# **GEOHYDRO** ENGINEERS

Proposal to Perform Subsurface Exploration and Geotechnical Engineering Evaluation

New Cartersville Recreation Center 640 North Tennessee Street Cartersville, Georgia Geo-Hydro Proposal Number 242370.P0

Prepared for Cartersville Parks and Recreation Department August 29, 2024

August 29, 2024

Mr. Steve Roberts Cartersville Parks and Recreation Department 100 Pine Grove Road Cartersville, Georgia 30120

> Proposal to Perform Subsurface Exploration and Geotechnical Engineering Evaluation New Cartersville Recreation Center 640 North Tennessee Street Cartersville, Georgia Geo-Hydro Proposal Number 242370.P0

Dear Mr. Roberts:

Geo-Hydro Engineers, Inc. appreciates the opportunity to present this proposal to provide geotechnical engineering services for the above-referenced project. Our understanding of the project is based on our email correspondence with you and our review of the project drawings provided via email by Croft and Associates.

We understand that the Cartersville Parks and Recreation department is planning to construct a new 53,500 square-foot recreation center building with associated parking and stormwater infrastructure at 640 North Tennessee Street, in Cartersville Georgia.

We understand the new two-story recreation center building will have a structural steel frame. The *Structural Geotechnical Information Request* prepared by PES Structural Engineers indicates that maximum column loads are expected to be about 175 kips. Based on our experience with similar projects, we have assumed that maximum wall loads will be no greater than 10 kips per lineal foot.

The area is currently a combination of wooded and grassed areas with two dilapidated single-family homes and a power easement. The ground surface within the construction area appears to be generally rolling with about 10 feet of vertical relief across the site. We expect site grading to include no more than 10 feet of mass excavation and structural fill placement. The annotated aerial photograph below shows current site conditions.





An outline of the exploration is provided in the following sections.

## SCOPE OF SERVICES

- 1) We will contact Georgia 811 for location of underground utilities. This is required by law. Also, we ask that the current property owner(s) provide any available information regarding the location of all underground utilities and septic systems in the work areas. As an optional service, we can engage a private utility locator to "scan" the boring locations as an added level of precaution. Geo-Hydro will not be responsible for damage to unmarked underground utilities. Please see the attached *Underground Utilities Fact Sheet* for more information.
- 2) The majority of the building footprint is currently wooded. We will engage the services of a loader and operator to clear access trails for our drilling equipment to access the boring locations.
- 3) We will perform twenty test borings at the approximate locations shown in red (●) on the annotated site plan excerpt below. Boring locations will be adjusted in the field based on topography, overhead obstructions, potential utility conflicts, and other access considerations. Standard penetration testing will be performed in accordance with ASTM D1586 in each boring extending to a planned depths of 25 feet in the building footprint, 10 feet in parking areas, and 15 feet in the pond and underground detention structure. The borings will be extended to the planned depth or the depth of auger refusal, whichever occurs first. Our lump sum fee allows for a total of **380** feet of soil test boring only.





- 4) If soft or loose subsoils are encountered, we will contact you and advise you regarding the need to perform additional work beyond the scope of the study outlined in these paragraphs. Additional work beyond the scope of this proposal may include extension of the test borings, obtaining thin-walled tube samples, consolidation tests, triaxial modulus tests, or supplemental engineering services. The need for, and the type and quantity of, these services will be dependent on the subsurface conditions. Additional work will not be performed without authorization.
- 5) We will obtain groundwater readings at the time of the drilling. All of the borings will be backfilled with soil cuttings after the final groundwater check.
- 6) Samples from the field operation will be physically examined, and a visual classification will be assigned in accordance with the Unified Soil Classification System.
- 7) Test boring records will be prepared which provide standard penetration resistances, detailed soil descriptions, and groundwater conditions. Significant soil strata will be delineated, and partially weathered rock or auger refusal will be identified where encountered.

