

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 McDonough Engineering Corporation, (hereinafter "Contractor"), a company authorized to conduct business in the State of Texas.

WITNESSETH

WHEREAS, County desires that Contractor provide professional engineering services for the reconstruction of a two-lane asphalt roadway to a four-lane concrete boulevard with storm sewer from FM 762 to 300 feet south of Reading Road for the Benton Road – Segment 1 Project, Number 17110, under the 2017 Mobility Bond Program (hereinafter "Services") pursuant to SOQ 14-025; and

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

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

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

AGREEMENT

Section 1. Scope of Services

Contractor shall render the professional engineering services, including the preliminary phase, final design phase, and bid and construction phase engineering services for the project as described Contractor's proposal dated April 18, 2018 (revised April 27, 2018) attached hereto as Exhibit A, and incorporated herein for all purposes.

Section 2. Personnel

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

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

Section 3. Compensation and Payment

3.1 Contractor's fees shall be calculated at the rates set forth in the attached Exhibit A. The Maximum Compensation for the performance of Services within the Scope of Services described in Exhibit A is four hundred seventy-two thousand three hundred twenty-two dollars and no/100 (\$472,322.00) as set forth in Exhibit A. In no case shall the amount paid by County under this Agreement exceed the Maximum Compensation without a written agreement executed by the parties.

3.2 All performance of the Scope of Services by 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 four hundred seventy-two thousand three hundred twenty-two dollars and no/100 (\$472,322.00) 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 four hundred seventy-two thousand three hundred twenty-two dollars and no/100 (\$472,322.00).

Section 5. Time of Performance

Time for performance of the Scope of Services under this Agreement shall begin with receipt of the Notice to Proceed and end no later than June 12, 2022. Contractor shall complete

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

Section 6. Modifications and Waivers

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

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

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

Section 7. Termination

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

7.2 Termination for Default

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

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

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

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

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

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

Section 8. Ownership and Reuse of Documents

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

Section 9. Inspection of Books and Records

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

Section 10. Insurance

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

10.1.1 Workers' Compensation insurance. Substitutes to genuine Workers' Compensation Insurance will not be allowed. Employers' Liability insurance with limits of not less than \$1,000,000 per injury by accident, \$1,000,000 per injury by disease, and \$1,000,000 per bodily injury by disease.

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

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

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

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

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

Section 11. Indemnity

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

Section 12. Confidential and Proprietary Information

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

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

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

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

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

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

Section 13. Independent Contractor

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

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

Section 14. Notices

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

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

County:	Fort Bend County Engineering Department Attn: County Engineer 301 Jackson Street Richmond, Texas 77469
With a copy to:	Fort Bend County Attn: County Judge 401 Jackson Street, 1 st Floor Richmond, Texas 77469
Contractor:	McDonough Engineering Corporation Attn: Ranney McDonough, President 5625 Schumacher Lane Houston, Texas 77057

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

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


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

FORT BEND COUNTY

MCDONOUGH ENGINEERING CORPORATION

Robert E. Hebert, County Judge



Ranney McDonough, President

Date

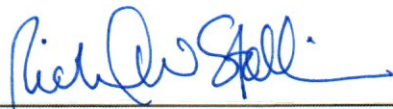
5-9-18

Date

ATTEST:

Laura Richard, County Clerk

APPROVED:



Richard W. Stolleis, P.E., County Engineer

APPROVED AS TO LEGAL FORM:

Marcus D. Spencer, First Assistant County Attorney

AUDITOR'S CERTIFICATE

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

Robert Ed Sturdivant, County Auditor

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EXHIBIT A



McDONOUGH ENGINEERING CORPORATION
Civil Engineers

EXHIBIT "A" SCOPE OF SERVICES

April 18, 2018
(Revised May 5, 2018)

Binkley & Barfield, Inc.
Tommy V. Cromer, P.E.
1710 Seamist Dr.
Houston, TX 77008

RE: Proposal for Professional Engineering Services
Benton Road: From FM 762 to 300' South of Reading Road
Precinct 1
Fort Bend County
MEC Project No. 18110

EXISTING CONDITIONS

The existing 3,600 LF road consists of two lane asphalt pavement with roadside ditches. The project right-of-way is currently 80+/- feet wide with the anticipation that land acquisition will be required to widen to a 100' ROW. The project does not appear to be located in the 100-year floodplain based on the current published FEMA maps. The existing roadway crosses the Burlington Northern Santa Fe Railway (BNSF).

PROPOSED SCOPE

McDonough Engineering Corporation's (MEC) scope for the 3,600 LF road includes the preliminary phase, final design phase, and bid and construction phase engineering services to develop the project PS&E package for the construction of a 4-lane concrete boulevard with storm sewer and detention basin.

Based on our scoping discussions with Binkley & Barfield, Inc (BBI), MEC was advised that a drainage study for the proposed road is not available. MEC will incorporate the Fort Bend County Drainage District requirements into preparation of the PS&E package. A Drainage Impact Analysis Letter Report and a Drainage Detention Mitigation design will be prepared and included with the Preliminary Engineering Report; see attached proposal by BGE.

As requested, the geotechnical report will be prepared in accordance with the current Harris County criteria.

The project will include design and permitting for improvements at the existing BNSF railway crossing to account for roadway widening, to be completed per BNSF design standards.

It is our understanding that any required environmental services will be provided by an independent consultant, not included in this proposal. A stormwater pollution prevention report is not included in this proposal.

No traffic signal design services for Reading Road or FM 762 are included as part of this proposal.

The project schedule will comply with the recommended timeline for projects provided at the February 23, 2018 Consultants Meeting for the 2017 Mobility Bond Program.

BASIC SERVICES

Basic services will generally follow the 2017 Mobility Bond Program Summary of Design Process document, dated February 21, 2018.

Preliminary Design Phase

MEC will prepare a study report documenting the project scope, findings and recommendations for the final design phase that will include a roadway schematic, drainage impact analysis, detention basin location recommendation, and geotechnical report. MEC will attend progress meetings with BBI and prepare a roll plot plan view of the proposed road.

Utilities

Research and obtain record documents for all known existing utilities within the road ROW. MEC will prepare a utility conflict table and update it during the final design phase as needed. MEC will submit milestone-level drawings to the applicable utility companies for their review. It is understood that the county and/or the project management consultant will contact and coordinate all utility adjustments.

Surveying

The following surveying services are included in this proposal and further described in the attached proposal from Jones and Carter:

- Deed Research, including abstracting
- Deed Plot
- Right-of-Entry letters
- Project Control
- Topographic Survey
- Proposed Right-of-Way Maps and Parcels, Category 1A Condition II Survey

Geotechnical

Provide a geotechnical report in accordance with the current Harris County criteria. A total of nine (9) soil borings, seven (7) at 25' depth and two (2) at 30' depth, will be drilled for the proposed road, including one piezometer at 20' depth. A total of five (5) borings at 25' depth will be drilled for the proposed detention pond, after the final location is determined. The geotechnical report will include a description of subsurface conditions, groundwater information, boring logs and pavement recommendations in typical HCED format. See attached proposal by Aviles Engineering Corporation for additional details.

Final Design Phase

MEC will proceed with completion of the PS&E for 70%, 95%, and 100% submittals to BBI. MEC will address comments presented in the Preliminary Design Phase review meeting, and address and/or provide responses to 70% and 95% comments.

Per the 2017 Mobility Bond Program Summary of Design Process document, 70% and 95% submittals shall include cover sheet, typical and non-standard cross-sections, overall project layout, survey control map, drainage area map with hydraulic calculations, plan and profile sheets, water and sewer relocation

plans, traffic control plan, storm water pollution prevention plan, specification table of contents, and bid form with estimated unit and total costs. Three (3) copies of the 70% submittal will be submitted for County review in 11"x17" sheets along with a PDF of the drawings, specifications and estimate.

Additionally, the 95% submittal shall also include general notes sheet, cross sections at 100' intervals, signage and pavement marking plans, standard construction details, project manual, and responses to 70% comments. The 95% physical submittal will be the same as for the 70% submittal.

The 100% submittal shall consist of one sealed and signed set of drawings delivered to the County, along with a PDF submittal of the drawings, specifications, and estimate sent to BBI.

MEC will provide monthly progress reports. It is understood that BBI will obtain utility agency approvals.

Utilities

MEC will identify all known existing utilities on the plan and profiles. MEC will coordinate with BBI's utility coordinator for the project and identify conflicts between the proposed improvements and the existing utilities.

Drainage

Based on our scoping meeting with Binkley & Barfield, Inc. (BBI), MEC was advised that a corridor drainage study for the proposed road is not available and is not part of this proposal. MEC will meet with and incorporate the Fort Bend County Drainage District requirements into preparation of the PS&E package.

Based on the current published FEMA maps the project location is outside of the 100-year floodplain. A FEMA submittal for the project is not included in this proposal. Providing or obtaining a "no impact letter" is not part of this proposal.

Traffic

Prepare construction phase traffic control sheets for lane closures in accordance with the current published criteria for Harris County and TxDOT as applicable. BGE will prepare the construction phase traffic control plans to accommodate the existing traffic during the construction of the proposed road improvements. See attached BGE proposal.

Bid and Construction Phase

Assist BBI with the preparation of the bid phase documents, prepare 27 compact discs with the project manual and construction plans, attend pre-bid meeting, address bidder questions, and prepare addendums.

