Hallandale SW Quadrant Study / Final Engineering / Permitting & Grant Services

Proposal Estimate

6/24/2010

Submitted by: Calvin, Giordano & Associates, Inc.

PHASE

TASK

1 Drainage Basin Study

The study will address the SW Quadrant basin bounded on the east by Dixie highway, on the north by Hallandale Beach Boulevard, on the west by SW 8th Avenue, and on the south by the County line. (survey information will be provided by the City).

TASK	STAFF	HOURS	RATE	COST	TASK COST	PHASE TOTAL
Conduct a pre/post design hydraulic analysis for the SW Quadrant						
	DIR	6 @	$165.00	$990.00		
	PM IV	25 @	$145.00	$3,625.00		
	SrCadd	25 @	$115.00	$2,875.00		
	Eng II	100 @	$125.00	$12,500.00		
	QA/QC	4 @	$180.00	$720.00		
					$20,710.00	
Develop a drainage report based on the above analysis. The report will define pre and post conditions for the following storm events; the 5 year 24 hour event, the 10year 24 hour event, the 25 year 3 day event, and the 100 year 3 day event. This report will estimate the number and location of wells necessary for the desired mitigation, as well as identify upsizing of existing piping or addition of piping required to adequately convey the stormwater to the pumping stations.						
	DIR	10 @	$165.00	$1,650.00		
	PM IV	25 @	$145.00	$3,625.00		
	SrCadd	25 @	$115.00	$2,875.00		
	Eng II	75 @	$125.00	$9,375.00		
	QA/QC	10 @	$180.00	$1,800.00		
					$19,325.00	
Attend three (3) meetings with the City and agencies to coordinate the project.						
	DIR	6 @	$165.00	$990.00		
	Eng II	6 @	$125.00	$750.00		
					$1,740.00	
DRAINAGE BASIN STUDY TOTAL						$41,775.00

ATTACHMENT B

2 Final Engineering

TASK	STAFF	HOURS	RATE	COST	TASK COST	PHASE TOTAL
Design, calculations, and construction documents for five (5) drainage pump stations including; calculations for flow to each of four wells in the pod, low flow and high flow pump sizing, pump station and well location, design special structure for pump stations, and design of pressure relief bypass system for pump stations (necessary if pressures in system exceed the allowable 15 feet of head).						
	DIR	6 @	$165.00	$990.00		
	Eng IV	10 @	$145.00	$1,450.00		
	SrCadd	45 @	$115.00	$5,175.00		
	Eng II	35 @	$125.00	$4,375.00		
	QA/QC	4 @	$180.00	$720.00		
					$12,710.00	
Design, calculations, and construction documents for upsized piping required to adequately convey stormwater flow necessary for pump station to operate as designed. It is assumed that the City has as-built information for both above and below ground in this area adequate for design. Based on length of piping to be replaced, there will be approximately 6 plan sheets for the replacement or addition of piping, drainage, and conflict structures (not including details)						
	DIR	6 @	$165.00	$990.00		
	Eng IV	15 @	$145.00	$2,175.00		
	SrCadd	35 @	$115.00	$4,025.00		
	Eng II	20 @	$125.00	$2,500.00		
	QA/QC	4 @	$180.00	$720.00		
					$10,410.00	

Final Engineering (Continued)

TASK	STAFF	HOURS	RATE	COST	TASK COST
Design of electrical for three (3(stormwater pump stations including providing three phase service to each station. Includes attending two (2) meetings. Please Note: Design of Control Panel's not included in this price. CGA shall only provide specific controls which are required to be included on the panel					
	DIR	18 @	$165.00	$2,970.00	
	Eng II	100 @	$125.00	$12,500.00	
	SrCadd	0 @	$115.00	$0.00	
	QA/QC	4 @	$180.00	$720.00	
					$16,190.00
Prepare specifications for pump stations, wells, and collection system improvements.					
	DIR	2 @	$165.00	$330.00	
	Eng IV	0 @	$145.00	$0.00	
	SrCadd	10 @	$115.00	$1,150.00	
	Eng II	12 @	$125.00	$1,500.00	
	QA/QC	5 @	$180.00	$900.00	
					$3,880.00

Attend five (5) meetings during the final engineering phase.

