



AI-29965

18. B. 2.

CC REGULAR

Meeting Date: 12/06/2011

Submitted For: Martha Salazar

Submitted By: Vangie Garcia, PURCHASING DEPT.

Department: PURCHASING DEPT.

Information

CAPTION

✓ Approval of request of the following Work Authorizations as submitted by L & G Engineering Laboratory, LLC for Hidalgo County Precinct One through Contract #C-11-289-11-15 as further detailed:

- a. Work Authorization No. 1-\$25,365.96 for "Geotechnical Engineering Services and Flexible Pavement Design For Mile 17 N. Roadway Rehabilitation and Widening" Project.
- b. Work Authorization No. 2-\$8,586.68 for "Construction Materials Testing Services For Mile 17 North Road (between FM 1015 & Mile 4½)" Project.

BACKGROUND

Requisition #206882 has been submitted for WA#1 and Requisition #206881 has been submitted for WA#2.

Fiscal Impact

FISCAL YEAR: 2011

ACCT. #: 1342-431-00-121-085-0-731

FUNDS AVAILABLE Y/N?:

MATCHING FUNDS Y/N?:

BUDGETARY IMPACT:

Attachments

Work Authorization #1

Work Authorization #2

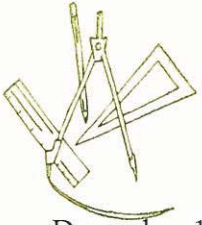
Form Review

<u>Inbox</u>	<u>Reviewed By</u>	<u>Date</u>
Purchasing Department	Marty Salazar	12/02/2011 11:17 AM
Budget & Management	Merlen P. Munoz	12/02/2011 11:28 AM
Purchasing Department	Marty Salazar	12/02/2011 11:17 AM
Budget & Management	Merlen P. Munoz	12/02/2011 11:28 AM

Ivan Cantu
Auditor's Office

Form Started By: Vangie Garcia

Started On: 12/01/2011 02:33 PM



L&G Engineering Laboratory

Construction Material Testing
Geotechnical Engineering

December 1, 2011

Commissioner Joel Quintanilla
Attn: Mr. Noe Montes
County of Hidalgo, Precinct No. 1
1902 Joe Stevens Drive
Weslaco, Texas 78596

RE: Work Authorization No. 1 – Geotechnical Engineering Services & Flexible Pavement Design for Mile 17 N. Roadway Rehabilitation and Widening Project in Hidalgo County Precinct No. 1.

Dear Mr. Montes:

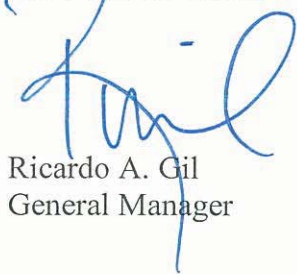
L&G Engineering Laboratory, L.L.C. (L&G), is providing you two (2) signed original work authorization forms for Geotechnical Engineering Services for the referenced project as per your request. We are attaching the following in duplicate:

- Work Authorization No. 1
- The Scope of Services (Owner) (Attachment A)
- The Scope of Services (Engineer) (Attachment B).
- Work Schedule (Attachment C)
- Project Cost Proposal (Attachment D)

L & G Engineering Laboratory, LLC. appreciates the opportunity to submit Work Authorization No.1 and look forward to working with **Hidalgo County Pct. 1**. If I may be of any assistance or any additional information is required, please feel free to contact me at 956-565-0760 or 956-463-2008.

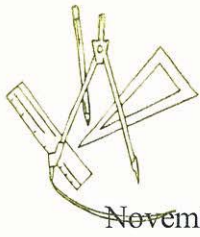
Sincerely,

L&G ENGINEERING LABORATORY, L.L.C.



Ricardo A. Gil
General Manager

Attachments



L&G Engineering Laboratory

Construction Material Testing
Geotechnical Engineering

November 29, 2011

Commissioner Joel Quintanilla
Attn: Mr. Noe Montes
County of Hidalgo, Precinct No. 1
1902 Joe Stevens Drive
Weslaco, Texas 78596

**RE: Proposal for Geotechnical Engineering Services and Flexible Pavement Design
Hidalgo Co. Pct. 1 – Mile 17 N. Roadway Rehabilitation and Widening Project
Limits: from 0.5 Mi. West of FM 3071 to FM 1015**

L&G Engineering Laboratory, LLC (L&G) is pleased to submit this cost proposal to provide Geotechnical Engineering Services and Flexible Pavement Design for the above referenced project. We are presenting this letter and cost estimate to confirm our understanding of this project and providing a description of the tasks to be performed. The broad objectives of our study will be to determine subsurface conditions for use by others in completing the design of the above referenced project located in Hidalgo County, TX. Described in this proposal are:

- Our understanding of pertinent project characteristics
- Our proposed scope for field and laboratory study
- Our proposed scope for engineering evaluation and reporting
- Our tentative project schedule
- Our project lump sum fee

Drilling and Miscellaneous Field Services

Based on the location map (or general directive) provided to **L&G Engineering Laboratory, LLC**, we are proposing the drilling and sampling of subsurface materials within the project limits as follows:

- Pavement Borings
 - Nine (9) Borings to be drilled to a depth of approximately ten (10) feet below top of existing natural ground at boring locations (Boring Locations evenly spaced throughout project site)
- Existing Pavement Section (Salvaged Base and ACP) Extraction Locations
 - Three (3) Locations will be extracted for testing of the salvaged base and asphalt concrete pavement testing for potential usage as flexible base and recycled asphalt pavement (RAP) (Excavations will be advanced to a depth of approximately the bottom of the existing flexible base layer)

HIDALGO COUNTY
Professional Engineering Services
Contract # C-11-289-11-15
Work Authorization Form

WORK AUTHORIZATION NO. 1

THIS WORK AUTHORIZATION is made pursuant to the terms and conditions of Section I.A. of the Agreement made by and between **HIDALGO COUNTY**, action herein by and through the **Commissioner's Court**, hereinafter called the "**Owner**," and, **L&G ENGINEERING LABORATORY, LLC** professional engineers of Texas, hereinafter called "**Engineer**".

PART 1. SCOPE OF WORK

The purpose of this Work Authorization is for the **Engineer** to provide **Geotechnical Engineering Services and Flexible Pavement Design for Mile 17 N. Roadway Rehabilitation and Widening Project in Hidalgo County Precinct No. One (1)**

The scope of services to be provided by the **Owner** is identified in *EXHIBIT "A" – Scope of Services to be Provided by the Owner* attached hereto.

The scope of services to be provided by the **Engineer** is identified in *EXHIBIT "B" – Scope of Services to be Provided by the Engineer* attached hereto.

PART 2. ESTIMATED COST

The estimated cost for services under this Work Authorization is **\$25,365.96**. This amount is based upon the costs outlined in the Estimated **Cost Proposal** attached hereto as **EXHIBIT "D"**.

PART 3. PAYMENT

Compensation and payment to the **Engineer** for the services established under this Work Authorization shall be made in accordance with Article/Part/Section 5.1 of the Agreement.

PART 4. FUNDING

This Work Authorization No. 1 shall be funded through funding source:
Account No. 1-1342-431-00-121-085-0-731
Requisition Number 206442 (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 scopes of the work authorization or (DATE).

PART 6. RESPONSIBILITIES AND OBLIGATIONS

This Authorization does not waive the parties' responsibilities and obligations provided under the **Agreement**.

PART 7. ACKNOWLEDGEMENT AND CONFIRMATION

Acknowledgement and confirmation by Hidalgo County Precinct No. 1 Commissioner Joel Quintanilla as to content and detail of this Work Authorization No. # 1.

HIDALGO COUNTY
COMMISSIONER PRECINCT NO. 1:

BY: 

PART 8. ACCEPTANCE AND APPROVAL

This Work Authorization is hereby accepted, approved by Hidalgo County Commissioners' Court on _____ as indicated below and effective as of 6th day of December, 2011.

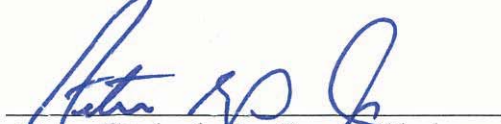
THE ENGINEER:
L&G ENGINEERING LABORATORY, LLC

THE OWNER:
HIDALGO COUNTY


By: Jacinto Garza, P.E.


Hon. Ramon Garcia, County Judge

ATTEST:


Arturo Guajardo Jr., County Clerk

APPROVED BY
COMMISSIONERS' COURT
ON: 12/6/11 

LIST OF ATTACHMENTS

- ATTACHMENT "A" - Service to be Provided by the Owner
- ATTACHMENT "B" - Services to be Provided by the Engineer
- ATTACHMENT "C" - Work Schedule
- ATTACHMENT "D" - Cost Proposal

ATTACHMENT "A"
Scope of Services (Owner)

PROJECT: Mile 17 N. Roadway Rehabilitation and Widening Project
Limits: from 0.5 Mi. West of FM 3071 to FM 1015
in Hidalgo County Precinct No. One (1)

SERVICES TO BE PROVIDED BY OWNER

The County of Hidalgo will provide **L&G Engineering Laboratory, LLC** with **Geotechnical Engineering Documents, Plans and Specifications** for the **Mile 17 N. Roadway Rehabilitation and Widening Project**.

