



December 29, 2017

The Honorable Joseph Palacios  
Commissioner, Hidalgo County Pct. No. 4  
1051 N. Doolittle Road  
Edinburg, Texas 78539

**RE: Supplemental No. 5 to Work Authorization No. 2  
10<sup>th</sup> Street Extension Project – Contract No. C-12-126-10-16**

Dear Commissioner Palacios:

L&G Engineering respectfully requests your approval of Supplemental No. 5 to Work Authorization No. 2 in the amount of **\$1,181,198.59** for the 10<sup>th</sup> Street Extension Project. This Work Authorization is to perform the Engineering Services required for the Construction Management, Construction Inspection and Construction Material Testing of the 10<sup>th</sup> Street Extension Project from SH 107 to FM 1925 (Monte Cristo Road). We are also submitting for your review and approval, Supplemental No. 1 to the Main Agreement to include our 2017 Contract Rates that are being used on the Supplemental identified above.

Therefore, attached you will find the following in duplicate:

- 1.) Two signed originals of Supplemental No. 1 to the Main Agreement with attachments below:
  - Exhibit D – Contract Rates
- 2.) Two signed originals of Supplemental No. 5 to Work Authorizations No. 2 with attachments below:
  - Exhibit A “Services to be provided by the Owner”
  - Exhibit B “Services to be provided by the Engineer”
  - Exhibit C “Work Schedule”
  - Exhibit D-1 “Estimated Project Fee Schedule and Man-hour Breakdown”

We would also like to advise you that we will be using the Sub-Consultant listed below for this project.

Assistant Project Management  
*Mr. Nicholas Munoz*  
*B2Z Engineering, LLC*  
*PO Box 2724*  
*McAllen, Texas 78502*  
*(956) 618-0624*

Should you have any questions regarding this submittal, do not hesitate to call me at (956) 565-9813.

Sincerely,  
**L&G ENGINEERING**

Ricardo Gallaga Jr., P.E.  
Project Engineer

Attachments

**EXHIBIT "F"**  
Supplemental Agreement Form

THE STATE OF TEXAS    §  
                                  §  
COUNTY OF HIDALGO   §

**SUPPLEMENTAL AGREEMENT NO. 5  
TO WORK AUTHORIZATION NO. 2  
TO AGREEMENT FOR PROFESSIONAL SERVICES  
C-12-126-10-16**

This **SUPPLEMENTAL AGREEMENT** is made pursuant to the terms and conditions of Article 8 of the Agreement made by and between **HIDALGO COUNTY**, hereinafter called the "**Owner**", and **L&G ENGINEERING**, professional engineers of Mercedes, Texas, hereinafter called the "**Engineer**".

**WITNESSETH**

**WHEREAS**, the **Owner** and the **Engineer** executed the Main Contract Agreement on the 16th day of October 2012, concerning professional engineering services for the "**10<sup>th</sup> Street Expansion**" project from SH 107 to FM 1925 for the preparation of PS&E hereinafter referred to as the "**Project**"; and,

**WHEREAS**, it has become necessary to amend "*Exhibit B – Services to be provided by the Engineer*" of Work Authorization No. 2, Article 2 of the Agreement – Scope of Work as identified below:

- *Construction Management, Construction Inspection and Construction Materials Testing*

**WHEREAS**, it has become necessary to revise the "*Exhibit C – Work Schedule*" of Work Authorization No. 2, Article 2, 2.3 of the Agreement – Work Schedule to allow additional time to perform the tasks listed above; and,

**WHEREAS**, it has become necessary to amend "*Exhibit D-1 – Project Estimated Fee Schedule*" of Work Authorization No. 2, Part 2 of the Agreement – Estimated Cost, to increase the original Work Authorization amount of **\$2,353,339.44** to **\$3,534,538.03**; therefore the amount of **Supplemental No. 5 is \$1,181,198.59.**

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A. AGREEMENT

**NOW THEREFORE**, premises considered, the **Owner** and the **Engineer** agree that said **Agreement** is amended as follows:

- I. Sections of the Agreement, EXHIBIT "B" – SERVICES TO BE PROVIDED BY THE ENGINEER, EXHIBIT "C" – WORK SCHEDULE and EXHIBIT "D-1" – PROJECT ESTIMATED FEE SCHEDULE, are revised to reflect the above listed modifications of this Supplemental.

**All other provisions are unchanged and remain in full force and effect.**

**IN WITNESS WHEREOF**, the Engineer and the Owner have caused this Supplemental Agreement to the Agreement for Professional Services to be executed as of the \_\_\_\_\_ day of \_\_\_\_\_, 2018.