DIR	10 @	$165.00	$1,650.00	
Eng IV	0 @	$145.00	$0.00	
SrCadd	0 @	$115.00	$0.00	
Eng II	10 @	$125.00	$1,250.00	
QA/QC	0 @	$180.00	$0.00	
				$2,900.00

FINAL ENGINEERING PHASE TOTAL	$46,090.00

3 Permitting

Prepare permit applications and process through Florida Department of Environmental protection, Broward County Environmental Protection Department and the South Florida Water Management District

DIR	8 @	$165.00	$1,320.00	
Eng IV	0 @	$145.00	$0.00	
SrCadd	6 @	$115.00	$690.00	
Eng II	20 @	$125.00	$2,500.00	
QA/QC	0 @	$180.00	$0.00	
				$4,510.00

Submit to FEMA for final review in relation to HMGP grant funding.

DIR	8 @	$165.00	$1,320.00	
Eng IV	0 @	$145.00	$0.00	
SrCadd	0 @	$115.00	$0.00	
Eng II	20 @	$125.00	$2,500.00	
QA/QC	0 @	$180.00	$0.00	
				$3,820.00

TASK	STAFF	HOURS	RATE	COST	TASK COST

Attend three (3) meetings during the permitting phase.

DIR	6 @	$165.00	$990.00	
Eng IV	0 @	$145.00	$0.00	
SrCadd	0 @	$115.00	$0.00	
Eng II	6 @	$125.00	$750.00	
QA/QC	0 @	$180.00	$0.00	
				$1,740.00

PERMITTING PHASE TOTAL	**$10,070.00**

TOTAL	**$97,935.00**

Calvin, Giordano & Associates, Inc.
EXCEPTIONAL SOLUTIONS

Additional Services Agreement

DATE:	June 16, 2010
RE:	Hallandale Beach SW Quad Drainage Reasonable Assurance Report (RAR)
CLIENT:	City of Hallandale Beach 630 NW 2nd Street Hallandale Beach, FL 33009
ATTENTION:	Mr. Rick Labinsky, P.E.
CGA NO.:	09-2591.8

CGA HAS BEEN ADVISED TO PROCEED WITH THE FOLLOWING ADDITIONAL SERVICES:

Due to the client's request for work outside the original scope of services, Calvin, Giordano & Associates, Inc. will provide the following additional services:

I. Professional Engineering Services

A. Civil Engineering

1. FDEP Reasonable Assurance Report and Specific Capacity Test

- Calvin Giordano & Associates shall coordinate with, and provide direction and guidance to, Langan Engineering & Environmental Services to assist them in the completion of a reasonable assurance report and specific capacity tests, which are required for the design and permitting of future drainage improvements planned for this area.

- Langan Engineering and Environmental Services shall complete a specific capacity test and prepare a reasonable assurance report for the City of Hallandale Beach. The specific services to be performed by Langan are spelled out in the attached proposal from Langan to Calvin, Giordano & Associates, which was last revised May 11, 2010.

COST OF THESE SERVICES (Lump Sum)		
I	**Professional Engineering Services**	
	A Professional Civil Engineering Services	**$97,575.00**
II	**Meetings not included in I thru I**	**Hourly**
	TOTAL (Plus Hourly Services)	**$97,575.00**

Engineering
Construction Engineering & Inspection
Municipal Engineering
Transportation Planning & Traffic Engineering
Surveying & Mapping
Planning
Landscape Architecture & Environmental Services
Construction Services
Indoor Air Quality
Data Technologies & Development
Emergency Management Services
Building Code Services
Governmental Services

1800 Eller Drive, Suite 600
Fort Lauderdale, FL 33316
Phone: 954.921.7781
Fax: 954.921.8807

www.calvin-giordano.com

AUTHORIZATION

Kindly sign and return this authorization at your earliest convenience.
Calvin, Giordano & Associates, Inc.
will proceed upon receipt of authorization..

By: _____

Mr. Rick Labinsky, P.E.
City Engineer

Date: _____

By: Shelley Eichner

Shelley Eichner, AICP
Vice President

Date: 6/16/10

Calvin, Giordano & Associates, Inc.
EXCEPTIONAL SOLUTIONS

an Employee Owned Company

PROFESSIONAL FEE SCHEDULE

Principal	215.00
Executive Assistant	75.00

ENGINEERING

Associate, Engineering (VI)	190.00
Director, Engineering (V)	165.00
Project Manager (IV)	145.00
Project Engineer (III)	125.00
Engineer (II)	105.00
Jr. Engineer (I)	100.00
Senior CADD Technician Manager	115.00
CADD Technician	95.00
Traffic Technician	90.00
Permit Administrator	90.00
Clerical	75.00