MEC will attend the preconstruction meeting, provide copies of the construction plans, review contractor submittal and respond to RFIs. Field visits and progress meetings will not be attended unless requested by Fort Bend County. MEC will attend a substantial completion walkthrough meeting, prepare record documents based on the contractor redlines and provide a hard copy to Fort Bend County.

Billing

The preliminary and final design efforts will be a lump sum fee to be billed monthly on a percent complete basis by tasks. Bid and construction phase services will be paid on a time and materials basis with a breakdown of hours spent by personnel in the various employee categories at the approved billing rates.

Proposal for Professional Engineering Services
Benton Road: From FM 762 to 300' South of Reading Road
Precinct 1
Fort Bend County
MEC Project No. 18110
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Invoicing will be per direction provided the 2017 Mobility Bond Program Summary of Design Process document, dated February 21, 2018.

Cost Summary

A level of effort estimate is enclosed based on the scope of work described herein. The Lump Sum Fee amount is \$445,377 and the Hourly Not-To-Exceed Fee amount is \$26,945.00 for a total of \$472,322.00 for the project.

Benton Road - FM 762 to 300' South of Reading Road - Precinct 1
Level of Effort Estimate

5/10/2018

	Proj. Man.	Engineer	Senior Designer	\$K CADD	CADD	Clerical	Fee	Hours per Task	Number of sheets	Total
Phase I - Preliminary Design Phase										
Review Documentation by other consultants (Drainage, Geotech, Surveyor)	8	12	12	0	4	0	\$ 6,280.00	36	N/A	N/A
Coordination with Environmental consultant (Independent of project team)	2	8	0	0	0	0	\$ 1,920.00	10	N/A	N/A
Attend Progress Meetings	8	8	4	0	0	0	\$ 3,960.00	20	N/A	N/A
Topo Site Walk Review	4	4	0	0	0	0	\$ 1,680.00	8	N/A	N/A
Research Documentation for Existing Utilities within ROW	4	4	20	6	20	0	\$ 7,430.00	54	N/A	N/A
Attend Utility Coordination Meetings	8	8	4	0	0	0	\$ 3,960.00	20	N/A	N/A
Prepare 30% plan and profile- proposed plan view only	4	16	40	32	120	0	\$ 25,840.00	212	8	26.5
Prepare Executive Summary Letter	4	12	16	4	4	8	\$ 7,020.00	48	N/A	N/A
QA/QC	3	5	10	2	3	0	\$ 3,670.00	23	N/A	N/A
Address Comments	2	4	8	8	12	6	\$ 5,050.00	40	N/A	N/A
Final Submittal of Letter Report	2	2	6	1	4	2	\$ 2,415.00	17	N/A	N/A
Construction Cost Estimate	2	4	20	0	6	0	\$ 4,800.00	32	N/A	N/A
Phase II - Final Design Phase										
Project Administration	75	2	4	0	0	8	\$ 19,560.00	89	N/A	N/A
Railroad Coordination	16	4	8	0	0	0	\$ 5,760.00	28	N/A	N/A
QA/QC										
Internal QA/QC (3 submittals)	7.5	10	18	9	12	0	\$ 8,625.00	56.5	N/A	N/A
Construction Documents										
Plans										
Cover sheet	0.5	1	1	0	2	0	\$ 650.00	4.5	1	4.5
Index of Sheets	1	1	1	2	2	0	\$ 1,020.00	7	1	7.0
General Notes	1	1	1	2	2	0	\$ 1,020.00	7	2	3.5
Legend	1	1	1	2	2	0	\$ 1,020.00	7	1	7.0
Survey Control Sheets	1	0	1	0	2	0	\$ 590.00	4	4	1.0
Existing Typical Section	1	1	1	4	8	0	\$ 1,870.00	15	1	15.0
Proposed Typical Sections	1	1	1	4	8	0	\$ 1,870.00	15	2	7.5
Storm Sewer Drainage Area Map	1	2	8	4	8	0	\$ 3,100.00	23	1	23.0
Storm Sewer Calculations	1	8	20	16	16	0	\$ 2,800.00	61	2	30.5
Overall Drainage Area Map	1	2	6	4	8	0	\$ 2,800.00	21	1	21.0
Detention Basin	2	1	2	0	2	0	\$ 1,160.00	7	3	2.3
Demolition Plans	1	1	2	8	12	0	\$ 2,920.00	24	1	24.0
Railroad Crossing	2	8	8	0	10	0	\$ 4,120.00	28	1	28.0
Railroad Crossing Details	2	2	6	0	6	0	\$ 2,340.00	16	4	4.0
Plan and Profile (20 scale)	8	20	46	80	124	0	\$ 34,820.00	278	8	34.8
Relocation Plans - Water and Sewer	2	6	8	8	48	0	\$ 8,560.00	72	8	9.0
Details										
Concrete Pavement Details	1	1	1	0	2	0	\$ 770.00	5	2	2.5
Concrete Driveway Details	1	1	1	0	1	0	\$ 670.00	4	1	4.0
ADA Ramp Details	1	1	1	0	1	0	\$ 670.00	4	1	4.0
Storm Sewer Construction Details	1	1	1	0	1	0	\$ 670.00	4	1	4.0
Type "A" Inlet Details	1	1	1	0	1	0	\$ 670.00	4	1	4.0

Benton Road - FM 762 to 300' South of Reading Road - Precinct 1
Level of Effort Estimate

McDonough Engineering Corporation

5/10/2018

	Proj. Man.	Engineer	Senior Designer	Sr. CADD	CADD	Clerical	Fee	Total Hours per Task	Number of sheets	Hour per Sheet
Modified Type "A" Inlet w/ Concrete Apron	1	1	1	0	1	0	\$ 670.00	4	1	4.0
Type "B-B" Inlet Details	1	1	1	0	1	0	\$ 670.00	4	1	4.0
Modified Type "B-B" Inlet Details	1	1	1	0	1	0	\$ 670.00	4	1	4.0
Monolithic Type C, C-1, C-2, and C-2A Inlet Details	1	1	1	0	1	0	\$ 670.00	4	1	4.0
Precast Concrete Storm Sewer Manhole Details	1	1	1	0	1	0	\$ 670.00	4	1	4.0
Junction Box Manhole Detail	1	1	1	0	1	0	\$ 670.00	4	1	4.0
Flexbeam Guardrail Details	1	1	1	0	2	0	\$ 770.00	5	2	2.5
Type III Barricade Details	1	1	1	0	1	0	\$ 670.00	4	1	4.0
Safety End Treatment for 12"-72" Dia. Pipe Culverts	1	1	1	0	1	0	\$ 670.00	4	1	4.0
Traffic Control Plans										
Phasing Layout with General Notes	1	0	0	0	1	0	\$ 340.00	2	1	2.0
Typical Construction Cross-sections	1	0	0	0	1	0	\$ 340.00	2	1	2.0
Advanced Warning Signs Layouts	1	0	0	0	1	0	\$ 340.00	2	1	2.0
Phase One Layouts	1	0	0	0	1	0	\$ 340.00	2	1	2.0
Phase Two Layouts	1	0	0	0	1	0	\$ 340.00	2	1	2.0
Temporary Traffic Signal (Benton at FM 762)	1	0	0	0	1	0	\$ 340.00	2	1	2.0
Storm Water Pollution Prevention Plans	1	1	2	4	8	0	\$ 2,020.00	16	1	16.0
Storm Water Pollution Prevention Plan Details	1	1	1	0	1	0	\$ 670.00	4	1	4.0
Signing and Paving Marking Plans	1	2	4	7	16	0	\$ 3,675.00	30	1	30.0
Pavement Marking Details	1	1	1	0	1	0	\$ 670.00	4	1	4.0
Earthwork Table	2	4	3	4	8	0	\$ 2,950.00	21	2	21.0
Cross Sections	1	2	6	10	20	0	\$ 4,750.00	39	2	19.5
Construction Cost Estimate	1	2	20	2	12	0	\$ 5,050.00	37	N/A	N/A
Project Manual (Bid form, specification TOC, special specs)	2	20	0	0	0	12	\$ 4,980.00	34	N/A	N/A
Phase III - Bid/Construction Phase										
Project Manual (Administrative docs, bid form, TOC, specifications and docs)	2	16	0	0	0	10	\$ 4,110.00	28	N/A	N/A
Pre-bid Meeting	4	0	0	0	0	0	\$ 960.00	4	N/A	N/A
Pre-construction Meeting	3	3	0	0	0	0	\$ 1,260.00	6	N/A	N/A
Construction Submittal Review	1	16	2	0	0	0	\$ 3,420.00	19	N/A	N/A
RFI Responses	1	16	2	0	0	0	\$ 3,420.00	19	N/A	N/A
Field Visits and Progress Meetings	4	10	0	0	0	0	\$ 2,760.00	14	N/A	N/A
Substantial Completion Walk-through	4	0	0	0	0	0	\$ 960.00	4	N/A	N/A
Prepare record drawings	1	3	0	3	12	0	\$ 2,355.00	19	N/A	N/A

Total Hours Phase I - Preliminary Design Phase	51	87	140	53	173	16	Total Hours	520
Rate (\$/HR)	240	180	150	125	100	75	Total Sheets	8

Phase I - Pre-Design Phase Subtotal (Lump Sum) \$ 12,240.00 \$ 15,660.00 \$ 21,000.00 \$ 6,625.00 \$ 17,300.00 \$ 1,200.00 \$ **74,025.00**

