L&G Consulting Engineers, Inc.

July 1, 2015

Mr. Armando Garza, Chief Administrator
Attn: Ms. Erika Zamora, Director of Administrative Operations
Hidalgo County Precinct No. 2
300 West Hall Acres
Pharr, Texas 78589

RE: On-Call Geotechnical, Construction Materials Testing and Inspection Services for "Road and Bridge, C.I.P. and Other Projects in General"
Work Authorization #3 – Hid. Co. Pct. 2 – Boys & Girls Club & Aquatics Park Projects (GEO)

Dear Ms. Zamora,

Attached for your review and approval is Work Authorization #3 to the On-Call Geotechnical, Construction Materials Testing and Inspection Services for "Road and Bridge, C.I.P. and Other Projects in General" Contract with Hidalgo County Precinct No. 2. This submittal is made to you in duplicate form for your further coordination with Commissioner Cantu.

We appreciate the opportunity to provide our professional services and look forward to working with you. Should you have any questions, please feel free to give me a call at (956) 585-1909.

Sincerely,

David A. Saenz, P.E., C.F.M.
Project Manager

cc: Mr. Jacinto Garza, P.E. – L&G Engineering

Attachments: Work Authorization #3

EXHIBIT D

-Work Authorization Form

HIDALGO COUNTY
Professional Engineering Services
Agreement #C-15-125-04-14

WORK AUTHORIZATION NO. 3

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 Consulting Engineers, Inc. *d/b/a* L & G Engineering, professional engineers of Mercedes, Texas, hereinafter called "**Engineer**".

PART 1. SCOPE OF WORK

The purpose of this Work Authorization is for the "engineering services" to provide Geotechnical Field, Laboratory and Engineering Analysis of Hidalgo County Pct. 2 – Boys & Girls Club & Aquatics Park Projects.

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 $25,985.16. 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 6 of the Agreement.

PART 4. FUNDING

This Work Authorization No. 3 shall be funded through funding source:
Account No. _-_ _ _ _-_ _ _-_ _-_ _ _-_ _ _-_-_ _ _
Requisition Number _____

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**.

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.2, Commissioner, Eduardo Cantu, as to content and detail of this **Work Authorization No. 3.**

HIDALGO COUNTY
COMMISSIONER PRECINCT No. 2:

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 _____ day of _____, 201____.

THE ENGINEER:
L&G ENGINEERING

_____
By: Jacinto Garza, P.E., President

THE OWNER:
HIDALGO COUNTY

_____
By: Ramon Garcia, County Judge

ATTEST:

_____
By: Arturo Guajardo Jr., County Clerk

LIST OF ATTACHMENTS

Exhibit A – Services to be Provided by the Owner
Exhibit B – Services to be Provided by the Engineer
Exhibit C – Work Schedule
Exhibit D – Fee Schedule

EXHIBIT A

-Scope of Services to be provided by the County

The following provides an outline of the services to be provided by the Owner in the development of Projects (as defined and more particularly identified in Exhibit "A" attached to this Agreement).

General:

The Owner will provide to the Engineer the following:

1) Provide the authorization to proceed with services through coordination with the project consulting and design Engineer.
2) Payment for work performed by the Engineer and accepted by the Owner in accordance with Article 3 of this Agreement.
3) Assistance to the Engineer, as necessary, to obtain the required data and information from other local, regional, State and Federal agencies the Engineer cannot easily obtain.
4) Provide any available relevant data the Owner may have on file concerning the projects.
5) Provide timely review and decisions in response to the Engineer's request for information and/or required submittals and deliverables, in order for the Engineer to maintain the agreed upon work schedule prepared in accordance with Exhibit "A" attached to this Agreement.
6) Attend and participate in progress meetings as required and as coordinated and conducted by Engineer.
7) Provide the authorization to proceed with services on project by project basis through consulting design and construction Engineer.