## Engineering Report

We will prepare an engineering report outlining the results of the exploration. We will present evaluations and recommendations concerning the following: site preparation, general foundation recommendations, groundwater elevations and their effect on the proposed construction, and remedial measures necessary to deal with soft or loose soils if they are encountered. More specifically, the report will present the following major sections:

- 1) <u>Project Information</u>: Our understanding of the proposed construction will be presented.
- 2) <u>Exploratory Procedures</u>: The report will describe the methods of subsurface exploration and laboratory testing.
- Site and Subsurface Description: An overview of site conditions will be presented, general geologic conditions for the site will be discussed, and a detailed discussion of the subsurface soil and groundwater conditions will be presented.
- 4) <u>Evaluations and Recommendations</u>: Based upon the field exploration, laboratory testing, and our experience with similar site and subsoil conditions, we will present recommendations for several geotechnical aspects of the project as follows:
  - <u>Site Preparation</u>: We will present recommendations for methods of site preparation and any remedial measures that may be necessary. These remedial measures may include methods of dewatering the site, densification of soft and loose surficial soils, etc.
  - <u>Groundwater</u>: We will provide recommendations for control of groundwater during construction and on a permanent basis, if necessary.



- <u>Excavation Characteristics</u>: We will discuss the anticipated methods necessary to achieve excavation of subsurface materials based on the results of the borings.
- <u>Reuse of Excavated Materials as Structural Fill</u>: We will discuss the suitability of excavated materials for reuse as structural fill based on visual soil classifications.
- <u>Structural Fill</u>: We will provide recommendations for achieving high density structural fill.
- <u>Earth Slopes</u>: We will present general recommendations for temporary construction slopes and permanent earth slopes.
- <u>Earth Pressure</u>: We will provide recommendations for the calculation of design earth pressure on foundation/retaining walls. Recommendations will include equivalent fluid pressures for design purposes.
- <u>Foundation Design</u>: We will provide recommendations for foundation design, including our evaluation of the suitability of shallow foundation support, and the allowable soil bearing pressure for support of shallow foundations. Estimates of settlement will be provided.
- <u>Seismic Design</u>: Based on the data from the subsurface exploration, we will provide a *Site Class* (International Building Code), mapped spectral response accelerations (S<sub>S</sub>, S<sub>1</sub>), and design spectral response accelerations (S<sub>DS</sub>, S<sub>D1</sub>).
- <u>Slab-on-Grade Design</u>: We will provide design recommendations for slab-on-grade construction, including a suggested modulus of subgrade reaction.
- <u>Pavement Design</u>: We will provide recommendations for pavement design based on estimated subgrade CBR values and traffic loading information to be provided by the project team.
- <u>Construction Materials Testing</u>: We will recommend construction materials testing methods for site preparation, foundation excavations, structural fill, etc.
- 5) <u>Appendix</u>: The Appendix will contain test boring records, a test boring plan, laboratory test results, etc.

## SITE-SPECIFIC SEISMIC ANALYSIS (OPTIONAL)

As described above, we will provide IBC compliant seismic design parameters based on the subsurface exploration and the mapped spectral response accelerations. Depending on those values and the details of the proposed construction, it may be economically justified to perform more detailed site-specific seismic analysis as described in the following sections.



New Cartersville Recreation Facility • 640 North Tennessee Street • Cartersville, Georgia Proposal 242370.P0

## SHEAR WAVE VELOCITY PROFILE ANALYSIS (SWVPA)

Shear Wave Velocity Profile Analysis (SWVPA) can often yield a more favorable seismic site class than would be obtained from standard penetration test (SPT) data. Based on the results of the soil test borings, we will advise you of the potential for obtaining a more favorable Site Class using SWVPA. If necessary and authorized, Geo-Hydro will use multi-channel analysis of surface waves (MASW) to develop a profile of shear wave velocity for the site to a depth of 100 feet. Geo-Hydro will select the Site Class in accordance with the criteria in the IBC. Shear wave velocity is the preferred parameter for determining the site class in accordance with the IBC.

### PROBABILISTIC SEISMIC HAZARD ANALYSIS (PSHA)

PSHA is a method allowed by the International Building Code (IBC) to determine  $S_S$  and  $S_1$  values in lieu of using published map values provided in IBC. Quite often the values resulting from PSHA are lower than the IBC map values. Lower values of  $S_S$  and  $S_1$  result in reduced seismic base shear, which can result in structural cost savings.

