

EXHIBIT “F”
HIDALGO COUNTY
Professional Engineering Services
Agreement # C-23-0111-05-16/ARPA-23-123-328

WORK AUTHORIZATION NO. 2

THIS WORK AUTHORIZATION is made pursuant to the terms and conditions of the Professional Engineering Services Agreement No. C-23-0111-05-16, incorporated herein by reference, for the “**5K Mansion Linear Park Trail**” made by and between HIDALGO COUNTY, action herein by and through the Commissioner’s Court, hereinafter called the “**Owner**,” and B2Z ENGINEERING, LLC, hereinafter called “**Engineer**”.

PART 1. SCOPE OF WORK

The purpose of this Work Authorization is for the **Engineer** to provide all Professional Engineering Services, Construction Phase Services and Construction Material Testing for the project.

The **Engineer** is to provide the scope of Services as required by the Agreement with Owner.

The scope of services to be provided by the **Engineer** is identified in **Attachment “A”** – “*Scope of Services to be provided by Engineer*” attached hereto and incorporated by reference.

PART 2. ESTIMATED COST

The estimated cost for services under this Work Authorization is **\$175,311.04**. This amount is based upon the costs outlined in the **Attachment “B”** – “*Fee Proposal*” attached hereto and incorporated by reference.

PART 3. PAYMENT

Compensation and payment to the Engineer for the services established under this Work Authorization shall be made in accordance with the **Professional Engineering Services Agreement No. C-23-0111-05-16** between the **Owner** and the **Engineer**.

PART 4. FUNDING

This Work Authorization No. 2 shall be funded through funding source:

Account No. _____

Requisition Number _____ **(MUST BE INCLUDED AFTER CC APPROVAL)**

PART 5. PERIOD OF SERVICE

This Work Authorization shall become effective on the date of final acceptance of the parties hereto, and terminate **upon completion of the scopes of the Work Authorization, within the limits of Agreement No. C-23-0111-05-16 , provided in this Work Authorization; or on (_____ DATE _____)**. *If applicable*: Engineer shall conform to the approved “Work/Project Schedule”.

PART 6. RESPONSIBILITIES AND OBLIGATIONS

This Authorization does not waive the parties’ responsibilities and obligations provided under the Agreement No. C-23-0111-05-16.

PART 7. ACKNOWLEDGEMENT AND CONFIRMATION

Acknowledgement and confirmation by **Hidalgo County Precinct 3, Commissioner Everardo “Ever” Villarreal**, as to content and detail of this **Work Authorization No. 2.**

HIDALGO COUNTY PRECINCT No. 3

By: _____
Everardo “Ever” Villarreal, Commissioner

PART 8. ACCEPTANCE AND APPROVAL

This Work Authorization is hereby accepted, approved by Hidalgo County Commissioners’ Court on July 23rd, 2024 as indicated below and effective as of **23RD day of JULY, 2024.**

EXECUTED as of the day and year first written above.

APPROVED BY COMMISSIONERS’ COURT ON JULY 23RD, 2024.

Agenda Item No. 96037

Executive Office: _____

ENGINEER:
B2Z ENGINEERING, LLC

COUNTY:
COUNTY OF HIDALGO

Aisha Gonzalez, President

Hon. Richard F. Cortez, County Judge

ATTEST:

Arturo Guajardo, Jr., County Clerk

LIST OF ATTACHMENTS:

Attachment “A” – *Scope of Services to be provided by Engineer*

Attachment “B” – *Fee Proposal*



ATTACHMENT A

PROJECT SPECIFIC SCOPE OF SERVICES TO BE PROVIDED BY ENGINEER

July 17, 2024

Hon. Everardo “Ever” Villarreal
Hidalgo County Precinct No. 3
724 Breyfogle Rd.
Mission, Texas 78574

**RE: C-23-0111-05-16 (ARPA 23-123-328)
5K Mansion Linear Park Trail – Work Authorization No. 2
Construction Management / Inspection & Construction Material Testing Services**

Dear Commissioner Villarreal,

Attached for your review and consideration is the Scope and Cost Proposal for Construction Management/Inspection and Construction Material Testing Services for the subject referenced project.

