & SIGNAL (FC162)											
SIGNING AND PAVEMENT MARKING LAYOUTS (SCALE 1"=100')	8	8	16		24	24	80	1	161	5	32
SIGNING AND PAVEMENT MARKING DETAILS	2	2	8		8	16	24	1	61	2	31
SIGNING AND PAVEMENT MARKING SUMMARY	2	2	8		8	8	8	1	37	1	37
SIGNING AND PAVEMENT MARKING STANDARDS	1	1	4		1	8	8	1	24	12	2
TRAFFIC SIGNAL MODIFICATIONS									0	4	0
TRAFFIC SIGNAL DETAILS									0	2	0
TRAFFIC SIGNAL SUMMARIES									0	1	0
TRAFFIC SIGNAL STANDARDS									0	12	0
HOURS SUB-TOTALS	13	13	36	0	41	56	120	4	283	39	
CONTRACT RATE PER HOUR	$274.94	$246.74	$200.92	$169.20	$144.52	$137.47	$112.79	$102.22			
TOTAL LABOR COSTS	$3,574.22	$3,207.62	$7,233.12	$0.00	$5,925.32	$7,698.32	$13,534.80	$408.88	$41,582.28		
SUBTOTAL (FC 162)									**$41,582.28**		

TASK DESCRIPTION	PROJECT MANAGER	SENIOR ENGINEER	PROJECT ENGINEER	PROJECT DESIGNER	SENIOR ENGINEER TECH	EIT	CADD OPERATOR	CLERICAL	TOTAL LABOR HRS. & COSTS	NO OF DWGS	LABOR HRS PER SHEET
MISCELLANEOUS (ROADWAY) (FC 163)											
TITLE SHEET	2	2	4		4	8	16	1	37	1	37
INDEX SHEET	2	2	4		8	4	8	1	29	1	29
SOIL BORING LOGS	2	2	4		8	4	16	0	36	5	7
RETAINING WALLS:											
RETAINING WALL PLAN/PROFILE									0	4	0
RETAINING WALL DETAILS									0	2	0
RETAINING WALL SUMMARIES									0	1	0
RETAINING WALL STANDARDS									0	1	0
TRAFFIC CONTROL PLAN:											
TCP, DETOURS AND SEQUENCE OF CONSTRUCTION	2	8	8		4	4	8	4	38	1	38
OVERALL PHASING LAYOUT	2	8	16		16	8	8	2	60	2	30
ADVANCE SIGNING LAYOUTS	2	2	8		16	16	40	1	85	2	43
TCP PHASE 1	8	8	24		24	40	60	2	166	5	33
TCP PHASE 2	8	8	24		24	40	60	2	166	5	33
TCP TYPICAL SECTIONS	2	2	8		16	16	32	2	78	2	39
TCP DETAILS	2	2	8		8	16	32	1	69	2	35
TCP STANDARDS	2	2	4		8	0	8	1	25	20	1
SUMMARY SHEETS FOR TCP QUANTITIES	2	2	8		4	4	8	1	29	1	29
PRELIM TRAFFIC CONTROL WORKSHOP	8	8	16		8	8	0	1	49	0	N/A
COMPUTE & TABULATE QUANTITIES	4	4	40		8	8	0	1	65	0	N/A
ILLUMINATION:											
SAFETY LIGHTING DESIGN									0		N/A
ILLUMINATION LAYOUTS									0		
ILLUMINATION DETAILS									0		
ILLUMINATION SUMMARIES									0		
ILLUMINATION STANDARDS									0		
UTILITY COORDINATION:											
UTILITY MEETINGS	24	24	24		40	8	8	2	130		
CONSTRUCTION COST ESTIMATE (30%, 60%, 90%, 95% & FINAL)	8	8	40		24	16	0	4	100	0	N/A
GENERAL NOTES, SPECIFICATIONS AND PROVISIONS	2	16	24		8	4	0	1	55	0	N/A
CONSTRUCTION TIME DETERMINATION	2	16	24		8	8	0	1	59	0	N/A
PS&E PLAN SET SUBMITTAL (30%/60%/90%/95%/FINAL)	8	8	16		16	16	40	1	105		
HOURS SUB-TOTALS	92	124	304	0	252	228	344	29	1373	55	
CONTRACT RATE PER HOUR	$274.94	$246.74	$200.92	$169.20	$144.52	$137.47	$112.79	$102.22			
TOTAL LABOR COSTS	$25,294.48	$30,595.76	$61,079.68	$0.00	$36,419.04	$31,343.16	$38,799.76	$2,964.38	$226,496.26		
SUBTOTAL (FC 163)									**$226,496.26**		

TASK DESCRIPTION	PROJECT MANAGER	SENIOR ENGINEER	PROJECT ENGINEER	PROJECT DESIGNER	SENIOR ENGINEER TECH	EIT	CADD OPERATOR	CLERICAL	TOTAL LABOR HRS. & COSTS	NO OF DWGS	LABOR HRS PER SHEET
BRIDGE DESIGN (FC 170)											
PROVIDE EXHIBITS AND DATA FOR BRIDGE DESIGN (by SIRRUS)	8	8	24	0	24	70	0	1	135		
									0		
HOURS SUB-TOTALS	8	8	24	0	24	70	0	1	135	0	
CONTRACT RATE PER HOUR	$274.94	$246.74	$200.92	$169.20	$144.52	$137.47	$112.79	$102.22			
TOTAL LABOR COSTS	$2,199.52	$1,973.92	$4,822.08	$0.00	$3,468.48	$9,622.90	$0.00	$102.22	$22,189.12		
SUBTOTAL (FC 163)									**$22,189.12**		

DESCRIPTION								TOTAL MH BY FC	TOTAL COSTS BY FC
PROJECT MANAGEMENT (FC 164)								1224	$278,591.32
ROADWAY DESIGN CONTROLS (FC160)								935	$140,877.06
DRAINAGE (FC161)								1,510	$226,378.48
SIGNING, PVMT. MARKING, & SIGNAL (FC162)								283	$41,582.28
MISCELLANEOUS (ROADWAY) (FC 163)								1,373	$226,496.26
BRIDGE DESIGN (FC 170)								135	$22,189.12
SUBTOTAL LABOR EXPENSES								5460	**$936,114.52**
OTHER DIRECT EXPENSES	**QUANTITY**	**RATE**	**UNIT**						
Mileage (# of miles) (0.550)	1,500	$0.545	MI						$817.50
Courier Services	6	$30.00	EACH						$180.00
Photocopies 8.5x11	1,000	$0.10	EACH						$100.00
Photocopies 11x17	2,500	$0.25	EACH						$625.00
Plot (Color on Bond)	0	$3.50	SF						$0.00
Mylars 11x17	0	$4.00	SHEET						$0.00
CD Archive	10	$5.00	EACH						$50.00
SUBTOTAL DIRECT EXPENSES									**$1,772.50**

SUBCONTRACTS:	
Murillo (Geotech)	$0.00
SWCA (Environmental)	$0.00
Weisser Engineering (Surveying)	$0.00
Sirrus Engineering (Bridge Design)	$181,590.40
SUBCONTRACT SUB-TOTAL	**$181,590.40**

SUMMARY	
TOTAL COSTS FOR PRIME ONLY(includes multiplier)	$936,114.52
NON-SALARY (OTHER DIRECT EXPENSES)	$1,772.50
SUBCONTRACTS (includes labor costs and direct expenses)	$181,590.40
GRAND TOTAL - PS&E SERVICES	**$1,119,477.42**

ATTACHMENT A
FEE SCHEDULE (SIRRUS)
METHOD OF PAYMENT: LUMP SUM

PRIME PROVIDER NAME: TEDSI
CONTRACT NUMBER:
PROJECT NAME: SH99 Southbound Frontage Road
PROJECT LIMITS: Westheimer Parkway to Fry Road

TASK DESCRIPTION	PROJECT MANAGER	SENIOR ENGINEER	DESIGN ENGINEER	SENIOR TECH	SENIOR CADD	CLERICAL	TOTAL LABOR HRS. & COSTS	NO OF DWGS	LABOR HRS PER SHEET
PROJECT COORDINATION (FC 164)									
PROJECT COORDINATION/MANAGEMENT	48	72					120	N/A	
BRIDGE DESIGN (FC170)									
BRIDGE 1 (Willow Fork Crossing)									
Bridge Layout (1 sheet)	4	8	40		20		72	1	
Typical Section (1 sheet)	1	2	20		20		43	1	
Foundation Layout (1 sheet)	1	2	20		20		43	1	
Boring Logs (2 sheets)	1	2	10		10		23	2	
Abutment Plan, Elevation & Details (3 sheets)	4	8	60		60		132	3	
Bent Plan, Elevation & Details (2 sheets)	2	4	40		40		86	2	
Framing plan (1 sheet)	1	2	40		10		53	1	
Slab Plan (1 sheet)	1	2	20		20		43	1	
Slab Details (1 sheet)	1	2	20		20		43	1	
Beam design (1 sheet)	1	2	40		10		53	1	
Bearing seat elevations & Quantities (1 sheet)	0	0	40		10		50	1	
BRIDGE 2 (Little Prong Crossing)									
Bridge Layout (1 Sheet)	4	8	40		20		72	1	
Typical Section (1 sheet)	1	2	20		20		43	1	
Foundation Layout (1 sheet)	1	2	20		20		43	1	
Boring Logs (2 sheets)	1	2	10		10		23	2	
Abutment Plan, Elevation & Details (3 sheets)	4	8	60		60		132	3	
Bent Plan, Elevation & Details (2 sheets)	2	4	40		40		86	2	
Framing plan (1 sheet)	1	2	40		10		53	1	
Slab Plan (1 sheet)	1	2	20		20		43	1	
Slab Details (1 sheet)	1	2	20		20		43	1	
Beam design (1 sheet)	1	2	40		10		53	1	
Bearing seat elevations & Quantities (1 sheet)	0	0	40		10		50	1	
Bridge Special Provisions and Specifications (each bridge)	0	0	20				20		
Standard Drawings	0	0	20				20		
HOURS SUB-TOTALS	82	140	740	0	480	0	1442		
CONTRACT RATE PER HOUR	$270.00	$180.00	$156.00	$120.00	$131.10	$0.00			
TOTAL LABOR COSTS	$22,140.00	$25,200.00	$115,440.00	$0.00	$62,928.00	$0.00	$225,708.00		
SUBTOTAL (FC161)							**$225,708.00**		

OTHER DIRECT EXPENSES	QUANTITY	RATE	UNIT				
Mileage (# of miles) (0.58)	1,000	0.58	MI				$580.00
Courier Services	20	$25.00	EACH				$500.00
Photocopies 8.5x11 (Report 2 copies for TxDOT and TEDSI, one for Willfork & FBCDD)	2,000	$0.10	EACH				$200.00
SUBTOTAL DIRECT EXPENSES							**$1,280.00**

SUMMARY	
TOTAL LABOR EXPENSES (includes multiplier)	$225,708.00
NON-SALARY (OTHER DIRECT EXPENSES)	$1,280.00
GRAND TOTAL	**$226,988.00**

THE MURILLO COMPANY

Geotechnical & Environmental Consultants

10325 Landsbury, Suite 400 • Houston, Texas 77099-4299 • (281) 933-9702 • Fax (281) 933-1051

March 25, 2021

TEDSI Infrastructure Group
738 Hwy 6 South, Suite 430
Houston, Texas 77079

Attn: Mr. Jules M. (Jay) Morris, Jr., PE

Re: **Geotechnical Investigation**
Fort Bend County 2020 Bond Program, Precinct 3
State Highway 99 SB Frontage Road
from Westheimer Parkway and Fry Road
Fort Bend County, Texas

The Murillo Company (TMC) is pleased to submit this proposal to TEDSI Infrastructure Group for construction of a new Frontage Road, two (2) Bridges and underground utilities for the above captioned project. The proposed facilities were discussed with Mr. Jay. Morris, Jr., P.E. in detail to prepare a Geotechnical Investigation that would provide the necessary design and construction data.