If authorized, our site specific probabilistic seismic hazard analysis work will include the following:

- We will evaluate the existing seismicity record in the area of the site. We will examine regional geology as it relates to seismic hazard analysis.
- We will perform a probabilistic seismic hazard analysis to estimate the site-specific ground motion response in accordance with IBC 2018 and ASCE 7-16.
- We will report applicable site-specific seismic design parameters based on IBC 2018 including the most recent Georgia Amendments.

## **SCHEDULE**

After receiving notice-to-proceed (NTP), Geo-Hydro will begin work immediately. Drilling will commence within about one to two weeks of NTP and should be completed in two days, barring inclement weather. Preliminary information will be provided shortly after completion of field drilling services. A complete report will be provided within two weeks of drilling completion.

## **COST INFORMATION**

Based on the Scope of Services outlined above, we will charge the following fees:

Task	Lump Sum Fee
Geotechnical Exploration and Report	\$12,450
Private Utility Locator (optional)	\$600
Shear Wave Velocity Profile Analysis	\$1,200
Probabilistic Seismic Hazard Analysis	\$1,500



In the event that additional work is required beyond the outlined scope of services, we will notify you prior to commencing any additional work. A fee for additional work will be negotiated.

We will backfill borings with soil cuttings after completion and clean up the work areas. Our work may result in some rutting of the ground surface or damage to vegetation. Stabilization of access trails is not included in our lump sum fee. Our backfilled boreholes may present a tripping hazard after completion. We will make reasonable efforts to reduce the ground disturbance caused by the subsurface exploration, but periodic maintenance by the owner to relevel the ground may be necessary after completion of our work. Geo-Hydro will not be responsible for damage to persons or property related to ongoing settlement of the boreholes after completion of our work.

If landscape repairs or ground stabilization with straw or other erosion control are necessary, we will hire a landscaping or erosion control subcontractor. Landscape repair or stabilization work will be charged at our cost plus 15 percent.

\* \* \* \* \*

We are pleased to submit this proposal and look forward to working on this project. If this proposal is acceptable, we ask that you execute the attached agreement and return the original to us. If you have any questions concerning this proposal or any of our services, please call us.

Sincerely,

GEO-HYDRO ENGINEERS, INC.

Kaylin D. James, P.G.

Senior Project Geologist kjames@geohydro.com

 $KDJ/AMP/{\it 242370.P0} \text{ - New Cartersville Recreational Facility - Geotechnical Proposal}$ 

Enclosures

A. Marty Peninger, P.E. Georgia Geotechnical Manager mpeninger@geohydro.com



## **CLIENT CONTRACT (Signature Page)**

PROJECT NAME: N	ew Cartersville Recreational Center	
PROJECT LOCATION	: 640 North Tennessee Street - Cartersville,	Georgia
PROPOSAL NUMBER	:242370.P0	<b>DATE:</b> August 29, 2024

This document memorializes the contractual understanding and agreement by and between Geo-Hydro Engineers, Inc. (*Geo-Hydro*) and the party as identified and defined below as "*Client*." Its content, along with the content of: (i) Client Terms & Conditions of Service issued and approved by Geo-Hydro, (ii) that certain proposal document involving the Project Name and Project Location identified above and with a Proposal Number and Proposal Date as identified above (the "*Proposal*"), and (iii) that and/or certain statement of work/s (*SOW*), project document/s, instruction document/s, and/or task order/s (each a "*Project Doc*") as are accepted and approved in writing by Geo-Hydro, constitute and comprise the terms, conditions and rights of the contractual agreement ("*Contract*") by and between Geo-Hydro and Client for the service project with the Project Name, Project Location, Proposal Number and Proposal Date as identified above (the "*Project*"), such Project Doc/s being the unique Contract for the Project.