Attached is the following:

- Attachment A – Scope of Services to be provided by the Engineer.
- Attachment B – Fee Proposal

We appreciate the opportunity to continue to provide our professional services and look forward to working with you.

Should you have any questions, please feel free to give me a call at (956) 581-3773.

Sincerely,



David Rivera
Senior Project Manager

Attachments: Attachment A – Scope of Services to be provided by the Engineer
Attachment B – Fee Proposal

ATTACHMENT “A” SCOPE OF SERVICES TO BE PROVIDED BY THE ENGINEER

SECTION 1 - PROJECT DESCRIPTION

The services designated herein as “Services provided by the ENGINEER” shall include the performance of all Professional Engineering Services, Construction Phase Services and Construction Material Testing for the following described facility:

ENTITY: HIDALGO COUNTY PRECINCT NO. 3

PROJECT/DESCRIPTION: 5K MANSION LINEAR PARK TRAIL

ENGINEER shall mean B2Z ENGINEERING, LLC.

COUNTY shall mean HIDALGO COUNTY

SECTION 2 – CONSTRUCTION PHASE SERVICES

The services to be provided by the ENGINEER in providing Construction Management & Inspection and Construction Material Testing Services for Hidalgo County (COUNTY) Projects are as follows:

CONSTRUCTION MANAGEMENT SERVICES:

The ENGINEER will provide Construction Engineering, Construction Inspection/Record Keeping services for and during the construction of the Project, or portions of the Project, approved by the COUNTY. Specific services for CONSTRUCTION MANAGEMENT AND SUPPORT by the ENGINEER will include the following:

CONSTRUCTION CONTRACT ADMINISTRATION:

- 1) In general, the ENGINEER will provide the management and engineering support in accordance with plans and specifications required for consultation and advisement to the COUNTY, and act as the COUNTY’S representative as provided in the General Condition of the Construction Contract.
- 2) The ENGINEER will coordinate and conduct both a “Pre-Coordination Meeting” and a “Pre-Construction Conference” as required by the COUNTY.
- 3) The ENGINEER will work with the COUNTY REPRESENTATIVE to develop and issue a Notice to Proceed (NTP) to the contractor.
- 4) The ENGINEER will coordinate with the Design Engineer of Record (DEOR) and will use his best efforts to protect the COUNTY against defects and deficiencies in the work of the Contractor. The ENGINEER will promptly notify the COUNTY of any such defect or deficiency and take all steps possible to require the Contractor to correct the defect or deficiency.
- 5) The ENGINEER will review the contractor’s DBE Program and EEO Plan for compliance throughout the project.
- 6) The ENGINEER will work with the COUNTY REPRESENTATIVE to develop a Certificate of Substantial Completion at the appropriate time.
- 7) The ENGINEER will develop as built plans identifying any field and change order modifications done during the project. When applicable the ENGINEER will work with the DEOR to prepare the engineering data, including plan sheet drawings, specifications, and estimates, for the preparation of construction contract change orders, which may be required due to actual field conditions encountered or new requirements directed by the COUNTY.
- 8) The ENGINEER will provide the COUNTY REPRESENTATIVE a Certification that all work performed on the project met and/or exceeded the project specifications.

ATTACHMENT “A”
SCOPE OF SERVICES TO BE PROVIDED BY THE ENGINEER

CONSTRUCTION MANAGEMENT AND INSPECTION:

Construction Management (During Construction)

- 1) The ENGINEER will conduct frequent meetings w/ COUNTY REPRESENTATIVE & Contractor throughout the construction duration of the project.
- 2) The ENGINEER will assist the COUNTY REPRESENTATIVE with the implementation of the adopted Quality Assurance Program (QAP)
- 3) The ENGINEER will conduct team field visits with the COUNTY REPRESENTATIVE, and Design Engineer representatives throughout the duration of the project.
- 4) The ENGINEER will review quantities as submitted by the Contractor and will coordinate with the COUNTY REPRESENTATIVE for the preparation of the monthly and final estimates for payment to the Contractor.
- 5) The ENGINEER will review quantities as submitted by the Contractor and will coordinate with the COUNTY REPRESENTATIVE for the preparation of the monthly and final estimates for payment to the Contractor.
- 6) The ENGINEER will coordinate with the DEOR to obtain concurrence on any suggestions or RFI’s made by the contractor to modify the plans and/or contract documents.
- 7) The ENGINEER will coordinate with COUNTY REPRESENTATIVE, Design Engineer, and other stakeholders to participate in all Project Related Meetings, Construction Status Meetings, and Final Inspection
- 8) The ENGINEER will coordinate with the DEOR and the COUNTY to obtain approval on all Change Orders.