**THE ENGINEER:  
ENGINEER**

BY:   
Jacinto Garza, P.E., President

**THE OWNER:  
HIDALGO COUNTY**

BY: \_\_\_\_\_  
Ramon Garcia, County Judge

LIST OF EXHIBITS:

- EXHIBIT A – "Services to be provided by County"
- EXHIBIT B – "Services to be provided by Engineer"
- EXHIBIT C – "Work Schedule"
- EXHIBIT D-1 – "Project Estimated Fee Schedule"

## **EXHIBIT "A"**

### **Services to be provided by the County**

The following provides an outline of the services to be provided by the **County** in the development of the **Project**.

The **County** will provide to the **Engineer** the following:

- 1) Authorization to the Engineer to begin.
- 2) Payment for work performed by the Engineer.
- 3) Assistance to the Engineer, as necessary, to obtain required data and information from other local, regional, and state agencies that the Engineer cannot easily obtain.
- 4) Provide timely review and decisions in response to the Engineers request for information and/or submittals and deliverables.
- 5) Attend and participate in progress meetings as required and as coordinated and conducted by the Engineer.
- 6) Review and approve monthly and final estimates, developed by the Engineer, for payment to the Contractor.
- 7) Compensate and pay the Contractor for work performed as identified in the approved monthly and final estimates.

**EXHIBIT "B"**  
**SCOPE OF SERVICES TO BE PROVIDED BY THE ENGINEER**

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**SECTION 1-PROJECT DESCRIPTION**

The services designated herein as "Services provided by the ENGINEER" shall include the performance of all engineering services for the following described facility:

COUNTY/CITY: Hidalgo County  
CONTROL: 0921-02-300  
PROJECT/DESCRIPTION: 10<sup>th</sup> Street Roadway Extension Project  
LENGTH: \_\_\_\_\_  
HIGHWAY: 10<sup>th</sup> Street  
LIMITS: form SH 107 to FM 1925 (Monte Christo Road)

**PROJECT CLASSIFICATION**

(Place an "X" in only one Project Classification)

- Surface Treatment
- Overlay
- Rehabilitation Existing Road (Scarify & Reshape)
- Convert Non-Freeway to Freeway
- Widen Freeway
- Widen Non-Freeway
- New Location Toll Freeway
- New Location Non-Freeway
- Interchange (New or Reconstruct)
- Bridge Widening or Rehabilitation
- Bridge Replacement
- Upgrade to Standards - Freeway
- Upgrade to Standards - Non-Freeway
- Miscellaneous Studies (Use Function Code 110 for All Tasks)

ENGINEER shall mean L&G Engineering.

STATE shall mean Texas Department of Transportation and/or City of N/A.

COUNTY shall mean Hidalgo County.

CITY shall mean the City of N/A.

LPA shall mean Hidalgo County.

**EXHIBIT "B"**  
**SCOPE OF SERVICES TO BE PROVIDED BY THE ENGINEER**

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**SECTION 12 - CONSTRUCTION PHASE SERVICES**  
(Function Code 320)

Services  
Provided By:  
ENGINEER LPA

NO NO **CONSTRUCTION MANAGEMENT SERVICES:**

The ENGINEER will provide engineering, geotechnical testing and support services for and during the construction of the Project or portions of the Project approved by the LPA. Specific (basic and special) services for CONSTRUCTION MANAGEMENT AND SUPPORT by the ENGINEER will include the following:

**Construction Bidding:**

- 1) The ENGINEER will furnish the LPA the necessary copies of approved plans, specifications, notices to bidders, and proposals as prepared under PS&E.
- 2) The ENGINEER will assist the LPA on the tabulation of bids, recommendations to the Owner as to the proper action on all bid proposals received, and the preparation of formal contract documents for the award of each construction contract.

YES NO **Construction Contract Administration and Inspection:**

- 3) In general, the ENGINEER will provide the management and engineering support/data required for consultation and advisement to the LPA and act as the LPA's representative as provided in the General Condition of the Construction Contract.
- 4) The ENGINEER will coordinate and conduct a pre-construction conference (if required).
- 5) Defects and Deficiencies. The ENGINEER will use his best efforts to protect the LPA against defects and deficiencies in the work of the Contractor. The ENGINEER will promptly notify the LPA of any such defect or deficiency, and take all steps possible to require the Contractor to correct the defect or deficiency.
- 6) Contractor Payment. The ENGINEER will review quantities as submitted by the Contractor and will coordinate with the LPA for the preparation of the monthly and final estimates for payment to the Contractor.
- 7) The ENGINEER will provide Project site inspection of the authorized construction contract as follows:
  - a) Project Engineer. The ENGINEER will provide visits by the Project 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) Resident Engineer and/or Construction Inspector(s). The ENGINEER will furnish the services of a Resident Engineer and/or Construction Inspector(s) for on the site inspection construction to monitor/inspect the Contractor's daily progress and conformance to TxDOT's PS&E specifications.