By signing below, each party, acknowledges and agrees to the incorporation and applicability of, and to be bound by, this document, the Client Terms & Conditions of Service document, the Proposal, and each applicable Project Doc as the Contract for the Project. The "*Signature Date*" of this document is:

GEO-HYDRO ENGINEERS, INC. ("Geo-Hydro")	Client Name ("Client")		
Signature of Authorized Geo-Hydro Agent	Signature of Authorized Agent		
Agent Printed Name	Agent Printed Name		
Agent Title	Agent Title		
Client is to complete and provide following information:			
Billing Entity Name			
Individual to Receive Invoices			
Email address Phone No			
Street Address			
City, State, Zip Code:			



#### A. CONTRACT

The provisions of this Terms & Conditions of Service document are incorporated as a part of that Client Contract ("signature page") document as well as that certain proposal document as identified on the signature page (the "Proposal") and/or that or those certain statement of work/s (SOW), project document/s and/or task order/s (each as "Project Doc") executed, accepted, and approved by Geo-Hydro Engineers, Inc. (Geo-Hydro) for each Geo-Hydro client Project. This document and all Project Docs that reference a unique Geo-Hydro client Project constitute and comprise a separate contractual agreement ("Contract") by and between Geo-Hydro and the other party Client to a Client Contract (signature page) document and such Project Docs.

#### B. GEO-HYDRO SERVICES

In consideration of Client: (i) paying Geo-Hydro in full all amounts due, (ii) providing Geo-Hydro and its representatives with access and information as they require, and (iii) complying otherwise with the terms and conditions of the Contract, and subject to the qualifications and limitations otherwise stated in this Contract, Geo-Hydro shall use commercially reasonable efforts to provide to Client the services ("Services") and deliverables ("Deliverables") as expressly set forth in the Proposal and each other applicable Project Doc that is in a writing executed by Geo-Hydro and Client so as to become a part of this Contract. Except to the extent otherwise expressly written as a part of the Contract, Services and Deliverables shall be provided in accordance with, and to, the standards established and determined by Geo-Hydro "Standard of Care" and shall not be required to exceed normal industry standards and specifications for the locale of the associated Geo-Hydro project for Client per the Contract. Nothing in this Contract limits or prevents Geo-Hydro from providing the same or similar services and/or deliverables to others. Geo-Hydro does not assume any responsibilities, duties, or obligations of Client or any other entity or individual. Geo-Hydro's performance shall not be considered to reduce, eliminate, abridge, or abrogate, any responsibilities, duties, or obligations of any other party. Geo-Hydro is not responsible for the design or construction of the project or the failure of any party to perform in accordance with the plans and specifications for the Projects or any of Geo-Hydro's recommendations or instructions.

#### C. FREEDOM TO REPORT.

It is contemplated that, during the course of its engagement, Geo-Hydro may be required to report on the past or current performance of others engaged, or being considered for engagement, directly or indirectly by Client and to render opinions and advice in that regard. Those about whom reports and opinions are rendered may, as a consequence, threaten, initiate, and//or bring claims, including (without limitation) for libel, slander and/or defamation, against Geo-Hydro and its present or former principals, officers, shareholders, directors, agents, representatives, subcontractors, successors, insurers, and attorneys (the "Geo-Hydro Representatives"). To help create an atmosphere in which Geo-Hydro's personnel feel free to express themselves candidly, Client agrees: (1) to waive any claim against the Geo-Hydro Representatives, and (2) to indemnify, and hold harmless Geo-Hydro defend. Representatives from any threat or actual claim for injury, damage, breach, failure, liability, damage, fine, penalty. cost, expense, and/or loss (collectively such individually being a

"Claim" and collectively "Claims") arising from or related to the Contract, its subject matter, the Project, the content of the Reports, and/or the professional opinions rendered by Geo-Hydro Representatives. Client further agrees to compensate Geo-Hydro Representatives for any time spent, or expenses incurred, by Geo-Hydro Representatives in defense of any such Claim, with compensation to be paid in accordance with Geo-Hydro prevailing fee schedule and expense reimbursement policy. Client acknowledges that Client and/or Geo-Hydro may be required by local, state, and/or federal statute and/or regulations to report the discovery of conditions, occurrence of events, and/or existence of hazardous materials, and Client authorizes Geo-Hydro to do so as Geo-Hydro deems to be required or otherwise appropriate notwithstanding any confidentiality obligation or other restriction or limitation as may apply. Client waives any cause of action, claim, suit, or demand associated with Geo-Hydro's compliance with its duties to report as required by local, state, and/or federal laws and regulations, and Client shall defend, indemnify, and hold harmless Geo-Hydro Representatives for any failure on the part of Client or its representatives breach any duty or obligation to report as required by local, state, and/or federal laws and regulations and for any inaccuracy and/or omissions from reports filed that is attributable to the information, data, and access that Client made available to Geo-Hydro Representatives.