INTRODUCTION

Approximately 5,000 ± linear feet of paving and drainage improvements will be reconstructed along State Highway 99 (Grand Parkway) southbound Frontage Road in Fort Bend County, Texas. The specific project improvements are as follows:

a. Frontage Road

New concrete pavement will be constructed along the Frontage Road. It is our understanding that the proposed roadway will be concrete pavement with curbs and gutters, and the Client will provide the traffic loading in a form of Equivalent Single Axial Load (ESAL).

b. Storm Sewer Lines

Storm Sewer Lines will consist of concrete pipes and/or box culverts. It is our understanding that the basic construction techniques for the storm sewer construction will be Open Cut or Augering.

c. Bridges

There will be two (2) Bridge crossings along the Frontage Road. It is our understanding the Bridges will be supported by Drilled Footings.

d. Retaining Walls

It is our understanding Retaining Walls may be used to separate the main lanes from the Frontage Road.

SCOPE OF WORK

The scope of work will be in general accordance with Texas Department of Transportation (TxDOT) requirements.

The scope of our work will consist of conducting a Geotechnical Investigation for the alignment. **TMC** will develop design recommendations with respect to design and construction of the drainage system, paving improvements, and Bridge foundations along the Frontage Road. In addition, **TMC** will develop recommendations on open excavations, pavements and construction considerations.

GEOTECHNICAL EXPLORATION

Field exploration will consist of the following:

Surveying - The Client will establish and provide **TMC** the boring coordinates and ground surface elevations. **TMC** will stake the boring locations in the field so that the survey crew can locate them. The Client will provide right of entry to the project site.

Site Access - Due to sloping topography along the Frontage Road, all borings will be drilled using an All Terrain Vehicle (ATV) Drill Rig.

Locating Utilities - **TMC** will contact and coordinate with Texas 811 to have utility lines marked. **TMC** suggests a subsurface utility investigation using Ground Penetrating Radar (GPR) be added to our Scope of Work at boring locations to insure that underground utilities are not encountered during field exploration.

Drilling and Sampling - Subsurface exploration at the site will consist of drilling twelve (12) undisturbed sample core borings along the Frontage Road to evaluate the soil stratigraphy and ground water conditions. The proposed borings are shown on the following Table.

BORING NUMBER	DEPTH
Borings B1 thru B4 and B9 thru B12	30 feet
Borings B5 thru B8	80 feet

The approximate boring locations are shown on the attached Boring Plan.

Soil samples will be obtained continuously at boring locations from existing ground surface to twenty (20) feet, and at five (5) feet intervals thereafter to the full depth explored. Standard Penetration Tests (SPT) will be performed in sands, if encountered, and the clays will be sampled by a Shelby Tube at five (5) feet intervals. Shear strengths of the clays will be measured in the field with a hand penetrometer and laboratory unconfined compression tests. All boreholes will be backfilled with on-site soils after drilling and sampling.

Groundwater - The borings will be drilled dry to determine existing ground water conditions, and the depth at which ground water is encountered will be recorded.

Piezometers - **TMC** recommends six (6) piezometers be installed to a depth of thirty (30) feet along the Frontage Road. Water table data will be recorded at 24 hours, 48 hours, 7 days and 28 days.

LABORATORY TESTING

Laboratory tests will be performed on selected soil samples to evaluate soils design parameters for the proposed project. It is anticipated that the tests will include hand penetrometer, unconfined compression, unit weight, moisture content, liquid and plastic limit tests, gradation, and hydrometers.

TMC will conduct additional detailed testing for slope stability analysis of the embankment. These tests will consist of Consolidated Undrained (Cu) Triaxial Tests with pore pressure measurements.

All tests will be performed in general accordance with American Society of Testing Materials (ASTM) Procedures, and soils samples classified in general accordance to ASTM Standards.

ENGINEERING ANALYSIS AND REPORTING

The field and laboratory data will be analyzed and presented in an engineering report. Design analysis and recommendations will include:

General - A summary will include geology, generalized soil stratigraphy and ground water levels including piezometer levels in the six (6) piezometers. Pictures of the site will be presented along with Boring Logs per TxDOT Wincore.

Bridge - Recommendations for design of the two (2) Bridges. Drilled footings foundation recommendations will be provided with installation recommendations and estimated drilled footing settlements. Pier capacity curves as a function of depth and lateral pier soil design parameters for L-pile analysis will be presented.

Pavement - Concrete pavement design will be provided using American Association of State highway and Transportation Officials (AASHTO) 1993 Pavement Design Method. The Client will provide traffic loading in the form of ESAL. Soil stabilization requirements for the pavement will also be included.

Underground Utilities - Recommendations for the design of storm sewers including bedding requirements, dewatering, and trench safety. Construction requirements to include trench excavations and backfilling, including ground water effects and dewatering considerations.

Also included will be soil types available from excavations and use of these soils as fill material. OSHA soil classification for the trench safety and trench construction and safety requirements will be provided.

COST ESTIMATE

Based on the scope of work outlined above, **TMC** estimates the cost for field, laboratory, and engineering services based on Harris County Fee Schedule to be as shown on the attached Summary Cost Estimate.

This estimate is based on the site being accessible to an ATV Drill Rig, and that all boring elevations and locations will be provided by the Client prior to completion of **TMC**'s draft report. All field and laboratory test data will be submitted on TxDOT boring logs.

The cost estimate for geotechnical services assumes that underground obstructions will not be encountered during drilling that requires boring relocation(s). It is the responsibility of the Client to identify the location of underground utilities prior to drilling and sampling. **TMC** is not responsible for damage to underground utilities, man-made objects, etc. **TMC** will contact Texas 811 and City of Houston Department of Public Works for the presence of underground utilities. However, Texas 811 does not have information regarding the presence of underground utilities inside the properties. We request that the Client provide **TMC** with the location of underground utilities. The scope of our work does not include subsurface utility investigation.

Upon completion of the investigation, one (1) hard copy and one (1) digital copy (pdf format) of the draft and final report will be provided. Additional report copies will be provided at a separate charge.

TIME SCHEDULE

TMC estimates that the field work can be started immediately after authorization is received.

The project schedule will be as follows:

	Number of Working Days			
Utility Clearance	Field Exploration	Lab	Engineering	Total
5	8	25	37	75

Our report will be submitted to the Client in a draft form for comments. Once these reviews are completed, a final report will be issued. The Client agrees that all reviews are complete once a notice for a final report is issued. Any changes to the final report will be outside the scope of our study. We will incorporate any future comments after the final report is issued on a time and materials basis per the applicable fee schedule.

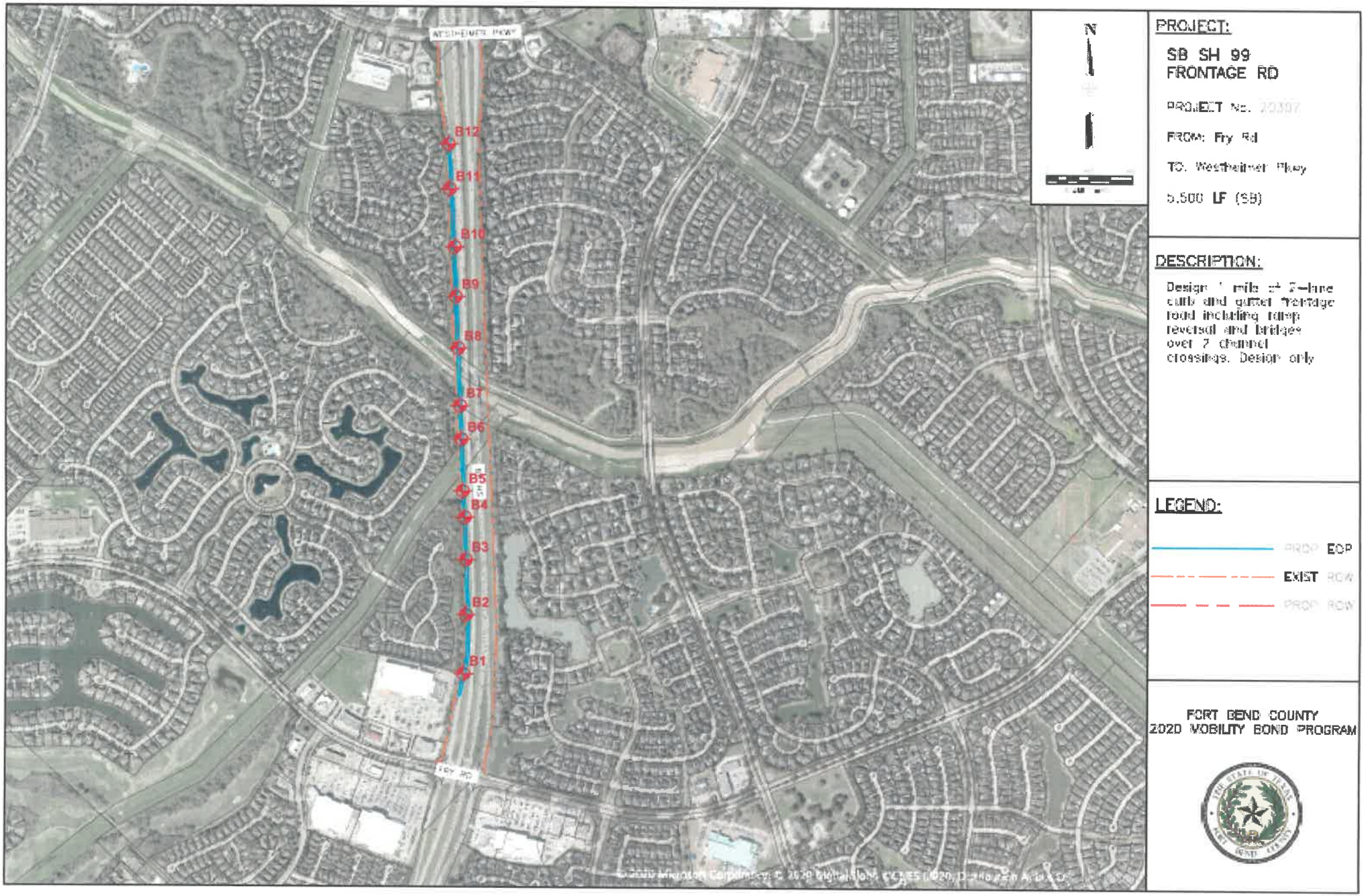
We appreciate the opportunity to submit the proposal for Geotechnical Services to TEDSI Infrastructure Group. This investigation will be authorized upon the execution of our attached agreement for Geotechnical Services, by an authorized representative for TEDSI Infrastructure Group. We look forward to your acceptance of this proposal.

Very Truly Yours,

Donna Murillo

Donna Murillo
Executive Vice President

Texas Board of Professional Engineers Registration No. F-2911


WESTHEIMER PKWY
B12
B11
B10
B9
B8
B7
B6
B5
B4
B3
B2
B1
FRY RD
N
PROJECT:
SB SH 99
FRONTAGE RD
PROJECT No. 20307
FROM: Fry Rd
TO: Westheimer Pkwy
5,500 LF (SB)
DESCRIPTION:
Design 1 mile of 2-lane curb and gutter frontage road including ramp reversal and bridges over 2 channel crossings. Design only
LEGEND:
PROP EOP
EXIST ROW
PROP ROW
FORT BEND COUNTY
2020 MOBILITY BOND PROGRAM

THE MURILLO COMPANY

Geotechnical & Environmental Consultants

10325 Landsbury, Suite 400 • Houston, Texas 77099-4299 • (281) 933-9702 • Fax (281) 933-1051

SUMMARY COST ESTIMATE

SH 99 South Bound Frontage Road from Westheimer Parkway and Fry Road

	Borings	Depth	Total, Feet
Drilling	4	80	320
	8	30	240
			560

	Depth	Price	Feet	Cost
Drilling Cost	0 to 50	$20	340	$ 6,800.00
	50 to 100	$24	60	$ 1,440.00

	Days	Price	
Mob/Demob	8	$500	$ 4,000.00

	Depth	Price	
Piezometer	180	$24	$ 4,320.00

	Depth	Price	
Grouting	180	$12	$ 2,160.00

	Depth	Price	
Plugging Piezometer	380	$20	$ 7,600.00

	Hours	Price	
*Lab			$ 46,620.00
Engineer	36	$250	$ 9,000.00
Project Manager	56	$115	$ 6,440.00
Admin	16	$70	$ 1,120.00

Total Cost = $ 89,500.00

*Lab includes, Slope Stability, Embankment, CU Triaxial, Consolidation, Atterberg Limits, Hydrometers, UC Test, Moisture

SWCA®
ENVIRONMENTAL CONSULTANTS
Sound Science. Creative Solutions.