EXHIBIT B

Scope of Services to be provided by the Engineer

SECTION 1 - PROJECT DESCRIPTION

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

COUNTY/CITY: HIDALGO COUNTY

PROJECT/DESCRIPTION: On-Call Geotechnical & Construction Materials Testing Services for "Road and Bridge, C.I.P. and Other Projects in General"

Pct. 2 –Boys & Girls Club & Aquatics Park Projects (Geo)

ENGINEER shall mean L&G Engineering.

STATE shall mean Texas Department of Transportation.

COUNTY shall mean Hidalgo County.

EXHIBIT B

Scope of Services to be provided by the Engineer

SECTION 2 ROUTE AND DESIGN STUDIES

(Function Code 110)

Services Provided By: ENGINEER	COUNTY	
		1. Soil Core Hole Drilling
YES	NO	a. Pavement ~~(See Section 3, page 3-1 for requirements)~~ – *Parking Areas/Drives
___	___	~~b. Retaining Walls (See Section 4, page 4-1 for requirements)~~
YES	NO	c. Miscellaneous Structures ~~(See Section 4, page 4-1 for requirements)~~ – *Nat./SOG
___	___	~~d. Bridges (See Section 5, page 5-1 for requirements)~~

***SEE EXHIBIT B-1 FOR BREAKDOWN OF GEO SERVICES**

EXHIBIT B

Scope of Services to be provided by the Engineer

SECTION 3 - ROADWAY DESIGN CONTROLS – N/A

(Function Code 160)

Services Provided By: ENGINEER	COUNTY	
		1. Pavement Design – Embankment and Subgrade Analysis
___	___	a. Embankment and Subgrade
		(1) Soil Core Holes (Show cost estimate with Function Code 110)
___	___	(a) Along center line
___	___	(b) Along center line of each roadway
		The location and minimum number of soil core holes required for this project are as follows: (To be determined by Engineer during Preliminary Engineering)
___	___	(2) Identify,interpret and summarize geologic features that affect engineering design (PI, Sulfate content, % of lime)
___	___	d. Traffic Data for Pavement Design (To be provided by others)
___	___	e. Basic Design Criteria
___	___	f. Life Cycle Cost Analysis(es)
___	___	g. Cost Data
___	___	h. Pavement Material Properties
___	___	i. Rehabilitation Investigations
___	___	(1) Core Hole Survey (Show cost estimate with Function Code 110)
		(a) Determine type and depth of existing material, pavement, etc. The Engineer will determine whether to salvage ACP and FLEXBASE as well as their properties and provide this information to Client.

EXHIBIT B

Scope of Services to be provided by the Engineer

SECTION 4 - MISCELLANEOUS (ROADWAY) – N/A

(Function Code 163)

Services Provided By: ENGINEER	COUNTY	
		1. Retaining Walls and Embankments
___	___	a. Foundation Studies (Show cost estimate with Function Code 110)
___	___	(1) The soil core holes shall be obtained at approximately 200 foot intervals along retaining wall alignments. The core holes shall extend 25 feet or more below the footing elevation.
		(2) The soil core holes shall be obtained at locations provided by the Engineer along the embankment locations.
___	___	b. Stability Analysis
___	___	c. Estimate
___	___	d. Summary of Quantities
___	___	e. Typical X-section.
___	___	f. General Guidelines for Retaining Walls
		(1) The ground water level should be observed at the water strike.
		(2) Soil core hole data shall be shown on boring logs & layouts as illustrated in the TxDOT Geotechnical Manual (2012).
		(3) Foundation exploration shall conform to the requirements set forth in Administrative Circular No. 25-84, Administrative Circular 33-87 and Administrative Circular No. 25-92.
		2. Miscellaneous Structures
___	___	a. Foundation Studies (Show cost estimate with Function Code 110)
		The soils exploration requirements for miscellaneous structures on this project are as follows: (To be provided by the Engineer on an as-needed basis)
		b. Foundation Analysis
		To be determined based on miscellaneous structure type and requirements.