DATA TECH DEVELOPMENT

Associate, Data Tech Dev.	165.00
GIS Coordinator	145.00
GIS Specialist	125.00
Multi-Media 3D Developer	115.00
GIS Technician	100.00
Sr. Applications Developer	165.00
Applications Developer	135.00
Network Administrator	155.00
System Support Specialist	115.00
IT Support Specialist	85.00

CONSTRUCTION

Associate, Construction	165.00
Construction Management Director	135.00
Senior Inspector	100.00
Inspector	90.00

EMERGENCY MANAGEMENT

Director	145.00
Planner	105.00
Jr. Planner	90.00

PLANNING

Associate, Planning	165.00
Director of Planning	145.00
Planning Administrator	135.00
Assistant Director	125.00
Planner	105.00
Jr. Planner	90.00

EXPERT WITNESS

Principal/Associate	330.00
Registered Engineer/Surveyor	280.00
Project Engineer	230.00

LANDSCAPE ARCHITECT

Associate, Landscape	165.00
Senior Landscape Architect	130.00
Environmental Administrator	125.00
Landscape Architect	115.00
Environmental Specialist	105.00
Landscape CADD Technician	95.00
Environmental Assistant	85.00

SURVEYING

Associate, Surveying	165.00
Senior Registered Surveyor	145.00
Survey Crew	135.00
Registered Surveyor	125.00
Survey Coordinator	105.00
CADD Technician	95.00
3D Laser Scanner	355.00
Hydrographic Survey Crew	330.00
G.P.S. Survey Crew	155.00
Sub-meter G.P.S	75.00
Soft Dig (per hole)	305.00
Utility Locates	205.00

MICROBIAL/INDOOR AIR QUALITY SERVICES

Sr. Environmental Scientist	115.00
Environmental Scientist	100.00

In addition to the hourly rates listed above, charges will include direct out-of-pocket expenses such as reproduction, overnight mail, and other reimbursables billed at a multiplier of 1.25.

Engineering
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Transportation Planning & Traffic Engineering
Surveying & Mapping
Planning
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1800 Eller Drive, Suite 600
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Phone: 954.921.7781
Fax: 954.921.8807

www.calvin-giordano.com

Effective January 1, 2009

LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES

David T. Gockel, P.E., P.P.
George P. Kelley, P.E.
George E. Derrick, P.E.
Michael A. Semeraro, Jr., P.E.
Nicholas De Rose, P.G.
Andrew J. Ciancia, P.E.
George E. Leventis, P.E.
Rudolph P. Frizzi, P.E., G.E.
Ronald A. Fuerst, C.L.A.
Colleen Costello, P.G.
Cristina M. González, P.E.
Gerald J. Zambrella, C.E.M.

Roger A. Archabal, P.E.
Matthew E. Meyer, P.E.

Eric B. Schwarz, P.E.
Vincent D. Yarina, P.G.

29 April 2010
(Revised 11 May 2010)
By e-mail to sbamforth@calvin-giordano.com

Shaun Bamforth, P.E.
Calvin, Giordano & Associates, Inc.
1800 Eller Drive, Suite 600
Fort Lauderdale, Florida 33316

Re: Proposal for a Specific Capacity Test and Preparation of an FDEP Reasonable Assurance Report
City of Hallandale Beach Right-of-Way
Vicinity of Southwest 3rd Street and Southwest 2nd Avenue
Hallandale Beach, Florida
Langan Proposal No.: 300060900

Dear Shaun:

Langan Engineering & Environmental Services has prepared this proposal for Calvin, Giordano & Associates, Inc. ("the Client") to complete a specific capacity test and to prepare a Reasonable Assurance Report (RAR) for the operation of stormwater drainage wells in the right-of-way in an area encompassed by Southwest 3rd Street on the north, Southwest 8th Avenue on the west, Southwest 2nd Avenue on the east, and Southwest 10th Street on the south in Hallandale Beach, Florida ("the project").

The RAR is one portion of the stormwater drainage well permit process. According to the Florida Department of Environmental Protection (FDEP), the RAR must provide reasonable assurance that the stormwater discharge has a minimum potential to adversely impact surface water bodies and overlying aquifers, derived through an evaluation of the geologic conditions. Chapter 62-528, Florida Administrative Code (FAC) requires the effluent to be discharged below a semi-confining layer and into a G-III aquifer (i.e., an aquifer with a total dissolved solids [TDS] concentration greater than 10,000 milligrams per liter).

Langan understands that the City of Hallandale intends to install pressurized Class V Group 6 stormwater drainage wells to relieve the flooding problem in an area bordered by Dixie Highway on the east, County Line Road on the south, I-95 on the west, and Hallandale Beach Boulevard on the north. The project area is a portion of the drainage area and encompasses approximately 120 acres.