**ATTACHMENT “B”
Scope of Services (Engineer)**

**PROJECT: Mile 17 N. Roadway Rehabilitation and Widening Project
Limits: from 0.5 Mi. West of FM 3071 to FM 1015
in Hidalgo County Precinct No. One (1)**

GENERAL SCOPE OF WORK

The Scope of Work will entail providing **The County of Hidalgo** with **Professional Geotechnical Engineering Services**.

The Scope of Work is identified as follows:

- **Geotechnical Engineering Services**

L&G Engineering will furnish all equipment, materials, supplies, and incidentals as needed to perform the services required by this Contract: The work is as follows:

Geotechnical Engineering Services

Geotechnical Drilling Services

L&G Engineering will provide drilling services for **Hidalgo County Pct. No. 1**. Soil samples will be removed from the sample apparatus during drilling operations. One of our geologists or engineering technicians will conduct various field tests on the recovered samples, visually classify the samples, and record the appropriate data on a field boring log. The samples will be appropriately packaged to minimize loss of their natural moisture content and to reduce the possibility of damage during transportation to our soils laboratory for testing. The tests performed on these samples will include Moisture Content, Liquid Limit, Plastic Limit, Plasticity Index and Materials Finer than No. 200. Unconfined Compressive Strength and Dry Unit Weight tests will be performed as necessary to provide detailed description of undisturbed samples.

Drilling services will also include a 24-hour water level reading at each boring location. Piezometers, when required, will be installed to maintain the integrity of the borehole overnight or over a weekend. Following completion of drilling, sampling, and subsurface water monitoring operations, all boreholes will be backfilled with soil cuttings from the completed borings. If enough soil cuttings are unavailable, clean sand will be used to backfill the completed boreholes. If a piezometer is installed, the pipe will be removed following the water level readings and the borehole backfilled as described above.

Once all of the Engineering Properties of the soils have been determined, the final Log of Boring is created using the field and laboratory data. Included in the Log of Boring are THD Penetrometer Blow Counts, actual Moisture Contents, Plasticity Indices, and other laboratory test data obtained during the laboratory testing phase of the project. Proper description and location

of strata, ground water elevations and test hole elevations will also be included in the Log of Boring.

Engineering Services

Engineering analyses will be conducted after reviewing the results of both the field and laboratory phases of the study. The findings and conclusions derived from the analyses will be presented in a written engineering report which will be prepared by the engineer. The report will include a boring location plan, boring logs with laboratory classification of recovered soil samples and subsurface water conditions encountered. The report will provide engineering recommendations for:

- Pier capacity curves; and
- Soil parameters that may be used in designing the foundations for the planned structures.

The geotechnical report will provide general comments and applicable recommendations regarding construction methods, sequences, and potential difficulties that may arise during overall construction as it relates to the soil and foundation aspects of this project. This information may serve to guide foundation selection and design and assist in the preparation of specifications for the project.

This contract **does not** include activities and corresponding costs that may be associated with the following:

- Providing an ATV mounted drill rig, dozer or special equipment to clear areas of vegetation and debris or to re-grade the site to gain access to the boring locations;
- Re-grading the site or portions of the site after drilling activities are completed;
- Site safety meetings that may be required; or
- Encountering hazardous or contaminated soils or substances during our field activities.

Hidalgo County Pct. No. 1 will be notified should these services become necessary for the completion of field exploration activities.

This proposal **does** include activities and corresponding costs that may be associated with locating buried utilities or pipelines as follows:

- Providing PVC pipe for water level readings; and
- Clearing the boring locations for underground utilities.

Hidalgo County Pct. No. 1 will be responsible for obtaining any necessary permits or authorization to egress areas where the borings are to be drilled.

Schedule

Based on the requested services, it is estimated that the drilling operations can take approximately two (2) to three (3) days to complete. We anticipate that drilling operations can usually begin within two (2) to three (3) days following notice to proceed, staking of the borings, clearing the boring locations of utilities and site and weather conditions permitting. The report and engineering analyses should generally be completed within two (2) weeks after completion of the drilling operations.

ATTACHMENT "C"
Work Schedule

PROJECT: Mile 17 N. Roadway Rehabilitation and Widening Project
Limits: from 0.5 Mi. West of FM 3071 to FM 1015
in Hidalgo County Precinct No. One (1)

Work Schedule

L&G Engineering Laboratory will provide **Hidalgo County Pct. # 1** with **Professional Geotechnical Engineering Services and Flexible Pavement Design** as outlined in **Contract Agreement C-11-289-11-15**.

ATTACHMENT "D"
Cost Proposal

PROJECT: Mile 17 N. Roadway Rehabilitation and Widening Project
Limits: from 0.5 Mi. West of FM 3071 to FM 1015
in Hidalgo County Precinct No. One (1)

See Attached

ATTACHMENT II**L&G ENGINEERING LABORATORY****STANDARD TERMS AND CONDITIONS**

1. L&G Engineering Laboratory (L&G) is being engaged by the CLIENT to render professional services involving the condition of various building, site, and/or environmental materials, which may contain or be contaminated by hazardous materials and asbestos containing materials (ACM). L&G will be compensated largely on the basis of the time required in rendering these professional services---not on the basis of potential legal liabilities created by any risks associated from the hazardous materials and ACM.
2. L&G will perform its services in accordance with the standard of care and diligence normally practiced by recognized professional firms in performing services of a similar nature, in the same locality, under similar circumstances. L&G makes no other warranties or guarantees, expressed or implied.
3. CLIENT will provide right-of-entry to the buildings and sites which are the subjects of L&G's services. CLIENT represents that it possesses authority for such right-of-entry and that the building/site operator(s) possess the necessary permits and licenses for current activities at the site.
4. The CLIENT will be responsible for providing the location of all underground utilities and other structures in the vicinity of our borings. We cannot accept responsibility and will not be liable for penetrating any underground utility, underground storage tank, or other subsurface condition not previously identified and located, or improperly located, by the CLIENT or utility agency.
5. If materials are encountered in the field which are judged to be potentially hazardous or a danger to our personnel, all field work will cease and the CLIENT will be notified. Subsequent work on the project will then be conducted only with specific additional authorization from the CLIENT and will be charged at appropriate revised unit rates. The scope of work and cost estimate does not include removal of any waste or cutting from the site. Such materials will be containerized and left at the site.
6. The scope of work and cost estimate does not include removal of any waste or drill cuttings from the site. The results of sample analysis or other information will be used to judge the nature of materials left on site. If this information indicates the materials are hazardous or potentially hazardous, and if CLIENT does not wish the waste or drill cuttings to be left on site, L&G will have such materials transported to a licensed facility for final disposal using a manifest signed by the CLIENT as generator. CLIENT agrees to pay all costs associated with management, analyses, storage, transportation, and disposal of materials. CLIENT recognizes and agrees that L&G at no time assumes title to said materials.

7. All samples obtained at the site will be managed by L&G. L&G will retain preservable samples and the residues from testing for 30 days after submission of its report, after which time the samples and residues will be disposed of.

In the event samples contain hazardous constituents, L&G will return such samples and residues to CLIENT, or, using a manifest signed by CLIENT as generator, L&G will have such samples transported to a licensed facility for final disposal. CLIENT agrees to pay all costs associated with management, analyses, storage, transportation, and disposal of materials. CLIENT recognizes and agrees that L&G at no time assumes title to said samples.

8. During its prime, asbestos was used in over 3,000 different products and can still be found in some products today. Consequently, attempts to locate and identify "all" asbestos in a survey would be both impractical and cost prohibitive. If retained to conduct an asbestos survey, L&G will direct its efforts at locating accessible, friable asbestos and non-friable asbestos which might become friable as a result of remodeling activities.
9. Likewise, several thousand chemicals, wastes, and other materials have been designated as hazardous or toxic by various laws and regulations. Attempts to locate and identify "all" such materials in a survey would also be impractical. If retained to conduct a site assessment with respect to such materials, L&G will direct its efforts at locating the most significant sources, or potential sources, of such materials with potential for the most significant impact.
10. The scope of work and cost estimate does not include costs incurred to provide access to sites which are inaccessible to our truck-mounted drill rigs and support vehicles. They also do not include costs incurred due to delays caused by inclement weather.
11. L&G will provide CLIENT with a written report in connection with the services performed. The report will present such findings and conclusions as L&G may reasonably make with the information gathered while performing its services.
12. The Contractor shall indemnify and hold the Owner and its officers, employees and successors, harmless from and against all damages, losses, and judgments, including reasonable attorney's fees and expenses to the extent they arise from the Contractor's negligent acts or omissions in the performance of its services and for patent, copyright or trademark infringement attributable to the Contractor's services. The Owner assumes liability for and agrees to indemnify, and hold the Contractor, its consultants and their respective officers, directors, shareholders, partners, principals, employees and successors harmless from and against all damages, losses and judgments, including reasonable attorney's fees and expenses, to the extent they arise from the owners, its agents, employees, consultants, contractors or construction manager (collectively for this indemnity "Owner Entity") gross negligence or willful misconduct. This indemnity applies to any Owner Entity deviations from the Instruments of Service not approved by the Contractor in writing. The Owner has no obligation to investigate the Contractor's

services for inconsistencies. The provisions of this section shall extend for all time not withstanding the termination or expiration of the Agreement.