**Miscellaneous Technical Activities:**

- 8) Shop Drawings. The ENGINEER will review and check all shop or working drawings furnished by the Contractor.

**EXHIBIT "B"**  
**SCOPE OF SERVICES TO BE PROVIDED BY THE ENGINEER**

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- 9) Control of Materials & Equipment. 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.
- 10) Change Orders. When applicable the ENGINEER will 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 LPA.
- 11) As Built Drawings. The ENGINEER will develop as built drawings to depict the work as actually constructed. The LPA will be furnished five (5) set of prints.


  YES        NO      **CONSTRUCTION MATERIAL TESTING:**

The ENGINEER will provide the LPA 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:

- (a) 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.
- (b) Field density testing of soils and base materials to ensure proper compaction as required by project plans and specifications.
- (c) Field sampling and testing of fresh concrete, and laboratory testing of hardened concrete to determine compliance with project plans and specifications.
- (d) Field compaction testing of asphalt to ensure proper compaction during lay down operations.
- (e) Field inspection, sampling and laboratory testing of asphalt materials to determine their material properties and their compliance with project plans and specifications.
- (f) The ENGINEER will be responsible for concrete batching as well as the asphalt testing at the plants to insure delivery of acceptable material to the job site.
- (g) Any additional laboratory testing as required/requested by the LPA and the project plans and specifications.
- (h) Providing accurate and timely reports to the LPA and all/other recipients as designated by the LPA.
- (i) The ENGINEER will verify the concrete and asphalt designs to assure it is in accordance with TxDOT specifications to be developed by the contractor.

**EXHIBIT "C"**  
**PROJECT SCHEDULE**

TASK AND DESCRIPTION	2018												2019											
	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
FC 120																								
Data Collection																								
Field Work																								
Report Preparation / Contract Mngmt																								


  
 L&G Engineering  
 Hidalgo County

**EXHIBIT D-1**

ESTIMATED PROJECT FEE SCHEDULE AND MAN-HOUR BREAKDOWN  
10th STREET ROADWAY EXTENSION PROJECT

	MANHOURS														TOTAL HOURS	TOTAL LINE ITEM COST
	Senior Project Manager	Engineer (V)	Senior Environmental Scientist / Specialist	Engineer III	Engineering Lab Manager	Senior Engineer Tech	Project Inspector V	Record Keeper	Project Inspector I	CADD Operator / GIS Analyst	Admin / Clerical	Soil & Aggregate Technician	Concrete & Asphalt Technician			
<b>CONTRACT RATE</b>	203.70	168.78	162.96	130.95	107.67	93.12	81.48	78.57	64.02	64.02	58.20	52.38	52.38			
<b>SECTION I ESTIMATE (CSJ: 0921-02-300):</b>																
<b>CONSTRUCTION MANAGEMENT &amp; INSPECTION SERVICES: (Est. 24 months construction and 1 month for post construction)</b>																
<b>CONSTRUCTION BIDDING:</b>																
1) The ENGINEER will furnish the COUNTY the necessary copies of approved specifications, notices to bidders and proposals as prepared under PS&E																
2) The ENGINEER will assist the COUNTY on the tabulation and communications to the Owner as to the proper action on all bid proposals received, and the preparation of formal contract documents for the award of each construction contract																
<b>ADMINISTRATION:</b>																
3) Maintain communication and coordinate with Design Engineer, Hidalgo County, TxDOT, Other Municipalities and Construction Contractor(s) on a regular basis.																
		96		192											288	\$ 41,345.28
4) Review, approve or reject invoices for processing.																
		24		48											72	\$ 10,336.32
5) Coordinate with the public and any affected property owners																
				96											96	\$ 12,571.20
6) Provide review, feedback, or guidance on Change Orders.																
		36		72						72					180	\$ 20,113.92
7) Accompany Design Engineer, State or Federal representatives and Municipality representatives on visits to the project.																
		32		32				32			32				128	\$ 13,968.00
8) Attend and conduct all job related meetings, Construction Status meetings and Final Inspection with the Design Engineer, State or Federal representatives and Municipality representatives including final walk through and inspection.																
		48		96											144	\$ 20,672.64
9) Calculate and verify the final contract quantities.																
				18											18	\$ 2,357.10
10) Review and submit to the Design Engineer any suggestions or request for information (RFI's) made by the contractor to change or modify any requirements of the Plans or Contract Documents.																
		60		120							60				240	\$ 29,332.80
11) Prepare a Contractors progress payment estimate on a monthly basis.																
		24		48							36				108	\$ 12,431.52
12) Issue a Certificate of Substantial Completion at the appropriate time.																
		8		16							8				32	\$ 3,911.04
13) Provide certification to the Municipality and TxDOT that this project was constructed as designed, subject to appropriate and necessary revisions during construction, in conformance with all project specifications and that all necessary contract provisions were fully complied with.																
		8		24							24				56	\$ 5,889.84
<b>CONSTRUCTION MANAGEMENT:</b>																
<b>Construction Phase Services:</b>																
1) Attend meetings as necessary, provide written reports																
											96				96	\$ 5,587.20
2) Provide cost control and value management on change orders																
		8		48											56	\$ 7,635.84
3) Assure quality and completeness of the work with continued on-site and office support monitoring and inspections																
		192		384							96				672	\$ 88,277.76
4) Maintain job safety measures																
		48		96							96				240	\$ 26,259.84
5) Monitor project schedule, provide weekly updates																
				24							12				36	\$ 3,841.20
<b>Post Construction Phase Services:</b>																
1) Provide all closeout documents																
				24				48			24				96	\$ 8,310.96
2) Coordinate final acceptance of projects																
		8		16											24	\$ 3,445.44
<b>CONSTRUCTION INSPECTION:</b>																
1) Maintain a presence on the project during times when contractor activities are underway and be on-site at all times during construction activities of the project requiring certification to be able to certify, on completion of the project, that the project was built as designed. Prepare Daily Reports, including quantities, locations of work, weather conditions, and weekly progress reports. Review and verify traffic control activities to include inspection of barricades and traffic control devices.																
								4320		1360					5680	\$ 439,060.80