In preparing this proposal, Langan requested TDS, geological, and well construction data within 1,000 ft of the project site from the Underground Injection Control Section of the Southeast District of the FDEP. The agency has no data for the project area.

SCOPE OF WORK

Reasonable Assurance Investigation

Because the FDEP did not have sufficient data to provide reasonable assurance, Langan will subcontract J&R Drilling, Inc., a certified drilling contractor, to advance five 200-ft-deep mud rotary Standard Penetration Test (SPT) borings. The attached figure shows the proposed boring locations.

Langan proposes 200-ft test borings because our experience drilling west of Federal Highway is that the G-II/G-III interface becomes deeper as one moves farther west from the coast. For example, we completed an RAR investigation at Hollywood Boulevard and Dixie Highway, less than 2 miles north of the project area. The interface at that location was 210 ft below ground surface. All of the project area is west of Dixie Highway, which leads us to believe that the interface will be deeper than 150 ft.

Before drilling, Langan will visit the proposed drilling locations and mark them in white paint and we will contact Sunshine One-Call of Florida to arrange for them to mark the locations of underground utilities. We request that the Client or the city participate in selecting boring locations in the field so we can minimize the impact to traffic. We also request that the Client and the city provide us with utility drawings. Langan and its subcontractors can not be responsible for damage to underground utilities that are not properly identified on the plans or in the field.

A Langan geologist will collect SPT samples every 5 ft to a maximum depth of 200 ft. Langan will collect a minimum of five groundwater samples at each test boring, which we will screen in the field with a portable TDS meter and send to a certified environmental laboratory for TDS analysis. Our experience is that the TDS interface becomes more gradual as distance from the coast increases; therefore Langan might have to collect as many as 10 samples in a test hole.

Langan will evaluate the geological and water quality data and discuss our findings with the Client, the City, and FDEP. Consultation with FDEP is particularly important for identifying issues that might affect the permitting process for a pressurized Class V well system.

Langan will prepare a report that documents our evaluation of the data and that will be suitable for submittal to FDEP as part of the well permitting package. A State of Florida-licensed Professional Geologist will sign and seal the report. If the data do not provide reasonable assurance of minimal impact, Langan might recommend additional evaluation, e.g., test wells/borings, groundwater modeling, etc. We will advise the Client and submit a separate proposal.

Specific Capacity Test

We understand that the Client wants to understand the ability of the formation to receive discharge and has requested that Langan perform one specific capacity test. The Client is advised that, given the size of the project area and the variation in hydrogeological conditions, one test might not be representative of the entire project area and Langan's ability to render an opinion on the specific capacity of the entire project area would be limited.

Langan will subcontract Jaffer Well Drilling to assist us in conducting the specific capacity test. If Langan determines that we can meet the reasonable assurance criteria in the project area, and if we identify potential production zones during the reasonable assurance investigation, we will conduct one specific capacity test, at a depth below what we would recommend as the minimum casing depth. We will select the location for the test after reviewing the data from the reasonable assurance investigation and in consultation with the Client and with Jaffer.

While drilling below the minimum casing depth, Langan and the driller will identify a potential production zone and the driller will grout the hole to the bottom of that interval and set the well casing at the top of that interval. The specific capacity test will be a step-drawdown test, which consists of pumping groundwater at three flow rates and monitoring flow rate, drawdown, elapsed time, and recovery time.

Because the specific capacity test will generate a large volume of water at a high flow rate, Langan recommends that the Client ask the City of Hallandale for permission to discharge the ground water to the nearest municipal stormwater catch basin. The driller will dispose of the drill cuttings off site.

Langan will prepare a report to the Client that summarizes the field work for the specific capacity test, evaluates the data, and provides an estimate of the specific capacity discharge that the aquifer can accommodate.

FEE AND SCHEDULE

We estimate we can complete this scope of work for a not-to-exceed fee of $88,700, which includes reimbursable expenses ($500), subcontracted drilling fees ($27,200 for the SPTs and $11,000 for the specific capacity test) and laboratory fees ($1,000), field work, data evaluation, consultation, and report preparation. Langan will invoice on a time-and-expenses basis according to the attached Schedule of Fees and General Terms and Conditions. This fee assumes 18 days to complete five 200-ft-deep test holes and one specific capacity test under normal drilling conditions and assumes that water for drilling is not available on site. If the reasonable assurance requirements are not met by 200 ft bls, additional drilling might be necessary at a rate of $125/ft.