13. Cancellation of the Agreement to which these terms and conditions apply may be made by either party for just cause after thirty days' written notification of intent of cancellation is provided to the other party. In the event the CLIENT elects to terminate the Agreement, L&G will be compensated in full for all services, materials, supplies, and expenses incurred prior to the actual cancellation date of the Agreement. The CLIENT shall in any event pay all amounts invoiced that the CLIENT does not dispute as provided herein.

14. All claims, disputes, and other controversy between L&G and CLIENT arising out of or in any way related to the services provided by L&G will be submitted to "alternative dispute resolution" (ADR) such as mediation, before and as a condition precedent to other remedies provided by law. If a dispute at law arises related to these services and that dispute required litigation as provided above, then; a) CLIENT assents to personal jurisdiction in the State of Texas; b) the claim will be brought and tried in judicial jurisdiction of the court of the county of Hidalgo; and CLIENT waives the right to remove action to any other county or jurisdiction; and c) The prevailing party will be entitled to recovery of all reasonable costs incurred, including staff time, court costs, attorneys' and expert witness fees, and other claim-related expenses.

L&G Engineering Laboratory will stake the boring locations and provide utility clearances prior to performing the field exploration portion of the project. The borings will be advanced to the specified depths and in-situ soil testing will be performed in general accordance with ASTM or TxDOT Standard Test Procedures (ASTM D1586 – Standard Penetration Testing or Tex-132-E – Texas Cone Penetration). The soil will be sampled as needed to verify subsurface materials and strata changes. Final drilling depths and elevations will be based on topographic conditions at the time of our drilling operations.

Unless requested, the client will be responsible for obtaining any necessary permits or authorization to egress areas (right of entry) where the borings are to be drilled. All samples will be removed from the sample apparatus during drilling operations. One of our geologists or engineering technicians (logger) will conduct various field tests on the recovered samples, visually classify the samples, and record the appropriate data on a field boring log. The samples will be appropriately packaged to minimize loss of their natural moisture content and to reduce the possibility of damage during transportation to our soils laboratory.

Drilling services will also include a 24-hour water level reading at each boring location, which may require piezometers be installed to maintain the integrity of the borehole overnight or over a weekend. Following completion of drilling, sampling, and subsurface water monitoring operations, all boreholes will be backfilled with soil cuttings from the completed borings. If there is not enough soil cuttings available, clean sand will be used to backfill the completed boreholes. If a piezometer is installed, the pipe will be removed following the water level readings and the borehole backfilled as described above.

This proposal *does not* include activities and corresponding costs that may be associated with the following:

- Providing an ATV mounted drill rig, dozer or special equipment to clear areas of vegetation and debris or to regrade the site to gain access to the boring locations;
- Regrading the site or portions of the site after drilling activities are completed;
- Site safety meetings that may be required; or
- Encountering hazardous or contaminated soils or substances during our field activities.

We will notify you should these services become necessary for us to complete our field exploration activities. We can arrange to provide for these services as part of our project scope, should you authorize us to do so.

Laboratory Testing Services

As requested, geotechnical laboratory testing is included as part of the scope of services for this project. Geotechnical engineering laboratory tests will be performed on the samples recovered during the field study to evaluate their physical and engineering properties. Testing may include several of the following test procedures:

- Atterberg Limits (ASTM D4318 or Tex-104-E, 105-E, 106-E)
 - This procedure will be used to aid in the classifying of the soil by way of Plastic Limit, Liquid Limit and Plasticity Index testing

- Gradation (ASTM D422 or Tex-111-E)
 - This procedure will be used to aid in the classifying of the soil. Testing will be dependent of the type of soil and can vary from a single sieve to a nest of sieves. A No. 200 sieve will be used to distinguish fine grained from coarse grained material
- Laboratory Determination of Water (Moisture) in Soil (ASTM D2216 or Tex-103-E)
 - This procedure will aid in determining the in-situ moisture content of the soils to assist in evaluating the behavior of soils
- Sulfate Content of Soil (ASTM C1580 or Tex-145-E)
 - This procedure will identify the soluble sulfate content of soil by using the turbidimetric techniques. The results of this procedure will be utilized to determine whether or not the subgrade material can be lime treated for stabilization or if other methods of stabilization will need to be proposed. The presence of extreme amounts of soluble sulfates will exclude lime treatment as a stabilization option.
- Lime Series Testing (Tex-121-E)
 - This procedure involves establishing a relationship between plasticity of soils, percentage lime and pH through the addition of hydrated lime at predetermined proportions. Results of this test will determine the required percent lime treatment for roadway subgrade.
- Unconfined Compression (ASTM D2166)
 - This procedure determines the direct unconfined compressive strength of a soil of which can be correlated to shear strength of a soil sample (comparison with strength testing).
- Triaxial Testing (Salvage Base) (Tex-117-E)
 - This procedure determines the shearing resistance, water absorption, and expansion of soils and/ or soil-aggregate mixtures. Shearing resistance values will be used to determine the salvage base criteria for the existing material.
- Gradation/Asphalt Content of ACP (Tex-200-F/Tex-236-F)
 - This test method is used to determine the particle size distribution of aggregate samples using standard U.S. sieves with square openings (Tex-200-F). The asphalt content will also be provided by Ignition Method (Tex-236-F).

Engineering Services

Engineering analyses will be conducted after reviewing the results of both the field and laboratory phases of our study. The findings and conclusions derived from our analyses will be presented in a written engineering report (three (3) copies), which will be prepared by one of our engineers, who specializes in geotechnical engineering and is familiar with the local conditions. The report will include a boring location plan, boring logs with laboratory classification of recovered soil samples and subsurface water conditions encountered. The report will provide engineering recommendations for:

- Analyses and Recommendations for Proposed Flexible Pavement (including FPS Report)
- Analyses and Recommendations for Lime Stabilization of Subgrade
- Analyses and Recommendations for Salvaged Base (Flexible Base and ACP)
- Additional Construction Considerations and Recommendations Where Applicable

The report will provide general comments and applicable recommendations regarding construction methods, sequences, and potential difficulties that may arise during overall construction as it relates to the soil aspects of this project. This information may serve to guide pavement selection and design and assist in the preparation of specifications for the project.

Schedule

Based on the requested services, we estimate that the drilling operations will take approximately one (1) day to complete. The roadway sampling of existing pavement section will take an additional one to two (1 to 2) days to complete. We anticipate that drilling and roadway sampling operations can begin within five (5) to seven (7) days following notice to proceed, staking of the borings, clearing the boring locations of utilities and site and weather conditions permitting. The report and engineering analyses (including FPS design) should be completed within three (3) weeks after completion of the drilling and roadway sampling operations.

Lump Sum Cost

The total lump sum cost for the study outlined herein is **\$25,365.96**. This lump sum cost includes personnel time for field exploration and laboratory testing and report preparation. Should unusual subsurface conditions be encountered in the field that indicates the desirability of significantly broadening the scope of the study, we will contact you to receive written authorization before proceeding with any additional work.

It should be noted that our study scopes (and project costs) do not include plan review or earthwork and foundation excavation observations during the construction of the project. However, plan review and construction observations costs should be included in the project budget.

Acceptance

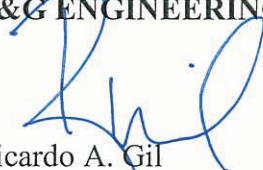
We appreciate the opportunity to submit this proposal and look forward to working with you in the development of this project, which will be carried out in accordance with this letter and the following attachments:

<u>Attachment</u>	<u>Description</u>
I	Fees
II	Terms and Conditions

Please return one signed copy of this letter proposal and provide written authorization for our firm to begin work on the services outlined herein. Our invoices are due and payable upon receipt at 2100 W. Expressway 83 Mercedes, Texas 78570.

L&G Engineering Laboratory, L.L.C. considers the data and information contained in this proposal to be proprietary. This statement of qualifications and any information contained herein shall not be disclosed and shall not be duplicated or used in whole or in part of any purpose other than to evaluate this proposal.

Sincerely,
L&G ENGINEERING LABORATORY, L.L.C.