EXHIBIT B

Scope of Services to be provided by the Engineer

SECTION 5 - BRIDGE DESIGN – N/A

(Function Code 170)

Services Provided By: ENGINEER	COUNTY	
~~___~~	~~___~~	~~1. Foundation Studies (Show cost estimate with Function Code 110)~~ ~~The minimum number of soil core holes shall be obtained in accordance with TxDOT Geotechnical Manual (2012). Soil core holes shall be obtained at approximately (300 foot) intervals along bridge alignments. Texas cone penetrometer (TCP) tests shall be conducted in all soil types encountered at a maximum of (5 foot) intervals.~~
~~___~~	~~___~~	~~2. Foundation Analysis~~ ~~Shall include analyses of bridge foundation options (drilled shafts, piling, etc.) and for water crossings shall include recommendations for scour predictions.~~

EXHIBIT B

Scope of Services to be provided by the Engineer

SECTION 6 - CONSTRUCTION PHASE SERVICES – N/A
(Function Code 320)

Services Provided By: ENGINEER	COUNTY	
~~__~~	~~__~~	~~**CONSTRUCTION INSPECTION SERVICES:**~~

~~The ENGINEER will provide engineering and support services (Inspection & Observation) during the construction of the Project or portions of the Project approved by the COUNTY.~~

~~__~~	~~__~~	~~**CONSTRUCTION MATERIAL TESTING:**~~

~~The ENGINEER will provide the COUNTY with construction material testing services for the Project. The services to be provided include sampling and testing of all construction materials as required by the project plans and specifications. All sampling frequencies and test procedures will be performed in general accordance with the Texas Department of Transportation TEX methods (or ASTM methods as required) as outlined in the Guide Schedule for Sampling and Testing (08/10). 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 COUNTY and the project plans and specifications.~~
- ~~(h) Providing accurate and timely reports to the COUNTY and all/other recipients as designated by the COUNTY.~~
- ~~(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 B

Scope of Services to be provided by the Engineer

SECTION 7 - ADDITIONAL RESONSIBILITIES

Document and Information Exchange

Geotechnical Reports, Data, Plan Sheets, General Notes and/or Specifications provided to the COUNTY shall be furnished on 8GB USB flash drives or CD/DVD medium. Each flash drive or CD/DVD shall have a file titled Table of Contents (as applicable). The Table of Contents shall indicate the locations of files within the directory structure of the documentation (as applicable).

General Notes and specifications shall be provided in MS Office 2007 format. Plan sheets shall be provided in Microstation DGN or GEOPAK GPK format. PDF copies of plan sheets shall also be provided.

CMT Reports and Inspection documentation shall be provided in PDF format.

Two copies of the documentation shall be provided to the COUNTY.

If required, the ENGINEER shall provide to the COUNTY, a CD that contains all the plan sheets for the project. The graphics tape shall be compatible with the COUNTY's computer system.

CD Tape Required (YES or NO): YES

Proposal Time

The time indicated in the proposal and the contract shall include time necessary for reviews, approval, etc.

Office Location

The ENGINEER will perform the services to be provided under this agreement out of their office or offices listed below:

Service	Office Location
Geotechnical	Mercedes Office
CMT	Mercedes Office
Inspection	Mission Office

The work effort will be managed out of the Mercedes (City)

office located at 2100 West Expressway 83 (Address),

Mercedes (City), Texas (State).

EXHIBIT B

Scope of Services to be provided by the Engineer

APPENDIX A – GENERAL SERVICES OUTLINE

The following is a general outline of the services to be provided by the ENGINEER in providing Geotechnical Laboratory services, Construction Materials Testing Services, and Construction Inspection Services:

A. Preliminary Phase:

1) Attend preliminary conferences with the COUNTY and, if requested, with the funding agency and other government agencies or interested parties regarding the Project.
2) Provide for the necessary geotechnical investigation and testing necessary to develop design.
3) Provide assistance to the COUNTY in providing material requirements and specifications for design, construction and maintenance projects.
4) Provide assistance to the COUNTY in providing pavement design and/or rehabilitation recommendations for the design, construction and maintenance projects.