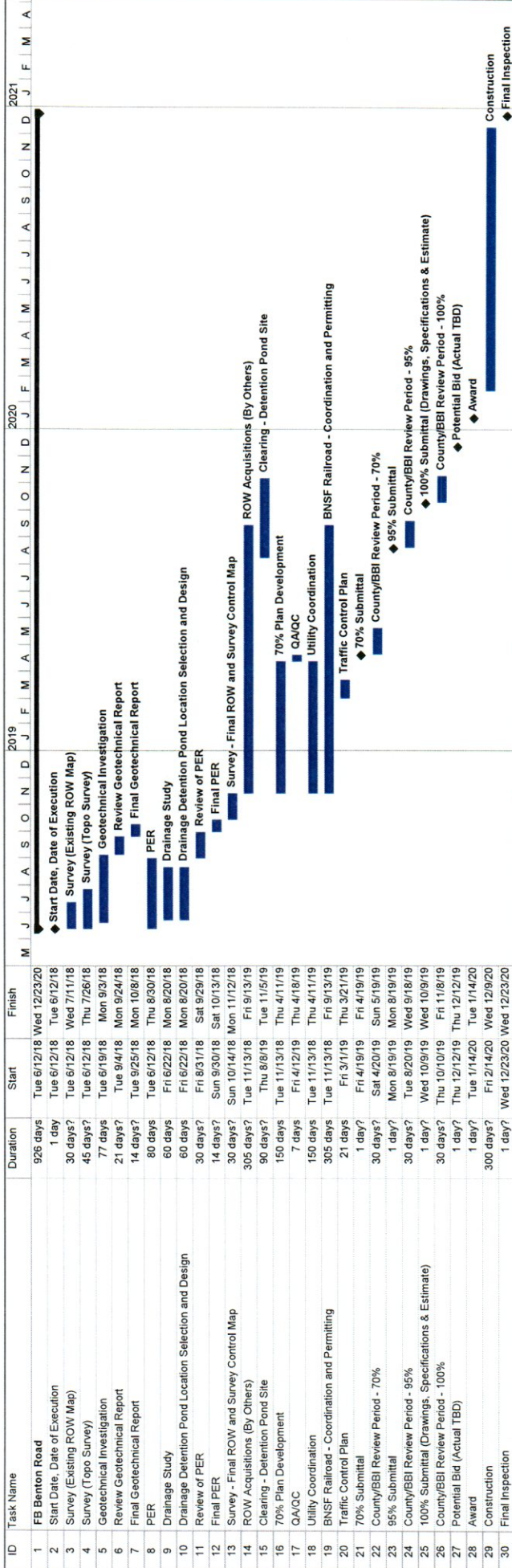
17% 21% 28% 9% 23% 1.6%

Total Hours Phase II - Final Design Phase	155	119	194	170	360	20	Total Hours	1018
Rate (\$/HR)	240	180	150	125	100	75	Total Sheets	81

Benton Road - FM 762 to 300' South of Reading Road - Predinct 1
Level of Effort Estimate

	Proj. Man.	Engineer	Senior Designer	\$/CADD	CADD	Clerical	Fee	Total Hours per Task	Number of sheets	Hour per Sheet
Phase II - Design Phase Subtotal (Lump Sum)										
	\$ 37,200.00	\$ 21,420.00	\$ 29,100.00	\$ 21,250.00	\$ 36,000.00	\$ 1,500.00	\$ 146,470.00			
	25%	15%	20%	15%	25%	1.0%				
Total Hours Phase II - Bid/Construction Phase	20	64	4	3	12	10	Total Hours	113		
Rate (\$/HR)	240	180	150	125	100	75	Total Sheets	81		
Phase III - Bid/Construction Phase Subtotal (Hourly, Not-To-Exceed)										
	\$ 4,800.00	\$ 11,520.00	\$ 600.00	\$ 375.00	\$ 1,200.00	\$ 750.00	\$ 19,245.00			
	3%	8%	0%	0%	1%	0.5%				
Survey - Jones and Carter										
Deed Research							\$ 3,000.00			
Deed Plot							\$ 2,428.00			
Right-of-Entry							\$ 890.00			
Control							\$ 2,687.00			
Topographic Survey Boundary Ties							\$ 25,340.00			
Railroad Flagman							\$ 2,400.00			
Right-of-Way Map for Existing and Proposed Right-of-Way, Metes & Bounds and Survey for Parcels (Cat 1A, Cond. 2 parcel survey, \$2,600.00 each - Budget 5)							\$ 13,000.00			
Survey Subtotal (Lump Sum)							\$ 49,745.00			
Geotechnical Report - Aviles Engineering Corporation										
Roadway							\$ 35,678.00			
Detention Pond							\$ 28,959.00			
Geotechnical Report Subtotal (Lump Sum)							\$ 64,637.00			
Civil Design Services - BGE										
Drainage Design Services (Lump sum)							\$ 51,000.00			
Drainage Construction Phase Services (Hourly, Not-To-Exceed)							\$ 2,000.00			
Traffic Control Plan Design (Lump Sum)							\$ 59,500.00			
TCP Construction Phase Services (Hourly, Not-To-Exceed)							\$ 5,700.00			
Civil Design Subtotal							\$ 118,200.00			
Total Professional Services Budget							\$ 472,322.00			

Anticipated Design Schedule FB Benton Road



Project Schedule
Date: Fri 4/27/18

Task
Split
Milestone
Summary

Project Summary

External Tasks

External Milestone

Inactive Milestone

Inactive Summary

Manual Task

Duration-only

Manual Summary Rollup

Manual Summary

Start-only

Finish-only

External Tasks

External Milestone

Progress

Deadline

Page 1

PROJECT:

BENTON ROAD-SEG.1

PROJECT No. 1-10
FROM: FM 762 to 300' South of
Reading Road
Rosenberg City Limits
3,600 LF

DESCRIPTION:

4-lane concrete boulevard with
storm sewer including
intersection improvements at
FM 762.

FORT BEND COUNTY
2017 MOBILITY BOND PROGRAM





April 12, 2018

Javier Casas, P.E.
McDonough Engineering Corp.
5625 Schumacher
Houston, TX 77057

RE: Benton Rd Segment I – Drainage Design and Traffic Control Plan Design Services

Dear Javier:

This constitutes our proposal to provide professional engineering services to prepare a drainage impact study, the drainage detention mitigation design, the traffic control plan design, and construction phase services for the Benton Road Segment I project in Fort Bend County. Our proposed scope of services and fee are described below.

Scope of Services

BGE will prepare a drainage impact study, the drainage detention mitigation design, the traffic control plan design, and provide construction phase services for the Benton Road Segment I project in Fort Bend County. Benton Road is proposed to be reconstructed from a two-lane asphalt roadway to a four-lane concrete boulevard with storm sewer from FM 762 to Reading Road, and transition from four lanes to two lanes from Reading Road to approximately 300 feet south of Reading Road. The project will need 20 feet of new right-of-way to widen from 80 feet to 100 feet.

Drainage Detention Design

1. Drainage Impact Analysis Letter Report – prepare a drainage impact analysis to include drainage area maps, hydrological computations, hydraulic models and computations, and storm runoff mitigation for roadway improvements described in the scope of work. Mitigation for impervious cover increase will be assessed using the Malcom's Small Watershed Methodology.
2. Drainage Detention Mitigation Design – Evaluate up to 3 alternative detention facility locations, prepare layout and cross sections of detention facility necessary to mitigate the impervious cover adverse impacts from roadway improvements.

Drainage Detention Design Deliverables

- Drainage Impacts Analysis Letter Report
- Detention Layout, Cross Sections, Computations and Details

Traffic Control Plan Design

Prepare the traffic control plans, specifications and estimates for the project consisting of two major construction phases with temporary pavement and a temporary traffic signal at Benton Road at FM 762. The work will include a traffic control plan (TCP) phasing layout with the general notes, typical construction cross-sections, advance warning sign layouts, a traffic construction sequence narrative, phase-one layouts, phase-two layouts, temporary pavement typical section and layout, temporary signal design, TCP details, and quantity and cost estimates.

Fee

Our proposed fee is as follows:

1. Drainage Design Services:	Lump-Sum	\$51,000
2. Drainage Construction Phase Services	Hourly NTE	2,000
3. Traffic Control Plan Design	Lump-Sum	59,500
4. <u>TCP Construction Phase Services</u>	<u>Hourly NTE</u>	<u>5,700</u>
Total Fee		\$118,200

Please find attached our Professional Service Agreement with Attachment A, Standard Terms and Conditions for your review and execution. We will invoice monthly based upon our estimated percent completion of the lump-sum services, and actual hours based on the rates for the hourly not-to-exceed (NTE) amounts, per Attachment B, BGE Fee Estimate.

If you have any questions, please feel free to contact me or Megan Siercks at 281-558-8700.

Sincerely,

I.F. Joskowicz, PhD, PE, PTOE

Isaac F. Joskowicz, PhD, PE, PTOE
Senior Project Manager

Attachments:

BGE Professional Service Agreement

Attachment A: Standard Terms and Conditions

Attachment B: BGE Fee Estimate for Drainage Detention Design and Traffic Control Plan



Professional Service Agreement

Agreement No. _____

THIS AGREEMENT ("Agreement"), made and entered into by and between Brown & Gay Engineers, Inc. (BGE) and the Client identified herein, provides for the Professional Services described under Item 3 of this Agreement.