Houston Office
10245 West Little York Road, Suite 600
Houston, Texas 77040
Tel 281.617.3217 Fax 281.617.3227
www.swca.com

February 8, 2021

Jay Morris
Vice President
TEDSI Infrastructure Group, Inc.
738 Hwy 6 South, Suite 430
Houston, TX 77079

Re: Proposal/Cost Estimate for Environmental Services Related to SH99 Grand Parkway Southbound Frontage Road Project – Westheimer Parkway to S. Fry Road, Fort Bend County, Texas

Dear Mr. Morris:

Thank you for allowing SWCA Environmental Consultants (SWCA) the opportunity to submit this proposal and cost estimate to TEDSI Infrastructure Group, Inc. (TEDSI) for environmental services for the proposed Grand Parkway (SH 99) South Bound Frontage Road (SBFR) Project (project) located in Fort Bend County, Texas. Fort Bend County is the project sponsor and will follow Texas Department of Transportation (TxDOT) Local Government Project Procedures. The project extends from Westheimer Parkway to S. Fry Road (approximately 1.3 miles) and crosses Buffalo Bayou. SWCA proposes to team with IDCUS to provide air and noise support services. SWCA and IDCUS will represent the same team as currently engaged on the Segments 1 and 2 SH 99 SBFR projects.

It is our understanding the project would include the addition of three new frontage lanes adjacent to the existing Grand Parkway. The travel lanes would be 12- to 14-feet wide, partly within existing TxDOT right of way (ROW) and may require acquisition of a sliver of land from adjacent landowners. The project also includes sound barriers and interchange adjustments with ramp reversals. Drainage will be determined during design and is expected to be within existing ROW. The environmental process is to follow TxDOT standards and it is anticipated that the project would be environmentally cleared as a Categorical Exclusion (CE). SWCA has prepared the following scope of work to address the CE with potential for an Environmental Assessment (EA) and to fit into the TxDOT Environmental Compliance and Oversight System (ECOS) for environmental clearance.

SCOPE OF WORK

TASK 1: TXDOT ENVIRONMENTAL COMPLIANCE

SWCA will coordinate with TxDOT for ECOS entry. ECOS replaces the previously utilized Project Scoping Form and CE Determination Form. SWCA anticipates up to 10 calls with TxDOT to work the project through the system. Forms and reports to be updated to be specific to the project are addressed in separate tasks and include the following.

- Air Quality Technical Report (see Task 2 below)

- Hazardous Materials Initial Site Assessment (ISA) (see Task 3 below)
- Traffic Noise Analysis Technical Report (see Task 4 below)
- Public Involvement (see Task 5 below)
- Impact Assessment (see Task 6 below)
- Water Resources (see Task 7 below)
- State and Federal Protected Species (see Task 8 below)
- Cultural Resources (see Task 9 below)
- Recreational Resources (see Task 10 below)

SWCA proposes to provide an electronic copy of the draft CE and supporting documentation to TEDSI for review. Once comments are received, SWCA will incorporate comments and upload into ECOS. TxDOT Environmental Division would have ultimate approval of the CE determination.

TASK 2: AIR QUALITY SERVICES

IDCUS will prepare a qualitative air quality analysis in accordance with the current version of the TxDOT Air Quality Handbook (May 2017) and the Air Quality Toolkit (Jan. 2021). The project is located within the Houston-Galveston-Brazoria (HGB) Nonattainment/Maintenance Area. Fort Bend County is currently in nonattainment for Ozone. The qualitative analysis will include:

- A statement indicating that the county where the project is located is not in attainment of all National Ambient Air Quality Standards (NAAQS).

- A statement indicating whether or not the project has been included in, and is consistent with, the current Regional Transportation Plan (RTP). If it is not consistent with the RTP, Fort Bend County will provide information about the status of the project's inclusion in the RTP.

- A statement that Annual Average Daily Traffic (AADT) projections for the project do not exceed the 140,000 Vehicles Per Day (VPD) threshold standard.

- Standard construction emissions disclosure language.

- Qualitative Mobile Source Air Toxics (MSAT) analysis.

- Congestion Management Process (CMP) analysis (provided by Fort Bend County).

- Applicable disclosure statements in the environmental document as prescribed in the TxDOT Guidance for Preparing Air Quality Statements (SOP) (August 2020).

- If required, IDCUS will complete the TxDOT Transportation Conformity Report Form (210.01.FRM, Nov. 2015).

- The Air Quality Analysis will be documented and presented in an Air Quality Technical Report/Memo.

One electronic copy of the Air Quality Technical Report/Memo will be provided to TEDSI for submission. IDCUS will respond to two rounds of review comments.

TASK 3: HAZARDOUS MATERIALS INITIAL SITE ASSESSMENT

SWCA will prepare a TxDOT Hazardous Materials Initial Site Assessment (ISA) Report including review and summary of the following information:

- Current and historic aerial and topographic maps.
- Sanborn Fire Insurance Maps, if available.
- Current and historic land use information.
- Regulatory database search.
- Oil/gas well database search.
- Site reconnaissance results.

SWCA will compile the hazardous materials ISA form with the CE.

TASK 4: TRAFFIC NOISE ANALYSIS, MODELING, & WORKSHOP

IDCUS will prepare a traffic noise analysis and a traffic noise technical report in accordance with the TxDOT Traffic Noise Toolkit (Jan. 2021) and the TxDOT Traffic Noise Guidelines (Feb. 2019). The traffic noise analysis will include:

- A project site investigation to identify adjacent land use and document representative receivers potentially impacted by traffic noise from the proposed project and may benefit from feasible and reasonable noise abatement measures.
- Validation of the Traffic Noise Model (TNM) existing noise model with field noise measurements performed at representative noise receivers located adjacent to the proposed project. Field noise measurements will be conducted in accordance with TxDOT noise policy and guidance. As part of the TNM model validation process, the noise analysis will include one noise measurement with simultaneous traffic counts at up to two receptor locations for model verification purposes. Documentation consisting of noise monitoring results, traffic counts, and comparisons to the existing TNM noise model will be included in the traffic noise analysis technical report and project files.
- Determination of existing and predicted (future) noise levels for representative receivers with TNM v2.5.
- Identification of impacted receivers in accordance with the absolute and relative impact criteria.
- Consideration and evaluation of required noise abatement measures for impacted receivers in accordance with the feasible and reasonable criteria.
- If required, propose noise abatement measures that are both feasible and reasonable.
- If required, determine predicted (future) noise impact contours for transportation activities where there is adjacent undeveloped property where residential or commercial development is likely to occur in the near future.

- The Traffic Noise Analysis will be documented in a Traffic Noise Technical Report/Memo.

TNM files and one electronic copy of the Traffic Noise Technical Report/Memo will be provided to SWCA for submission. IDCUS will respond to two rounds of review comments.

SWCA and IDCUS will each provide one representative to attend or participate virtually in up to three practice meetings and three workshops for proposed noise abatement options.

SWCA prepare will prepare the meeting notification including a link to the project website and publication in 2 local newspapers. SWCA will prepare posters and handouts for the meeting in electronic format. Printing of these materials is not included.

TASK 5: PUBLIC INVOLVEMENT

SWCA will work with TEDSI and TxDOT to conduct a public meeting and provide response to comments. SWCA has included scope for a public meeting that can be adapted to a virtual meeting (if necessary) consistent with the TxDOT Public Involvement Handbook (March 2020).

Public Meeting

SWCA will assist with development of one public meeting for the project. SWCA will prepare the meeting notification including a link to the project website and instructions for participants. The notice will be published in 3 local newspapers, including a major newspaper (the Chronicle), a local paper (the Katy Times of Fort Bend Herald), and one Spanish-printed paper. Up to two SWCA and one IDCUS staff representatives will attend up to three internal meetings and one dress rehearsal at the district office, and up to 10 conference calls to go over the public meeting materials. SWCA will prepare up to 10 posterboards, 4 sign-in sheets, and 5 maps and 1 handout for the meeting. SWCA coordinate translation of materials into Spanish with TxDOT. SWCA will address up to 20 public involvement comments in conjunction with the project design team.

Should it be determined that the public meeting cannot be held in person, SWCA will assist with development of one virtual public meeting for the project. SWCA will prepare the meeting notification including a link to the project website and instructions for participants. The notice will also be published in local newspapers as described above. SWCA will provide a host and moderator for technical support during the meeting in addition to SWCA project staff. SWCA recommends pre-recording the meeting and launching the recorded version at the assigned public meeting time. The recording will be posted on the project website for a minimum of 15 calendar days during the comment period. Two SWCA and one IDCUS staff will attend up to 10 virtual meetings to review the meeting materials, two practice sessions and one virtual meeting.

Notice Affording Opportunity for Public Hearing (NAOPH)

SWCA anticipates clearance of the project as a CE, Open-Ended (d) list project based on the inclusion of noise barriers. SWCA will prepare one NAOPH for the project. The notice will identify the lead agency responsible for environmental review and describe the proposed project. SWCA will provide the NAOPH by email to state and local agencies and mail the NAOPH to abutting landowners. SWCA will also submit the NAOPH for publication in a newspaper of local circulation.

TASK 6: IMPACT ASSESSMENT

Community Impacts Assessment (CIA)

SWCA will update the CIA Technical Report Form for the project consistent with the Federal Highway publication, Community Impacts Assessment: A Quick Reference for Transportation (Publication No. FHWA-PD-96-036). The evaluation will include an assessment of the effects of the proposed project on the surrounding community and its quality of life. The assessment will also include items of importance to people, such as mobility, safety, employment effects, relocation, isolation, and other community issues.

Indirect and Cumulative Impacts

SWCA will update the Risk Assessment for Indirect Impacts for the project. The assessment includes seven questions with "yes", "no" or "unknown" checkboxes. The answer to each checkbox determines if you proceed to the next question. The purpose of the assessment is to determine if an indirect impacts analysis is required for the proposed project. The results of the assessment stated that an indirect impacts analysis was required. Supporting text will be added to the bottom of each question in order to bolster the findings of each question.

SWCA will complete a Risk Assessment for Cumulative Impacts for the project. The assessment includes three questions with "yes" or "no" checkboxes. The answer to each checkbox determines if you proceed to the next question. The purpose of the assessment is to determine if a cumulative impacts analysis is required for the proposed project. The results of the assessment stated that a cumulative impacts analysis was required. Supporting text will be added to the bottom of each question in order to bolster the findings of each question.

TASK 7: WATER RESOURCES

Water Resources Technical Report

SWCA will perform a surface water analysis in ECOS to determine appropriate water resources technical reports. The project crosses Buffalo Bayou and a tributary; therefore, SWCA will conduct a wetland and waterbody delineation in accordance with the U.S. Army Corps of Engineers' 1987 Wetlands Delineation Manual (Manual) and subsequent 2010 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region. The delineation will identify potential waters of the United States (WOTUS), including wetlands and waterbodies, within the proposed project corridor. SWCA will prepare Waters of the U.S. Delineation Report for the project.

Section 404/10 Impacts Determination and Permitting

SWCA will review the project design to determine the need for a Section 404/10 permit from the U.S. Army Corps of Engineers (USACE). It is anticipated that the project will qualify for Nationwide Permit (NWP) 14 for linear transportation projects and that the bridge carrying the frontage roads will span Buffalo Bayou with abutments placed above the high-water mark and no discharges into special aquatic sites, including wetlands. Such placement will qualify for self-verification of NWP 14 without pre-construction notification (PCN). SWCA will prepare a memo to document how the project meets the appropriate conditions. Should project activities result in any wetland impacts, or stream impacts greater than 0.1 acre, a PCN will be required. Impacts greater than 0.5 acre will not qualify for NWP 14. SWCA can provide separate scope and cost estimate should the impact thresholds be exceeded and a PCN or other permit be required.

TASK 8: STATE AND FEDERAL PROTECTED SPECIES

SWCA will perform a species analysis in ECOS and prepare a Biological Evaluation for Informal Consultation with the U.S. Fish & Wildlife Service (USFWS) and Tier I Site Assessment for the project. SWCA anticipates review of the following:

- Aerial map (with delineated project boundaries).
- USFWS Information for Planning and Consultation (IPaC) report.
- Texas Parks and Wildlife Department (TPWD) County Threatened or Endangered Species list.
- Texas Natural Diversity Database (TXNDD) rare resources report.
- Marine Mammal Protection Act (MMPA) Analysis.
- Essential Fish Habitat (EFH) Analysis.
- Natural Resources Conservation Service (NRCS) Web Soil Survey Map.
- Farmland Protection Policy Act (FPPA) documentation, if applicable.
- Ecological Mapping System of Texas (EMST)-MOU Project Area Map and Summary Table.