Construction Inspection

- 1) The ENGINEER will provide Project site inspection of the authorized construction contract as follows:
 - a. The ENGINEER will provide visits by a Senior Construction Engineer or a competent representative of the ENGINEER to the site of construction for the purpose of monitoring the Contractor’s progress and conformance to the construction contract plans and specifications.
 - b. The ENGINEER will provide a Construction Manager to coordinate with the public and adjacent property owners on construction inconveniences.
 - c. The ENGINEER will furnish the services of a Construction Superintendent and/or Construction Inspector(s) for full-time on-site inspection services.
 - d. The ENGINEER will provide construction oversight to monitor/inspect the Contractor’s daily progress and conformance to PS&E specifications.
 - e. The ENGINEER will provide an Environmental Specialist to inspect SW3P BMP’s,
 - f. The ENGINEER will maintain job safety measures and implement OSHA requirements
 - g. The ENGINEER will develop and oversee the completion of a “Project Punch List” with the COUNTY REPRESENTATIVE & Contractor’s Representative.

Construction Management (Post Construction)

- 1) The ENGINEER will prepare a Final Estimate for Project Close-Out & Release Retainage.
- 2) The ENGINEER will provide all Close-Out Documents to COUNTY REPRESENTATIVE.
- 3) The ENGINEER will coordinate “Final Acceptance” of the project.

ATTACHMENT "A"

SCOPE OF SERVICES TO BE PROVIDED BY THE ENGINEER

CONSTRUCTION MATERIAL TESTING:

The ENGINEER will provide the COUNTY with construction material testing services for the Project. The services to be provided include sampling and testing of all construction materials as required by the project plans and specifications. All sampling frequencies and test procedures will be performed in general accordance with the Texas Department of Transportation TEX methods (or ASTM methods as required) as outlined in the Guide Schedule for Sampling and Testing (11/07). The construction material testing includes, but is not limited to the following:

- 1) Attend the COUNTY'S and respective Party's pre-construction and construction meetings as requested to establish coordination and lines of communication for proposed construction materials testing during construction activities.
- 2) Consult and advise with the COUNTY during construction.
- 3) Sampling and ENGINEER testing of soils and base materials proposed for use in the construction of Project (Roads/Bridges/Drainage Structures/Misc.) to determine compliance of these materials with project plans and specifications.
- 4) Field density testing of soils and base materials to ensure proper compaction as required by project plans and specifications.
- 5) Field sampling and testing of fresh concrete, and ENGINEER testing of hardened concrete to determine compliance with project plans and specifications.
- 6) Field compaction testing of asphalt to ensure proper compaction during lay down operations.
- 7) Field inspection, sampling and ENGINEER testing of asphalt materials to determine their material properties and their compliance with project plans and specifications.
- 8) Any additional ENGINEER testing as required/requested by the COUNTY and the project plans and specifications.
- 9) Providing accurate and timely reports to the COUNTY and all/other recipients as designated by the COUNTY.
- 10) The ENGINEER will verify the concrete and asphalt designs to assure it is in accordance with project specifications.