We expect to complete the boring layout, utility clearances, and coordination within one month of authorization, the drilling within three weeks thereafter, and the report within two weeks of receiving the final laboratory reports.

LIMITATIONS AND EXCEPTIONS

Langan does not guarantee that our investigation will conclude that the city can meet the reasonable assurance criteria in the project area. Our experience is that the criteria become harder to meet as distance from the coast increases. We will discuss our findings with the Client, the city, and FDEP. If our investigation indicates that the reasonable assurance criteria cannot be met at one or more locations, we will work with the Client to evaluate alternative solutions to help the city meet its drainage requirements.

Langan requires the Client to provide well completion reports or similar documentation on the stormwater drainage wells that were installed in the project area in the past. Such documentation can help us understand the site-specific hydrogeological conditions. In addition, if such wells exist, the city must register them with FDEP because the agency does not have a record of any such wells.

This scope of work does not include maintenance-of-traffic (MOT) during drilling in the right of way. The City indicated that it would work with Langan to provide the MOT. Therefore, this estimate does not include the cost of a MOT subcontractor.

The RAR report is a professional opinion of the hydrogeological conditions at the project with respect to minimum casing depth and is not a certification for the use of the drainage wells. The report will make no claims regarding the advisability of installing stormwater drainage wells or the ability of such wells to accept the expected volume of water.

CLOSURE

We look forward to working with Calvin, Giordano & Associates, Inc. and with the City of Hallandale Beach on this project. Please sign below as your authorization to proceed and return a copy of this proposal for our file. Please contact us at (786) 264-7200 if you have questions or concerns. Thank you.

Sincerely,

Langan Engineering & Environmental Services

Daniel Spector, P.G.
Project Manager

Vincent D. Yarina, P.G.
Associate

DS/vdy

Enclosures: Attachment A – Proposed Test Boring Locations
Schedule of Fees and General Terms and Conditions

AUTHORIZATION

Receipt of this proposal, including the Schedule of Fees and General Terms and Conditions annexed hereto, is hereby acknowledged and all of the terms and conditions contained therein are accepted.

Company: _____ **("the Client")**

By/Title: _____

Signature: _____

Date: _____

FL Cert. of Authorization No. 6601
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SCHEDULE OF FEES AND CONDITIONS
Effective 1 January 2008

BILLING CATEGORY	HOURLY BILLING RATE
Principal	**$250**
Senior Project Personnel	**$220**
Project Personnel Level III	**$200**
Project Personnel Level II	**$190**
Project Personnel Level I	**$175**
Assistant Project Personnel – Level III	**$160**
Assistant Project Personnel – Level II	**$153**
Assistant Project Personnel – Level I	**$145**
Senior Personnel/Scientist/Designer – Level III	**$122**
Senior Personnel/Scientist/Designer – Level II	**$117**
Senior Personnel/Scientist/Designer – Level I	**$112**
Staff Personnel, Designers, Senior Technicians – Level III	**$ 98**
Staff Personnel, Designers, Senior Technicians – Level II	**$ 93**
Staff Personnel, Designers, Senior Technicians – Level I	**$ 88**
Assistant Staff Personnel	**$ 85**
Draftspeople, Engineering Technicians, Inspectors	**$ 77**
Technicians, Word Processors/Technical Typists, Financial Analysts	**$ 70**

- Senior Principals are billed at $350/hour.
- At any level, personnel may be engineers, geologists, hydrogeologists, landscape architects, regulatory specialists, scientists, toxicologists, wetland specialists, etc.
- Litigation related services, including expert testimony, court appearance, depositions, etc., are billed at $350/hour for Principals and Senior Project Personnel, and $250/hour for all other Project Level Personnel.
- This Schedule of Fees has been developed in accordance with "charges for Consulting Engineering Services", specified by the ASCE in its standard manual No. 45, 2002 revised edition. Langan reserves the right to make adjustments for individuals within these classifications as may be necessary by reason of promotion, and to increase our hourly billing rates due to annual salary increases.

COMPUTER SERVICES

The fee services on our in-house computers is billed on a time bases at the following rates:

	Rate Per Hour
CADD, GIS and Terrain Modeling Programs	$ 30
Engineering Programs/Digitizing	25
Plotting (minimum charge; 3 minutes)	50
PC Entry	10

REIMBURSABLE EXPENSES

PROFESSIONAL LIABILITY AND RELATED INSURANCE

A surcharge of 4% will be added to the invoice total to cover the cost of Professional Liability insurance and related costs of insurance.