SWCA will utilize the USFWS IPaC, TXNDD, and TPWD threatened and endangered species information obtained for Fort Bend County, Texas as described above to develop the species consultation for the project.

TASK 9: CULTURAL RESOURCES

SWCA will conduct a review of the project limits for archeological sites and cemeteries and non-archeological historic properties in compliance with Section 106 of the National Historic Preservation Act (NHPA) and the Antiquities Code of Texas (ACT).

For archeological sites and cemeteries, an SWCA archaeologist will perform an on-line search of the project area and a 0.6-mile (1 kilometer) radius on the Texas Archeological Sites Atlas (TASA), a restricted database maintained by the Texas Historical Commission (THC) and Texas Archeological Research Laboratory (TARL). This source provides information for previously recorded surveys and historic or prehistoric archaeological sites in or near the project area. In addition to identifying previously recorded archaeological sites, the TASA review includes the following types of information: National Register of Historic Places (NRHP) properties, State Antiquities Landmarks (SALs), Official Texas Historical Markers, Registered Texas Historic Landmarks, cemeteries, and local neighborhood surveys. Additional sources of information utilized will include historical aerial photographs and topographic maps and the Texas Historic Overlay. Bureau of Economic Geology Maps, and the Natural Resources Conservation Service (NRCS) Web Soil Survey will also be examined for historical and environmental information related to the project area.

SWCA will utilize the background literature and records review to prepare an Archaeological Background Study of the project area. This report will document the methodology used in the investigation and the presence and condition of any previously recorded sites and/or surveys revealed in the literature review. The report will also identify the potential for these resources to affect the current development and determine management recommendations to satisfy applicable Federal or State cultural resource laws. No field investigations are anticipated.

SWCA will provide a draft report to TEDSI for review and approval, followed by a final report incorporating comments and suggestions. The report can be used for planning purposes and, if necessary,

submitted to the USACE Galveston District and THC for review and concurrence with SWCA recommendations. A 30-day, or roughly 5-week, timeframe is assumed for THC review.

Additionally, SWCA conducted a preliminary review for non-archeological historic properties in compliance with the NHPA and the ACT. No buildings were identified in the project corridor during the historic period. However, historic aerials show that Buffalo Bayou had been lined with concrete by 1958, which could require investigation into the significance of the infrastructure. SWCA will complete a Project Coordination Request (PCR) for Historic Studies in ECOS to determine the significance of the Bayou.

TASK 10: RECREATIONAL RESOURCES

SWCA will identify and evaluate potential impacts resulting from the direct use of the proposed project on any publicly-owned parks, recreation areas, or wildlife and waterfowl refuge lands in the project area to ensure compliance with Section 4(f) of the Department of Transportation Act of 1966. SWCA has identified a trail that follows along Buffalo Bayou. Listed as Buffalo Bayou Nature Trail, the trail is located on the north bank of the bayou and provides connections into surrounding neighborhoods. SWCA preliminarily consulted with the Texas Parks and Wildlife Department and determined that no properties protected under Section 6(f) Land and Water Conservation Fund (LWCF) Act or Chapter 26 of the Texas Parks and Wildlife Code are located within the project area. SWCA will verify this determination once project plans are available.

SWCA will assist the County to consult with the officials with jurisdiction (OWJ) to determine the significance of properties considered for Section 4(f) protection, the magnitude of project impacts to protected properties, and the appropriate level of mitigation if needed. Since the nature trail is a potential Section 4(f) property, SWCA will prepare a textual and graphic description of the Section 4(f) property boundaries, significant features, and position in relationship to the project area for OWJ consultation. SWCA will also complete the required checklist to determine where an exception applies and/or whether the proposed project will use a Section 4(f) property. If the project will constitute a use of Section 4(f) property, SWCA will assist the County to avoid impacts or seek a *de minimis* impact determination through consultation with the OWJ. If impacts are *de minimis*, then SWCA will complete a *de minimis* checklist with appropriate documentation. Consultation efforts with the OWJ will be documented in the NEPA document. SWCA assumes the project would not result in the use or take of significant Section 4(f) properties that would require an Individual 4(f) Evaluation. If an Individual Section 4(f) Evaluation is required, a separate scope and cost estimated would be provided.

TASK 11: PROJECT MANAGEMENT, MEETINGS

SWCA will attend weekly project calls for up to 50 weeks and provide a monthly progress report for 18 months for the Project. SWCA will also attend up to 5 meetings for the project.

ASSUMPTIONS

- SWCA assumes that the project will ultimately be classified as a CE and will not require preparation or publication of a Finding of No Significant Impact (FONSI).
- SWCA assume up to 10 calls with TxDOT to work the project through ECOS.
- TEDSI will provide coordination with TxDOT and/or assist with coordination where delegated to SWCA for development of the CE and analyses.

- TEDSI will provide all project documents such as schematic plan and profile, digital design files, GIS shapefiles, CAD files necessary for TNM, traffic data for existing and the design year.
- SWCA assumes that each report prepared in tasks 2 through 10 above will be provided to TEDSI for one round of review prior to submittal to TxDOT.
- A title search is not included in the Hazardous Materials ISA. A separate cost estimate at $350/parcel can be included if requested.
- This scope does not include lead-based paint or asbestos surveys.
- Traffic data necessary to complete the air quality analysis will be provided by Fort Bend County or Engineer.
- The project has a 24-hour future traffic volume of less than 140,000 vehicles, it is anticipated that only a qualitative analysis would be required for the proposed project. The qualitative analysis would provide information on national Mobile Source Air Toxics (MSAT) emission trends.
- Since the project is not located within a carbon monoxide (CO) or particulate matter (PM) nonattainment or maintenance area, the project is anticipated to be exempt from Hot Spot Analysis and CO Traffic Air Quality Analysis.
- If required, a Congestion Management Process (CMP) analysis will be provided by Fort Bend County.
- Coordination with TxDOT to determine noise measurement location will be required.
- Two IDCUS staff will perform site investigation and site field measurements for noise.
- Traffic data necessary to complete the traffic noise analysis for existing and predicted (future) years, including Average Daily Traffic (ADT), k-factor or Design Hourly Volumes (DHV), fleet mix, and directional split or line diagrams, will be provided by Fort Bend County or TEDSI.
- Previous modeling of project or adjacent projects, such as the TxDOT SH 99 mainlane project will be provided by TEDSI or TxDOT.
- Changes to the traffic noise model and technical report/memo for revised traffic numbers or other factors is not included.
- Detailed barrier design will require additional analysis and is not included in the current scope and fee.
- Two SWCA and one IDCUS staff will attend one public involvement event or participate in one virtual public involvement event. Meeting security and materials translation are to be provided by others.
- Cost estimate assumes addressing up to 20 public involvement comments.
- One SWCA and one IDCUS team member will attend up to 15 project coordination meetings in the Houston area, 10 with the Design Team and 5 with TxDOT.
- Structures carrying SH 99 SBFR will span Buffalo Bayou and the Buffalo Bayou Trail without wetland, stream or trail impact.
- Costs and scope do not include the development of a wetland permit or mitigation plan. Separate scope and cost estimate can be provided if project activities result in any wetland impacts, or stream impacts greater than 0.1 acre and permitting and mitigation is required.
- Cost includes up to 2 hours of agency (USFWS and TPWD) coordination as the proposed action is anticipated to have no effect on listed species, or no listed species are present.
- No agency meetings will be required.

- Cultural resource investigations are limited to online analysis, thus no costs are provided for archaeological field investigations or non-archeological historic properties viewshed or other indirect effect field studies. A change order would be required, if the agencies require field investigation.
- Costs for additional surveys due to changes in the project area outside the initial field survey efforts are not included in this estimate.
- No protected 4(f), 6(f), or Chapter 26 properties would be impacted by the project.

COST ESTIMATE SUMMARY

SWCA will conduct authorized tasks described in this proposal on a time and materials basis, not to exceed $190,550. Invoicing will be once per month. We can begin the project immediately upon execution of a contract and notice to proceed.

Table 1. Cost estimate by task.

TASK	DESCRIPTION	COST
1.	TxDOT Environmental Compliance	$4,400
2.	Air Quality Analysis	$9,700
3.	Hazardous Materials Initial Site Assessment	$5,000
4.	Traffic Noise Analysis, Modeling & Workshops (includes site and publication fees costing $27,600)	$82,350
5.	Public Involvement (includes site and publication fees costing $9,900)	$36,150
6.	Impact Assessment	$3,500
7.	Water Resources	$4,850
8.	Biological Resources	$2,800
9.	Cultural Resources	$4,000
10.	Recreational Resources	$8,650
11.	Project Management, Meetings	$29,150
	TOTAL (includes $37,500 in newspaper ads and fees)	**$190,550**

If you have any questions or require any additional information, please contact me at 281.617.3217 or patricia.riley@swca.com. Thank you for the opportunity to assist with this project.

Sincerely,

SWCA Environmental Consultants

Patricia Riley
Senior Project Manager, Natural Resources

WEISSER Engineering & Surveying

TBPLS Reg. No. 10194324
TBPE Reg. No. F-68

PROPOSAL AGREEMENT FOR PROFESSIONAL SERVICES

Effective Date: March 17, 2021

Jules Morris, Jr.
TEDSI Infrastructure Group, Inc.
738 Hwy 6 South, Suite 430
Houston, TX 77079
832-619-1017
jmorris@tedsi.com

Proposal for Professional Services in Connection With: Grand Parkway (SH 99) Southbound Frontage Road Project – Westheimer Parkway to S. Fry Road, Fort Bend County, Texas

Weisser Engineering & Surveying is pleased to submit this proposal and terms of service (together, the "Agreement") to TEDSI Infrastructure Group, Inc. (the "Client").

I. SCOPE OF SERVICES

Surveying and Mapping
The Surveyor shall evaluate the existing ROW envelope and make recommendations for the acquisition of ROW necessary for the Project including but not limited to roadway, corner cuts, sight distance triangles, detention, and outfalls, if necessary. The Surveyor shall establish a project baseline based on the centerline of the right-of-way. The Surveyor shall create an available existing utility list (Excel Format) including the type, owner, location, and contact information for available existing utilities within the project limits to be supplied to the Engineering Consultant to complete the identification of potential utility conflicts. The Surveyor shall sign and seal all survey documents.

The specific survey limits are as follows:
The linear topographic and right-of-way survey along Grand Parkway (SH 99) Southbound Frontage Road beginning 800 feet south of Westheimer Parkway and 600 feet south of Fry Road for an approximate total of **5,500 linear feet**. (As Shown on the Attached Aerial Image)

1. **Existing Right of Way Mapping (Cat. 1B; Cond. II)**
    a. Perform abstract survey; obtain deeds of records, and plats for Grand Parkway (SH 99) right-of-way, streets intersecting Grand Parkway (SH 99) and tracts of land adjoining Grand Parkway (SH 99).
    b. Establish the existing right-of-way of Grand Parkway (SH 99).
    c. Prepare existing Right-of-Way Map of the Project certifying to a Cat. 1B, Cond. II Right-of-Way Survey to be delivered in PDF format.
    d. Prepare Survey Control Sheet(s) for the project to be delivered in PDF format.