CLIENT:	<u>McDonough Engineering Corp.</u>	CONTACT PERSON:	<u>Javier Casas, P.E.</u>
ADDRESS:	<u>5625 Schumacher</u>	OFFICE NUMBER:	<u>713-975-9990</u>
	<u>Houston, TX 77057</u>	CELL NUMBER:	<u></u>
	<u></u>	EMAIL:	<u>JavierC@mectx.com</u>

PROJECT NAME: Benton Road Segment I, FM 762 to Reading Road, Fort Bend County

1. **THE AGREEMENT INCLUDES THE STANDARD TERMS AND CONDITIONS which are included in Attachment A.** Client shall authorize and BGE shall commence its services on BGE's receipt of the properly executed and signed Agreement, as may be amended from time to time. If the Agreement is not executed by Client within thirty (30) days of the date tendered, it shall become invalid unless: (1) BGE extends the time in writing; or (2) at the sole option of BGE, BGE accepts Client's written or oral authorization to proceed with the services, in which event the terms of the authorization shall include all the terms of this Agreement. BGE's performance of the services, including Additional Services, under the written or oral authorization shall be in reliance on the inclusion of all the terms of this Agreement.

2. **LOCATION & DESCRIPTION OF PROJECT SITE:** (If additional pages are necessary, they are identified as Attachment B)

Benton Road, from FM 762 to approximately 300 feet South of Reading Road in Fort Bend County, Texas

3. **SCOPE OF SERVICES TO BE PROVIDED BY BGE:** (If additional pages are necessary, they are identified as Attachment B)

Prepare a drainage impact analysis to include drainage area maps, hydrological computations, hydraulic models and computations, and storm runoff mitigation for roadway improvements. Mitigation for impervious cover increase will be assessed using the Malcom's Small Watershed Methodology. Evaluate up to 3 alternative detention facility locations, prepare layout and cross sections of detention facility necessary to mitigate the impervious cover adverse impacts from roadway improvements. Prepare the traffic control plans, specifications and estimates to include a traffic control plan (TCP) phasing layout with the general notes, typical construction cross-sections, advance warning sign layouts, a traffic construction sequence narrative, phase-one layouts, phase-two layouts, temporary pavement typical section and layout, temporary signal design at FM 762, and TCP details.

4. **EXCLUDED AND/OR ADDITIONAL SERVICES:** (If additional pages are necessary, they are identified as Attachment B)

Permanent traffic signal design for Benton Road at FM 762 and Benton Rd at Reading Road, and storm sewer design.



Professional Service Agreement
Agreement No. _____

5. THE COMPENSATION TO BE PAID BGE FOR PROVIDING THE REQUESTED SERVICES: (If additional pages are necessary, they are identified as Attachment B)

1. Drainage Design Services:	Lump-Sum \$51,000
2. Drainage Construction Phase Services	Hourly NTE \$2,000
3. Traffic Control Plan Design	Lump-Sum \$59,500
4. TCP Construction Phase Services	Hourly NTE \$5,700
Total Fee	\$118,200

IN WITNESS WHEREOF, this Agreement is accepted on the date written below and subject to the terms and conditions set forth above and in Attachments.

Brown & Gay Engineers, Inc.

CLIENT: McDonough Engineering Corp.

SIGNED: _____

SIGNED: _____

TYPED NAME: Matt Brannen, P.E.

TYPED NAME: _____

TITLE: Director, Transportation Systems

TITLE: _____

DATE: _____

DATE: _____



Attachment A

Standard Terms and Conditions

Project/Proposal: Benton Road
Client: McDonough Engineering Corp.
Date: 4/9/2018

1. **STANDARD OF CARE:** Professional Services shall be performed in accordance with and limited to the standard of professional practice ordinarily exercised by the applicable profession at the time and within the locality where the Professional Services are performed. Professional services are not subject to, nor can or will Brown & Gay Engineers, Inc. (BGE) provide any warranty or guarantee, express or implied, regarding the Professional Services to be supplied by BGE. Any such warranties or guarantees contained in any purchase orders, requisitions, or notices to proceed issued by Client are specifically objected to and shall not be a part of the agreement. BGE DISCLAIMS ANY AND ALL EXPRESS, STATUTORY AND IMPLIED WARRANTIES INCLUDING, BUT NOT LIMITED TO, IMPLIED WARRANTIES OF FITNESS FOR PARTICULAR PURPOSE, MERCHANTABILITY, AND GOOD AND WORKMANLIKE MANNER.
2. **COMPENSATION:** Direct personnel expense shall be defined as: the cost of salaries and fringe benefit costs related to vacation, holiday, and sick leave pay; contributions for Social Security, Worker's Compensation Insurance, retirement benefits, and medical and insurance benefits; unemployment and payroll taxes; and other allowed benefits of those employees directly engaged in the performance of the requested service.

Reimbursable costs include: fees of Professional Services and out-of-pocket expenses, the cost of which shall be charged at actual costs plus an administrative charge of 10% and shall be itemized and included in the invoice.

Typical out-of-pocket expenses shall include, but not limited to, travel expenses (lodging, meals, etc.). Job-related mileage at the prevailing IRS rate; courier, printing and reproduction costs; and survey supplies and materials. In the event the requested service involves the use of electronic measuring equipment, computers, plotters, and other special equipment such as boats, swamp buggies, etc., an additional direct charge shall be made for the use of this equipment.

It is understood and agreed that BGE's services under this Agreement are limited to those described in the Scope of Services and do not include participation in or control over the operation of any aspect of the project. Compensation under this Agreement does not include any amount for participating in or controlling of any such operation.

3. **INVOICE PROCEDURES AND PAYMENT:** BGE shall submit invoices to the Client for work accomplished during each calendar month. For services provided on a Lump Sum basis, the amount of each monthly invoice shall be determined on the "percentage of completion method," whereby BGE will estimate the percentage of the total work (provided on a Lump Sum basis) accomplished during the invoicing period. Monthly invoices shall include, separately listed, any charges for services for which time charges and/or unit costs shall apply. Such invoices shall also include, separately listed, any charges for Professional Services and reimbursable costs. Such invoices shall be submitted by BGE as soon as possible after the end of the month in which the work was accomplished and shall be due and payable by the Client upon receipt.

The Client, as Owner or authorized agent for the Owner, hereby agrees that payment as provided herein will be made for said work within 30 days from the date the invoice for the same is mailed to the Client at the address set out herein or is otherwise delivered, and, in default of such payment, hereby agrees to pay all costs of collection, including reasonable attorney's fees, regardless of whether legal action is initiated. The Client hereby acknowledges that unpaid invoices shall accrue interest at the maximum rate allowed by law after they have been outstanding for over 30 days. BGE reserves the right to suspend all services on the Client's project without notice if an invoice remains unpaid 45 days after date of invoice. The suspension shall remain in effect until all unpaid invoices are paid in full.

4. **COST ESTIMATES:** Any cost estimates provided by BGE are opinions based on the experience and judgment of BGE. Client hereby acknowledges that BGE cannot warrant that any cost estimates provided by BGE will not vary from actual costs incurred by Client.
5. **DELAYS:** Although BGE may specify completion date of the work, that date is subject to and shall be extended by delays caused by conditions beyond the control of BGE, including but not limited to, the availability of required materials; acts of or disputes with Client; change orders that expand the scope of the work or cause delay in acquisition of materials; riots, civil commotions, war, insurrections, strikes, lockouts, fire, or other casualty; acts of God; inclement weather which interferes with normal scheduling of the work; failure of Client to make decisions; judicial restraint or delays in securing governmental approvals; permits or other authorizations. In the event of such delay, BGE shall be entitled to an extension of time for performance and additional compensation.
6. **LIMIT OF LIABILITY:** TO THE FULLEST EXTENT PERMITTED BY LAW, THE TOTAL LIABILITY OF BGE AND ITS EMPLOYEES, OFFICERS, DIRECTORS, SUBCONSULTANTS AND SUBCONTRACTORS, TO CLIENT OR ANY PARTY CLAIMING BY, THROUGH OR UNDER CLIENT, FOR ANY AND ALL INJURIES, CLAIMS, LOSSES, EXPENSES, OR DAMAGES WHATSOEVER FROM ANY CAUSE OR CAUSES, INCLUDING, BUT NOT LIMITED TO, STRICT LIABILITY, BREACH OF CONTRACT, BREACH OF WARRANTY, NEGLIGENCE, OR ERRORS OR OMISSIONS SHALL BE LIMITED TO THE TOTAL COMPENSATION RECEIVED BY BGE UNDER THE TERMS OF THIS AGREEMENT.