B. Design Phase: N/A

~~1) Attend the COUNTY'S and respective Party's meeting as requested for the purpose of explaining geotechnical investigation report recommendations and preliminary testing results and their impact to proposed design activities.~~
~~2) Perform any additional geotechnical investigations, testing and environmental studies necessary to collect information required in the design of the Project.~~
~~3) Provide assistance to the COUNTY in providing material requirements and specifications for design, construction and maintenance projects.~~
~~4) Provide assistance to the COUNTY in providing pavement design and/or rehabilitation recommendations for the design, construction and maintenance projects.~~
~~5) Furnish the COUNTY all necessary reports for preliminary design, design, and construction and maintenance projects.~~

C. Construction/Maintenance Phase: N/A

~~1) Attend the COUNTY'S and respective Party's pre-construction and construction meetings as requested for the purpose of explaining geotechnical investigation report recommendation and preliminary testing results and their impact to proposed construction activities and establish coordination and lines of communication for proposed construction materials testing during construction activities.~~
~~2) Consult and advise with the COUNTY during construction.~~
~~3) Provide construction materials testing for construction and maintenance project as required by the project plans and specifications and/or specified by the project design Laboratory.~~
~~4) Review all material designs as requested by the COUNTY and/or project design Laboratory.~~
~~5) Furnish the COUNTY all necessary reports for construction and maintenance projects.~~
~~6) Provide construction inspection and observation services as requested by the COUNTY on construction and maintenance projects.~~

D. Miscellaneous/Other:

1) Promptly submit formal construction materials testing reports for all tests, observations and services performed indicating where applicable, compliance with COUNTY specifications or other documents. Such reports shall be completed and factual, citing the tests performed, methods employed, values obtained, parts of the structure and location at which tests were made.
2) The plans, specifications, and Geotechnical/CMT reports prepared under this Agreement shall become the property of the COUNTY upon completion of the work and payment in full of all monies due to the ENGINEER.
3) Retain all pertinent records relating to the services performed for a period of five (5) years following submission of all reports, during which period the records will be made available to the COUNTY within a reasonable time.

EXHIBIT B-1

Scope of Services to be provided by the Engineer – Geo. Tasks

The broad objectives of the study to be conducted by the ENGINEER will be to determine subsurface conditions for use by COUNTY in completing the design of the above referenced project. 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

I. Geotechnical Drilling and Miscellaneous Field Services (GEO - Drill)

Based on the location map (or general directive) provided, we are proposing the drilling and sampling of subsurface materials within the project limits as follows:

- Structural Borings – Four (4) Borings will be drilled at proposed location of Building Areas (Borings will be advanced to a depth of approximately 20 feet below the existing top of natural ground) (2 Boring per Each Project Site – B&G Club & Aquatics Center)

- Pavement Borings – Four (4) Borings will be drilled at proposed location of Parking Lot Areas and Driveways (Borings will be advanced to a depth of approximately 10 feet below the existing top of natural ground) (2 Borings per Each Project Site – B&G Club & Aquatics Center)

ENGINEER 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 COUNTY will be responsible for obtaining any necessary permits or authorization to access areas (right of entry) where the borings are to be drilled. All samples will be removed from the sample apparatus during drilling operations. ENGINEER 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 soils laboratory.

Drilling services will also include a 24-hour water level reading at each boring location where applicable. 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, alternate fill will be used to backfill the completed boreholes.

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.

II. Geotechnical Laboratory Testing Services (GEO - Test)

The ENGINEER will perform Geotechnical Laboratory Testing on the samples recovered during the field study to evaluate their physical and engineering properties. Testing shall include several of the following test procedures:

(1) 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 and to provide information on the potential vertical rise and contraction of the soil. Test data furnished will include Liquid Limit, Plastic Limit and Plasticity Index test results.

(2) Gradation (-200) (ASTM D1140 or Tex-111-E)
This procedure will be used to aid in the classifying of the soil. A No. 200 sieve will be used to distinguish fine grained material and coarse grained material.