#### D. ACCESS, ENTRY & SAFETY

Client shall, among other things: (a) provide Geo-Hydro, and its representatives and equipment, with access to Client's properties, sites, facilities, equipment, and/or systems (collectives, "Sites") as may reasonably be required for the purposes of Geo-Hydro performing the Services and producing the Deliverables; (b) respond promptly to any Geo-Hydro request for information, materials and/or approvals, and timely obtain, provide and make available the same to Geo-Hydro and/or its designees, as Geo-Hydro requires to perform its obligations pursuant to this Contract. Additionally, Client agrees that in accordance with applicable laws, ordinances, and generally accepted construction practice, it will be solely and completely responsible for working conditions at, on and near Sites, which obligations includes (without limitation) compliance with OSHA regulations and safety otherwise of all persons and property. These requirements will apply continuously and are not limited to normal working hours. Any monitoring and/or reporting of procedures conducted by Geo-Hydro does not include review of the adequacy of the safety measures at, in, on, adjacent to, or near the Site.

#### (i) ENTRY.

As a result of Geo-Hydro, and its representatives and equipment, accessing, entering and/or performing Services at or on a Site, damage may occur. Geo-Hydro will use commercially reasonable efforts to endeavor to minimize damage to a Site; with Client acknowledging that the vary nature of the Services and Deliverable are expected to cause damages and agreeing that Geo-Hydro is not under any duty or responsibility whatsoever to restore the Site to its condition prior to performance of the Services or provision of the Deliverables. Unless otherwise expressly stated in a Project Doc, Geo-Hydro's scope of Service contains no provision for backfilling boreholes, test pits, or other exploration holes created to facilitate testing. Client further agrees to waive any Claim against Geo-Hydro Representatives, and to hold harmless, indemnify, and defend Geo-Hydro Representatives, for any Claim alleging injury or damage as a consequence of unfilled exploration holes on the Site or any other disturbance to natural conditions of or any improvements on the Site. Should any costs of restoration be determined to apply to Geo-Hydro, then the amount



deemed to be due shall be added to the compensation Client is to pay Geo-Hydro using such price and terms as determined by Geo-Hydro.

#### (ii) FIELD MONITORING AND TESTING.

Whenever Geo-Hydro's personnel make on-site observations of materials and/or services provided by the Client or a contractor engaged by Client (the "Contractor"), Client agrees that Geo-Hydro is not responsible for the Client's or Contractor's means, methods, techniques, sequences or procedures of construction. Client acknowledges and agrees that the field services provided by Geo-Hydro shall not relieve the Contractor of its responsibilities for performing the work in accordance with the plans and specifications. The words "monitoring," "supervision," "inspection," or "control" mean the periodic observation of the work and the conducting of tests by Geo-Hydro to verify substantial compliance with the plans, specifications, and design concepts for the Project. Continuous or full-time monitoring does not mean that Geo-Hydro personnel are observing placement of all materials or that Geo-Hydro assumes any responsibility or liability for placing or directing placement of materials and Client shall indemnify Geo-Hydro for Claims relating to, or arising from, the placing or directing of the placement of, materials.

#### E. PAYMENTS

Client agrees to pay Geo-Hydro in full all amounts due on or before their due date, including (without limitation) those due for any Service or Deliverable. Time is of the essence regarding such payment of Geo-Hydro. Client shall be responsible for all sales, use, and excise taxes, as well as any other similar taxes, duties, and charges of any kind, imposed by any federal, state, or local governmental entity on the Contract, Services, Deliverables and/or amounts payable by Client to Geo-Hydro hereunder. Client's obligation to pay Geo-Hydro is not dependent upon Client's ability to obtain financing or the receipt of any approval of any governmental, regulatory agency, zoning board or other party or upon Client's successful completion of the Project. Geo-Hydro reserves the right to submit progress invoices to Client on a bi-monthly, monthly or milestone basis and a final invoice upon completion of Geo-Hydro's work. Each invoice is due and payable to Geo-Hydro, by Client, immediately upon presentation. All amounts due to Geo-Hydro and not paid within thirty (30) days of invoice presentation shall bear interest at the rate of eighteen percent (18%) per annum (or the maximum permissible rate allowed by law if such is less than 18%) until paid in full.