Attachment A

Standard Terms and Conditions

7. **CONSTRUCTION SERVICES:** If, under this Agreement, Professional Services are provided during the construction phase of the project, BGE shall not supervise, be responsible for or have control over any contractor's means, methods, techniques, sequences, or procedures, or for safety precautions and programs in connection with any contractor's work; nor shall BGE be responsible for the contractor's failure to carry out the Work in accordance with the Contract Documents or for the Contractor's failure to comply with applicable laws, ordinances, rules or regulations. The Client agrees that any contractors shall be solely responsible for jobsite and worker safety and warrants that this intent shall be carried out in the Client's contract with the contractors. Client understands that construction phase services are not intended to be a detailed check or an inspection of any contractor's work. CLIENT AGREES TO INDEMNIFY AND HOLD HARMLESS BGE FROM ALL CLAIMS, LOSSES, DAMAGES, ATTORNEY FEES, INJURIES, JUDGMENTS, CAUSES OF ACTIONS, AND SUITS OF ANY AND ALL KIND, FOR BODILY INJURY, DEATH, OR PROPERTY DAMAGES CAUSED BY CONSTRUCTION SERVICES ARISING OUT OF THE PROJECT AND THE WORK.
8. **CONSEQUENTIAL DAMAGES. NOTWITHSTANDING ANY OTHER PROVISION OF THIS AGREEMENT, AND TO THE FULLEST EXTENT PERMITTED BY LAW, NEITHER THE CLIENT NOR BGE, THEIR RESPECTIVE OFFICERS, DIRECTORS, PARTNERS, EMPLOYEES, CONTRACTORS OR SUBCONSULTANTS SHALL BE LIABLE TO THE OTHER OR SHALL MAKE ANY CLAIM FOR ANY INCIDENTAL, INDIRECT OR CONSEQUENTIAL DAMAGES ARISING OUT OF OR CONNECTED IN ANY WAY TO THE PROJECT OR TO THIS AGREEMENT. THIS MUTUAL WAIVER OF INCIDENTAL, INDIRECT AND CONSEQUENTIAL DAMAGES SHALL INCLUDE, BUT IS NOT LIMITED TO, LOSS OF USE, LOSS OF PROFIT, LOSS OF BUSINESS, LOSS OF INCOME, LOSS OF REPUTATION, LOSS OF OPPORTUNITY AND ANY OTHER CONSEQUENTIAL DAMAGES THAT EITHER PARTY MAY HAVE INCURRED FROM ANY CAUSE OF ACTION INCLUDING NEGLIGENCE, STRICT LIABILITY, BREACH OF CONTRACT AND BREACH OF STRICT OR IMPLIED WARRANTY. BOTH THE CLIENT AND BGE SHALL REQUIRE SIMILAR WAIVERS OF CONSEQUENTIAL DAMAGES PROTECTING ALL ENTITIES OR PERSONS NAMED HEREIN IN ALL CONTRACTS AND SUBCONTRACTS WITH OTHERS INVOLVED IN THIS PROJECT.**
9. **ASSIGNMENT AND NO THIRD PARTY BENEFICIARIES:** Neither Client nor BGE shall assign, sublet, or transfer his interest in this Agreement without the written consent of the other. Nothing herein shall be construed as giving any rights or benefits hereunder to anyone other than Client and BGE. Client and BGE agree that there are no third party beneficiaries to this Agreement. Client's representative signing below warrants that he or she has full authority to bind Client to this Agreement.
10. **SUSPENSION, TERMINATION, CANCELLATION OR ABANDONMENT:** In the event the project described in the Scope of Services, or the services of BGE called for under this Agreement, is/are suspended, cancelled, terminated or abandoned by the Client for the Client's convenience, BGE shall be given seven (7) days prior written notice of such action and shall be compensated for the professional services and reimbursable expenses provided up to the date of suspension, termination, cancellation or abandonment plus anticipated profit on those professional services not performed by BGE. In the event either Client or BGE seeks to terminate the Agreement based on the material breach of this Agreement, the party seeking to terminate the Agreement shall give written notice of the alleged breach and that party shall have ten (10) days after receipt of the written notice to cure the alleged breach. If the alleged breach has not been cured within that ten (10) day cure period, then the party claiming breach may terminate the Agreement for cause. If the Client terminates the Agreement for cause, then BGE shall be compensated for all professional services performed prior to termination plus reimbursable expenses. In the event BGE terminates this Agreement for cause, Client waives any and all claims or causes of action against BGE relating to BGE's services under this Agreement.
11. **ENTIRETY OF AGREEMENT:** The Agreement embodies the entire agreement and understanding between the parties hereto, and there are no other agreements and understandings, oral or written, with reference to the subject matter hereof that are not merged herein and superseded hereby. No alteration, change or modification of the terms of this Agreement shall be valid unless made in writing and signed by both parties and attached hereto.
12. **OWNERSHIP OF DOCUMENTS:**
 - a. All designs, drawings, specifications, documents, and other work products of the BGE (collectively, the "Documents"), whether in hard copy or electronic form, are instruments of service for the services and are owned by BGE regardless of whether or not services are completed. Reuse, change or alteration of the Documents by the Client or by others acting through or on behalf of the Client is not permitted without the written consent of BGE. BGE grants to Client a nonexclusive license to reproduce the Documents solely for the purpose of constructing and maintaining the Project. Any termination of the Agreement prior to final completion of construction of the Project shall terminate this license. Upon such termination, and unless otherwise agreed by BGE in writing, the Client (and any third party who received copies of the Documents from Client) shall refrain from making further reproductions of the Documents and shall return to BGE within seven days of termination all originals and reproductions in the Client's possession, custody and control.
 - b. ANY REUSE, CHANGE OR ALTERATION BY THE CLIENT OR THIRD PARTIES IS AT THEIR OWN RISK AND TO THE FULLEST EXTENT OF THE LAW CLIENT AGREES TO HOLD HARMLESS AND INDEMNIFY BGE, ITS OFFICERS, PARTNERS, EMPLOYEES, AND SUBCONTRACTORS FROM ALL CLAIMS, DAMAGES, LOSSES, EXPENSES AND COSTS (INCLUDING ATTORNEYS' FEES), INCLUDING, BUT NOT LIMITED TO, CLAIMS FOR BGE'S ALLEGED NEGLIGENCE, ARISING OUT OF OR RELATED TO SUCH AUTHORIZED OR UNAUTHORIZED REUSE, CHANGE OR ALTERATION.
13. **WAIVER:** Any failure by BGE to require strict compliance with any provision of this Agreement shall not be construed as a waiver of such provision, and BGE may subsequently require strict compliance at any time, notwithstanding any prior failure to do so.



Attachment A

Standard Terms and Conditions

14. DISPUTE RESOLUTION:

- a. **Mediation.** Any claim, dispute or other matter in question arising out of or related to this Agreement shall be subject to non-binding mediation as a condition precedent to the commencement of arbitration by either party. If such matter relates to or is the subject of a lien arising out of BGE's services, then BGE may proceed in accordance with applicable law to comply with the lien notice or filing deadlines prior to resolution of the matter by mediation or other legal proceedings.

The parties shall share the mediator's fee and any filing fees equally. The mediation shall be held in the county where the Project is located, unless another location is mutually agreed upon. Agreements reached in mediation shall be enforceable as settlement agreements in any court having jurisdiction thereof.

- b. **Arbitration.** Any claims, disputes and other matters in question between the parties that are not resolved by mediation shall be decided by arbitration which, unless the parties mutually agree otherwise, shall be in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association currently in effect. The demand for arbitration shall be filed in writing with the other party to the Agreement and with the American Arbitration Association. With the sole exception of any subconsultants hired by BGE, no arbitration arising out of or relating to the Agreement shall include, by consolidation or joinder or in any other manner, an additional person or entity not a party to this Agreement. The foregoing agreement to arbitration shall be specifically enforceable in accordance with applicable law in any court having jurisdiction. The award rendered by the arbitrator or arbitrators shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction.

15. **HAZARDOUS WASTE, MATERIALS OR SUBSTANCES:** Unless otherwise specifically provided in this Agreement, BGE shall not be responsible for or have control over the discovery, presence, handling, removal, transport or disposal of hazardous waste, materials or substances in any form on the project site. Client is solely responsible for compliance and enforcement of same with respect to all applicable federal, state and local statutes, rules and regulation regarding hazardous waste.
16. **GOVERNING LAW:** This Agreement shall be governed by and construed according to the laws of the State where the site of the work is located.
17. **CLIENT SUPPLIED DOCUMENTS AND INFORMATION:** Client warrants that all documentation and information provided by Client to BGE for use in performing the services hereunder is accurate and may be relied upon by BGE in all respects, and that Client has the right to provide such documentation and information to BGE. BGE shall have no liability to Client for any damages or claims arising out of any errors contained in such documents and information and BGE's use and reliance upon the same. Client hereby agrees to indemnify and hold BGE harmless from any and all liabilities, claims and lawsuits arising out of BGE's Use and reliance upon such documentation and information and for any claims of infringement or ownership disputes involving such documentation and information.
18. **CORPORATE LIABILITY:** Client understands and agrees that BGE is a business entity that has contracted to perform services, and any services provided by BGE's employees, agents or officers are not provided in their individual capacity. Client will not make any claim or demand against any of BGE's employees, agents or officers in their individual capacity.
19. **REGULATORY CHANGES:** In the event that there are modifications or additions to regulatory requirements relating to the services to be performed under this Agreement after the date of execution of this Agreement, the increased or decreased cost of performance of the services provided for in this Agreement shall be reflected in an appropriate Additional Services amendment.
20. **CHANGED CONDITIONS:** The Client and BGE acknowledge the possibility of occurrences or discoveries that were not originally contemplated by or known to the BGE. Should Client or BGE call for contract renegotiation, they shall identify the changed conditions necessitating renegotiation, and BGE and the Client shall promptly and in good faith enter into renegotiation of this Agreement. If the terms cannot be agreed to, the parties agree that either party has the right to terminate the Agreement.
21. **PERMITS:** Client is responsible for obtaining and complying with all required permits or other approvals of, and for giving any required notices to, all governmental and quasi-governmental authorities having jurisdiction over the Services or the Property. Client will provide to BGE copies of any such permits or any such notices, together with any other relevant information that will alert BGE to the requirements of such permits, approvals, or notifications.
22. **ATTORNEY'S FEES:** In the event BGE's invoices for Services are given to any attorney for collection, or if suit is brought for collection, or if they are collected through probate, bankruptcy, or other judicial proceeding, then Client shall pay BGE all costs of collection, including the maximum attorneys' fees allowed by law and court costs, in addition to other amounts due.
23. **FIDUCIARY RESPONSIBILITY:** BGE makes no warranty, either expressed or implied, as to BGE's findings, recommendations, Documents, or professional advice. Any warranties or guarantees contained in any purchase orders, contracts, certifications, requisitions, or notices to proceed issued by the Client are specifically objected to and excluded. Client recognizes that neither BGE nor any of BGE's Subconsultants or subcontractors owes any fiduciary responsibility or duty to Client.