2) Check that the contractor is in compliance with all construction contract requirements. Municipality permits and ordinances; property rights agreements; erosion and sediment control and stormwater management plans state permits, regulations and statutes; and federal regulations and statutes; and exercise the engineer's authority as provided in the contract documents and report immediately any deviations to the County and Construction Manager (CM).			44					1680						20			1744	\$ 140,331.84
3) Maintain a photographic record of the progress of construction, annotating such photos to indicate their content and context including date. This photographic record must be available for reference by the Construction Manager, Design Engineer, State or Federal representatives, and Municipality representatives.																	48	\$ 4,469.76
4) Inspect and approve material sources and water, borrow and staging areas.				2													2	\$ 261.90
5) Receive materials certifications, computations and reference materials submitted by the Contractor. Verify compliance with the Buy America Act. Maintain files on the project site of all items submitted by the contractor and of work done on behalf of the Municipality.				8													8	\$ 1,047.60
6) Track utility relocations and plot final facility locations on the final as-built plans (if any).																	48	\$ 4,469.76
7) Erosion control monitoring in accordance with applicable permits.				24													24	\$ 3,142.80
8) Develop final as-built plans by marking up a set of contract plans.				10							60			10			80	\$ 5,732.70
9) Check that completed work complies with the plans and specifications and is true to line and grade.				2													2	\$ 261.90
10) Organize an inspection of work completed at such time as contractor may claim substantial completion, with a contractor's representative, Design Engineer, State, Federal & Local representatives, and issue a list of items to be corrected or completed.				2													2	\$ 261.90
<b>SUB-TOTAL</b>				0	592	44	1402	0	96	4320	1760	1360	132	514	0	0	10,220	\$ 915,328.86

Construction Management & Inspection Sub-Total:	\$ 915,328.86
Construction Material Testing (CMT) Sub-Total:	\$ 186,639.37
B2Z Engineering (See Detailed Proposal) Sub-Total:	\$ 79,230.36
<b>Grand Total:</b>	<b>\$ 1,181,198.59</b>

**EXHIBIT D**

ESTIMATED MAN-HOURS AND TEST BREAKDOWN

**Hidalgo County Pct. 4 - 10th Street Project (From SH 107 to FM 1925) - CSJ: 0921-02-300**  
**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.