A. Miscellaneous/Other:

- 1) Perform all technical services under the general direction of a Licensed Professional ENGINEER in the State of Texas and in substantial accordance with the basic requirements of the appropriate Standards of the American Society of Testing and Materials, where applicable, or other standards designated by COUNTY.
- 2) Employ testing machines which have been calibrated within a period not exceeding twelve (12) months from the time of use by devised of accuracy traceable to the National Institute of Standards and Technology (NIST) of the United States Department of Commerce, and, upon request, submit to the COUNTY or its authorized representative documentation of such calibration.
- 3) Retain all pertinent records relating to the services performed for a period of five (5) years following submission of all reports, during which period the records will be made available to the COUNTY within a reasonable time.
- 4) The ENGINEER will coordinate with the Design Engineer of Record to review and check all shop or working drawings furnished by the Contractor.
- 5) The ENGINEER will provide Monthly Reports/Presentations to the COUNTY.
- 6) The ENGINEER will provide inspection of all materials and equipment furnished/used by the Contractor as follows:
 - a. Review and record all laboratory, shop and mill tests of materials and equipment for compliance with the construction contract specifications.
 - b. Observe and/or perform Project record testing and/or independent assurance testing as outlined in the construction contract specifications.

NOTE: Change in and/or additional services to Scope will require prior approval from the COUNTY prior to undertaking.



ATTACHMENT B

FEE PROPOSAL



ATTACHMENT "B"

5K Mansion Linear Park Trail

Construction Phase Services

<i>Hidalgo County Precinct No. 3 Construction Management Services (FC320)</i>			PROJECT MANAGER	CONSTRUCTION INSPECTOR	ADMIN / CLERICAL	TOTAL HOURS	TOTAL LINE ITEM COST
TASKS							
Construction Contract Administration							
1	Review project plans, general notes, general conditions, bid & contract documents, and any other pertinent project documents.		20	8	8	36	\$5,788.64
2	Attend the Project Pre-Construction Meeting with the HCDD1, Design Engineer and the Construction Contractor		4	4		8	\$1,286.36
3	Coordination with Design Engineer of Record, HCDD1 Staff, and Construction Contractor(s) throughout the duration of the project		10			10	\$2,186.80
4	Issue a Certificate of Substantial Completion that Certifies to HCDD1 the Project was Construction as Designed and Complies.		8		8	16	\$2,341.20
5	Prepare Monthly Invoicing to HCDD1 (11 Pay Applications)		10			10	\$2,186.80
	Subtotal Labor Hours		52	12	16	80	\$13,789.80
Construction Management & Inspection							
Construction Management (During Construction)							
1	Meetings, and Coordination with HCDD1 Staff, Design Engineer and Contractor throughout construction duration to ensure project progression (Field Visits, Status Meetings, Issue Resolution, & Final Inspection)		10	8	8	26	\$3,601.84
2	Review & Processing of Contractor's Application for Payment (Approval/Modification/Rejection)		20		40	60	\$7,332.40
3	Obtain Design Engineer's Concurrence with any Suggestions or Request for Information (RFI's) and/or Submittals made by the Contractor		20			20	\$4,373.60
4	Coordinate with the Design Engineer and HCDD1 on any required Change Orders		24		8	32	\$5,840.08
	Subtotal Labor Hours		74	8	56	138	\$21,147.92
Construction Inspection							
1	On-Site Inspection During Construction Activities & Documentation in Project Diary. To include: SW3P requirements, maintaining job safety measures and implement OSHA requirements, inspection of TCP and Barricades, and coordination of CMT. Upload photos and diary notes into Owner-Insite & VPM.		20	540		560	\$59,945.00
2	Develop and Oversee Completion of a "Project Punch List" with the HCDD1 Inspector/PM & Contractor's Representative		8		8	16	\$2,341.20
	Subtotal Labor Hours		28	540	8	576	\$62,286.20
Construction Management (Post Construction)							
1	Coordinate all Project Close-Out Documents for delivery to HCDD1, Review Contractor's Final Application for Payment & Release of Retainage		8		8	16	\$2,341.20
	Subtotal Labor Hours		8	0	8	16	\$2,341.20
Total Labor Hours			162	560	88	810	810
Hourly Base Rates			\$ 68.00	\$ 32.00	\$ 23.00		
Contract Rate FY2024			\$ 218.68	\$ 102.91	\$ 73.97		
Total Costs			\$ 35,426.16	\$ 57,629.60	\$ 6,509.36		\$99,565.12

Direct Expenses	Construction Materials Testing (See Pages 2-4 of 4)	\$	75,090.92
	Mileage: \$0.655/mile	\$	655.00
Total Direct Expenses		\$	75,745.92

B2Z Engineering Total Cost

\$175,311.04

ATTACHMENT "B"
ESTIMATED MAN-HOURS AND TEST BREAKDOWN

Hidalgo County Pct. 3 - 5K Mansion Linear Park Trail Project (From Breyfogle Rd to N. Inspiration Rd)
Construction Materials Testing

Embankment (Test All Fill Material Including Cut From Job) (ITEM 132)

- Sampling and laboratory testing of soils and base materials proposed for use in the construction of Project (Roads/Bridges/Misc.) to determine compliance of these materials with project plans and specifications.
- Field density testing of soils and base materials to ensure proposer compaction as required by project plans and specifications.