Attachment B **BGE Fee Estimate for Drainage Detention Design and Traffic Control Plan** **Project Name: Benton Road, FM 762 to Reading Rd, Fort Bend County**

TASK DESCRIPTION	PROJECT MANAGER	SENIOR ENGINEER	PROJECT ENGINEER	DESIGN ENGINEER	ENGINEER IN TRAINING	SENIOR CADD OPERATOR	CADD OPERATOR	ADMIN/ CLERICAL	TOTAL LABOR HRS. & COSTS	NO OF DWGS	LABOR HRS PER SHEET
DRAINAGE DETENTION DESIGN											
DRAINAGE IMPACT STUDY (IMPERVIOUS COVER MITIGATION-NO DEVELOPMENT)			14		20				34		
EXISTING CONDITIONS HYDROLOGY (CALCULATIONS AND DRAINAGE AREAS)			14		20				34		
PROPOSED CONDITIONS HYDROLOGY (CALCULATIONS AND DRAINAGE AREAS)			12		10				22		
IMPERVIOUS COVER MITIGATION			30		20				50		
DRAFT LETTER REPORT			14		16				30		
ADDRESS DRAFT LETTER REPORT COMMENTS/FINAL DRAINAGE LETTER REPORT											
LETTER REPORT EXHIBITS											
DRAINAGE COORDINATION MEETINGS	8	0	130	0	208	82	0	0	436		
DETENTION FACILITY LOCATION ALTERNATIVES	1		2		24	16			43	1	43
DETENTION FACILITY LAYOUT	1		9		10	25			45	1	45
DETENTION FACILITY CROSS SECTIONS	2		7		10	25			45	1	45
DETENTION FACILITY DETAILS	1		9		16	8			33	1	33
DETENTION FACILITY QUANTITIES AND COST ESTIMATE	2		2		30	4			40		
CONSTRUCTION PHASE SERVICES											
HOURS SUB-TOTALS	16	0	130	0	208	82	0	0	436		
CONTRACT RATE PER HOUR	\$192.00	\$160.00	\$144.00	\$128.00	\$108.80	\$102.40	\$80.00	\$73.60	\$52,819.20		
TOTAL LABOR COSTS	\$3,072.00	\$0.00	\$18,720.00	\$0.00	\$22,630.40	\$8,396.80	\$0.00	\$0.00			
SUBTOTAL DRAINAGE DETENTION DESIGN									\$52,819.20		

TASK DESCRIPTION	PROJECT MANAGER	SENIOR ENGINEER	PROJECT ENGINEER	DESIGN ENGINEER	ENGINEER IN TRAINING	SENIOR CADD OPERATOR	CADD OPERATOR	ADMIN/ CLERICAL	TOTAL LABOR HRS. & COSTS	NO OF DWGS	LABOR HRS PER SHEET
TRAFFIC CONTROL PLAN											
TCP PHASING LAYOUTS	1			4	8				13	1	13
TYPICAL SECTIONS	1			4	8				13	1	13
ADVANCE WARNING SIGNS LAYOUTS	1			4	8				13	1	13
TRAFFIC CONTROL CONSTRUCTION SEQUENCING NARRATIVE									9		
PHASE ONE LAYOUTS	10	5	5	40	100				155	5	31
PHASE TWO LAYOUTS	10	5	5	40	100				155	5	31
TEMPORARY PAVEMENT	5			10	20				35		
TEMPORARY TRAFFIC SIGNAL (BENTON RD AT FM 762)	4	1		20	40				65	2	33
TCP DETAILS	1			5	10				16		
QUANTITY & COST ESTIMATE	1			5	10				16		
CONSTRUCTION PHASE SERVICES	4			14	28				46		
HOURS SUB-TOTALS	39	11	0	150	336	0	0	0	536		
CONTRACT RATE PER HOUR	\$192.00	\$160.00	\$144.00	\$128.00	\$108.80	\$102.40	\$80.00	\$73.60			
TOTAL LABOR COSTS	\$7,488.00	\$1,760.00	\$0.00	\$19,200.00	\$36,556.80	\$0.00	\$0.00	\$0.00	\$65,004.80		
SUBTOTAL TRAFFIC CONTROL PLAN									\$65,004.80		

TOTAL DIRECT EXPENSES	UNIT	QUANTITY	COST/UNIT	TOTAL EXPENSES
MILEAGE	MILE	534.5794393	\$0.535	\$286.00
PHOTOCOPIES BMW (11" X 17")	EACH	300	\$0.20	\$60.00
Overnight Mail - oversized box	EACH	1	\$30.00	\$30.00
SUBTOTAL DIRECT EXPENSES				\$376.00

SUMMARY	TOTAL LABOR COSTS	NON-SALARY (OTHER DIRECT EXPENSES)	GRAND TOTAL
	\$117,824.00	\$376.00	\$118,200.00



JONES | CARTER

6330 West Loop South, Suite 150
Bellaire, Texas 77401
Tel: 713.777.5337
Fax: 713.777.5976
www.jonescarter.com

April 6, 2018

Mr. Javier Casas, P.E.
Senior Project Manager
McDonough Engineering Corp.
5625 Schumacher
Houston, TX 77057
javierC@mectx.com

Re: Benton Road

Dear Mr. Casas,

Thank you for considering this proposal for Surveying Services on the above referenced project. Our understanding is McDonough Engineering Corp (MEC). has been contacted by Fort Bend County as part of the 2017 Mobility Bond Program to provide engineering services to widen existing Benton Road. We also understand Jones & Carter, Inc. (JCI) will contract with MEC to provide Phase 1 surveying services. Based on our project understanding we have prepared the following scope of services and fee proposal for your consideration.

Deed Research:

- Research Ownership, Subdivision Plats & existing easement documentation, TxDOT right of way maps.
- Establish the existing rights-of-way of Benton Road, F. M. Hwy 762, and Reading Road
- Acquire ownership names, deed and easement recording data.
- An Abstractor will be hired to prepare the research at a lump sum fee.

Deed Plot:

- Deed lines and easement lines will be plotted to identify ownerships, right of entry requirements, existing right of way widths and called for boundary monumentation.

Right of entry:

- We will prepare right of entry letters to be sent to the land owners by registered mail.

Project Control:

- Horizontal control will be established on site based upon GPS observations.
- Horizontal control will be based upon the Texas Coordinate System of 1983, South Central Zone.
- Vertical data will be based upon the North American Vertical Datum of 1988 utilizing available NGS bench marks.



Mr. Javier Casas

April 6, 2018

Page 2

Topographic Survey:

- Topographic data will be acquired at +/- 100 grid intervals and at all grade breaks.
- We will contact Texas ONECALL to have utilities located and marked.
- We will locate all visible utilities.
- We will measure all manhole and inlet inverts within the project limits as identified on the attached exhibit.

Proposed Right-of-Way Maps and Parcels:

- Prepare Right-of-Way Map for proposed right-of-way and Survey Control Sheet(s) for the project.
- Drawings will be prepared to the TSPS Standards and Specifications for a Category 1A Condition II Survey, full size and 1/2 size signed and sealed drawings will be provided.
- Prepare metes and bounds descriptions and surveys for parcel acquisition.
- Establish a design/construction baseline.
- Right-of-way maps will be prepared at a scale of 1"= 20'.
- Survey control drawing will be prepared at a scale of 1"=100'.

Deliverables:

- We will provide a 2D – DWG file for planimetric, at a 1"=20' on 22"x34" sheets, 3-D DGN file of the grade break lines, and an ASCII file of points used for creating the model. Plots of the triangles and 0.2 foot contours for QA/QC checks will be provided upon request.
- PDF files of the existing and proposed Right-of-Way maps and parcel surveys will be provided.

These services can be completed for a Lump Sum fee of \$49,745.00. This fee includes services for a currently unidentified Detention Pond parcel, additional fees for railroad safety personnel, topographic surveying of the railroad for approximately 0.5 mile, and locating an underground pipeline after it has been "potholed" by a separate contractor. A Level of Effort worksheet is attached. The existing Right-of-Way Map can be completed within thirty (30) days upon receipt of your written authorization to proceed. The Topographic Survey can be completed within forty-five (45) days upon receipt of your written authorization to proceed. The final Right-of-Way and survey control can be completed within thirty (30) days upon receipt of your final alignment.



Mr. Javier Casas
April 6, 2018
Page 3

Again Mr. Jones, thank you for considering this proposal. If these terms are agreeable, please indicate by signing in the space provided below. We look forward to working with you on this project.

A blue ink signature of Chris D. Kalkomey, consisting of several loops and a trailing line.

Chris D. Kalkomey
Registered Professional Land Surveyor
No. 5869

Sincerely,

A blue ink signature of Martin G. Hicks, written in a cursive style.