							80500C/16900F CY
	TxDOT Test	TxDOT Guide Specs	Additional Assumptions	Unit	Qty.	Contract Rate	Total
Liquid Limit	Tex-104-E	PI>15 ~ Every 5,000 CY	included with PI	Each		\$54.74	\$0.00
Plasticity Index	Tex-106-E	PI>15 ~ Every 5,000 CY	16 per Cut & 4 per Fill (Job)	Each	20	\$82.05	\$1,641.00
Gradation	Tex-110-E	Every 10,000 CY	8 per Cut & 2 per Fill (Job)	Each	10	\$98.63	\$986.30
Moisture/Density	Tex-114-E	One per Each Material	2 Exist (Assume Borrow)	Each	2	\$218.97	\$437.94
In-Place Density	Tex-115-E	Every 5,000 CY or 6,000 Linear Feet (Min. 1 per Lift)	At Least 12 on Job (0.25 Mi)	Each	12	\$24.63	\$295.56
Reports			LL/PI, Grad, MD, FD	Each	44	\$24.30	\$1,069.20
Tech Time (Soils)			4 hrs - PI,Gr,MD, 2 hrs - FD	Hour	112	\$52.38	\$5,866.56
# of Trips (Tech)			32 Trips (50 Miles RT)	Mile	1600	\$0.54	\$864.00
**Admin/Clerical				Hour	18	\$58.20	\$1,047.60
Item Subtotal							\$12,208.16

**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.

							46,250 CY
	TxDOT Test	TxDOT Guide Specs	Additional Assumptions	Unit	Qty.	Contract Rate	Total
Liquid Limit	Tex-104-E		included with PI	Each		\$54.74	\$0.00
Plasticity Index	Tex-106-E	Each 5,000 CY		Each	9	\$82.05	\$738.45
Gradation	Tex-110-E	Each 5,000 CY		Each	9	\$98.63	\$887.67
Moisture/Density	Tex-114-E	Every 20,000 CY		Each	2	\$218.97	\$437.94
In-Place Density	Tex-115-E	Every 3,000 CY	Use thru Prj - 1 Lift	Each	15	\$24.63	\$369.45
Reports			LL/PI, MD, FD	Each	35	\$24.30	\$850.50
Tech Time (Soils)			4 hrs - PI,Gr,MD, 2 hrs - FD	Hour	74	\$52.38	\$3,876.12
# of Trips (Tech)			24 Trips (50 Miles RT)	Mile	1200	\$0.54	\$648.00
**Admin/Clerical				Hour	10	\$58.20	\$582.00
Item Subtotal							\$8,390.13

**Flexible Base (Untreated - Stockpile Testing) (ITEM 247)**

- 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.

							36,400 CY
	TxDOT Test	TxDOT Guide Specs	Additional Assumptions	Unit	Qty.	Contract Rate	Total
Liquid Limit	Tex-104-E		included with PI	Each		\$54.74	\$0.00
Plasticity Index	Tex-106-E	Each 5,000 CY		Each	7	\$82.05	\$574.35
Gradation	Tex-110-E	Each 5,000 CY		Each	7	\$98.63	\$690.41
Moisture/Density	Tex-113-E	Every 20,000 CY		Each	2	\$218.97	\$437.94
Wet Ball Mill	Tex-116-E	Every 20,000 CY		Each	2	\$239.53	\$479.06
Triaxial	Tex-117-E	Every 20,000 CY		Each	2	\$360.50	\$721.00
Reports			LL/PI, MD, WB, Triaxial	Each	20	\$24.30	\$486.00
Tech Time (Soils)			4 hrs - LL,PI,MD & WB/Triax.	Hour	44	\$52.38	\$2,304.72
# of Trips (Tech)			7 Trips (50 Miles RT)	Mile	350	\$0.54	\$189.00
**Admin/Clerical				Hour	8	\$58.20	\$465.60
Item Subtotal							\$6,348.08