IN-HOUSE GEOTECHNICAL LABORATORY TESTS

Laboratory testing will be billed at unit rates depending on the type of test. A schedule of unit prices for standard laboratory tests will be furnished upon request. Engineering soil and/or rock samples will be stored for 90 days without charge and will be discarded, or returned the client, unless otherwise requested by the client. Sample storage past 90 days will be billed at $105.00 per box per month.

HEALTH AND SAFETY AND OTHER SPECIAL FIELD EQUIPMENT

Special equipment such as nuclear densometers, seismographs, load test equipment, surveying equipment, disposable protective equipment, respirator cartridges, OVA's and similar safety and/or monitoring equipment will be billed on daily, weekly or monthly rates. A rate schedule will be provided upon request.

SUBCONTRACTED CHARGES

All subcontracted work including laboratory analyses, borings, test pits, report reproduction, outside computer services, surveying, etc., will be billed at cost plus 15%.

OTHER EXPENSES

All expenses incurred for special supplies, plan reproduction, long distance communications, travel and subsistence and other project related expenses will be billed at cost plus 10%. Car mileage is billed at $.51/per mile. Sampling vans are billed at daily rates plus mileage.

TERMS

Invoices are payable within 30 days. A service charge of 1.0% per month will be imposed on all bills not paid within 30 days. If a bill remains unpaid after 60 days, we will discontinue our work until payments are received to bring your account current. We reserve the right to terminate an account without notice for non-payment.

GENERAL TERMS AND CONDITIONS

A. STANDARD OF CARE

The services of **Langan Engineering and Environmental Services, Inc. or, in New York State, Langan Engineering and Environmental Services, Inc., P.C. or Langan International ("LANGAN"),** will be performed, prepared, and presented in accordance with this Agreement and, subject to causes outside of LANGAN's control, in a manner consistent with generally accepted professional engineering, surveying, geotechnical, environmental and geological standards ordinarily exercised by other engineering professionals performing similar services under similar circumstances in the jurisdiction where these services are rendered at the time the services are being performed. LANGAN shall exercise usual and customary professional care in its efforts to comply with codes, regulations, laws, rules, ordinances, and such other requirements in effect as of the date of execution of this Agreement. The Client agrees that no other representation, expressed or implied, and no warranty or guarantee is provided by LANGAN or is presumed given by LANGAN under this Agreement or in any report, opinion, or any other document prepared by LANGAN or otherwise.

B. RIGHT OF ENTRY

The Client will provide for right of entry in order for LANGAN to perform its services. While LANGAN will take all reasonable precautions to minimize any damage to the property, it is understood by the Client that in the normal course of work some damage may occur, the correction of which is not part of this Agreement. LANGAN will take reasonable precautions to avoid damage or injury to subterranean structures or utilities in the performance of its services.

C. EXISTING CONDITIONS

Client recognizes that actual conditions may vary from those encountered at the locations where borings, surveys, observations or explorations are made by LANGAN and that the data, interpretation, and recommendations of LANGAN are based solely on the information available to it. LANGAN shall have the right to rely on the accuracy and completeness of all information furnished to it by the Client. LANGAN shall not be responsible for interpretations by others of the information it develops or provides to the Client.

D. INVOICING, SERVICE CHARGES AND NO RIGHT OF SETOFF

Invoices are payable within 30 days of receipt. A service charge of 1% per month will be imposed on all bills not paid within 30 days. In the event of a suspension of services or termination of the Agreement by LANGAN in accordance with paragraph H of these General Terms and Conditions, LANGAN shall have no liability for any delay or damage of any kind actually or allegedly caused by such suspension of services or termination. The Client shall have no right of setoff against the amounts due to LANGAN and no deductions shall be made from LANGAN's compensation on account of any actual or alleged claim, action, breach, error, omission, tort, fault, wrong, liability, penalty or damage actually or allegedly caused by, arising from or relating to LANGAN, LANGAN's services on the Project, or this Agreement.

E. JOBSITE SAFETY AND CONTROL OF WORK

LANGAN shall take reasonable precautions to safeguard its own employees. Except as otherwise expressly agreed to in writing by LANGAN, LANGAN shall have no responsibility for the safety program at the Project nor the safety of any contractor, subcontractor or other person. Neither the professional activities of LANGAN nor the presence of LANGAN's employees and subcontractors at the Project site shall be construed to confer upon LANGAN any responsibility for any activities on site performed by personnel other than LANGAN's employees. The Client agrees that LANGAN shall have no power, authority, right or obligation to supervise, direct, stop the work of or control the activities of any contractors or subcontractors or construction manager, their agents, servants or employees.