	TxDOT Test	TxDOT Guide Specs	Additional Assumptions	Unit	Qty.	Contract Rate	Total
Atterberg Limits of Soils	Tex-106-E	PI>15 - Every 5,000 CY		Each	10	\$135.00	\$1,350.00
Gradation	Tex-110-E	Every 10,000 CY		Each	5	\$90.00	\$450.00
Moisture/Density	Tex-114-E	One per Each Material		Each	1	\$225.00	\$225.00
In-Place Density	Tex-115-E	Every 5,000 CY or 6,000 Linear Feet (Min. 1 per Lift)	Inc. to 10 - 2 per Leg (Job)	Each	10	\$28.00	\$280.00
Test Reports			LL/PI, Grad, MD, FD	Each	26	\$25.00	\$650.00
Tech Time (Soils)			PI,Gr,MD & FD	Hour	68	\$93.26	\$6,341.68
# of Trips (Tech)			20 Trips (10 Miles RT)	Mile	200	\$0.655	\$131.00
**Admin/Clerical				Hour	26	\$73.97	\$1,923.22
Item Subtotal							\$11,350.90

Subgrade (Untreated) (ITEM 260)

- Sampling and laboratory testing of soils and base materials proposed for use in the construction of Project (Roads/Bridges/Misc.) to determine compliance of these materials with project plans and specifications.

	TxDOT Test	TxDOT Guide Specs	Additional Assumptions	Unit	Qty.	Contract Rate	Total
Organic Content	Tex-148-E	Each 500 LF		Each	33	\$120.00	\$3,960.00
Sulfate Content	Tex-145-E	Each 500 LF		Each	33	\$95.00	\$3,135.00
Test Reports			OC & SC	Each	33	\$25.00	\$825.00
Tech Time (Soils)			1 hrs - OC/SC	Hour	66	\$93.26	\$6,155.16
# of Trips (Tech)			9 Trips (10 Miles RT)	Mile	90	\$0.655	\$58.95
**Admin/Clerical				Hour	33	\$73.97	\$2,441.01
Item Subtotal							\$16,575.12

Lime (ITEM 260)

- Sampling and laboratory testing of soils and base materials proposed for use in the construction of Project (Roads/Bridges/Misc.) to determine compliance of these materials with project plans and specifications.

	TxDOT Test	TxDOT Guide Specs	Additional Assumptions	Unit	Qty.	Contract Rate	Total
Compliance of Lime (DMS 6350)	Tex-600-J	1 per 200 Tons		Each	2	\$300.00	\$600.00
Item Subtotal							\$600.00

Subgrade (Lime Treated) (ITEM 260)

- Sampling and laboratory testing of soils and base materials proposed for use in the construction of Project (Roads/Bridges/Misc.) to determine compliance of these materials with project plans and specifications.
- Field density testing of soils and base materials to ensure proposer compaction as required by project plans and specifications.

	TxDOT Test	TxDOT Guide Specs	Additional Assumptions	Unit	Qty.	Contract Rate	Total
Pulverization Gradation	Tex-101-E (Part III)	Each 4,500 CY	Inc. to 5 - 1 per Leg (Job)	Each	5	\$100.00	\$500.00
Atterberg Limits of Soils	Tex-106-E	Each 5,000 CY	Inc. to 5 - 1 per Leg (Job)	Each	5	\$135.00	\$675.00
Gradation	Tex-110-E	Each 5,000 CY	Inc. to 5 - 1 per Leg (Job)	Each	5	\$90.00	\$450.00
Moisture/Density	Tex-121-E (Part II)	Every 20,000 CY		Each	1	\$225.00	\$225.00
In-Place Density	Tex-115-E	Every 3,000 CY	Inc. to 10 - 2 per Leg (Job)	Each	10	\$28.00	\$280.00
Test Reports			LL/PI, MD, FD	Each	26	\$25.00	\$650.00
Tech Time (Soils)			PI, Gr, MD & FD	Hour	48	\$93.26	\$4,476.48
# of Trips (Tech)			15 Trips (10 Miles RT)	Mile	150	\$0.655	\$98.25
**Admin/Clerical				Hour	4	\$73.97	\$295.88
Item Subtotal							\$7,650.61