    COST: $32,100.00 (non-taxable)

2. **Topographic Surveying for Grand Parkway (SH 99) Southbound Frontage Road and Intersecting Roadways (Cat 6; Cond. II)**

    The Surveyor will provide the following within the surveying limits described in Task 2:

a. Utilize horizontal and vertical project control established and provided by Texas Department of Transportation.
b. For the roadway and ditches, obtain cross-sections at 100-foot intervals with grade breaks. Cross-sections shall extend 20 feet beyond the proposed right-of-way lines where accessible. Identify locations and elevations of physical features to include buildings, fences, walls, trees (trunk diameter, drip line, and type), sidewalks, driveways and driveway curbs, power poles, light poles, water meters, water wells, ponds, sprinklers, off-site drain pipe, etc. Horizontally and vertically locate available existing utilities within, crossing, and adjoining project limits. Utilities will be located and tied based on visual evidence and utilities based on maps, plans, and marked by "One Call" within the project limits, flow line elevations, sizes, material types and directions of pipes will be obtained on storm sewer lines, sanitary sewer lines and culverts. The rim (top) and flow line elevations will be obtained on inlets, manholes, and drainage structures.
c. The Surveyor will coordinate with pipeline companies, municipal utility districts (MUDs), homeowner's associations (HOA's), Fort Bend County, and private utility agencies to obtain locations of available existing utilities and depths of existing pipelines and provide Level B Subsurface Utility Surveying.
d. Survey geotechnical bore hole locations as indicated by Client and provide information to Client in an approved digital format.
e. Prepare existing Topographic Survey Map of the Project certifying to a Cat. 6, Cond. II Topographic Survey to be delivered in PDF format.
f. The 3D topographical survey base map and digital terrain model (DTM), surface triangular irregular network (TIN) will be created and delivered for the existing roadway using Geopak and Microstation.

COST: $36,085.00 (non-taxable)

3. **Subsurface Utility Engineering (Level B) Utility/Pipeline Investigations**
The Survey shall perform such investigations, research, and other activities necessary to identify any potential utility/pipeline conflicts with the Project, including but not limited to:
    a. Locating and identifying available existing utilities/pipelines including casings and vent pipes within the existing and proposed rights-of-way, including obtaining information from utility owners record drawings and site reconnaissance, as well as shooting elevations marked or uncovered by others, and providing Subsurface Utility Engineering Level B effort to locate all available subsurface utilities within the existing and proposed right-of-way.
        - Level B – Two dimensional (x,y) information obtained through the application and interpretation of non-destructive surface geophysical methods. Also known as "designating", this quality level provides the horizontal position of subsurface utilities within approximately one foot.

COST: $7,800.00 (non-taxable)

4. **Additional Services**
    a. **Parcel Surveys (Cat. 1A; Cond. II)** - Prepare metes and bounds descriptions in accordance with Fort Bend County guidelines for property acquisition and add parcels to the existing right-of-way maps.

COST: $1,500.00 per parcel (**non-taxable**)
(Approximately 5 Tracts = $7,500.00)

    b. Subsurface Utility Engineering (Level A) Pothole Investigation
    COST: 0 to 5 feet - $1,200.00 per excavation (non-taxable)
    5 to 10 feet – $1,500.00 per excavation (non-taxable)

10 to 15 feet – $1,800.00 per excavation (non-taxable)
15 to 20 feet - $2,300.00 per excavation (non-taxable)

(Note: $5,000 threshold must be met to cover cost of excavation equipment)

Survey field crew charge per day to collect the data from potholing.
COST: $2,100.00 (non-taxable)

II. TERMS AND CONDITIONS

1. This Agreement may only be modified by a writing acknowledging agreement of modification by both parties.
2. The Responsible Party signing this Agreement agrees to be fully responsible for the timely and complete payment for Services within thirty (30) days of invoicing. Any requests for modification of this provision must be signed by an officer or department director of Weisser Engineering & Surveying.
3. Weisser Engineering & Surveying is an independent contractor. Nothing in this Agreement forms a partnership, joint venture, employment, franchise, master-servant, or agency relationship between Client and Weisser Engineering & Surveying.
4. WEISSER ENGINEERING & SURVEYING SHALL ONLY BE LIABLE FOR DAMAGE OR LOSS TO ANY PERSON OR PROPERTY TO THE EXTENT SUCH DAMAGE OR LOSS IS CAUSED BY WEISSER ENGINEERING & SURVEYING'S NEGLIGENT ACT OR OMISSION IN CONNECTION WITH THE SERVICES. WEISSER ENGINEERING & SURVEYING'S LIABILITY TO CLIENT OR ANY OTHER PARTY FOR CLAIMS OF ANY KIND, WHETHER BASED ON CONTRACT OR TORT OR OTHERWISE RELATING TO THIS AGREEMENT, SHALL NOT EXCEED THE COMPENSATION PAID OR OWED TO WEISSER ENGINEERING & SURVEYING FOR SERVICES UNDER THIS AGREEMENT.
5. Client shall not solicit Weisser Engineering & Surveying employees for purposes of employment during the course of the Agreement or for a period of twelve (12) months thereafter. Client acknowledges and agrees that breach of this provision may result in irreparable and continuing damage to Weisser Engineering & Surveying, for which there would be no adequate remedy at law, and that, in the event of such breach, Weisser Engineering & Surveying may be entitled to equitable or injunctive relief and/or a decree for specific performance, in addition to all such other and further relief as may be available at law, in equity, or otherwise.
6. Upon request, Weisser Engineering & Surveying may make electronic files of its CAD drawings available to Client on an "as is" basis for informational purposes only that may not be relied upon for any other purpose. ALL WARRANTIES AND REPRESENTATIONS OF ANY KIND WITH REGARD TO ELECTRONIC FILES ARE DISCLAIMED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR USE. Since revisions or additions to design file drawings may occur at any time, Client agrees to indemnify, defend and hold harmless Weisser Engineering & Surveying, its officers, directors, agents, shareholders, and employees from and against any and all claims, suits, losses, damages or costs, including reasonable attorney's fees, arising from the use of outdated or amended design file drawings by Client or any third party, and such indemnification shall survive acceptance of said file(s) by Client or the termination of this Agreement. Client promises to notify any third party that the third party may not reasonably rely on electronic files, drawings, or documents not directly provided to such third party by Weisser Engineering & Surveying.
7. This Agreement shall be deemed entered into in Texas and shall be governed by and construed and interpreted in accordance with the laws of the State of Texas, without reference to any rules of conflict of laws. Venue shall be in Houston, Harris County, Texas.
8. In the event that any one or more of the provisions contained in this Agreement shall for any reason be held to be invalid, illegal, or unenforceable in any respect, such invalidity, illegality, or unenforceability

shall not affect any other provisions, and the Agreement shall be construed as if such invalid, illegal, or unenforceable provision had never been contained in it.

9. This Agreement may be executed by facsimile or scanned and electronically transferred signatures. A copy of this Agreement bearing such a signature or signatures shall have the same force and effect as an original agreement with inked original signatures. Once signed, any reproduction of this Agreement made by reliable means (e.g., photocopy, scan, facsimile) is considered an original.
10. Client's failure to sign and return this Agreement to Weisser Engineering & Surveying within fifteen (15) days of Effective Date renders the Agreement voidable by Weisser Engineering & Surveying.
11. Notwithstanding anything to the contrary in this Agreement or any other ancillary documents, Weisser Engineering & Surveying shall not be responsible for delays caused by factors beyond Weisser Engineering & Surveying's reasonable control, including but not limited to delays because of strikes, lockouts, work slowdowns or stoppages, government ordered industry shutdowns, power or server outages, acts of nature, widespread infectious disease outbreaks (including, but not limited to epidemics and pandemics), failure of any governmental or other regulatory authority to act in a timely manner, failure of the Client to furnish timely information or approve or disapprove of Weisser Engineering & Surveying's services or work product, or delays caused by faulty performance by the Client or by contractors of any level. When such delays beyond Weisser Engineering & Surveying's reasonable control occur, Client agrees that Weisser Engineering & Surveying shall not be responsible for damages, nor shall Weisser Engineering & Surveying be deemed in default of this Agreement or any other agreement.

We appreciate the opportunity to provide this proposal. If you have any questions or comments, please do not hesitate to contact John Harvill, SIT (jharvill@weissereng.com).

The Client, by signing below, represents that he or she has the authority to enter into this Agreement, agrees to the terms and conditions in this Agreement, is willing to be the Responsible Party, promises to pay the invoiced amount within thirty (30) days of invoicing, and authorizes Weisser Engineering & Surveying to proceed with the Services as described above.

CLIENT
TEDSI Infrastructure Group, Inc.
By: _____

Printed Name: _____

Title: _____

Date of Acceptance: _____

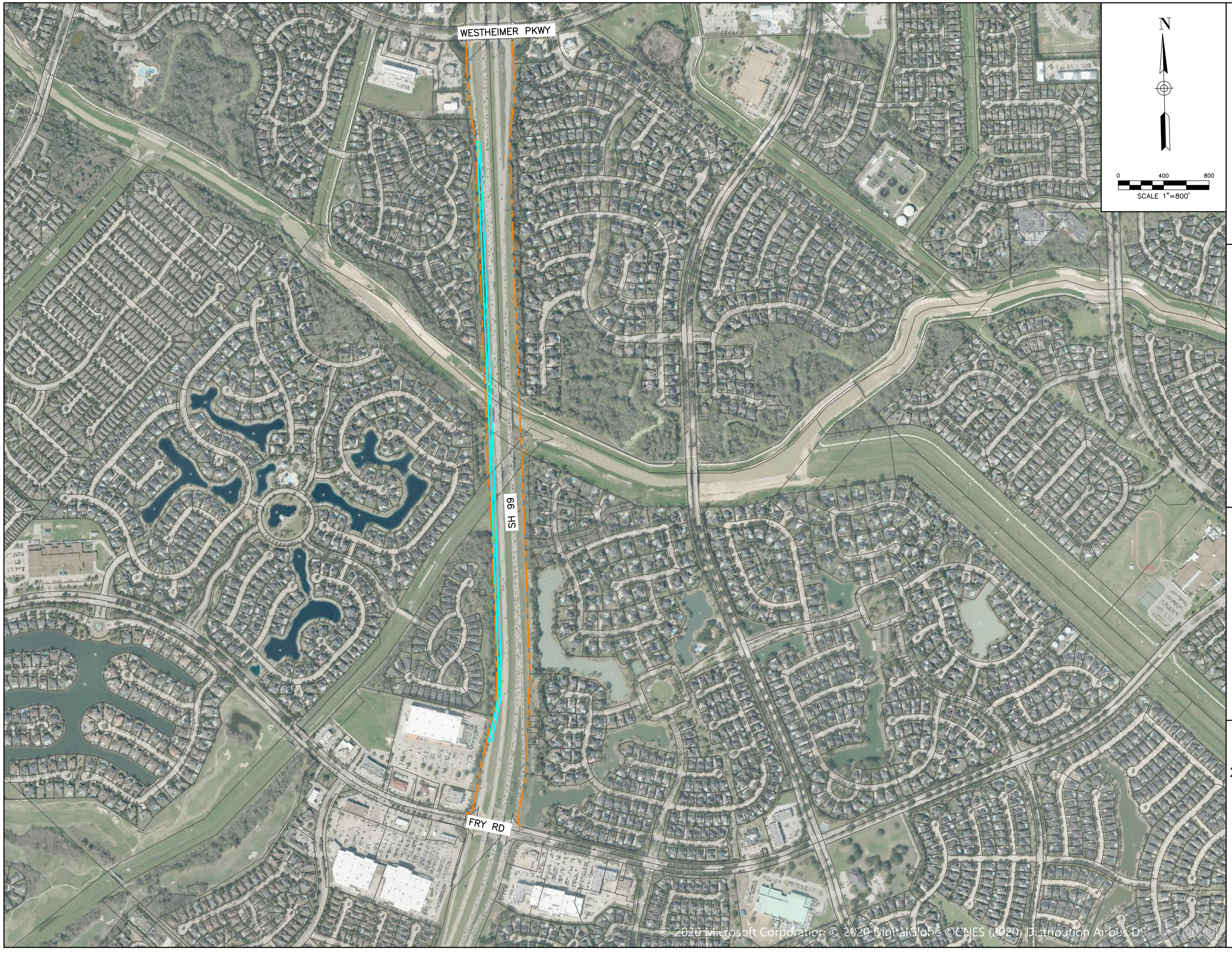
WEISSER ENGINEERING & SURVEYING

By: _____

Printed Name: Walter P. Sass

Title: Principal

Date of Acceptance: 3/17/2021



PROJECT:

SB SH 99 FRONTAGE RD

PROJECT No. 20307

FROM: Fry Rd

TO: Westheimer Pkwy

5,500 LF (SB)

DESCRIPTION:

Design 1 mile of 2–lane curb and gutter frontage road including ramp reversal and bridges over 2 channel crossings. Design only.