(3) Lab. Determination of Moisture in Soils (ASTM D2216 or Tex-103-E)
This procedure will aid in determining the in-situ moisture of the soil to be able to evaluate the potential vertical rise and contraction of the soil.

(4) Particle Size (Sieve) Analysis with Hydrometer (ASTM D422)
This procedure will aid in determining the complete gradation (full gradation curve) of a soil sample including hydrometer for tail-end portion of gradation curve.

(5) Sulfate Content of Soil (ASTM C1580 or Tex-145-E)
This procedure will identify the soluble sulfate content of soil by using the colorimetric method. 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.

(6) 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 pavement subgrade.

III. Geotechnical Engineering Services (GEO – Eng)

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 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 analyses/recommendations for:

- Structural Evaluation of Borings / Calculation of Shear Strength / Soil Profiles
- Allowable Bearing Capacity (Shallow Foundations)
- Potential Vertical Rise (Heave) Analysis (PVR)
- Shallow Foundation Analysis & Recommendations (WRI, PTI, Modulus)
- Pavement Structure Analysis & Recommendations (Parking Lot Area)
- Construction Recommendations based on Geotechnical Investigation/Analyses

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.

EXHIBIT "C"
PROJECT SCHEDULE
WA #3 - Geotechnical Services for HC Pct. 2 - Boys Girls Club Aquatics Park Projects

Function Code 110 ~ Geotchnical Services

	2015											
TASK AND DESCRIPTION	**JAN**	**FEB**	**MAR**	**APR**	**MAY**	**JUN**	**JUL**	**AUG**	**SEP**	**OCT**	**NOV**	**DEC**
HC Pct. 2 - Boys & Girls Club & Aquatics Park Projects (GEO)												
Geotechnical Field Services, Lab Services and Engineering Analysis												

~ Estimated Time for Project Construction = 4 months (All services noted will be provided during the full duration of Construction)
~ Start Date and NTP estimated for July 20, 2015 (Approx. 1 to 1.5 month window will move with NTP date as required)

Schedule

Based on the requested services, we estimate that the drilling operations will take approximately two (2) days to complete (1 day per Project Site). We anticipate that drilling 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/weather conditions permitting. The report and engineering analyses should be completed within approximately three to four (3 to 4) weeks after completion of the drilling operations.

Exhibit D
FEE SCHEDULE

L&G Consulting Engineers, Inc.

Geotechnical Engineering, Report & Summary

L&G Consulting Engineers, Inc. (Division: L&G ENGINEERING LAB)

		Hidalgo County Pct. 2 - B&G Club & Aquatics Park Projects ***Client: Hidalgo County Pct. 2***	MANHOURS					
			Senior Project Manager	Senior Geotechnical Engineer	Design Engineer	CADD Tech	Admin/Clerical	Total
	TASK							
	1	Structural Evaluation of Borings / Calc. Shear Strength Models / Soil Profiles			4			4
	2	Allowable Bearing Capacity Analysis (Shallow Foundations)			4			4
	3	Potential Vertical Rise (Heave) Analysis (PVR)			4			4
	4	Shallow Foundation Analysis & Recommendations (WRI, PTI, Modulus)			8			8
	5	Pavement Structure Analysis & Recommendations (Parking Lot Area/Drives)			4			4
	6	Construction Recommendations based on Geotechncial Investigation/Analyses			4			4
	7	Geotechnical Report (Including Soil Survey/Geog./All Analyses)	4	8	24	12	6	54
	8	Meetings/Coordination	6	4	4		2	16
		Subtotal	**10**	**12**	**56**	**12**	**8**	**98**
Labor Hours			**10**	**12**	**56**	**12**	**8**	**98**
Hourly Base Rates			$ 70.00	$ 58.00	$ 43.00	$ 22.00	$ 20.00	
Direct Salary Cost			$ 700.00	$ 696.00	$ 2,408.00	$ 264.00	$ 160.00	
Contract Rate w/ Audited Overhead Rate of 178.12% & 12% Profit			$ 218.04	$ 180.66	$ 133.94	$ 68.53	$ 62.30	
Total Labor Costs			**$ 2,180.40**	**$ 2,167.92**	**$ 7,500.64**	**$ 822.36**	**$ 498.40**	**$ 13,169.72**