Martin G. Hicks
Registered Professional Land Surveyor
No. 4387

MGH/Ilm
E:\Surveying\proposals\MDE Engineering estimate_Benton Road- Revised.docx
Enclosure

APPROVED BY:

Lump Sum fee of \$49,745.00

Signature of Authorization

Print Name and Title

Date

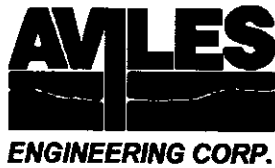
Jones and Carter, Inc.

Level of Effort for Benton Road Project

April 6, 2018

Design Phase Surveying Services

Task:	General Description:	Service Description: Hourly Rates:							Lump Sum Fee	Total Hours	Total Cost
		2-Man Field Crew	3-Man Field Crew	Survey Tech 2	Project Surveyor 4	RPLS	CAD Operator 5	Admin IV			
Deed Research	Research deeds & easements of adjoining, roadways, TxDot right of way	\$160.00	\$195.00	\$75.00	\$108.00	\$175.00	\$87.00	\$90.00	\$3,000.00	N/A	\$3,000.00
Deed Plot	Plot deeds, easements and existing rights-of-way				16	4				20	\$2,428.00
Right-of-Entry	Letters to land owners per tax rolls					2		6		8	\$890.00
Control	Establish 4 permanent control monuments based on Texas Coordinate System of 1983, South Central Zone Temporary benchmarks at ± 1,000 foot intervals Prepare survey control sheets	10			2	1	8			21	\$2,687.00
Topographic Survey Boundary Ties	Gather field data Provide plan view in DWG format at 1"=20' scale Provide DTM	70	30		30	4	50			184	\$25,340.00
Railroad Flagman	Railroad flagman required for all work done within railroad right-of-way								\$2,400.00	N/A	\$2,400.00
Right-of-Way Map for existing and proposed right-of-way	Estimated 5 parcels at \$2,600.00 per parcel								\$13,000.00	N/A	\$13,000.00
Meters & Bounds and survey for parcels											
Total Hours:		80	30		48	11	58	6		213	
Total Cost:		\$12,800.00	\$5,850.00		\$5,184.00	\$1,925.00	\$5,046.00	\$540.00	\$18,400.00		\$49,745.00



April 5, 2018

Mr. Javier Casas, P.E.
Senior Project Manager
McDonough Engineering Corporation
5625 Schumacher
Houston, Texas 77057

Re: Revised Geotechnical Investigation Proposal /Agreement
Improvements of Benton Road Segment 1 from FM 762 to 300 feet South of Reading Road
Fort Bend County Precinct 1
Fort Bend County, Texas
AEC Proposal No. G2018-03-14R

Dear Mr. Casas,

Aviles Engineering Corporation (AEC) is pleased to submit this proposal for a geotechnical investigation for the proposed Improvements of Benton Road Segment 1 from FM 762 to 300 feet South of Reading Road (Fort Bend County Key Map 606 T & X) in Fort Bend County Precinct 1, Texas. According to the information and drawing provided, AEC understands that the approximately 3,600 feet of improvements include: (i) widening the existing 2 lane asphalt pavement to 4 lane concrete boulevard that will use 8-inches of concrete with 8-inches of lime stabilized subgrade; (ii) installing storm sewer along the roadway and the maximum invert depth of storm sewer is estimated to be 15 feet below the existing pavement; (iii) intersection improvements at FM 762 which may include new traffic signals; and (iv) a new detention pond but the size, depth, and location have not determined yet. For fee estimate purpose, we assume that the pond is approximately 5 acre, with maximum depth of 15 feet.

Based on the information provided, AEC proposes to drill 14 of 25 to 30 feet deep borings: (i) 9 borings seven 25-foot deep borings and two 30 feet borings for the roadway as shown on the attached boring location plan; and (ii) five borings for the detention pond. Total drilling footage is 360 feet (235 feet for the roadway, and 125 feet for the detention pond). We also propose to install two 20 feet deep piezometers in Boring B-5 location. AEC personnel will mark the boring locations along the alignment and contact Texas 811 to check underground utilities. However, Texas 811 does not check underground water line, storm sewer, and sanitary sewer. We request that the existing underground utilities drawings be provided to AEC at the project onset.

Benton Road along the alignment currently is a 2-lane (one lane at each direction) asphalt roadway; traffic control will be required for our field exploration along the alignment. We will core through existing roadway pavement at the boring locations. Samples will be obtained continuously in the top 20 feet and at 5-foot intervals thereafter. Undisturbed samples will be obtained of cohesive soils by pushing a Shelby tube (ASTM D-1587). Standard Penetration Test samples will be obtained of granular soils (ASTM D-1586). We will note any visual evidence of odor indicating hazardous materials if encountered in the samples. Representative portions of all soil samples will be sealed, packaged and transported to our laboratory. Water level readings will be noted during drilling and obtained upon completion of drilling. The boreholes on existing pavement, except the piezometer, will be backfilled



with cement-bentonite grout and then patch the holes with asphalt; while off pavement boreholes will be backfilled with bentonite chips. We will obtain 24-hour and approximately 30-day water level readings in the piezometer, then the piezometers will be plugged.

As part of our services, we will review in-house published fault maps of the alignment to identify documented faults crossing the alignment. Laboratory testing may consist of moisture contents, Atterberg limits, percentage passing No. 200 sieve, sieve analysis and hydrometer analysis, dry density, unconfined compression and unconsolidated-undrained triaxial tests depending on the soil types encountered. Two consolidated-undrained (CU) triaxial tests (three samples for each test, one stage per sample), two double hydrometer tests, and four crumb tests will be performed for the detention pond borings.

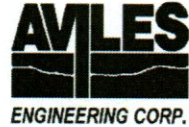
We will analyze the field and laboratory data to develop geotechnical engineering recommendations for (1) summary of existing pavement and stabilized subgrade thicknesses; (2) soil boring logs depicting soil stratigraphy and groundwater depths; (3) calculating the 18-kips equivalent single axle load (ESAL) based on the average daily traffic count (ADT) and pavement design life (in years) to be provided, recommendations for concrete pavement thickness and subgrade preparation; (4) evaluation if the subsurface soils at the detention pond are dispersive; and slope stability analyses on one or two selected cross-sections for the proposed detention pond, and recommendations for the stable slope inclination; (5) geotechnical guidelines for the storm sewer installation by open-cut method, recommendations for excavation and shoring, and bedding; and (6) geotechnical recommendations and dewatering guideline for the facility construction.

The estimated lump sum fees for the services described in this proposal are **\$35,678.00** for the roadway; and **\$28,959.00** for the detention pond. The fees include providing services as outlined in this proposal in the quantities indicated on the itemized fee estimate which includes one mob/demob for a truck rig and a buggy rig, a site visit to mark the borings, 2 copies of draft and 3 copies of final report. The fee is based on the following assumptions: (1) the field personnel will use Level D during the field exploration; (2) no standby time (weather-related or incurred due to reasons beyond AEC's control) are included; and (3) fence/gate removal, standby time, surveying, plan/specification review, environmental assessment and attendance at meetings are not included.

Weather permitting, and assuming no field delays, we plan to start the field exploration about a week after receiving your notice to proceed. The tree clearing (for detention pond if applicable) and field exploration including pavement coring and drilling will take about 2 weeks; laboratory soil testing will require 4 to 6 weeks (due to CU triaxial test) to complete. We will submit draft report 3 weeks after completion of the laboratory soil testing. Final report and trench report will be issued 2 weeks after we receive your comments on the draft report.

To reduce delays in the schedule, we request that we be provided with any proposed or preferred geotechnical-related design details including existing utility drawings, and proposed utility drawings at the onset. If any of the project details described in this proposal are incorrect or the scope of services needs modification, please inform us immediately so we can revise the proposal as necessary.

McDonough Engineering Corporation
Improvements of Benton Road Segment 1 from FM 762 to 300 feet South of Reading Road
Fort Bend County Precinct 1, Texas
AEC Proposal No. G2018-03-14R
April 5, 2018



Page 3 of 4

We appreciate the opportunity to present this proposal, and look forward to working with you again.

Respectfully submitted,
Aviles Engineering Corporation

A handwritten signature in blue ink, appearing to read "Shou Ting Hu", is written over a light blue horizontal line.

Shou Ting Hu, MSCE, P.E.
President

Attachments: Terms and Conditions, Itemized Fee Estimates, Proposed Boring Location Plan

AGREED TO THIS _____ DAY OF _____, _____

BY (Signature): _____

NAME (Print): _____

TITLE: _____

FIRM: _____



GEOTECHNICAL INVESTIGATION TERMS AND CONDITIONS

STANDARD OF CARE

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

The CLIENT should expect AVILES ENGINEERING to perform Services under this PROPOSAL/AGREEMENT in a manner consistent with the level of care and skill ordinarily exercised by members of the engineering profession practicing contemporaneously under similar conditions in the locality of the project. No other warranty, expressed or implied, is made.

SCOPE OF SERVICES

AVILES ENGINEERING will develop a scope of services based on the project information provided by the CLIENT. AVILES ENGINEERING shall not be responsible for problems arising due to inadequate number of borings and/or depths dictated or required by others or inadequate engineering analyses, if the CLIENT reduces the scope of services and/or provides insufficient or invalid project or other relevant information to AVILES ENGINEERING. In the event the CLIENT or his representative orders work described in this PROPOSAL/AGREEMENT, that action shall constitute the CLIENT's acceptance of this PROPOSAL/AGREEMENT and its terms and conditions.