LEGEND:

PROP EOP

EXIST ROW

PROP ROW

FORT BEND COUNTY
2020 MOBILITY BOND PROGRAM

THE STATE OF TEXAS · FORT BEND COUNTY ·

T:\2_Projects\300704.00 Fort Bend County 2020 Bond Program\2020 Exhibits\Plans\DWG\Production\20307 SH 99 At Westheimer.dwg

GENERAL DESCRIPTION OF PROJECT

Fort Bend County proposes to design a new southbound frontage road along the west side of SH 99/Grand Parkway from Westheimer Parkway to Fry Road. The proposed project is approximately 1.3-miles in length. Efforts will be taken to develop design solutions within the existing right-of-way (ROW); however, additional ROW is anticipated.

It is understood that the orientation/location of the existing on and off ramps within the project limits will not be changed. Therefore, ramp reversal design is not included in this scope of services. Any ancillary work typically associated with ramp reversal designs (i.e., retaining walls, safety lighting, new guidesigns, etc) is also not included. Finally, it is the express intent to avoid any intersection modifications (including traffic signals) at both Westheimer Parkway and Fry Road. Thus any such design work is omitted from this project.

The “Engineer” shall perform the work in accordance with current and applicable Fort Bend County and TxDOT regulations, policies, standards and guidelines. This proposal describes sources of data needed from other federal, state, and local governmental and quasi-governmental agencies and field investigations in order for the Engineer to complete their work.

A subconsultant to the Engineer on the Project is hereinafter referred to as the “Consultant”.

PART 1 - PRELIMINARY ENGINEERING SERVICES

Function Code 110: Schematic Design and Development

1. Data Collection and Corridor Assessment

1.1. Data Collection

The Engineer shall conduct field reconnaissance and collect data as necessary to complete the schematic design. Data shall include the following information.

- Design data from record drawings of existing and proposed facilities
- Existing and future design year traffic data. Design year traffic data to be provided by others.
- Applicable roadway inventory information, including the number of lanes, speed limits, pavement widths and rating, bridge widths and ratings, and ROW widths
- Aerial photos, planimetric mapping, and DTM (provided by others)
- Environmental Data
- Record plans as available
- Federal Emergency Management Agency (FEMA) Flood Boundary Maps

- Public and private utility information – record maps only, no SUE this phase.

1.2. Develop Base Maps

The base maps to be used for analysis and proposed schematic layout shall be developed by the Engineer from existing construction and right of way (ROW) plans, as available. The Engineer shall identify existing ROW, property owners and the approximate location of major utilities in the preparation of base maps.

1.3. Analyze Existing Conditions

Using collected data and base maps, the Engineer shall develop an overall analysis of the existing conditions in order to develop the schematic design. The analysis shall include, but not be limited to the following:

- ROW determination
- Horizontal alignment
- Profile grades
- Pavement cross slopes and pavement type
- Intersection design and analysis
- Sight distance
- Roadside signing
- Level-of-service
- Locations of critical constraints
- Drainage
- Traffic control and construction phasing sequence

1.4 Geotechnical Borings and Investigations (by Murillo)

The Consultant shall determine the location of proposed soil borings for potential sound walls, ditch slope stability, and along storm drain alignment in accordance with the latest edition of the TxDOT's Geotechnical Manual.

The Consultant shall perform all geotechnical work in accordance with the latest version of TxDOT's Geotechnical Manual. All testing shall be performed in accordance with the latest version of the State's Manual of Test Procedures. American Society for Testing Materials (ASTM) test procedures can be used only in the absence of the State's procedures. All soil classification shall be done in accordance with the Unified Soil Classification System.

The Consultant shall provide a signed, sealed and dated geotechnical report which contains, but is not limited to, soil boring locations, boring logs, laboratory test results, generalized subsurface conditions, ground water conditions, piezometer data, analyses and recommendations for settlement and slope stability of the earthen embankments, skin friction tables and design capacity

curves including skin friction and point bearing. The skin friction tables and design capacity curves must be present for piling and drilled shaft foundation.

The Consultant incorporate soil boring data sheets prepared, signed, sealed, and dated by the Geotechnical Engineer. The soil boring sheets shall be in accordance with the State's WINCORE software as can be found on the TxDOT website.

2. Design Concept Conference

In accordance with the State's Project Development Process Manual, the Engineer, in cooperation with the State, shall plan, attend and document a Design Concept Conference (DCC). In preparation for the DCC, the Engineer shall complete a State's Design Summary Report to serve as a checklist for the minimum required design considerations. The conference will provide for a brainstorming session in which decision makers, stakeholders and technical personnel may discuss and agree on:

- Roadway and drainage design parameters
- Engineering and environmental constraints
- Project development schedule
- Other issues as identified by the State
- Identify any Design Exceptions and waivers
- Preliminary Construction Cost Estimate

3. Conceptual Design Schematics

The Engineer shall develop conceptual design schematics in MicroStation format to evaluate various alignments. Profile work will be done only to the extent necessary to lay out the proper horizontal geometry. The conceptual schematic layouts shall contain the following design elements:

- Roadway alignment
- Pavement edges, face of curbs and shoulder lines
- Typical sections of existing and proposed roadways
- Proposed structure locations
- Preliminary ROW requirements and control-of-access locations
- Direction of traffic flow and the number of lanes
- Existing and projected traffic volumes

4. Geometric Design Schematics

The Engineer shall furnish Microsoft Office and MicroStation V8 or V8i-Geopak compatible computer generated media containing the roadway schematic layout. All supporting attachments and exhibits shall accompany the schematic layout.

Design shall be prepared in accordance with the latest version of TxDOT Advance Project Development Design Schematic Checklist, TxDOT Roadway Design Manual, TxDOT Project Development Process Manual, American Association of State Highway and Transportation Officials (AASHTO), including:

- Roadway alignments for ramps, frontage roads and cross streets
- Pavement edges, curb lines, sidewalks
- Typical sections of existing and proposed roadways
- Structure locations
- Existing and proposed major utilities
- Existing property lines and respective property ownership information
- ROW requirements adequate for preparation of ROW ramps
- Control-of-access limits
- Existing and projected traffic volumes
- Location and text of the proposed guide signs
- Lane lines, shoulder lines, and direction of traffic flow arrows
- Calculated profile grade and vertical curve data including “K” values
- Potential noise barrier locations

4.1. Typical Sections

The Engineer shall develop both existing and proposed typical sections that depict the number and type of lanes, shoulders, median width, curb offsets, cross slope, border width, clear zone widths, bicycle and pedestrian facilities, and ROW limits.

4.2. Environmental Constraints

The Engineer shall consider impacts to environmentally sensitive sites based on approved environmental document prepared by others.

4.3. Drainage Study

The Consultant will prepare, submit, and obtain approval of a Drainage Impact Analysis. This analysis will identify the changes in peak flows due to the proposed roadway improvements and recommend drainage measures to mitigate the impacts associated with the proposed improvements. This study will include the evaluation of the existing storm sewer systems and recommend preliminary size detention basin or an enlarged storm sewer system so as not to impact the receiving streams or the abutting property.

The purpose of this task is to prepare a Drainage Mitigation Impact Analysis Study to determine the 100-year storm impacts resulting from construction of the

project and to develop and analyze alternatives to mitigate these impacts. The following tasks describe the work to be performed:

- Prepare 100-year storm drainage area maps for existing and proposed conditions, which includes the southbound lanes, within the project right of way (ROW) and any off-site areas draining into the ROW.
- Compute existing and proposed peak flows with standard TxDOT methodology within the ROW. The Rational Method will be used to compute these flows for drainage areas less than 200 acres and the Small Watershed Method will be used to evaluate the impacts of the ultimate conditions. HEC-HMS modeling will be used for drainage areas equal to or greater than 200 acres.
- Compute required 100-year storage volumes within the ROW using the average end area method to determine mitigation requirements for the proposed condition versus existing conditions.
- Prepare existing and proposed hydrographs at each outfall location to develop mitigation alternatives to implement the required 100-year mitigation. Alternatives may include increasing storm sewer sizes beyond what is required for the design 10-year storm or improving existing roadside ditches/ or providing a detention site required within the vicinity. The location of the detention site may vary and further analysis depending on the location will be needed.
- Prepare construction cost estimates for mitigation alternatives developed in the previous task to assist in selecting the most cost effective mitigation methods.
- Prepare a Drainage Mitigation Study report to summarize and document the findings of this study. The report will include the following items at a minimum:
    - Conceptual and generic discussions of mitigation alternatives considered
    - Comparative costs associated with each alternative
    - Recommended mitigation solutions
    - Required mitigation volumes of ultimate versus existing conditions
    - Plan sheets showing the proposed mitigation plan with outfall and flowline elevations
    - Hydrologic and hydraulic computer models such as HEC-HMS, HEC-RAS, or XP-SWMM with drainage area maps
    - Drainage outfall descriptions
    - The report will be signed and sealed by a professional engineer.

4.4. ROW Requirements

The Engineer shall provide early identification of the ROW and drainage easement requirements and temporary construction easements, based on the proposed alignment, typical sections, access control, terrain, construction

requirements, drainage, clear zone, maintenance, and any environmental mitigation requirements.

4.5. Traffic Data Collection

The Engineer shall collect or identify required traffic data to supplement the data provided by TxDOT, including:

a) Classification Turning Movement Counts collected from previous studies.
b) Origin Destination Data collected from previous studies.
c) Historical Crash Data: Historical crash data

4.6. Traffic Studies / Signal Warrants

The Engineer shall compute current Level of Service based upon existing traffic counts collected at signalized intersections within the Project. Engineer shall then evaluate future traffic operations with proposed SB 99 Frontage Road added to the roadway network, determine future Level of Service, and make recommendations to address deficiencies as appropriate.

The Engineer shall prepare a traffic signal warrants to support their recommendation for the continuous activation of an existing traffic signal based on existing and projected volumes.

The Engineer shall implement each proposed traffic signal improvement within existing State right-of- way unless otherwise approved by the State. The Engineer shall refer to the TMUTCD (Oct 2014), Traffic Signal Manual, and The State's roadway (ramp) and traffic standards for work performed for either temporary or permanent traffic signals.

5. Cross Sections

The Engineer shall use Geopak to generate preliminary cross-sections every 100 feet in conjunction with the Geometric Schematic. The Engineer shall determine earthwork volumes for use in the cost estimate, and shall prepare roll plots or 11X17 sheets of the cross-sections as required.

6. Preliminary Construction Sequence

The Engineer shall prepare a Preliminary Construction Sequence Layout in conjunction with the Geometric Schematic.

7. Preliminary Cost Estimate

The Engineer shall prepare a preliminary cost estimate for the project, including the costs of construction and eligible utility adjustments. Current State unit bid prices will be used in preparation of the estimate.

8. Engineering Summary Report

The Engineer shall prepare a report to summarize the design criteria, traffic analysis, preliminary cost estimate and basis of estimate, construction sequence description, and utility conflict issues.

9. Deliverables

In conjunction with the performance of the foregoing services, the Engineer shall provide the following draft and final documents and associated electronic files:

- Design Summary Report and Geometric Criteria Table (2 hard copies & PDF)
- Conceptual Design Alternative roll plots and matrix (2 hard copies & PDF)
- Preliminary Construction Sequence (2 hard copies & PDF)
- Preliminary opinion of probable costs for each Conceptual Alternative (PDF)
- Preliminary Drainage Study (2 hard copies & PDF)
- Final Drainage Study (2 hard copies & PDF)
- Geometric Design & Signing Schematic roll plots (2 hard copies & PDF)

Function Code 120: Environmental Documentation – (by SWCA)

1. Project Scope for CE Form

The Consultant shall prepare the TxDOT required *Project Scope for Categorical Exclusions (CEs).* This task includes one set of revisions per the Client and TxDOT Houston District, and one meeting with the Client and TxDOT Houston District to discuss the scoping form. TxDOT Environmental Affairs Division (ENV) must approve the classification of the proposed project as an Open-Ended (d)-list project.

2. Data Collection

The Consultant will collect, review, and evaluate any necessary available and appropriate data pertaining to this proposed project and/or the project area.

3. Right-of-Entry

The Consultant will obtain the names and addresses of adjacent property owners for purposes of right-of-entry letters, public involvement notices, and noise workshops. The Consultant will request and obtain permission to enter their property to conduct environmental investigations.

4. Technical Reports

The Consultant will conduct analyses and prepare technical reports for the following items.