In addition to the amounts otherwise due per this Contract, and the interest due for past due amounts, Client shall pay Geo-Hydro for all Costs (as defined below) relating to a Legal Matter (as defined below) involving Client and Geo-Hydro. "Costs" are all amounts Geo-Hydro incurs to enforce its rights or Client's obligations as well as to defend its rights and itself from Claims made by Client or third parties, including (without limitation) the cost to Geo-Hydro for legal counsel, third-party collection agencies, and time spent by Geo-Hydro employees. "Legal Matters" are all actions taken that involve a contractual, tortious, fiduciary, or statutory subject matter, including (without limitation) demand letters, securitization of debts, lawsuits, administrative filings, arbitration, mediation, and/or other forms of judicial or administrative recourse or dispute resolution proceeding.

#### F. REPRESENTATIONS, WARRANTIES & DISCLAIMER.

Each party represents and warrants to the other party that: (a) it has the full right, power, and authority to enter into the Contract, to grant the rights and licenses granted hereunder and to perform its obligations hereunder; and (b) when executed and delivered by such party, this Contract will constitute the legal, valid and binding obligation of such party, enforceable against such party in accordance with its terms. In the event that there is to be a some entity other than the Client that is to be billed by, and is to pay, Geo-Hydro (such other party being the "Billing Entity"), Client represents, warrants and covenants that: (i) it has a legally binding, express commitment in writing from such Billing Entity to accept and pay (as and when due) all amounts owed Geo-Hydro per the Contracts, and (ii) it guarantees the payment obligations of the Billing Entity and will immediately pay whatever amounts not fully paid to Geo-Hydro by the Billing Entity as due upon being given notice by Geo-Hydro that it has not received payment in full from the Billing Entity for the amounts due but not paid by the Billing Entity. EXCEPT AS OTHERWISE EXPRESSLY SET FORTH HEREIN, AND TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, GEO-HYDRO: (1) DISCLAIMS ALL WARRANTIES, WHETHER EXPRESS, IMPLIED, STATUTORY, OR OTHERWISE EXISTING WITH REGARD TO THIS CONTRACT OR ITS SUBJECT MATTER, AND (2) MAKES NO WARRANTIES, GUARANTEES, OR REPRESENTATIONS OF ANY KIND, EXPRESS OR IMPLIED, UNDER THIS CONTRACT AND WITH RESPECT TO GEO-HYDRO'S ACTIONS, OMISSIONS, REPORTS, FINDINGS, OPINIONS, COMMUNICATIONS, DELIVERABLES, AND/OR SERVICES, INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTY OF MERCHANTABILITY, TITLE, NON-INFRINGEMENT, AND/OR FITNESS FOR A PARTICULAR PURPOSE.

#### G. EXISTING CONDITIONS.

Client agrees that subsurface explorations and geotechnical or environmental engineering evaluations are subject to naturally occurring and/or man-made soil and other conditions which cannot always be discovered or anticipated and that a potential exists for such phenomena to impact the Project in ways for which Geo-Hydro cannot be responsible. Client shall disclose, at least 7 days before any scheduled inspections by Geo-Hydro, the presence and location of all known man-made or naturally occurring objects which could be affected by or affect field tests or borings to be performed by Geo-Hydro.

Client acknowledges and agrees that Geo-Hydro has neither created nor contributed to the creation or existence of any irritant, pollutant, or hazardous, radioactive, toxic, otherwise dangerous or harmful substance that may exist at the site, or dangerous conditions resulting therefrom. Client further acknowledges that Geo-Hydro's sole role is to provide a service intended to benefit Client and that Geo-Hydro is performing no function at or association with the site that would classify Geo-Hydro as a generator, disposer, treater, storer, coordinator, handler, or transporter of hazardous materials.