SITE ACCESS AND SITE CONDITIONS

The CLIENT will grant or obtain free access to the site for all equipment and personnel necessary for AVILES ENGINEERING to perform the services described in this PROPOSAL/AGREEMENT, as well as provide location data for all below and above ground structures, pipelines and utilities. For such items encountered, not called to the attention of AVILES ENGINEERING, the CLIENT shall assume responsibility for any resultant damages. AVILES ENGINEERING will take reasonable precautions to minimize damage to the site, but it is understood by the CLIENT that, in the normal course of work, some damage may occur and the correction of such damage is not part of this AGREEMENT. The CLIENT will notify AVILES ENGINEERING of any known toxic and/or hazardous materials on site and shall assume responsibility for the cost of occurrences due to unknown toxic and/or hazardous materials on site.

BILLING AND PAYMENT

The CLIENT will pay AVILES ENGINEERING the lump sum amount(s) shown in the PROPOSAL/AGREEMENT. Invoices will be submitted to the CLIENT by AVILES ENGINEERING, and will be due and payable within thirty (30) days of the invoice date. CLIENT will pay an additional charge of 1.5 percent per month on any delinquent amount, and agrees to pay attorney's fees and/or other costs involved in any required collection activity.

LIMITATION OF LIABILITY / INDEMNIFICATION

If at any time, there shall be or arise any liability on the part of AVILES ENGINEERING by virtue of this Agreement or because of the relation hereby established, whether due to the negligence of AVILES ENGINEERING (including gross negligence) or otherwise, such liability is and shall be limited to a sum equal in amount to the fee charged by AVILES ENGINEERING. AVILES ENGINEERING and CLIENT agree to indemnify each other from any claims, etc., including attorney's fees and litigation costs, to the proportionate extent caused by each party's own negligence. If AVILES ENGINEERING is found to be prevalent in any third party lawsuits relating to this AGREEMENT, the CLIENT shall pay all AVILES ENGINEERING costs, including legal fees, that were incurred as a result thereof.

Geotechnical Investigation Proposal
Improvements of Benton Road Segment 1 from FM 762 to 300 feet South of Reading Road
Fort Bend County Precinct 1, Texas
AEC Proposal No. G2018-03-14
4/04/2018



ITEMIZED FEE ESTIMATE - ROADWAY

9 borings: 7@25', and 2@30', one piezometer @20'

A. FIELD EXPLORATION	QTY	UNIT		RATE	AMOUNT
Mobilization/Demobilization (Truck Rig)	1	LS	@	\$349.00	\$349.00
Site Reconnaissance (Project Engineer, P.E.)	5	hrs.	@	\$149.00	\$745.00
Fault Study (Sr. Geologist)	8	hrs.	@	\$101.00	\$808.00
Layout of Borings and Utilities Check (Technician)	10	hrs.	@	\$65.00	\$650.00
Field Supervision (Technician)	30	hr.	@	\$65.00	\$1,950.00
Pavement Coring (0" - 6" thick)	9	ea.	@	\$105.00	\$945.00
Pavement Coring (6" to 12" thick)	0	in.	@	\$9.00	\$0.00
Soil Drilling w/truck-mounted rig (0 to 20 ft continuous)	180	ft.	@	\$21.00	\$3,780.00
Soil Drilling w/truck-mounted rig (20 to 50 ft intermittent)	55	ft.	@	\$19.00	\$1,045.00
Traffic Control (Attenuator, Flashing Arrow Board, and 2 Flaggers)	3	days	@	\$1,650.00	\$4,950.00
Installing Piezometers	20	ft.	@	\$16.00	\$320.00
Grouting Holes	200	ft.	@	\$10.00	\$2,000.00
Piezometer Monitoring (2 Technicians, Two Trips)	20	hrs.	@	\$65.00	\$1,300.00
Plug and Abandon Piezometers	1	ea.	@	\$360.00	\$360.00
Standby Time for Traffic Control Setup (Drill Rig & Crew)	3	hrs.	@	\$185.00	\$555.00
Vehicle Charge	73	hrs.	@	10.00	\$730.00
	SUBTOTAL				\$20,487.00
B. GEOTECHNICAL LABORATORY TESTING					
Atterberg Limits (ASTM D-4318)	30	ea.	@	\$62.00	\$1,860.00
Passing No. 200 Sieve (ASTM D-1140)	30	ea.	@	\$48.00	\$1,440.00
Sieve Analysis w/o Hydrometer (ASTM D-422)	4	ea.	@	\$57.00	\$228.00
Moisture Content (ASTM D-2216)	101	ea.	@	\$9.00	\$909.00
Unconfined Compression (ASTM D-2166)	14	ea.	@	\$45.00	\$630.00
Unconsolidated-Undrained Triaxial Test (ASTM D-2850)	16	ea.	@	\$63.00	\$1,008.00
	SUBTOTAL				\$6,075.00
C. ENGINEERING & REPORT PREPARATION					
Senior Engineer, P.E.	8	hrs.	@	\$183.00	\$1,464.00
Project Engineer, P.E.	24	hrs.	@	\$149.00	\$3,576.00
Graduate Engineer, EIT	36	hrs.	@	\$101.00	\$3,636.00
Clerical/Word Processor	4	hrs.	@	\$60.00	\$240.00
Reproduction (2 Copies of Draft and 3 Copies of Final Report)	5	copies	@	\$40.00	\$200.00
	SUBTOTAL				\$9,116.00
	TOTAL ESTIMATED FEE				\$35,678.00

Geotechnical Investigation Proposal
 Improvements of Benton Road Segment 1 from FM 762 to 300 feet South of Reading Road
 Fort Bend County Precinct 1, Texas
 AEC Proposal No. G2018-03-14
 4/04/2018



ITEMIZED FEE ESTIMATE - DETENTION POND

5 borings @ 25'

A. FIELD EXPLORATION	QTY	UNIT		RATE	AMOUNT
Mobilization/Demobilization (ATV Rig)	1	LS	@	\$485.00	\$485.00
Site Reconnaissance (Project Engineer, P.E.)	5	hrs.	@	\$149.00	\$745.00
Layout of Borings and Utilities Check (Technician)	8	hrs.	@	\$65.00	\$520.00
Field Supervision (Technician)	16	hr.	@	\$65.00	\$1,040.00
Tree Clearing (Dozer for Detention Pond Borings)	2	days	@	\$1,950.00	\$3,900.00
Soil Drilling w/truck-mounted rig (0 to 20 ft continuous)	100	ft.	@	\$21.00	\$2,100.00
Soil Drilling w/truck-mounted rig (20 to 50 ft intermittent)	25	ft.	@	\$19.00	\$475.00
Surcharge for Drilling with Buggy Rig	125	ft.	@	\$7.00	\$875.00
Piezometer Caps	1	ea.	@	\$100.00	\$100.00
Grouting Holes	125	ft.	@	\$10.00	\$1,250.00
24 hour Groundwater Readings (Technician)	6	hrs.	@	\$65.00	\$390.00
Standby Time (Drill Rig & Crew)	0	hrs.	@	\$170.00	\$0.00
Vehicle Charge	35	hrs.	@	10.00	\$350.00
	SUBTOTAL				\$12,230.00
B. GEOTECHNICAL LABORATORY TESTING					
Atterberg Limits (ASTM D-4318)	18	ea.	@	\$62.00	\$1,116.00
Passing No. 200 Sieve (ASTM D-1140\)	18	ea.	@	\$48.00	\$864.00
Sieve Analysis w/o Hydrometer (ASTM D-422)	4	ea.	@	\$57.00	\$228.00
Moisture Content (ASTM D-2216)	55	ea.	@	\$9.00	\$495.00
Unconfined Compression (ASTM D-2166)	6	ea.	@	\$45.00	\$270.00
Unconsolidated-Undrained Triaxial Test (ASTM D-2850)	12	ea.	@	\$63.00	\$756.00
Consolidated-Undrained Triaxial Test (ASTM D-4767)	2	ea.	@	\$1,800.00	\$3,600.00
Double Hydrometer (ASTM D-4221)	2	ea.	@	\$177.00	\$354.00
Crumb Test (ASTM D-6572)	4	ea.	@	\$38.00	\$152.00
	SUBTOTAL				\$7,835.00
C. SLOPE STABILITY ANALYSIS					
Senior Engineer, P.E.	4	hrs.	@	\$183.00	\$732.00
Project Engineer, P.E.	16	hrs.	@	\$149.00	\$2,384.00
	SUBTOTAL				\$3,116.00
D. ENGINEERING & REPORT PREPARATION					
Senior Engineer, P.E.	4	hrs.	@	\$183.00	\$732.00
Project Engineer, P.E.	16	hrs.	@	\$149.00	\$2,384.00
Graduate Engineer, EIT	22	hrs.	@	\$101.00	\$2,222.00
Clerical/Word Processor	4	hrs.	@	\$60.00	\$240.00
Reproduction (2 Copies of Draft and 3 Copies of Final Report)	5	copies	@	\$40.00	\$200.00
	SUBTOTAL				\$5,778.00
	TOTAL ESTIMATED FEE				\$28,959.00



AVILES ENGINEERING CORPORATION

PROPOSED BORING LOCATION PLAN
IMPROVEMENTS OF BENTON ROAD
FROM FM 762 TO 300 FT SOUTH OF READING ROAD
FORT BEND COUNTY, TEXAS

REG. PROPOSAL NO.	DATE	CHL	PLATE NO.
G2018-03-14	04-04-2018	CHL	PLATE 1
APPROVAL SCALE	1" = 300'		

NOTE: BORING LOCATIONS ARE APPROXIMATE.