Flexible Base (Lime Treated) (ITEM 247)							
<ul style="list-style-type: none"> <li>• 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.</li> <li>• Field density testing of soils and base materials to ensure proposer compaction as required by project plans and specifications.</li> </ul>							
							36,400 CY
	TxDOT Test	TxDOT Guide Specs	Additional Assumptions	Unit	Qty.	Contract Rate	Total
Liquid Limit	Tex-104-E		included with PI	Each		\$54.74	\$0.00
Plasticity Index	Tex-106-E	Each 5,000 CY		Each	7	\$82.05	\$574.35
Gradation	Tex-110-E	Each 5,000 CY		Each	7	\$98.63	\$690.41
Moisture/Density	Tex-113-E	Every 20,000 CY	Complete Mixture	Each	2	\$218.97	\$437.94
In-Place Density	Tex-115-E	Every 3,000 CY		Each	12	\$24.63	\$295.56
Reports			MC, LL/PI, MD, FD	Each	28	\$24.30	\$680.40
Tech Time (Soils)			4 hrs - PI,Gr,MD, 2 hrs - FD	Hour	60	\$52.38	\$3,142.80
# of Trips (Tech)			18 Trips (50 Miles RT)	Mile	900	\$0.54	\$486.00
**Admin/Clerical				Hour	8	\$58.20	\$465.60
Item Subtotal							\$6,773.06
Asphalt Concrete Pavement (Item 3268 - HMA-QC/QA)							
<ul style="list-style-type: none"> <li>• Field compaction testing of asphalt to ensure proper compaction during lay down operations.</li> <li>• Field sampling and laboratory testing of asphalt materials to determine their material properties and their compliance with project plans and specifications.</li> </ul>							
							21,000 Tons
	TxDOT Test	TxDOT Guide Specs	Additional Assumptions	Unit	Qty.	Contract Rate	Total
Coarse Aggr.			Stockpile				
L.A. Abrasion	Tex-410-A	1 Per Project Per Source Per Design	if BRSQC meets Project Spec ~ Remove	Each	0	\$581.49	\$0.00
Soundness	Tex-411-A	1 Per Project Per Source Per Design	if BRSQC meets Project Spec ~ Remove	Each	0	\$581.49	\$0.00
Gradation	Tex-200-F	1 Per Project Per Source Per Design		Each	1	\$74.44	\$74.44
MicroDeval	Tex-461-A	1 Per every 12 Sublots	May be Eliminated based on Test History	Each	0		
Flat & Elongated Particles	Tex-280-F	1 Per Project Per Source Per Design		Each	1	\$61.80	\$61.80
Coarse Aggr. Angularity	Tex-460-A (Part I)	1 Per Project Per Source Per Design		Each	1	\$82.40	\$82.40
Del. Matl. and Decant	Tex-217-F	1 Per Project Per Source Per Design		Each	1	\$47.90	\$47.90
Fine Aggr.			Stockpile				
Bar Linear Shrinkage	Tex-107-E	1 Per Project Per Source Per Design		Each	1	\$68.46	\$68.46
Organic Impurities	Tex-408-A	1 Per Project Per Source Per Design		Each	1	\$47.90	\$47.90
Gradation	Tex-200-F	1 Per Project Per Source Per Design		Each	1	\$74.44	\$74.44
Mineral Filler			Bin or Silo				
Bar Linear Shrinkage	Tex-107-E	1 Per Project Per Source Per Design	Assume No Filler	Each	0	\$68.46	\$0.00
Gradation	Tex-200-F	1 Per Project Per Source Per Design	Assume No Filler	Each	0	\$74.44	\$0.00
Combined Aggr.			Stockpile or Feeder Belt				
Sand Equivalent	Tex-203-F	1 Per Project Per Source Per Design		Each	1	\$75.18	\$75.18
Complete Mix			Truck Sample				
Asphalt Content (%)	Tex-236-F	1 Per Lot Per Design		Each	21	\$92.70	\$1,946.70
Voids in Mineral Aggr. (VMA)	Tex-207-F	1 Per Sublot Per Design	with 227-F Rice Gravity	Each	84	\$113.30	\$9,517.20
Gradation	Tex-236-F	Min 1 Per 12 Sublots Per Design		Each	7	\$92.70	\$648.90
Boil Test	Tex-530-C	1 Per Project Per Source Per Design	Waived by Engineer	Each	0	\$88.99	\$0.00
Indirect Tensile - Dry	Tex-226-F	1 Per Project Per Source Per Design	Waived by Engineer	Each	0	\$618.00	\$0.00
Moisture Content	Tex-212-F (Part II)	1 Per Project Per Source Per Design		Each	1	\$15.45	\$15.45
Lab Molded Density	Tex-207-F	1 Per Sublot Per Design		Each	84	\$82.40	\$6,921.60
Hamburg Wheel Tracker	Tex-242-F	1 Per Project Per Source Per Design	Make Contractor Perform Test	Each	0	\$927.00	\$0.00
Roadway			At Site				
Field Coring		2 Cores Per Sublot Per Design	For Tex-207-F	Each	168	\$68.46	\$11,501.28
In-Place Air Voids	Tex-207-F	2 Cores Per Sublot Per Design		Each	168	\$25.75	\$4,326.00
Segregation Profile	Tex-207-F (Part V)	1 Per Project Per Source Per Design		Each	1	\$309.00	\$309.00
Joint Density	Tex-207-F (Part VII)	1 Per Project Per Source Per Design		Each	1	\$309.00	\$309.00
Tack Coat Adhesion	Tex-243-F	1 Per Project Per Source Per Design	Waived by Engineer	Each	0	\$103.00	\$0.00
Thermal Profile	Tex-244-F	1 Per Project Per Source Per Design		Each	1	\$180.25	\$180.25
Ride Quality	Tex-1001-S	Engineer may verify Contractor's results	Make Contractor Perform Test	Each	0		\$0.00
Reports				Each	372	\$24.30	\$9,039.60
Tech Time (Aggr)			16 hours per 1 days (trips/test - CA/FA/Co)	Each	16	\$52.38	\$838.08
Tech Time (Asph)			12 hours per 21 days	Hours	252	\$52.38	\$13,199.76
# of Trips (Tech)			22 Trips (50 Miles RT)	Mile	1100	\$0.54	\$594.00
**Admin/Clerical				Hours	90	\$58.20	\$5,238.00
Item Subtotal							\$65,117.34