Ricardo A. Gil
General Manager

Attachments I-Fees
II-Terms and Conditions

Jacinto Garza, P.E., President/CEO

Date

Accepted By _____
(Signature)

(Typed or Printed Name)

(Title)

(Date)

Attachment "I"
 Geotechnical Field and Laboratory Services
 Mile 17 N. Road (Hidalgo County Pct. 1)
 Limits: from 0.5 Mi. West of FM 3071 to FM 1015

	SERVICES		UNITS	UNITS	UNIT COST	TOTAL COST
I.	Project Management / Review					
	A. Principal / Project Manager / Review		Hours			
	B. Project Engineer (Staff)		Hours	1	\$ 150.22	\$ 150.22
	C. Typing and Clerical (Report)		Hours			
	D. Lodging		Day			
	E. Mileage		Mile			
	F. Air Travel		Trip			
II.	Utility Clearances / Boring Locates					
	A. Technician (Locate Borings)(Util Clr)		Hours	2	\$ 45.07	\$ 90.14
	B. Staff Engineer/Geologist/Scientist		Hours			
	C. Rebar (stakes with impalement covers)		Cost +12.5%			
	D. Vehicle Charge		Mile			
	E. Mileage		Mile	30	\$ 0.490	\$ 14.70
III.	Field Exploration					
	A Mobilization		Day	1	\$ 418.18	\$ 418.18
	B Field Exploration					
	1. Soil Boring/Solid Stem with SPT Testing		Feet	90	\$ 29.28	\$ 2,635.20
	2. Texas Cone Penetration Tests		Ea.		\$ -	\$ -
	3. Field Logger / Engineering Tech		Hour	10	\$ 45.07	\$ 450.70
	4. 24 Hr. Water Level Observations		Hour	2	\$ 45.07	\$ 90.14
	5. Piezometers		Each	0	\$ -	\$ -
	6. Vehicle Charge (Support Vehicle)		Mile	30	\$ 1.57	\$ 47.10
	7. Vehicle Charge (Logger)		Mile	60	\$ 0.49	\$ 29.40
	8. Trenching to Obtain In-situ Flexbase & ACP <i>(cut existing section to remove ACP & base)</i>		Per Location	3	\$ 800.00	\$ 2,400.00
IV	Geotechnical Data Analysis					
	1. Engineering Spec. (Soil Classification)		Hours	4	\$ 112.61	\$ 450.44
	2. Engineering Spec. (Logs & Summaries)		Hours	4	\$ 112.61	\$ 450.44
	3. Moisture Content		Ea.	27	\$ 10.00	\$ 270.00
	4. Atterberg Limits		Ea.	18	\$ 75.06	\$ 1,351.08
	5. -200 Determination		Ea.	18	\$ 52.27	\$ 940.86
	6. Consolidation Tests		Ea.			
	7. Unconfined Compression Testing		Ea.	9	\$ 47.05	\$ 423.45
	8. Soil Sulfate Testing (Subgrade)		Ea.	9	\$ 95.00	\$ 855.00
	9. Soil Lime Series Testing (Subgrade)		Ea.	5	\$ 505.93	\$ 2,529.65
IV	Salvage Materials Testing					
	1. Triaxial Tests (Salvage Adequacy) <i>(including MD testing and sample curing)</i>		Ea.	3	\$ 400.00	\$ 1,200.00
	2. Extraction / Gradation /Asph Cont (Ex. ACP)		Ea.	3	\$ 219.04	\$ 657.12
Project Total						\$ 15,453.82

ATTACHMENT "I" - FEE SCHEDULE
 Geotechnical Engineering - Geotechnical Report (including Flexible Pavement Design)

L&G ENGINEERING LABORATORY, LLC

TASK		MANHOURS							Total
		Senior Project Manager	Senior Geotechnical Engineer	Geotechnical Engineer	EIT	Technician (CADD)	Admin/ Clerical		
Mile 17 N. Road - Hidalgo County Pct. 1 Limits: from 0.5 Mi. West of FM 3071 to FM 1015									
1	Evaluate Existing Soil Data & Pavement Details		1		4			5	
2	Prepare Exhibits (Location Map, Soil Conservation Map, etc)				2	2		4	
3	Create Soil Profile & Determine Subgrade Reaction		1		4	2		7	
4	Determine Strength Parameters (FWD Research) for FPS		1	2	2			5	
5	Evaluate Traffic Analysis for FPS Run (Coord w/ TxDOT)		1	2	2			5	
6	Design Pavement Structure with FPS (Multiple Alternatives)		1	4	6	2		13	
7	Triaxial Check (Cohesimeter Determination)		1	1	2			4	
8	Determine Potential Vertical Rise			2	4			6	
9	Recommendations for Soil Stabilization (Lime Ser, Sulfate,...)			2	4			6	
10	Value Engineering	1	1					2	
11	Flexible Pavement Design Report	1	1	2	4		2	10	
12	Geotechnical Report and Summary (Final Package)	1	1	2	4		2	10	
13	Meeting and Coordination	1	1	1				3	
	Subtotal	4	8	20	40	6	4	82	
Labor Hours		4	8	20	40	6	4	82	
Contract Rates		\$ 150.22	\$ 150.22	\$ 150.22	\$ 112.61	\$ 45.07	\$ 45.07		
Total Labor Costs		\$ 600.88	\$ 1,201.76	\$ 3,004.40	\$ 4,504.40	\$ 270.42	\$ 180.28	\$ 9,762.14	

LINE ITEM EXPENSES
 Printing Reproduction
 Drilling & Testing (See Page 2 of 2)

\$ 150.00
 \$ 15,453.82

Total Expenses

\$ 15,603.82

L&G Engineering Laboratory Total Cost

\$ 25,365.96

Requisition # 00206882 Print Requisition Date Entered 12-01-2011 Account Year 1 PG # Item Total 25,365.96

Enter Req's Only Approve Approve By Year Requisition Status Needs Approval by PCT1 View Acct Total 25,365.96

Order Header Items Accounts Inquire Approval

Inquire Vendor Documents Stipend Vendor: Approve as Vendor Allow Stipend Order: Approve Disapprove Approval Level Owner

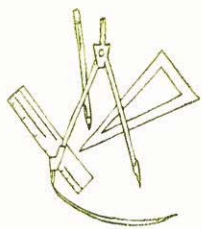
L & G ENGINEERING LABORATORY, LLC
 2100 W. EXPRESSWAY 83
 MERCEDES TX 78570

Type:
 Order: COMMISSIONER, PRECINCT 1
 Ship: COMMISSIONER, PRECINCT 1
 Special Inst Internal:
 Po Special Inst: RM221
 Owner: RELIZONDO

View

Line No	Qty Ordered	Description	Unit Price	Final Cost
1	1	GEOTECHNICAL ENGINEERING SERVICES AND FLEXIBLE PAVE	25,365.96	25,365.96

Account Number	Description	Account Balance	Amount
1-1342-431-00-121-085-0-731	CO2010A&B-PCT1 MILE17N(FM88-FM1015)-ROAD	11,661.90	25,365.96



L&G Engineering Laboratory

Construction Material Testing
Geotechnical Engineering

December 1, 2011

Commissioner Joel Quintanilla
Attn: Mr. Noe Montes
County of Hidalgo, Precinct No. 1
1902 Joe Stevens Drive
Weslaco, Texas 78596

RE: Work Authorization No. 2 – Mile 17 North Road (between FM 1015 & Mile 4 ½) Project

Dear Mr. Montes:

L&G Engineering Laboratory, L.L.C. (L&G), is providing you two (2) signed original work authorization forms for Construction Materials Testing Services for the referenced project as per your request. We are attaching the following in duplicate:

- Work Authorization No. 2
- The Scope of Services (Owner) (Attachment A)
- The Scope of Services (Engineer) (Attachment B).
- Work Schedule (Attachment C)
- Project Cost Proposal (Attachment D)

L & G Engineering Laboratory, LLC. appreciates the opportunity to submit Work Authorization No.2 and look forward to working with **Hidalgo County Pct. 1**. If I may be of any assistance or any additional information is required, please feel free to contact me at 956-565-0760 or 956-463-2008.

Sincerely,

L&G ENGINEERING LABORATORY, L.L.C.

Ricardo A. Gil
General Manager

Attachments

HIDALGO COUNTY
Professional Engineering Services
Contract # C-11-289-11-15
Work Authorization Form

WORK AUTHORIZATION NO. 2

THIS WORK AUTHORIZATION is made pursuant to the terms and conditions of Section I.A. of the Agreement made by and between **HIDALGO COUNTY**, action herein by and through the **Commissioner’s Court**, hereinafter called the “**Owner**,” and, **L&G ENGINEERING LABORATORY, LLC** professional engineers of Texas, hereinafter called “**Engineer**”.

PART 1. SCOPE OF WORK

The purpose of this Work Authorization is for the **Engineer** to provide **Construction Materials Testing Services for Mile 17 North Road (between FM 1015 & Mile 4 ½) Project in Hidalgo County Precinct No. One (1)**

The scope of services to be provided by the **Owner** is identified in **EXHIBIT “A” – Scope of Services to be Provided by the Owner** attached hereto.

The scope of services to be provided by the **Engineer** is identified in **EXHIBIT “B” – Scope of Services to be Provided by the Engineer** attached hereto.

PART 2. ESTIMATED COST

The estimated cost for services under this Work Authorization is **\$ 8,586.68**. This amount is based upon the costs outlined in the Estimated **Cost Proposal** attached hereto as **EXHIBIT “D”**.

PART 3. PAYMENT

Compensation and payment to the **Engineer** for the services established under this Work Authorization shall be made in accordance with Article/Part/Section 5.1 of the Agreement.

PART 4. FUNDING

This Work Authorization No. 2 shall be funded through funding source:
Account No. 1-1342-431-00-121-085-0-731
Requisition Number 2016881 (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 scopes of the work authorization or (DATE).

PART 6. RESPONSIBILITIES AND OBLIGATIONS

This Authorization does not waive the parties' responsibilities and obligations provided under the **Agreement**.

PART 7. ACKNOWLEDGEMENT AND CONFIRMATION

Acknowledgement and confirmation by Hidalgo County Precinct No. 1 Commissioner Joel Quintanilla as to content and detail of this Work Authorization No. #2.