Pipe Final Backfill Material 12" Lifts Drainage

- Sampling and laboratory testing of soils and base materials proposed for use in the construction of Project (Roads/Bridges/Misc.) to determine compliance of these materials with project plans and specifications.
- Field density testing of soils and base materials to ensure proper compaction as required by project plans and specifications.

	Test	TxDOT Guide Specs	Additional Assumptions	Unit	Qty.	Contract Rate	Total
Atterberg Limits of Soils	Tex-106-E	PI>15 – Every 5,000 CY		Each	2	\$135.00	\$270.00
Gradation	Tex-110-E	Each 5,000 CY	Assume 1 Mtl for Project	Each	2	\$90.00	\$180.00
Moisture/Density	Tex-113-E		Assume 1 Mtl for Project	Each	2	\$225.00	\$450.00
In-Place Density	Tex-115-E			Each	47	\$28.00	\$1,316.00
Test Reports			LL/PI, Grad, MD, FD	Each	22	\$25.00	\$550.00
Tech Time (Soils)			PI, Gr, MD & FD	Hour	56	\$93.26	\$5,222.56
# of Trips (Tech)			18 Trips (10 Miles RT)	Mile	180	\$0.655	\$117.90
**Admin/Clerical				Hour	22	\$73.97	\$1,627.34
Item Subtotal							\$9,733.80

Asphalt Concrete Pavement (Item 341 - HMA-QC/QA)

- Field compaction testing of asphalt to ensure proper compaction during lay down operations.
- Field sampling and laboratory testing of asphalt materials to determine their material properties and their compliance with project plans and specifications.

	TxDOT Test	TxDOT Guide Specs	Additional Assumptions	Unit	Qty.	Contract Rate	Total
Coarse Aggr.			Stockpile				
Gradation	Tex-200-F	1 Per Project Per Source Per Design		Each	1	\$75.00	\$75.00
Flat & Elongated Particles	Tex-280-F	1 Per Project Per Source Per Design		Each	1	\$60.00	\$60.00
Coarse Aggr. Angularity	Tex-460-A (Part I)	1 Per Project Per Source Per Design		Each	1	\$60.00	\$60.00
Del. Matl. and Decant	Tex-217-F	1 Per Project Per Source Per Design		Each	1	\$50.00	\$50.00
Fine Aggr.			Stockpile				
Bar Linear Shrinkage	Tex-107-E	1 Per Project Per Source Per Design		Each	1	\$45.00	\$45.00
Organic Impurities	Tex-408-A	1 Per Project Per Source Per Design		Each	1	\$50.00	\$50.00
Gradation	Tex-200-F	1 Per Project Per Source Per Design		Each	1	\$75.00	\$75.00
Mineral Filler Combined Aggr.			Bin or Silo Stockpile or Feeder Belt				
Sand Equivalent	Tex-203-F	1 Per Project Per Source Per Design		Each	1	\$80.00	\$80.00
Complete Mix			Truck Sample				
Asphalt Content (%)	Tex-236-F	1 Per Lot Per Design		Each	1	\$95.00	\$95.00
Voids in Mineral Aggr. (VMA)	Tex-204-F	1 Per Sublot Per Design	with 227-F Rice Gravity	Each	1	\$90.00	\$90.00
Gradation	Tex-236-F	Min 1 Per 12 Sublots Per Design		Each	1	\$95.00	\$95.00
Moisture Content	Tex-212-F (Part II)	1 Per Project Per Source Per Design		Each	1	\$18.00	\$18.00
Lab Molded Density Roadway	Tex-207-F	1 Per Sublot Per Design	At Site	Each	3	\$90.00	\$270.00
In-Place Air Voids	Tex-207-F	2 Cores Per Sublot Per Design		Each	2	\$25.00	\$50.00
Test Reports				Each	3	\$25.00	\$75.00
Tech Time (Aggr)			8 hours per 1 days (trips/test - CA/FA/Co)	Hour	8	\$93.26	\$746.08
Tech Time (Asph)			12 hours per 5 days	Hour	12	\$93.26	\$1,119.12
# of Trips (Tech)			2 Trips (10 Miles RT)	Mile	20	\$0.655	\$13.10
**Admin/Clerical				Hour	3	\$73.97	\$221.91
Item Subtotal							\$3,288.21