**Hydraulic Cement Concrete Bridge Slab ~ (Class S)**

- 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).

							315 CY
	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	\$47.90	\$47.90
Sieve Analysis	Tex-401-A	Each 1,000 CY( ea source)	5 Sieve	Each	1	\$87.55	\$87.55
Deleterious Matl.	Tex-413-A	Each 20,000 CY( or source)		Each	1	\$47.90	\$47.90
L.A. Abrasion	Tex-410-A	Two Each Source	if CRSQC meets Project Spec ~ Remove	Each	0	\$581.49	\$0.00
Soundness	Tex-411-A	Two Each Source	if CRSQC meets Project Spec ~ Remove	Each	0	\$581.49	\$0.00
Fine Aggr.			QA Test. (QC by Source)				
Sand Equivalent	Tex-203-F	Each 1,000 CY( ea source)		Each	1	\$75.18	\$75.18
Organic Imp.	Tex-408-A	One Per Project Per Source		Each	1	\$47.90	\$47.90
Sieve Analysis	Tex-401-A	Each 1,000 CY( ea source)		Each	1	\$87.55	\$87.55
Fineness Mod.	Tex-402-A	Each 1,000 CY( ea source)		Each	1	\$16.43	\$16.43
Deleterious Matl.	Tex-413-A	Each 20,000 CY( or source)		Each	1	\$47.90	\$47.90
Acid Insoluble	Tex-612-J	Two Each Source	if CRSQC meets Project Spec ~ Remove	Each	0	\$88.99	\$0.00
Mineral Filler			QA Test. (QC by Source)				
Sieve Analysis	Tex-401-A	Two Each Source	if No Mineral Filler utilized in Mix ~ Remove	Each	0	\$87.55	\$0.00
Concrete							
*Strength	Tex-418-A	Each 60 CY(2 Sets = 4 Cyl.)		Each	24	\$28.76	\$690.24
Slump	Tex-415-A	One per 2 Sets		Each	6	\$0.00	\$0.00
Entrained Air	Tex-416-A	One per 2 Sets		Each	6	\$24.58	\$147.48
Temperature	Tex-422-A	One per 2 Sets		Each	6	\$0.00	\$0.00
Reports			CA,FA,MF,Conc.	Each	26	\$24.30	\$631.80
Tech Time (Aggr)				Hour	8	\$52.38	\$419.04
Tech Time (Conc)				Hour	48	\$52.38	\$2,514.24
# of Trips (Tech)			12 Trips (50 Miles RT)	Mile	600	\$0.54	\$324.00
**Admin/Clerical				Hour	6	\$58.20	\$349.20
<b>Item Subtotal</b>							<b>\$5,534.31</b>

**Hydraulic Cement Concrete ~ Abutments, Bents, Rails, Wingwalls, Traffic Signal Found. (Class C)**

- 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).