HIDALGO COUNTY
COMMISSIONER PRECINCT NO. 1:

BY: 

PART 8. ACCEPTANCE AND APPROVAL

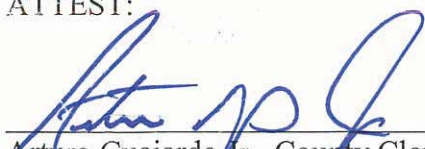
This Work Authorization is hereby accepted, approved by Hidalgo County Commissioners' Court on 12/6/11 as indicated below and effective as of 6th day of December, 2011.

THE ENGINEER:
L&G ENGINEERING LABORATORY, LLC

THE OWNER:
HIDALGO COUNTY


By: Jacinto Garza, P.E.


Hon. Ramon Garcia, County Judge

ATTEST:

Arturo Guajardo Jr., County Clerk

APPROVED BY
COMMISSIONERS' COURT
ON: 12/6/11 

LIST OF ATTACHMENTS

- ATTACHMENT "A" - Service to be Provided by the Owner
- ATTACHMENT "B" - Services to be Provided by the Engineer
- ATTACHMENT "C" - Work Schedule
- ATTACHMENT "D" - Cost Proposal

ATTACHMENT "A"
Scope of Services (Owner)

PROJECT: Mile 17 North Road (between FM 1015 & Mile 4½) in Hidalgo County Precinct No. One (1)

SERVICES TO BE PROVIDED BY OWNER

The County of Hidalgo will provide **L&G Engineering Laboratory, LLC** with **Construction Documents, Plans and Specifications** for the **Mile 17 North Road (between FM 1015 & Mile 4½) Project**.

**ATTACHMENT “B”
Scope of Services (Engineer)**

PROJECT: Mile 17 North Road (between FM 1015 & Mile 4½) Project in Hidalgo County Precinct No. One (1)

GENERAL SCOPE OF WORK

The Scope of Work will entail providing **The County of Hidalgo** with **Construction Materials Testing Services**.

The Scope of Work is identified as follows:

- **Construction Materials Testing Services**

L&G Engineering Laboratory will furnish all equipment, materials, supplies, and incidentals as needed to perform the services required by this Contract: The work is as follows:

Construction Materials Testing Services

L&G Engineering Laboratory, L.L.C. will provide **The County of Hidalgo** with **Construction Materials Testing Services** for the **Mile 17 North Road (between FM 1015 & Mile 4½) Project in Hidalgo County Precinct No. One (1)**

The services to be provided are as follows:

- Sampling and laboratory testing of soils and base materials proposed for use in the construction of Roads and Bridges 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.
- Field sampling and testing of fresh concrete, and Laboratory testing of hardened concrete to determine compliance with project plans and specifications.
- Field Compaction testing of Asphalt to ensure proper compaction during lay down operations.
- Field inspection, sampling and laboratory testing of Asphalt materials to determine their materials properties and their compliance with project plans and specifications.
- Any additional laboratory testing as required/requested by **The County of Hidalgo and the project plans and specifications**.

- Provide accurate and timely reports to **The County of Hidalgo** and all/other recipients as designated by the County.

Engineering Services

L&G Engineering Laboratory, L.L.C. will provide an engineer's review of all test results to determine compliance with all project plans and specifications.

Scheduling of Services

L & G Engineering Laboratory is prepared to make a commitment to **The County of Hidalgo's** materials testing needs. L & G Engineering Laboratory makes every effort to respond to its clients as requests are received, and every effort will be made to keep scheduling conflicts to a minimum. As any other firm or business providing a service, L & G Engineering Laboratory prefers to schedule field and laboratory work with as much advance notice as possible. L & G Engineering Laboratory understands; however, that certain situations may occur when the Client may have a need for Materials Testing Services with as little or no advance notice. During these instances, L & G Engineering Laboratory will make every effort to dispatch personnel to the project within one (1) hour of the Client's request for services.

ATTACHMENT "C"
Work Schedule

PROJECT: Mile 17 North Road (between FM 1015 & Mile 4½) Project in Hidalgo County Precinct No. One (1)

Work Schedule

L&G Engineering Laboratory will provide **Hidalgo County Pct. # 1** with **Construction Materials Testing Services** as outlined in **Contract Agreement C-11-289-11-15**.

ATTACHMENT "D"
Cost Proposal

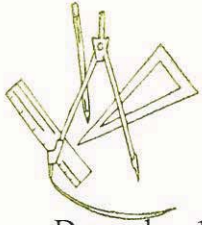
PROJECT: Mile 17 North Road (between FM 1015 & Mile 4½) Project in Hidalgo County
Precinct No. One (1)

See Attached

Attachment "I"
Mile 17 North Road between FM 1015 & Mile 4 1/2
Prepared for Hidalgo County Pct. 1

<i>Subgrade Testing - Laboratory</i>					
Tech Time	6	Hrs.	\$45.75	\$274.50	
Trip Charge	48	Mi.	\$0.50	\$24.00	
Atterberg	4	Ea.	\$76.18	\$304.72	
Moisture-Density Determ	2	Ea.	\$203.31	\$406.62	
Reports	4	Ea.	\$22.56	\$90.24	
Eng. Spec.	1	Hr.	\$114.30	\$114.30	
Engineer	1	Hr.	\$152.47	\$152.47	
			Sub.	\$1,366.85	
<i>Subgrade Field Density Testing</i>					
Tech Time	16	Hrs.	\$45.75	\$732.00	based
Trip Charge	192	Mi	\$0.50	\$96.00	on
Comp. Test	24	Ea.	\$22.87	\$548.88	8
Reports	8	Ea.	\$22.56	\$180.48	Trips
Eng. Spec.	2	Hr.	\$114.30	\$228.60	
Engineer	2	Hr.	\$152.47	\$304.94	
			Sub.	\$2,090.90	
<i>Roadway Base Materials Testing - Laboratory</i>					
Tech Time	2.5	Hrs.	\$45.75	\$114.38	
Trip Charge	24	Mi.	\$0.50	\$12.00	
Atterberg	1	Ea.	\$76.18	\$76.18	
Moisture-Density Determ	1	Ea.	\$203.31	\$203.31	
Sieve Analysis	1	Ea.	\$57.12	\$57.12	
Reports	2	Ea.	\$22.56	\$45.12	
Eng. Spec.	0.5	Hr.	\$114.30	\$57.15	
Engineer	0.5	Hr.	\$152.47	\$76.24	
			Sub.	\$641.49	
<i>Base Material Field Density Testing</i>					
Tech Time	16	Hrs.	\$45.75	\$732.00	based
Trip Charge	192	Mi	\$0.50	\$96.00	on 8
Comp. Test	24	Ea.	\$22.87	\$548.88	trips
Reports	8	Ea.	\$22.56	\$180.48	
Eng. Spec.	2	Hr.	\$114.30	\$228.60	
Engineer	2	Hr.	\$152.47	\$304.94	
			Sub.	\$2,090.90	
<i>Asphalt Field & Laboratory Testing</i>					
Tech Time	8	Hrs.	\$58.41	\$467.28	
Trip Charge	72	Mi	\$0.50	\$36.00	based
Rolling Patterns	4	Ea.	\$37.56	\$150.24	on 4
Ext./Sieve/% A/C	2	Ea.	\$222.33	\$444.66	trips
Coring ACP Thickness	12	Ea.	\$63.57	\$762.84	
Reports	6	Ea.	\$22.56	\$135.36	
Eng. Spec.	1.5	Hr.	\$114.30	\$171.45	
Engineer	1.5	Hr.	\$152.47	\$228.71	
			Sub.	\$2,396.54	

Estimated Project Total \$8,586.68



L&G Engineering Laboratory

Construction Material Testing
Geotechnical Engineering

December 1, 2011

Commissioner Joel Quintanilla
Attn: Mr. Noe Montes
County of Hidalgo, Precinct No. 1
1902 Joe Stevens Drive
Weslaco, Texas 78596

RE: Work Authorization No. 1 – Geotechnical Engineering Services & Flexible Pavement Design for Mile 17 N. Roadway Rehabilitation and Widening Project in Hidalgo County Precinct No. 1.

Dear Mr. Montes:

L&G Engineering Laboratory, L.L.C. (L&G), is providing you two (2) signed original work authorization forms for Geotechnical Engineering Services for the referenced project as per your request. We are attaching the following in duplicate:

- Work Authorization No. 1
- The Scope of Services (Owner) (Attachment A)
- The Scope of Services (Engineer) (Attachment B).
- Work Schedule (Attachment C)
- Project Cost Proposal (Attachment D)

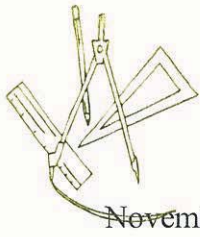
L & G Engineering Laboratory, LLC. appreciates the opportunity to submit Work Authorization No.1 and look forward to working with **Hidalgo County Pct. 1**. If I may be of any assistance or any additional information is required, please feel free to contact me at 956-565-0760 or 956-463-2008.

Sincerely,

L&G ENGINEERING LABORATORY, L.L.C.