1. Biological
2. Hazardous Materials
3. Community Impacts
4. Indirect and Cumulative Impacts
5. Air Quality
6. Noise
7. Water Resources, including Wetlands
8. Cultural Resources

5. Notice Affording and Opportunity for Public Hearing (NAOPH)

The Consultant will prepare and publish a NAOPH after TxDOT Houston District has determined the CE to be satisfactory for further processing. The NAOPH will be submitted to the Client and TxDOT Houston District for approval prior to publication. The NAOPH will be published in a major newspaper, a local newspaper and a Spanish newspaper.

If requests for a public hearing are received and if the concerns of the requestors cannot be satisfied, the Consultant will coordinate a public hearing, which will be addressed in a supplemental agreement.

6. CE Determination Form

The Consultant shall prepare a draft CE Determination Form, address comments, revise the Form, and produce a final CE form.

7. Conduct Noise Workshops:

A. Conduct Noise Workshops - The Consultant will conduct two noise workshops to present the results of the noise analysis and the details of the proposed noise barriers from the noise mitigation analysis.

B. Prepare Noise Workshop Summary Report - After the two noise workshops have been completed, the Consultant will prepare one draft noise workshop summary report. The completed draft summary report will be submitted for review and approval in electronic format to the Client and TxDOT Houston District.

8. Deliverables

- Project Scope for CE Determination Form (PDF to Client & TxDOT)
- Technical Reports (See Task 5 above) (PDF to Client & TxDOT)
- Noise Analysis (PDF & TNM files to Client & TxDOT)
- Hazardous Materials Assessment (PDF to Client & TxDOT)
- CE Determination Form (PDF to Client & TxDOT)
- Noise Workshop Summary Report (PDF to Client & TxDOT)

Function Code 130: Right-Of-Way Data (by Weisser Engineering and Surveying)

All surveys shall meet the standards set in the Professional Land Surveying Practices Act, the General Rules of Procedures and Practices promulgated by the Texas Board of Professional Land Surveying (TBPLS), and the Texas Department of Transportation (TxDOT) TxDOT Survey Manual, latest edition, and shall be accomplished in an organized and professional manner, subject to the approval of the State.

The Surveyor shall evaluate the existing ROW envelope and make recommendations for the acquisition of ROW necessary for the Project including but not limited to roadway, corner cuts, sight distance triangles, detention, and outfalls, if necessary.

The Surveyor shall establish a project baseline based on the centerline of the right-of-way.

The Surveyor shall create an available existing utility list (Excel Format) including the type, owner, location, and contact information for available existing utilities within the project limits to be supplied to the Engineering Consultant to complete the identification of potential utility conflicts.

The Surveyor shall sign and seal all survey documents.

Specific work scope includes:

Existing Right of Way Mapping will include:

- Perform abstract survey; obtain deeds of records, and plats for Grand Parkway (SH 99) Southbound Frontage Road (Project) right-of-way, streets intersecting Project and tracts of land adjoining Project.
- Establish the existing right-of-way of Project.
- Prepare existing Right-of-Way Map of the Project certifying to a Cat. 1B, Cond. II Right-of-Way Survey to be delivered in PDF format.
- Prepare Survey Control Sheet(s) for the project to be delivered in PDF format.
- Parcel Surveys (Cat. 1A; Cond. II) - Prepare metes and bounds descriptions in accordance with Fort Bend County guidelines for property acquisition and add parcels to the existing ROW maps.

2. Utility Adjustment Coordination

Utility Adjustment Coordination shall include utility coordination meetings with individual utility companies, communication and coordination with utilities,

preparation of utility agreement assemblies including utility agreements, joint use agreements, and advanced funding agreements.

2.1 Utility Coordination

The Utility Coordinator shall perform utility coordination and liaison activities with involved utility owners, their consultants, and the County to achieve timely project notifications, formal coordination meetings, conflict analysis and resolution.

- The Utility Coordinator shall coordinate all activities to facilitate the orderly progress and timely completion of the design phase.
- The Utility Coordinator shall provide initial project notification letters to all affected utility companies, owners, and other concerned parties.
- The Utility Coordinator shall provide a Utility Contact List for each.
- The Utility Coordinator shall advise utility companies and owners of the general characteristics of the Project and provide an illustration of the project footprint for mark-up of the utility facility locations that occupy the project area.

2.2 Utility Agreements for Utility Adjustments

The Utility Coordinator shall coordinate with utilities that conflict with highway construction or the “Utility Accommodation Rules” (UAR), and make the utility company aware of these conflicts. The Utility Coordinator shall assist the utility companies in the preparation of required agreements associated with the funding of adjustments and the occupation of State right of way.

2.3 Review of Utility’s Proposed Adjustments

The Utility Engineer shall evaluate alternatives in the adjustment of utilities balancing the needs of both the State and the Utility.

The Utility Engineer shall review the utility adjustment estimates for reasonableness of cost and the timely scheduling of the adjustment.

The Utility Engineer shall review plans for compliance with Utility Accommodation Rules and proposed location data. The responsibility for quality and accuracy of Utility adjustment plans will remain with the Utility Company.

Function Code 145 / 164: Project Management

1. Progress Reports and Invoices

The Engineer shall conduct monthly project reviews, prepare monthly Progress Reports and Invoices for review and approval. Progress Reports shall include a brief discussion of the activities conducted during the reporting period and activities planned for the upcoming month, and describe any problems/delays encountered and remedial actions needed and/or exercised to alleviate the same.

2. Coordination/Administration

The Engineer shall manage all project activities (including scheduled/unscheduled meetings), maintain the project files, direct Engineer's team/staff.

3. Quality Control/Assurance

The Engineer shall also establish a project specific Quality Management Plan to provide Quality Control and Quality Assurance processes for each deliverable submitted.

4. Sub-consultant Management

The Engineer shall prepare subcontracts/supplemental agreements for sub-consultant(s), monitor sub-consultant activities (staff and schedule), and review and recommend approval of sub-consultant invoices.

Function Code 150: Surveys (by Weisser Engineering and Surveying)

1. **Topographic Surveying**

The Surveyor will provide the following within the surveying limits:

- Utilize horizontal and vertical project control established and provided by TxDOT.
- For the roadway and ditches, obtain cross-sections at 100-foot intervals with grade breaks. Cross-sections shall extend 20 feet beyond the proposed right-of-way lines where accessible. Identify locations and elevations of physical features to include buildings, fences, walls, trees, sidewalks, driveways and driveway curbs, power poles, light poles, water meters, water wells, ponds, sprinklers, off-site drain pipe, etc. Horizontally and vertically locate available existing utilities within, crossing, and adjoining project limits. Utilities will be located and tied based on visual evidence and utilities based on maps, plans, and marked by "One Call" within the project limits, flow line elevations, sizes, material types and directions of pipes will be obtained on storm sewer lines, sanitary sewer lines and culverts. The rim (top) and flow line elevations will be obtained on inlets, manholes, and drainage structures.
- The Surveyor will coordinate with pipeline companies, municipal utility districts (MUDs), homeowner's associations (HOA's), Fort Bend County, and private

utility agencies to obtain locations of available existing utilities and depths of existing pipelines and provide Level B Subsurface Utility Surveying.

- Survey geotechnical bore hole locations as indicated by Client and provide information to Client in an approved digital format.
- Prepare existing Topographic Survey Map of the Project certifying to a Cat. 6, Cond. II Topographic Survey to be delivered in PDF format.
- Topographic survey will supplement TxDOT's aerial flight data.
- The 3D topographical survey base map and digital terrain model (DTM), surface triangular irregular network (TIN) will be created and delivered for the existing roadway using Geopak and Microstation.

2. Subsurface Utility Engineering (Level B) Utility/Pipeline Investigations

The Survey shall perform such investigations, research, and other activities necessary to identify any potential utility/pipeline conflicts with the Project, including but not limited to:

- Locating and identifying available existing utilities/pipelines including casings and vent pipes within the existing and proposed rights-of-way, including obtaining information from utility owners record drawings and site reconnaissance, as well as shooting elevations marked or uncovered by others, and providing Subsurface Utility Engineering Level B effort to locate all available subsurface utilities within the existing and proposed ROW.
- Level B – Two dimensional (x,y) information obtained through the application and interpretation of no-destructive surface geophysical methods. Also known as "designating", this quality level provides the horizontal position of subsurface utilities within approximately one foot.

PART 2 - PS&E SERVICES

SERVICES TO BE PROVIDED BY THE ENGINEER

The work to be performed by the Engineer shall consist of providing engineering services required for the schematic refinement and environmental re-evaluation of the existing schematic and the preparation of plans, specifications and estimates (PS&E) and related documents.

GENERAL REQUIREMENTS

1. Design Criteria

The Engineer shall prepare all work in accordance with the latest version the PS&E Preparation Manual, Roadway Design Manual, Hydraulic Design Manual, the Texas Manual on Uniform Traffic Control Devices (TMUTCD), Standard

Specifications for Construction and Maintenance of Highways, Streets and Bridges.

The Engineer shall supplement criteria established as part of Schematic Design Phase. The Engineer shall update the Design Summary Report (DSR). The Engineer shall obtain written concurrence from the State prior to proceeding with a design if any questions arise during the design process regarding the applicability of State's design criteria.

The Engineer shall prepare design waiver or exception questionnaires as warranted per State guidance. The Engineer shall supply the required justification, facts, and summaries to support the proposed Design Waivers or Exceptions. The Engineer shall make up to two submittals and corresponding revisions of the design exception report.

2. Quality Assurance and Quality Control (QA/AC)

The Engineer shall maintain records of their internal review, as confirmation that the designs are being prepared in accordance with the adopted Quality Plan.

Function Code 145: Project Management

The Engineer, in association with the Project Manager shall be responsible for directing and coordinating all activities associated with the project to comply with policies and procedures, and to deliver that work on time.

1. Progress Reports and Invoices

The Engineer shall conduct monthly project reviews, prepare monthly Progress Reports and Invoices for review and approval. Progress Reports shall include a brief discussion of the activities conducted during the reporting period and activities planned for the upcoming month, and describe any problems/delays encountered and remedial actions needed and/or exercised to alleviate the same.

2. Coordination/Administration

The Engineer shall manage project activities (including scheduled/ unscheduled meetings), maintain the project files, and direct Project Teams and staff.

3. Quality Plan

The Engineer shall establish a project specific Quality Management Plan to provide Quality Control and Quality Assurance processes for Team members.

4. Sub-consultant Management

The Engineer shall manage subcontracts/supplemental agreements for sub-consultant(s), monitor sub-consultant activities (staff and schedule), and review and recommend approval of sub-consultant invoices and progress reports.

Function Code 160: Roadway Design Controls

1. Roadway Design

The Engineer shall provide roadway plan and profile drawings using Computer-Aided Design and Drafting (CADD) standards as required by the State. The plan view shall contain the following design elements:

- Calculated roadway centerlines for mainlanes, ramps, cross streets and frontage roads, as applicable. Horizontal control points shall be shown. The alignments shall be calculated using GEOPAK.
- Pavement edges for all improvements (mainlanes, ramps, cross streets, driveways and frontage roads, if applicable).
- Lane and pavement width dimensions.
- The geometrics of ramps, auxiliary lanes.
- Proposed structure locations, lengths and widths.
- Direction of traffic flow on all roadways.
- Control of access line, & ROW lines and easements.
- Begin/end super elevation transitions and cross slope changes.
- Limits of rip rap, block sod, and seeding.
- Existing utilities and structures.
- Benchmark information.
- Radial call outs, curb location, Concrete Traffic Barrier (CTB), guard fence, crash safety items and American with Disabilities Act Accessibility Guidelines (ADAAG) compliance items.
- Removal items.

The profile view shall contain the following design elements:

- Calculated profile grade for proposed mainlanes, ramps, cross streets and frontage roads, if applicable. Vertical curve data, including "K" values shall be shown.
- Existing and proposed profiles along the proposed centerline of the mainlanes, the outside shoulder line of ramps, and the outside gutter line of the designated frontage roads.
- Water surface elevations at major stream crossing for 2, 5, 10, 25, 50, and 100-year storms.
- Calculated clearances, taking into account the appropriate super elevation rate.

- The location of interchanges, mainlanes, grade separations and ramps (shall include cross sections of any proposed or existing roadway, structure, or utility crossing).

2. Typical Sections

Typical sections shall be required for all proposed and existing roadways and structures.

The Engineer shall provide the design of mainlanes with full shoulders, frontage roads, entrance and exit ramps, managed lanes and auxiliary lanes. The design shall be consistent with the approved refined schematic and the current Roadway Design Manual.