Hydraulic Cement Concrete Misc. - Riprap/Riprap(Mowstrip)/Curb/Sidewalk(Class A)

- Field sampling and testing of fresh concrete and laboratory testing of hardened concrete to determine compliance with project plans and specifications.
- Concrete batching as well as the asphalt testing at the plants to insure delivery of acceptable material to the job site (as required).

	TxDOT Test	TxDOT Guide Specs	Additional Assumptions	Unit	Qty.	Contract Rate	Total
Coarse Aggr.			QA Test. (QC by Source)				
Decantation	Tex-406-A	Each 20,000 CY(or source)		Each	1	\$50.00	\$50.00
Sieve Analysis	Tex-401-A	Each 1,000 CY(ea source)	5 Sieve	Each	1	\$90.00	\$90.00
Deleterious Matl.	Tex-413-A	Each 20,000 CY(or source)		Each	1	\$50.00	\$50.00
Fine Aggr.			QA Test. (QC by Source)				
Sand Equivalent	Tex-203-F	Each 1,000 CY(ea source)		Each	1	\$80.00	\$80.00
Organic Imp.	Tex-408-A	One Per Project Per Source		Each	1	\$50.00	\$50.00
Sieve Analysis	Tex-401-A	Each 1,000 CY(ea source)		Each	1	\$90.00	\$90.00
Fineness Mod.	Tex-402-A	Each 1,000 CY(ea source)		Each	1	\$15.00	\$15.00
Deleterious Matl.	Tex-413-A	Each 20,000 CY(or source)		Each	1	\$50.00	\$50.00
Mineral Filler			QA Test. (QC by Source)				
*Strength	Tex-447-A & Tex-418-A	Each 160 CY(1 Sets = 4 Cyl.)	use 2 Sets per Pour (11 Pours)	Each	76	\$30.00	\$2,280.00
Slump	Tex-415-A	One per 2 Sets		Each	19	\$20.00	\$380.00
Entrained Air	Tex-416-A	One per 2 Sets		Each	19	\$25.00	\$475.00
Temperature	Tex-422-A	One per 2 Sets		Each	19	\$5.00	\$95.00
Test Reports			CA,FA,MF,Conc.	Each	41	\$25.00	\$1,025.00
Tech Time (Aggr)				Hour	8	\$93.26	\$746.08
Tech Time (Conc)				Hour	44	\$93.26	\$4,103.44
# of Trips (Tech)			39 Trips (10 Miles RT)	Mile	390	\$0.655	\$255.45
**Admin/Clerical				Hour	39	\$73.97	\$2,884.83
Item Subtotal							\$12,719.80

- * Concrete Strength testing includes strength testing of cylinder specimens (breaks) as well as preparation, holding and curing of strength specimen costs
 - ~ 1 Set is defined as 2 Cylinders (7-day or 28-day)
 - ~ All Structural Concrete requires a minimum 2 Sets per Test Location (4 Cyl.)
- ** Project Administrative Fee is assessed on a per invoice basis and involves engineering review, evaluation, management and administration

Summary

Sub-Total (CMT Items) =		\$61,918.44
Project Engineer (QA/QC of CMT)	(64 hrs x 144.72 Hr.)	\$9,262.08
Sr. Eng. Tech. (Coord. w/ CEI Team)	(32 hrs x 122.20 Hr.)	\$3,910.40

Constuction Materials Testing Total :	\$75,090.92
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