Ricardo A. Gil
General Manager

Attachments



L&G Engineering Laboratory

Construction Material Testing
Geotechnical Engineering

November 29, 2011

Commissioner Joel Quintanilla
Attn: Mr. Noe Montes
County of Hidalgo, Precinct No. 1
1902 Joe Stevens Drive
Weslaco, Texas 78596

**RE: Proposal for Geotechnical Engineering Services and Flexible Pavement Design
Hidalgo Co. Pct. 1 – Mile 17 N. Roadway Rehabilitation and Widening Project
Limits: from 0.5 Mi. West of FM 3071 to FM 1015**

L&G Engineering Laboratory, LLC (L&G) is pleased to submit this cost proposal to provide Geotechnical Engineering Services and Flexible Pavement Design for the above referenced project. We are presenting this letter and cost estimate to confirm our understanding of this project and providing a description of the tasks to be performed. The broad objectives of our study will be to determine subsurface conditions for use by others in completing the design of the above referenced project located in Hidalgo County, TX. Described in this proposal are:

- Our understanding of pertinent project characteristics
- Our proposed scope for field and laboratory study
- Our proposed scope for engineering evaluation and reporting
- Our tentative project schedule
- Our project lump sum fee

Drilling and Miscellaneous Field Services

Based on the location map (or general directive) provided to **L&G Engineering Laboratory, LLC**, we are proposing the drilling and sampling of subsurface materials within the project limits as follows:

- Pavement Borings
 - Nine (9) Borings to be drilled to a depth of approximately ten (10) feet below top of existing natural ground at boring locations (Boring Locations evenly spaced throughout project site)
- Existing Pavement Section (Salvaged Base and ACP) Extraction Locations
 - Three (3) Locations will be extracted for testing of the salvaged base and asphalt concrete pavement testing for potential usage as flexible base and recycled asphalt pavement (RAP) (Excavations will be advanced to a depth of approximately the bottom of the existing flexible base layer)

HIDALGO COUNTY
Professional Engineering Services
Contract # C-11-289-11-15
Work Authorization Form

WORK AUTHORIZATION NO. 1

THIS WORK AUTHORIZATION is made pursuant to the terms and conditions of Section I.A. of the Agreement made by and between **HIDALGO COUNTY**, action herein by and through the **Commissioner's Court**, hereinafter called the "**Owner**," and, **L&G ENGINEERING LABORATORY, LLC** professional engineers of Texas, hereinafter called "**Engineer**".

PART 1. SCOPE OF WORK

The purpose of this Work Authorization is for the **Engineer** to provide **Geotechnical Engineering Services and Flexible Pavement Design for Mile 17 N. Roadway Rehabilitation and Widening Project in Hidalgo County Precinct No. One (1)**

The scope of services to be provided by the **Owner** is identified in *EXHIBIT "A" – Scope of Services to be Provided by the Owner* attached hereto.

The scope of services to be provided by the **Engineer** is identified in *EXHIBIT "B" – Scope of Services to be Provided by the Engineer* attached hereto.

PART 2. ESTIMATED COST

The estimated cost for services under this Work Authorization is **\$25,365.96**. This amount is based upon the costs outlined in the Estimated **Cost Proposal** attached hereto as **EXHIBIT "D"**.

PART 3. PAYMENT

Compensation and payment to the **Engineer** for the services established under this Work Authorization shall be made in accordance with Article/Part/Section 5.1 of the Agreement.

PART 4. FUNDING

This Work Authorization No. 1 shall be funded through funding source:
Account No. 1-1342-431-00-121-085-0-731
Requisition Number 206442 (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 scopes of the work authorization or (DATE).


PART 6. RESPONSIBILITIES AND OBLIGATIONS

This Authorization does not waive the parties' responsibilities and obligations provided under the **Agreement**.

PART 7. ACKNOWLEDGEMENT AND CONFIRMATION

Acknowledgement and confirmation by Hidalgo County Precinct No. 1 Commissioner Joel Quintanilla as to content and detail of this Work Authorization No. # 1.

HIDALGO COUNTY
COMMISSIONER PRECINCT NO. 1:

BY: 

PART 8. ACCEPTANCE AND APPROVAL

This Work Authorization is hereby accepted, approved by Hidalgo County Commissioners' Court on _____ as indicated below and effective as of 6th day of December, 2011.

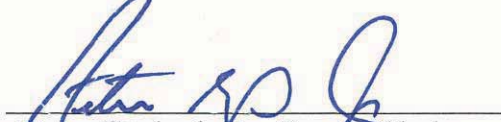
THE ENGINEER:
L&G ENGINEERING LABORATORY, LLC

THE OWNER:
HIDALGO COUNTY


By: Jacinto Garza, P.E.


Hon. Ramon Garcia, County Judge

ATTEST:


Arturo Guajardo Jr., County Clerk

APPROVED BY
COMMISSIONERS' COURT
ON: 12/6/11 

LIST OF ATTACHMENTS

- ATTACHMENT "A" - Service to be Provided by the Owner
- ATTACHMENT "B" - Services to be Provided by the Engineer
- ATTACHMENT "C" - Work Schedule
- ATTACHMENT "D" - Cost Proposal

ATTACHMENT "A"
Scope of Services (Owner)

PROJECT: Mile 17 N. Roadway Rehabilitation and Widening Project
Limits: from 0.5 Mi. West of FM 3071 to FM 1015
in Hidalgo County Precinct No. One (1)

SERVICES TO BE PROVIDED BY OWNER

The County of Hidalgo will provide **L&G Engineering Laboratory, LLC** with **Geotechnical Engineering Documents, Plans and Specifications** for the **Mile 17 N. Roadway Rehabilitation and Widening Project**.

ATTACHMENT "B"
Scope of Services (Engineer)

PROJECT: Mile 17 N. Roadway Rehabilitation and Widening Project
Limits: from 0.5 Mi. West of FM 3071 to FM 1015
in Hidalgo County Precinct No. One (1)

GENERAL SCOPE OF WORK

The Scope of Work will entail providing **The County of Hidalgo** with **Professional Geotechnical Engineering Services**.

The Scope of Work is identified as follows:

- **Geotechnical Engineering Services**

L&G Engineering will furnish all equipment, materials, supplies, and incidentals as needed to perform the services required by this Contract: The work is as follows:

Geotechnical Engineering Services

Geotechnical Drilling Services

L&G Engineering will provide drilling services for **Hidalgo County Pct. No. 1**. Soil samples will be removed from the sample apparatus during drilling operations. One of our geologists or engineering technicians will conduct various field tests on the recovered samples, visually classify the samples, and record the appropriate data on a field boring log. The samples will be appropriately packaged to minimize loss of their natural moisture content and to reduce the possibility of damage during transportation to our soils laboratory for testing. The tests performed on these samples will include Moisture Content, Liquid Limit, Plastic Limit, Plasticity Index and Materials Finer than No. 200. Unconfined Compressive Strength and Dry Unit Weight tests will be performed as necessary to provide detailed description of undisturbed samples.

Drilling services will also include a 24-hour water level reading at each boring location. Piezometers, when required, will be installed to maintain the integrity of the borehole overnight or over a weekend. Following completion of drilling, sampling, and subsurface water monitoring operations, all boreholes will be backfilled with soil cuttings from the completed borings. If enough soil cuttings are unavailable, clean sand will be used to backfill the completed boreholes. If a piezometer is installed, the pipe will be removed following the water level readings and the borehole backfilled as described above.

Once all of the Engineering Properties of the soils have been determined, the final Log of Boring is created using the field and laboratory data. Included in the Log of Boring are THD Penetrometer Blow Counts, actual Moisture Contents, Plasticity Indices, and other laboratory test data obtained during the laboratory testing phase of the project. Proper description and location

of strata, ground water elevations and test hole elevations will also be included in the Log of Boring.

Engineering Services

Engineering analyses will be conducted after reviewing the results of both the field and laboratory phases of the study. The findings and conclusions derived from the analyses will be presented in a written engineering report which will be prepared by the engineer. The report will include a boring location plan, boring logs with laboratory classification of recovered soil samples and subsurface water conditions encountered. The report will provide engineering recommendations for:

- Pier capacity curves; and
- Soil parameters that may be used in designing the foundations for the planned structures.

The geotechnical report will provide general comments and applicable recommendations regarding construction methods, sequences, and potential difficulties that may arise during overall construction as it relates to the soil and foundation aspects of this project. This information may serve to guide foundation selection and design and assist in the preparation of specifications for the project.

This contract **does not** include activities and corresponding costs that may be associated with the following:

- Providing an ATV mounted drill rig, dozer or special equipment to clear areas of vegetation and debris or to re-grade the site to gain access to the boring locations;
- Re-grading the site or portions of the site after drilling activities are completed;
- Site safety meetings that may be required; or
- Encountering hazardous or contaminated soils or substances during our field activities.

Hidalgo County Pct. No. 1 will be notified should these services become necessary for the completion of field exploration activities.

This proposal **does** include activities and corresponding costs that may be associated with locating buried utilities or pipelines as follows:

- Providing PVC pipe for water level readings; and
- Clearing the boring locations for underground utilities.

Hidalgo County Pct. No. 1 will be responsible for obtaining any necessary permits or authorization to egress areas where the borings are to be drilled.