F. DISPOSAL OF SAMPLES

All samples, contaminated or otherwise ("Samples"), collected by LANGAN while performing services under this agreement are the property and responsibility of the Client. LANGAN may dispose of Samples in its possession after ninety (90) calendar days unless otherwise required by law or other arrangements are mutually agreed to in writing by the parties. At all times, any and all rights, title and responsibility for Samples shall remain with the CLIENT and under no circumstances shall these rights, title and responsibility be transferred to LANGAN.

G. HAZARDOUS MATERIALS

Unless otherwise expressly agreed to in writing, the parties acknowledge that LANGAN'S scope of services does not include any services related to a Hazardous Environmental Condition (the presence of asbestos, PCBs, petroleum, mold, waste, radioactive materials or any other hazardous substances).

H. TERMINATION

Except as otherwise provided in this Agreement, this Agreement may be terminated by either party upon not less than seven (7) calendar days' written notice should the other party fail substantially to perform in accordance with the terms and conditions of this Agreement through no fault of the party initiating the termination. If the defaulting party fails to cure its default within the seven (7) calendar day notice period or fails to commence action to cure its default if the cure cannot reasonably be completed within the seven (7) days, the non-defaulting party may terminate the Agreement. Failure of the Client to make payments to LANGAN in accordance with this Agreement shall be considered substantial non-performance and grounds for termination or suspension of services at LANGAN's option after such seven (7) day notice period or anytime thereafter. In the event of termination, LANGAN shall be compensated for all services performed and reimbursable expenses incurred prior to such termination and all termination expenses.

I. INDEMNIFICATION

Subject to the provisions of paragraph J of this Agreement, LANGAN agrees to defend, indemnify and hold Client and Client's parents, subsidiaries, affiliates, partners, officers, directors, shareholders, employees and agents harmless for any and all claims, damage obligations, liabilities, suits, demands and losses for personal injury and/or property damage including reasonable attorney's fees and all other expenses and disbursements, asserted by any third parties arising out of the negligent acts or omissions of LANGAN in the performance of its services under this Agreement. LANGAN shall not be responsible for any loss, damage, or liability arising from any acts by the Client or any of its agents, employees, staff, or other consultants, subconsultants, contractors or subcontractors. In no event shall the indemnification obligation extend beyond the date when the institution of legal or equitable proceedings for professional negligence would be barred by an applicable statute of repose or statute of limitations.

To the fullest extent permitted by law, the Client agrees to defend, indemnify, and hold LANGAN and LANGAN's parents, subsidiaries, affiliates, partners, officers, directors, shareholders, employees and agents harmless for any and all claims, damage obligations, liabilities, suits, demands and loss, including reasonable attorneys' fees and all other costs, expenses and disbursements, to which LANGAN may be subject, actually or allegedly arising from or relating to (i) any unknown site condition or subterranean structures of which LANGAN does not have actual knowledge; (ii) any errors, omissions or inconsistencies in any data documents, records or information provided to LANGAN by Client or third parties; (iii) any breach, tort, error, omission,

wrong or fault of the Client or third party over whom LANGAN has no control; (iv) any Act of God (such as but not limited to an earthquake, cyclone, flood, hurricane, tornado, windstorm, and high winds), fire, explosion, civil disturbance, terrorist act, embargoes, hazardous materials, or enjoining of LANGAN's services by a governmental body; (v) the transport, treatment, removal or disposal of all Samples; and (vi) Client's unauthorized use or copyright violation of plans, reports, documents and related materials prepared by LANGAN. In the event any part of this indemnification is void as a matter of law, then only that portion that is deemed void as a matter of law shall be stricken and the balance of this indemnification shall remain in full force and effect.

J. LIMITATION OF LIABILITY

The Client agrees to limit LANGAN's liability to the Client and to any and all of the Client's, parents, subsidiaries, affiliates, partners, officers, directors, shareholders, employees, agents, construction managers, contractors, subcontractors, consultants, subconsultants and insurers for any and all damages arising out of or relating to the performance of LANGAN's services under this Agreement, such that LANGAN's aggregate liability to all those named will not exceed the lesser of (i) LANGAN's fee for its services on the Project or (ii) LANGAN's available professional liability insurance coverage at the time of any settlement or judgment. In the event that this limitation of liability provision is deemed void as a matter of law, then LANGAN's liability pursuant to this paragraph J shall be limited to the lowest amount allowable as a matter of law. Client agrees to notify any construction manager, contractor, subcontractor, or consultant who may perform work on behalf of Client in connection with any design, report or study prepared by LANGAN of such limitation of professional liability for defects, errors, omissions or negligence and to require as a condition precedent to their performing their work a like indemnity and limitation of liability on their part in favor of LANGAN.