3. Cross Streets

The Engineer shall provide an intersection layout detailing the pavement design and drainage design at the intersection of each cross street. The layout shall include the curb returns, geometrics, transition length, stationing, and pavement and drainage details. The Engineer shall design for full pavement width to the ROW and provide a transition to the existing roadway.

4. Cut and Fill Quantities

The Engineer shall develop an earthwork analysis to determine cut and fill quantities and provide final design cross sections at 100 feet intervals. Cross sections shall be delivered in standard GEOPAK format on 11"x17" sheets or roll plots and electronic files. The Engineer shall provide all criteria and input files used to generate the design cross sections.

5. Plan Preparation

The Engineer shall prepare roadway plans, profiles and typical sections for the proposed improvements.

Function Code 161: Drainage

1. Drainage Design

The Consultant shall provide drainage layouts, drainage area maps, calculations, and design of all drainage components. The Consultant shall design all detention/retention ponds, conventional storm drainage and cross drainage in conformance with the State Hydraulic Design Manual (May 2014), Districts' criteria.

The drainage design will be prepared to provide for the two-lane frontage section. At a minimum the drainage items to be provided shall include the detailed drainage area maps showing the final drainage areas and inlet and storm sewer calculations for revised storm sewer flow elements. All drainage designs shall be prepared in accordance with the findings presented in the Drainage Study. The proposed tasks are listed below:

- Conduct field trips to the Project site to investigate and confirm data and assumptions and assess general drainage conditions as needed;
- Review previous plans and drainage reports prepared by others which relate to drainage in the Project area (to be provided by the PMC);
- Prepare proposed drainage area maps for proposed improvements within the portion of the Project limits stated above;
- Design drainage structures located within the Project ROW, including open ditch drainage, storm sewer, inlets, manholes, subsurface drainage at retaining walls, and inlets/internal drainage piping where required on structures;
- Design and analyze the storm sewer system utilizing the WINSTORM Program and incorporate output to plan set;
- Design and analyze the roadside ditches for the proposed drainage criteria and incorporate results into the plans set on the roadway plan and profile sheets;
- Prepare storm sewer plan/profile drawings and special plan details, where required, for storm sewer system, laterals, junction boxes, etc. Identify potential utility conflicts during project design. Drawings will be prepared on 11” X 17” sheet at horizontal scale of 1”=100’ and vertical scale of 1”=10’; and
- Design cross-culvert extensions, if required, within the Project limits. This task is the extent to which designs and calculations regarding cross-culverts is required. Required drainage work outside the ROW will be performed by others.

Function Code 162: Signing, Pavement Markings and Signalization (Permanent)

1. Signing

The Engineer shall prepare drawings, specifications and details for all project-related signs. The Engineer shall coordinate with the State (and other Engineers as required) for overall temporary, interim and final signing strategies and placement of signs within contract limits.

2. Pavement Marking

The Engineer shall detail both permanent and temporary pavement markings and channelization devices on plan sheets. The Engineer shall coordinate with the State (and other Engineers as required) for overall temporary, interim, and final

pavement marking strategies. The Engineer shall select Pavement markings from the latest State standards.

3. Traffic Signals

Based upon the results of the Traffic Warrant Studies and paving improvements associated with the SB Frontage Road implementation, the Engineer shall identify necessary signal modifications. Traffic all Signal Plans for warranted traffic signals. Based upon current conditions and the Project concept, this design is not intended to provide for full, brand new traffic signal installations. Rather, it should be limited to items such as re-cabling the west halves of both signalized intersections due to potential relocation of signal poles and pedestrian poles, ADA upgrades, etc. Traffic Signal Plans shall be signed, sealed, and dated by a Professional Engineer licensed in Texas. The Engineer shall develop all quantities, general notes, specifications and incorporate the appropriate agency standards required to complete construction.

Function Code 163: Miscellaneous (Roadway)

1. Traffic Control Plan, Detours, Sequence of Construction

The Engineer shall prepare Traffic Control Plans (TCP) for the project. A detailed TCP shall be developed in accordance with the TMUTCD (Oct 2014).

2. Storm Water Pollution Prevention Plans (SW3P)

The Engineer shall develop SW3P, on separate sheets from (but in conformance with) the TCP, to minimize potential impact to receiving waterways. The SW3P shall include text describing the plan, quantities, type, phase and locations of erosion control devices and any required permanent erosion control.

3. Compute and Tabulate Quantities

The Engineer shall provide the summaries and quantities with formal submittals.

4. Estimate

The Engineer shall independently develop and report quantities necessary to construct contract in standard State bid format at the specified milestones and Final PS&E submittals. The Engineer shall prepare construction estimates using Microsoft Excel or in a format directed by the State.

5. Specifications and General Notes

The Engineer shall identify necessary standard specifications, special specifications, special provisions and the appropriate reference items. The

Engineer shall prepare general notes, special specifications and special provisions for inclusion in the plans and bidding documents.

Function Code 170: Bridge Design (By Sirrus)

SH 99 Project improvements consist of design of 1 mile of 2-lane curb and gutter for Southbound frontage between Westheimer Parkway and Fry Road for bridges over 2 channel crossings. The work to be performed by the Engineer under this scope of work consists of providing Structural Bridge design for a 300-ft and 200-ft and a 40-ft wide straight crossing.

1. GENERAL REQUIREMENTS

A. Produce bridge design plans specifications and estimates (PS&E) and prepare construction bid documents.

B. Furnish computer media and computer graphics files in compliance with the Prime Consultant (PC).

C. Submit 30%, 60%, 90%, and final PS&E packages for review by the PC requirements and Program Management Consultant (PMC).

D. Provide Project planning and control to include quality management.

E. Provide an accurate, complete and constructible set of contract documents.

2. BRIDGE DESIGN

Preliminary Design Phase

- Prepare Bridge Conceptual Layout and Section
- Coordinate with Bridge Hydraulics Engineer to help determine span arrangement
- Coordinate with Roadway Engineer to develop bridge section
- Develop letter report with bridge recommendations
- Prepare Cost Estimate

Final Design Phase

- Bridge Layout
- Bridge Typical Section
- Foundation Layout
- Boring Logs
- Abutment Plan, Elevation & Details
- Bent Plan, Elevation & Details
- Framing Plan
- Slab Plan
- Slab Details
- Beam design
- Bearing seat elevations & Quantities
- Bridge Standards
- Prepare Cost Estimate
- Prepare Specifications

3. QUANTITY TAKE-OFFS AND QUANTITY SUMMARIES

Quantities will be determined by the Engineer for the items. These quantities will be included on summary sheets. Quantity calculations should be organized and easily verified by the PC. Sample calculations should be prepared for each submittal for review by the PC. Calculations should be organized by item, clear and concise, and in an electronic format that can be transmitted via e-mail, if necessary.

4. CONSTRUCTION COST ESTIMATE

An estimate of the construction costs will be prepared based on plan quantities in standard TxDOT bid format at the 60%, 90% and final submittal stages of the Project. More detailed and refined quantities will be updated for each successive submittal. All estimates will utilize Fort Bend and TxDOT's historical price data for similar projects.

5. PREPARATION AND SUBMITTAL OF PS&E

A. All submittals will follow the design requirements and provide so that the contract documents can be prepared into the milestone submittals as summarized below:

1) The 30% submittal shall include legible 11”x17” construction drawings in a Portable Document File (PDF) format.

2) The 60% submittal shall include legible 11”x17” construction drawings in a PDF format. Also include, 30% submittal comments addressed, applicable standard drawings shown on the index of sheets, a listing of “Governing Specifications and Special Provisions” and a construction cost estimate.

3) The 90% submittal shall include legible 11”x17” construction drawings in a PDF format. Also include all 60% submittal comments addressed, all applicable standard drawings shown on the index of sheets, a complete set of Engineer-prepared Special Specifications, Special Provisions and Reference Specifications, a listing of “Governing Specifications and Special Provisions”, an edited “Bid Proposal Form” and a construction cost estimate as a PDF.

4) The 100% review submittal shall include legible 11”x17” construction drawings in a PDF format. Also include all 90% submittal comments addressed, all applicable standard drawings shown on the index of sheets, a complete set of Engineer-prepared Special Specifications, Special Provisions and Reference Specifications, a listing of “Governing Specifications and Special Provisions”, an edited “Bid Proposal Form” a construction cost estimate and a signed approval sheet. When requested provide one (1) set of 11” x 17” white mylars.

6. PROJECT MANAGEMENT

The purpose of this task is to provide the overall management of this design contract. Project files will be set up and contact with PC will be maintained.

A. Report and coordinate with PC on any design issues and requests for information.

B. Prepare and submit monthly progress reports and invoices to PC for review and approval. The invoices will include the progress report, invoice, and the schedule – as described above. The progress report will list outstanding issues that need resolution, as well as, progress of the tasks and estimated completion dates for the work.

C. Internal administration of the Project files. At the completion of the work, the Project files will be shipped to the PC.

D. Prepare an overall Project schedule, detailing the progression of the work incorporating information provided by other PTMs involved in this section. This schedule will include review dates by the PC and PMC, submittal dates for deliverables, and estimated time frame to complete the work. The schedule will be updated monthly and included in the progress report. Changes or adjustments in the schedule caused by delays due to unforeseen task difficulties or lengthy review times will be shown and reported to the PC.

E. Attend coordination and interim progress review meetings once per month (or as necessary). Furnish to the PC any draft notes pertaining to the Structural Design.

F. The Engineer will attend the Project “kick-off” meeting held by the PC.

Deliverables - Plans

The Engineer shall provide the following information at each submittal:

1. 30% Plans Submittal
   - 1.1. 8 sets of 11” x 17” plan sheets for Review.
   - 1.2. Estimate of construction cost.
   - 1.3. Engineer’s internal QA and QC markup set.
   - 1.4. Form 1002 and Design Exceptions with existing and proposed typical sections, location map and design exception exhibits.

2. 60% Plans Submittal:
   - 2.1. 8 sets of 11” x 17” plan sets for Review.
   - 2.2. Estimate of construction cost.
   - 2.3. Engineer’s internal QA and QC marked up set.
   - 2.4. One set of a roll format TCP phasing layouts, one .pdf of plan sheets for TCP concept, and significant project procedures form (State Form 2229) to present at the TCAT for TxDOT review.

3. 90% Plans Submittal
   - 3.1. 8 sets of 11” x 17” plan sheets for the Review.
   - 3.2. Estimate of construction cost.
   - 3.3. Marked up general notes
   - 3.4. Construction schedule.

3.5. New Special Specifications and Special Provisions with Form 1814, if applicable.
3.6. Engineer's internal QA and QC marked up set.
3.7. Other supporting documents.

4. District Review Submittal (95%):
   4.1. 8 sets of 11" x 17" plan sheets for the State district review
   4.2. List of governing Specifications and Special Provisions in addition to those required.
   4.3. Marked up general notes.
   4.4. Plans estimate.
   4.5. New Special Specifications and Special Provisions with Form 1814, if applicable.
   4.6. Triple Zero Special Provisions.
   4.7. Engineer sign, seal and date supplemental sheets (8 ½" x 11").
   4.8. Contract time determination summary.
   4.9. Significant project procedures form.
   4.10. Right-of-Way and utilities certification.
   4.11. Temporary road closure letters.
   4.12. Construction speed zone request.
   4.13. Engineer's internal QA and QC marked-up set.
   4.14. Other supporting documents.

5. Final submittal (100%).
   5.1. 8 paper sets of 11" x 17"
   5.2. Revised supporting documents from 95% review comments.

Electronic Copies

The Engineer shall furnish a DVD of the final plans in the format of current CADD system used by TxDOT, and in .pdf format.

SERVICES NOT INCLUDED IN SCOPE OR FEE PROPOSAL

1. CLOMR & LOMR preparation and coordination;
2. Public Hearing;
3. Design of any utilities within project limits;
4. Negotiations with adjacent property owners;
5. Improvement Survey once project is complete;
6. Filing and permit fees;
7. Value engineering studies;
8. Large Signing or new/special sign design;
9. VISSIM Modeling;
10. Design of ramp reversals;
11. Design of pump stations that may be required for detention;
12. Nationwide and Individual 404 Permits;
13. Landscaping, irrigation or hardscape design;
14. Utility Adjustment Coordination.