Schedule

Based on the requested services, it is estimated that the drilling operations can take approximately two (2) to three (3) days to complete. We anticipate that drilling operations can usually begin within two (2) to three (3) days following notice to proceed, staking of the borings, clearing the boring locations of utilities and site and weather conditions permitting. The report and engineering analyses should generally be completed within two (2) weeks after completion of the drilling operations.

ATTACHMENT "C"
Work Schedule

PROJECT: Mile 17 N. Roadway Rehabilitation and Widening Project
Limits: from 0.5 Mi. West of FM 3071 to FM 1015
in Hidalgo County Precinct No. One (1)

Work Schedule

L&G Engineering Laboratory will provide Hidalgo County Pct. # 1 with Professional Geotechnical Engineering Services and Flexible Pavement Design as outlined in Contract Agreement C-11-289-11-15.

ATTACHMENT "D"
Cost Proposal

PROJECT: Mile 17 N. Roadway Rehabilitation and Widening Project
Limits: from 0.5 Mi. West of FM 3071 to FM 1015
in Hidalgo County Precinct No. One (1)

See Attached

ATTACHMENT II**L&G ENGINEERING LABORATORY****STANDARD TERMS AND CONDITIONS**

1. L&G Engineering Laboratory (L&G) is being engaged by the CLIENT to render professional services involving the condition of various building, site, and/or environmental materials, which may contain or be contaminated by hazardous materials and asbestos containing materials (ACM). L&G will be compensated largely on the basis of the time required in rendering these professional services---not on the basis of potential legal liabilities created by any risks associated from the hazardous materials and ACM.
2. L&G will perform its services in accordance with the standard of care and diligence normally practiced by recognized professional firms in performing services of a similar nature, in the same locality, under similar circumstances. L&G makes no other warranties or guarantees, expressed or implied.
3. CLIENT will provide right-of-entry to the buildings and sites which are the subjects of L&G's services. CLIENT represents that it possesses authority for such right-of-entry and that the building/site operator(s) possess the necessary permits and licenses for current activities at the site.
4. The CLIENT will be responsible for providing the location of all underground utilities and other structures in the vicinity of our borings. We cannot accept responsibility and will not be liable for penetrating any underground utility, underground storage tank, or other subsurface condition not previously identified and located, or improperly located, by the CLIENT or utility agency.
5. If materials are encountered in the field which are judged to be potentially hazardous or a danger to our personnel, all field work will cease and the CLIENT will be notified. Subsequent work on the project will then be conducted only with specific additional authorization from the CLIENT and will be charged at appropriate revised unit rates. The scope of work and cost estimate does not include removal of any waste or cutting from the site. Such materials will be containerized and left at the site.
6. The scope of work and cost estimate does not include removal of any waste or drill cuttings from the site. The results of sample analysis or other information will be used to judge the nature of materials left on site. If this information indicates the materials are hazardous or potentially hazardous, and if CLIENT does not wish the waste or drill cuttings to be left on site, L&G will have such materials transported to a licensed facility for final disposal using a manifest signed by the CLIENT as generator. CLIENT agrees to pay all costs associated with management, analyses, storage, transportation, and disposal of materials. CLIENT recognizes and agrees that L&G at no time assumes title to said materials.

7. All samples obtained at the site will be managed by L&G. L&G will retain preservable samples and the residues from testing for 30 days after submission of its report, after which time the samples and residues will be disposed of.

In the event samples contain hazardous constituents, L&G will return such samples and residues to CLIENT, or, using a manifest signed by CLIENT as generator, L&G will have such samples transported to a licensed facility for final disposal. CLIENT agrees to pay all costs associated with management, analyses, storage, transportation, and disposal of materials. CLIENT recognizes and agrees that L&G at no time assumes title to said samples.

8. During its prime, asbestos was used in over 3,000 different products and can still be found in some products today. Consequently, attempts to locate and identify "all" asbestos in a survey would be both impractical and cost prohibitive. If retained to conduct an asbestos survey, L&G will direct its efforts at locating accessible, friable asbestos and non-friable asbestos which might become friable as a result of remodeling activities.
9. Likewise, several thousand chemicals, wastes, and other materials have been designated as hazardous or toxic by various laws and regulations. Attempts to locate and identify "all" such materials in a survey would also be impractical. If retained to conduct a site assessment with respect to such materials, L&G will direct its efforts at locating the most significant sources, or potential sources, of such materials with potential for the most significant impact.
10. The scope of work and cost estimate does not include costs incurred to provide access to sites which are inaccessible to our truck-mounted drill rigs and support vehicles. They also do not include costs incurred due to delays caused by inclement weather.
11. L&G will provide CLIENT with a written report in connection with the services performed. The report will present such findings and conclusions as L&G may reasonably make with the information gathered while performing its services.
12. The Contractor shall indemnify and hold the Owner and its officers, employees and successors, harmless from and against all damages, losses, and judgments, including reasonable attorney's fees and expenses to the extent they arise from the Contractor's negligent acts or omissions in the performance of its services and for patent, copyright or trademark infringement attributable to the Contractor's services. The Owner assumes liability for and agrees to indemnify, and hold the Contractor, its consultants and their respective officers, directors, shareholders, partners, principals, employees and successors harmless from and against all damages, losses and judgments, including reasonable attorney's fees and expenses, to the extent they arise from the owners, its agents, employees, consultants, contractors or construction manager (collectively for this indemnity "Owner Entity") gross negligence or willful misconduct. This indemnity applies to any Owner Entity deviations from the Instruments of Service not approved by the Contractor in writing. The Owner has no obligation to investigate the Contractor's

services for inconsistencies. The provisions of this section shall extend for all time notwithstanding the termination or expiration of the Agreement.

13. Cancellation of the Agreement to which these terms and conditions apply may be made by either party for just cause after thirty days' written notification of intent of cancellation is provided to the other party. In the event the CLIENT elects to terminate the Agreement, L&G will be compensated in full for all services, materials, supplies, and expenses incurred prior to the actual cancellation date of the Agreement. The CLIENT shall in any event pay all amounts invoiced that the CLIENT does not dispute as provided herein.

14. All claims, disputes, and other controversy between L&G and CLIENT arising out of or in any way related to the services provided by L&G will be submitted to "alternative dispute resolution" (ADR) such as mediation, before and as a condition precedent to other remedies provided by law. If a dispute at law arises related to these services and that dispute required litigation as provided above, then; a) CLIENT assents to personal jurisdiction in the State of Texas; b) the claim will be brought and tried in judicial jurisdiction of the court of the county of Hidalgo; and CLIENT waives the right to remove action to any other county or jurisdiction; and c) The prevailing party will be entitled to recovery of all reasonable costs incurred, including staff time, court costs, attorneys' and expert witness fees, and other claim-related expenses.

L&G Engineering Laboratory will stake the boring locations and provide utility clearances prior to performing the field exploration portion of the project. The borings will be advanced to the specified depths and in-situ soil testing will be performed in general accordance with ASTM or TxDOT Standard Test Procedures (ASTM D1586 – Standard Penetration Testing or Tex-132-E – Texas Cone Penetration). The soil will be sampled as needed to verify subsurface materials and strata changes. Final drilling depths and elevations will be based on topographic conditions at the time of our drilling operations.

Unless requested, the client will be responsible for obtaining any necessary permits or authorization to egress areas (right of entry) where the borings are to be drilled. All samples will be removed from the sample apparatus during drilling operations. One of our geologists or engineering technicians (logger) will conduct various field tests on the recovered samples, visually classify the samples, and record the appropriate data on a field boring log. The samples will be appropriately packaged to minimize loss of their natural moisture content and to reduce the possibility of damage during transportation to our soils laboratory.

Drilling services will also include a 24-hour water level reading at each boring location, which may require piezometers be installed to maintain the integrity of the borehole overnight or over a weekend. Following completion of drilling, sampling, and subsurface water monitoring operations, all boreholes will be backfilled with soil cuttings from the completed borings. If there is not enough soil cuttings available, clean sand will be used to backfill the completed boreholes. If a piezometer is installed, the pipe will be removed following the water level readings and the borehole backfilled as described above.

This proposal *does not* include activities and corresponding costs that may be associated with the following:

- Providing an ATV mounted drill rig, dozer or special equipment to clear areas of vegetation and debris or to regrade the site to gain access to the boring locations;
- Regrading the site or portions of the site after drilling activities are completed;
- Site safety meetings that may be required; or
- Encountering hazardous or contaminated soils or substances during our field activities.

We will notify you should these services become necessary for us to complete our field exploration activities. We can arrange to provide for these services as part of our project scope, should you authorize us to do so.