To the fullest extent permitted by law, the Client further agrees that no shareholder, officer, director, partner, principal or employee of LANGAN shall have personal liability for any act, omission, breach, tort, fault or wrong arising from or relating to LANGAN's services on the Project or under this Agreement.

LANGAN and the Client waive consequential damages, including, but not limited to, loss of use or loss of profits for claims, disputes, or other matters in question arising out of or relating to the services provided by LANGAN regardless of whether such claim or dispute is based upon an alleged breach of contract, willful misconduct or negligent act or omission of either of them or their employees, agents, subconsultants, or other legal theory. This mutual waiver is applicable without limitation to either party's termination of this Agreement pursuant to the terms set forth herein.

To the extent damages are covered by property insurance, LANGAN and the Client waive all rights against each other and against the contractors, consultants, agents and employees of the other for damages, except such rights as they may have to the proceeds of such insurance. LANGAN and the Client, as appropriate, shall require of the contractors, subcontractors, consultants, subconsultants, agents and employees of any of them similar waivers in favor of the other parties enumerated herein.

K. INSURANCE

LANGAN maintains workers' compensation, general liability, property, automobile and professional liability insurance. Certificates of insurance will be issued to the Client upon a written request from the Client. Client agrees that it will require the construction manager, general contractor or, if Client has not retained a construction manager or general contractor, the contractor(s) responsible for performing the work reflected by or relating to LANGAN's services on the Project, to name LANGAN as an additional insured on its insurance coverage applicable to the Project.

L. CLIENT REQUIRED TO SERVE A NOTICE OF CLAIM

The Client shall make no claim (directly or in the form of a third-party claim) against LANGAN, unless the Client has first provided LANGAN with a written certificate, executed by an independent engineer, surveyor or geologist, as the case may be, or appropriate design professional licensed in the state in which the Project is located, specifying and certifying each and every act or omission that the Client contends constitutes a violation of the standard of care governing a geotechnical, civil or environmental engineer, surveyor or geologist, as the case may be, performing professional services under similar circumstances. Such certification shall be provided to LANGAN thirty (30) calendar days prior to the institution of any legal proceeding by Client.

M. FORCE MAJEURE

LANGAN shall not be responsible or liable for any delays in performance or failure of performance in the event of fire, flood, explosion, the elements, or other catastrophe, acts of God, war, riot, civil disturbances, terrorist act, strike, lock-out, refusal of employees to work, labor disputes, inability to obtain materials or services, delays caused by the Client, its agents, contractors, subcontractors, consultants, subconsultants or employee or any governmental regulation or agency, or for any other reason beyond the control of LANGAN.

N. RIGHT TO REFERENCE PROJECT

Client agrees that LANGAN has the authority to use its name as a client and a general description of the Project as a reference for other prospective clients.

O. ENTIRE AGREEMENT

This Agreement (consisting of these General Terms and Conditions, LANGAN's Fee Schedule if applicable and any Proposal which these Conditions accompany and of which they are part) constitutes the entire agreement between the parties, supersedes any and all prior agreements or representations of the parties to this agreement, and may not be modified, amended, or varied except by a document in writing signed by the parties hereto.

P. SUCCESSORS AND ASSIGNS

This Agreement shall be binding upon the parties hereto and their respective legal representative successors and assigns.

Q. GOVERNING LAW

This Agreement shall be governed by and construed in accordance with the laws of the state in which the office of LANGAN that issued the Proposal is located.

R. DISPUTE RESOLUTION

LANGAN and Client agree that any disputes arising under this Agreement and the performance thereof shall be subject to non-binding mediation as a prerequisite to further legal proceedings.

S. DOCUMENT OWNERSHIP

All reports, notes, drawings, specifications, data, calculations, and other documents prepared by LANGAN ("Documents") are instruments of LANGAN's services that shall remain LANGAN's property. The Client agrees not to use the Documents for future additions or alterations to this Project or for other projects without LANGAN's express written consent. Any unauthorized use of the Documents will be at the Client's sole risk and without liability to LANGAN or its subconsultants. Accordingly, Client shall defend, indemnify, and hold harmless LANGAN from and against any and all losses, claims, demands, liabilities, suits, actions, and damages whatsoever arising out of or resulting from such unauthorized use.