							225 CY (10 Sig Poles)
	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	\$47.90	\$47.90
Sieve Analysis	Tex-401-A	Each 1,000 CY( ea source)	5 Sieve	Each	1	\$87.55	\$87.55
Deleterious Matl.	Tex-413-A	Each 20,000 CY( or source)		Each	1	\$47.90	\$47.90
L.A. Abrasion	Tex-410-A	Two Each Source	if CRSQC meets Project Spec ~ Remove	Each	0	\$581.49	\$0.00
Soundness	Tex-411-A	Two Each Source	if CRSQC meets Project Spec ~ Remove	Each	0	\$581.49	\$0.00
Fine Aggr.			QA Test. (QC by Source)				
Sand Equivalent	Tex-203-F	Each 1,000 CY( ea source)		Each	1	\$75.18	\$75.18
Organic Imp.	Tex-408-A	One Per Project Per Source		Each	1	\$47.90	\$47.90
Sieve Analysis	Tex-401-A	Each 1,000 CY( ea source)	9 Sieve	Each	1	\$87.55	\$87.55
Fineness Mod.	Tex-402-A	Each 1,000 CY( ea source)		Each	1	\$16.43	\$16.43
Deleterious Matl.	Tex-413-A	Each 20,000 CY( or source)		Each	1	\$47.90	\$47.90
Acid Insoluble	Tex-612-J	Two Each Source	if CRSQC meets Project Spec ~ Remove	Each	0	\$88.99	\$0.00
Mineral Filler			QA Test. (QC by Source)				
Sieve Analysis	Tex-401-A	Two Each Source	if No Mineral Filler utilized in Mix ~ Remove	Each	0	\$87.55	\$0.00
Concrete							
*Strength	Tex-418-A	Each 60 CY(2 Sets = 4 Cyl.)	Assume 4 Set per Int. (2 Int.)	Each	76	\$28.76	\$2,185.76
Slump	Tex-415-A	One per 2 Sets		Each	19	\$0.00	\$0.00
Entrained Air	Tex-416-A	One per 2 Sets		Each	19	\$24.58	\$467.02
Temperature	Tex-422-A	One per 2 Sets		Each	19	\$0.00	\$0.00
Reports			CA,FA,MF,Conc.	Each	65	\$24.30	\$1,579.50
Tech Time (Aggr)				Hour	8	\$52.38	\$419.04
Tech Time (Conc)				Hour	152	\$52.38	\$7,961.76
# of Trips (Tech)			38 Trips (50 Miles RT)	Mile	1900	\$0.54	\$1,026.00
**Admin/Clerical				Hour	20	\$58.20	\$1,164.00
<b>Item Subtotal</b>							<b>\$15,261.39</b>

Hydraulic Cement Concrete Misc. - Curb/Valley Gutter/Sidewalk/Riprap/Curb Ramps (Class A)							
<ul style="list-style-type: none"> <li>Field sampling and testing of fresh concrete and laboratory testing of hardened concrete to determine compliance with project plans and specifications.</li> <li>Concrete batching as well as the asphalt testing at the plants to insure delivery of acceptable material to the job site (as required).</li> </ul>							3200 CY+Curb Ramp
	TxDOT Test	TxDOT Guide Specs	Additional Assumptions	Unit	Qty.	Contract Rate	Total
Concrete							
*Strength	Tex-418-A	Each 180 CY(1 Set = 2 Cyl.)	Adjust Per Str & Placement	Each	94	\$28.76	\$2,703.44
Slump	Tex-415-A	Not Required	Not Required	Each	0	\$0.00	\$0.00
Entrained Air	Tex-416-A	One per Set		Each	47	\$24.58	\$1,155.26
Temperature	Tex-422-A	Not Required	Not Required	Each	0	\$0.00	\$0.00
Reports			Conc.	Each	94	\$24.30	\$2,284.20
Tech Time (Aggr)		Not Required		Hour	0	\$52.38	\$0.00
Tech Time (Conc)				Hour	212	\$52.38	\$11,104.56
# of Trips (Tech)			59 Trips (50 Miles RT)	Miles	2950	\$0.54	\$1,593.00
**Admin/Clerical				Hour	30	\$58.20	\$1,746.00
Item Subtotal							\$20,586.46
Batching for Hydraulic Cement Concrete (Class C & S) & Asphalt Concrete Pavement (ACP) - Inspection of Batching at Plant (1 Tech per Plant, Reports)							
<ul style="list-style-type: none"> <li>Field sampling and testing of fresh concrete and laboratory testing of hardened concrete to determine compliance with project plans and specifications.</li> <li>Concrete batching as well as the asphalt testing at the plants to insure delivery of acceptable material to the job site (as required).</li> </ul>							
	TxDOT Test	TxDOT Guide Specs	Additional Assumptions	Unit	Qty.	Contract Rate	Total
Concrete							
Tech Time (Conc)				Hour	166	\$52.38	\$8,695.08
# of Trips (Tech)			21 Trips (50 Miles RT)	Mile	1050	\$0.54	\$567.00
				Reports	21	\$24.30	\$510.30
Hot Mix				Hour	264	\$52.38	\$13,828.32
Tech Time (Asph)			22 Trips (50 Miles RT)	Mile	1100	\$0.54	\$594.00
# of Trips (Tech)				Reports	22	\$24.30	\$534.60
**Admin/Clerical				Hour	36	\$58.20	\$2,095.20
Item Subtotal							\$26,824.50

\* 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) =	\$167,043.43
Eng. Lab. Mgr. (Coord. w/Area Eng./Rpt.) (182 hrs x 107.67/Hr.)	\$19,595.94
<b>Construction Materials Testing Total:</b>	<b>\$186,639.37</b>