LINE ITEM EXPENSES

Printing Reproduction (Estimated 6 Reports x 30 Pages per Report x $1.00 per Page)	$ 180.00
*L&G Consulting Engineers, Inc. (Sub-Total for Geo. Field & Lab Services)	$ 12,635.44
** - (Please see page 2, for detailed estimates of testing)*	
Total Expenses	**$ 12,815.44**

Sub-Total (Proj, 1 - Boys & Girls Club)	$ 12,992.58
Sub-Total (Proj, 2 - Aquatics Center)	$ 12,992.58
L&G Total Cost (Grand Total)	**$ 25,985.16**

L&G Consulting Engineers, Inc.

Exhibit D - Cost Proposal
Geotechnical Field and Laboratory Services
Hidalgo County Pct. 2 - B&G Club & Aquatics Park Projects
Prepared for Hidalgo County Pct. 2

	SERVICES		UNITS	UNITS	UNIT COST	TOTAL COST
I.	**Project Management / Review**					
	A. Principal / Project Manager / Review		Hours			
	B. Senior Project Engineer (Staff)		Hours			$ -
	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	**4**	**$ 52.95**	**$ 211.80**
	B. Staff Engineer/Geologist/Scientist		Hours			
	C. Rebar (stakes with impalement covers)		Cost +12.5%			
	D. Vehicle Charge		Mile			
	E. Mileage		Mile	**120**	**$ 0.55**	**$ 66.00**
	F. Survey Locate Borings (X,Y,Z)		LS			$ -
III.	**Field Exploration**					
A	Mobilization/Demobilization		Day	**2**	**$ 441.66**	**$ 883.32**
B	Field Exploration					
	1a. ASTM Drill & SPT/Tube Sampling (SS)		Feet	**120**	**$ 31.08**	**$ 3,729.60**
	1b. ASTM Drill & SPT/Tube Sampling (Mud)		Feet			$ -
	2. TxDOT TCP Field Test (BL/ft)		Ea.			
	3. Field Logger / Engineering Tech		Hour	**20**	**$ 52.95**	**$ 1,059.00**
	4. 24 Hr. Water Level Observations		Hour	**4**	**$ 52.95**	**$ 211.80**
	5. Piezometers		Each			$ -
	6. Supp. Vehicle-Trailer, Tools Water Supply		Mile	**120**	**$ 1.65**	**$ 198.00**
	7. Vehicle Charge		Mile	**240**	**$ 0.55**	**$ 132.00**
C	Miscellaneous Field Services					
IV.	**Engineering Data Analysis / Report**					
	1. Staff Engineer		Hours			
	2. Engineer III (Soil Classification)		Hours	**3**	**$ 133.94**	**$ 401.82**
	3. Engineer III (Logs & Summaries)		Hours	**3**	**$ 133.94**	**$ 401.82**
	4. Moisture Content		Ea.	**48**	**$ 10.55**	**$ 506.40**
	5. Atterberg Limits		Ea.	**24**	**$ 79.66**	**$ 1,911.84**
	6. -200 Determination		Ea.	**20**	**$ 66.47**	**$ 1,329.40**
	7. Sieve Analysis (w/ Hydrometers)		Ea.	**4**	**$ 95.76**	**$ 383.04**
	8. UC Testing (w/ Unit Weight)		Ea.			$ -
	9. Consolidation Testing		Ea.			$ -
	10. Dry Unit Weight		Ea.			$ -
	11. Soils Sulfate Content		Ea.	**2**	**$ 86.40**	**$ 172.80**
	12. Determination of Soil pH		Ea.			$ -
	13. Lime Series Testing (5 Pt.)		Ea.	**2**	**$ 518.40**	**$ 1,036.80**
	Project Sub-Total (Geo Field and Lab)					**$ 12,635.44**