Laboratory Testing Services

As requested, geotechnical laboratory testing is included as part of the scope of services for this project. Geotechnical engineering laboratory tests will be performed on the samples recovered during the field study to evaluate their physical and engineering properties. Testing may include several of the following test procedures:

- Atterberg Limits (ASTM D4318 or Tex-104-E, 105-E, 106-E)
 - This procedure will be used to aid in the classifying of the soil by way of Plastic Limit, Liquid Limit and Plasticity Index testing

- Gradation (ASTM D422 or Tex-111-E)
 - This procedure will be used to aid in the classifying of the soil. Testing will be dependent of the type of soil and can vary from a single sieve to a nest of sieves. A No. 200 sieve will be used to distinguish fine grained from coarse grained material
- Laboratory Determination of Water (Moisture) in Soil (ASTM D2216 or Tex-103-E)
 - This procedure will aid in determining the in-situ moisture content of the soils to assist in evaluating the behavior of soils
- Sulfate Content of Soil (ASTM C1580 or Tex-145-E)
 - This procedure will identify the soluble sulfate content of soil by using the turbidimetric techniques. The results of this procedure will be utilized to determine whether or not the subgrade material can be lime treated for stabilization or if other methods of stabilization will need to be proposed. The presence of extreme amounts of soluble sulfates will exclude lime treatment as a stabilization option.
- Lime Series Testing (Tex-121-E)
 - This procedure involves establishing a relationship between plasticity of soils, percentage lime and pH through the addition of hydrated lime at predetermined proportions. Results of this test will determine the required percent lime treatment for roadway subgrade.
- Unconfined Compression (ASTM D2166)
 - This procedure determines the direct unconfined compressive strength of a soil of which can be correlated to shear strength of a soil sample (comparison with strength testing).
- Triaxial Testing (Salvage Base) (Tex-117-E)
 - This procedure determines the shearing resistance, water absorption, and expansion of soils and/ or soil-aggregate mixtures. Shearing resistance values will be used to determine the salvage base criteria for the existing material.
- Gradation/Asphalt Content of ACP (Tex-200-F/Tex-236-F)
 - This test method is used to determine the particle size distribution of aggregate samples using standard U.S. sieves with square openings (Tex-200-F). The asphalt content will also be provided by Ignition Method (Tex-236-F).

Engineering Services

Engineering analyses will be conducted after reviewing the results of both the field and laboratory phases of our study. The findings and conclusions derived from our analyses will be presented in a written engineering report (three (3) copies), which will be prepared by one of our engineers, who specializes in geotechnical engineering and is familiar with the local conditions. The report will include a boring location plan, boring logs with laboratory classification of recovered soil samples and subsurface water conditions encountered. The report will provide engineering recommendations for:

- Analyses and Recommendations for Proposed Flexible Pavement (including FPS Report)
- Analyses and Recommendations for Lime Stabilization of Subgrade
- Analyses and Recommendations for Salvaged Base (Flexible Base and ACP)
- Additional Construction Considerations and Recommendations Where Applicable

The report will provide general comments and applicable recommendations regarding construction methods, sequences, and potential difficulties that may arise during overall construction as it relates to the soil aspects of this project. This information may serve to guide pavement selection and design and assist in the preparation of specifications for the project.

Schedule

Based on the requested services, we estimate that the drilling operations will take approximately one (1) day to complete. The roadway sampling of existing pavement section will take an additional one to two (1 to 2) days to complete. We anticipate that drilling and roadway sampling operations can begin within five (5) to seven (7) days following notice to proceed, staking of the borings, clearing the boring locations of utilities and site and weather conditions permitting. The report and engineering analyses (including FPS design) should be completed within three (3) weeks after completion of the drilling and roadway sampling operations.

Lump Sum Cost

The total lump sum cost for the study outlined herein is **\$25,365.96**. This lump sum cost includes personnel time for field exploration and laboratory testing and report preparation. Should unusual subsurface conditions be encountered in the field that indicates the desirability of significantly broadening the scope of the study, we will contact you to receive written authorization before proceeding with any additional work.

It should be noted that our study scopes (and project costs) do not include plan review or earthwork and foundation excavation observations during the construction of the project. However, plan review and construction observations costs should be included in the project budget.

Acceptance

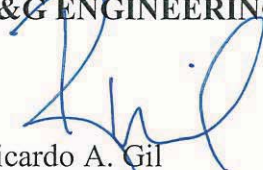
We appreciate the opportunity to submit this proposal and look forward to working with you in the development of this project, which will be carried out in accordance with this letter and the following attachments:

<u>Attachment</u>	<u>Description</u>
I	Fees
II	Terms and Conditions

Please return one signed copy of this letter proposal and provide written authorization for our firm to begin work on the services outlined herein. Our invoices are due and payable upon receipt at 2100 W. Expressway 83 Mercedes, Texas 78570.

L&G Engineering Laboratory, L.L.C. considers the data and information contained in this proposal to be proprietary. This statement of qualifications and any information contained herein shall not be disclosed and shall not be duplicated or used in whole or in part of any purpose other than to evaluate this proposal.

Sincerely,
L&G ENGINEERING LABORATORY, L.L.C.



Ricardo A. Gil
General Manager

Attachments I-Fees
II-Terms and Conditions

Jacinto Garza, P.E., President/CEO

Date

Accepted By _____
(Signature)

(Typed or Printed Name)

(Title)

(Date)

Attachment "I"
 Geotechnical Field and Laboratory Services
 Mile 17 N. Road (Hidalgo County Pct. 1)
 Limits: from 0.5 Mi. West of FM 3071 to FM 1015

	SERVICES		UNITS	UNITS	UNIT COST	TOTAL COST
I.	Project Management / Review					
	A. Principal / Project Manager / Review		Hours			
	B. Project Engineer (Staff)		Hours	1	\$ 150.22	\$ 150.22
	C. Typing and Clerical (Report)		Hours			
	D. Lodging		Day			
	E. Mileage		Mile			
	F. Air Travel		Trip			
II.	Utility Clearances / Boring Locates					
	A. Technician (Locate Borings)(Util Clr)		Hours	2	\$ 45.07	\$ 90.14
	B. Staff Engineer/Geologist/Scientist		Hours			
	C. Rebar (stakes with impalement covers)		Cost +12.5%			
	D. Vehicle Charge		Mile			
	E. Mileage		Mile	30	\$ 0.490	\$ 14.70
III.	Field Exploration					
	A Mobilization		Day	1	\$ 418.18	\$ 418.18
	B Field Exploration					
	1. Soil Boring/Solid Stem with SPT Testing		Feet	90	\$ 29.28	\$ 2,635.20
	2. Texas Cone Penetration Tests		Ea.		\$ -	\$ -
	3. Field Logger / Engineering Tech		Hour	10	\$ 45.07	\$ 450.70
	4. 24 Hr. Water Level Observations		Hour	2	\$ 45.07	\$ 90.14
	5. Piezometers		Each	0	\$ -	\$ -
	6. Vehicle Charge (Support Vehicle)		Mile	30	\$ 1.57	\$ 47.10
	7. Vehicle Charge (Logger)		Mile	60	\$ 0.49	\$ 29.40
	8. Trenching to Obtain In-situ Flexbase & ACP		Per Location	3	\$ 800.00	\$ 2,400.00
	<i>(cut existing section to remove ACP & base)</i>					
IV	Geotechnical Data Analysis					
	1. Engineering Spec. (Soil Classification)		Hours	4	\$ 112.61	\$ 450.44
	2. Engineering Spec. (Logs & Summaries)		Hours	4	\$ 112.61	\$ 450.44
	3. Moisture Content		Ea.	27	\$ 10.00	\$ 270.00
	4. Atterberg Limits		Ea.	18	\$ 75.06	\$ 1,351.08
	5. -200 Determination		Ea.	18	\$ 52.27	\$ 940.86
	6. Consolidation Tests		Ea.			
	7. Unconfined Compression Testing		Ea.	9	\$ 47.05	\$ 423.45
	8. Soil Sulfate Testing (Subgrade)		Ea.	9	\$ 95.00	\$ 855.00
	9. Soil Lime Series Testing (Subgrade)		Ea.	5	\$ 505.93	\$ 2,529.65
IV	Salvage Materials Testing					
	1. Triaxial Tests (Salvage Adequacy)		Ea.	3	\$ 400.00	\$ 1,200.00
	<i>(including MD tesing and sample curing)</i>					
	2. Extraction / Gradation /Asph Cont (Ex. ACP)		Ea.	3	\$ 219.04	\$ 657.12
Project Total						\$ 15,453.82

Requisition # 00206882 [Print Requisition](#) Date Entered 12-01-2011 Account Year 1 PG # Item Total 25,365.96
 Enter Req's Only Approve Approve By Year Requisition Status Needs Approval by PCT1 [View](#) Acct Total 25,365.96

Order Header | Items | Accounts | Inquire | Approval

Inquire	Stipend Vendor: Approve as Vendor Allow Stipend	Order: Approve Disapprove	Approval Level Owner ▼
Vendor Documents		View	
L & G ENGINEERING LABORATORY, LLC 2100 W. EXPRESSWAY 83 MERCEDES TX 78570		Type: Order: COMMISSIONER, PRECINCT 1 Ship: COMMISSIONER, PRECINCT 1 Special Inst Internal: Po Special Inst: RM221 Owner: RELIZONDO	

Line No	Qty Ordered	Description	Unit Price	Final Cost
1	1	GEOTECHNICAL ENGINEERING SERVICES AND FLEXIBLE PAVE	25,365.96	25,365.96 ▲

Account Number	Description	Account Balance	Amount
1-1342-431-00-121-085-0-731	CO2010A&B-PCT1 MILE17N(FM88-FM1015)-ROAD	11,661.90	25,365.96 ▲