#### SURVEYING, SAMPLING & TESTING.

Unless otherwise stated, the fees in this proposal do not include costs associated with surveying of the site for the accurate horizontal and vertical locations of tests. Field tests described in a report or shown on sketches are based upon information furnished by others or estimates made in the field by Geo-Hydro's representatives. Such dimensions, depths or elevations should be considered as approximations unless otherwise stated. Geo-Hydro may employ sampling procedures during the course of the Project, with Client acknowledging that such procedures indicate actual conditions only at the precise locations and elevations from which samples were



**(i)** 

taken. Client further acknowledges that, in accordance with the generally accepted construction practice, Geo-Hydro shall make certain inferences based on the results of sampling and any related testing to form its opinion of conditions in areas beyond those from which samples were taken. Client acknowledges that despite proper implementation of sampling and testing procedures, and despite proper interpretation of their results, Geo-Hydro cannot, and does not, guarantee the existence or absence of conditions which it may infer to exist.

#### (ii) CONDITIONS & HAZARDOUS SUBSTANCES.

Client agrees to advise Geo-Hydro, in writing, of any hazardous substances on or near the site prior to Geo-Hydro coming onto the site; provided, however, if the hazardous conditions arise after Geo-Hydro is engaged, then such notice shall be within 24 hours after Client learns about the presence of such hazardous substances. In the event that test samples obtained contain substances hazardous to health, safety, or the environment, these samples shall remain the property of the Client. Likewise, any equipment which becomes contaminated and cannot be reasonably decontaminated shall become the property and responsibility of Client. Such samples or equipment will be delivered to Client. Client agrees to pay transportation costs for samples and equipment and the fair market value of such contaminated equipment upon request. Exploratory activities may expose soil and/or ground water considered to be hazardous by local and/or state and/or federal agencies. Geo-Hydro agrees to contain such materials in a manner approved by Geo-Hydro both during and at the completion of Geo-Hydro's field activities. Client understands and agrees that Client, and not Geo-Hydro, is responsible for the storage or disposal of hazardous materials or suspected hazardous materials brought to the surface during Geo-Hydro's exploratory activities.

#### (iii) **DISCOVERY OF UNANTICIPATED** HAZARDOUS MATERIALS.

Hazardous materials may exist at a site where there is no reason to believe they could or should be present. Client agrees that the discovery of unanticipated hazardous materials constitutes a changed condition mandating a renegotiation of the scope of work or termination of services. Client also agrees that the discovery of unanticipated hazardous materials could make it necessary for Geo-Hydro to take immediate measures to protect human health, safety, or the environment. Geo-Hydro agrees to notify Client as soon as practically possible should unanticipated hazardous materials or suspected hazardous materials be encountered. Client encourages Geo-Hydro to take any and all measures that in Geo-Hydro's professional opinion are justified to preserve and protect the health and safety of Geo-Hydro's personnel, and Client agrees to compensate Geo-Hydro for the additional cost of such work. In addition, Client waives any Claim against Geo-Hydro, and agrees to indemnify, defend, and hold Geo-Hydro harmless from any Claim arising from Geo-Hydro's encountering of unanticipated hazardous materials or suspected hazardous materials. Client acknowledges that discovery of hazardous materials or suspected hazardous materials may lead to a temporary or permanent diminution of property value, and/or may cause delays in or otherwise affect completion of the real estate transaction Client now contemplates.

#### H. AQUIFER CONTAMINATION.

Subsurface sampling may result in unavoidable contamination of certain subsurface areas, as when a probe or boring device moves through a contaminated area, linking it to an aquifer, underground stream, or other hydrous body not previously contaminated and capable of spreading hazardous materials off-site. Because nothing can be done to eliminate the risk of such an occurrence, and when subsurface sampling is a part of the work which Geo-Hydro will perform on Client's behalf, Client hereby waives any Claim against Geo-Hydro, its officers, employees, subcontractors and other representatives ("Geo-Hydro Indemnitees"), and agrees to defend, indemnify and hold Geo-Hydro Indemnitees harmless from any Claim that may arise as a result of alleged cross-contamination caused by sampling. Client further agrees to compensate Geo-Hydro for any time spent or expenses incurred by Geo-Hydro in defense of such Claim, including, but not limited to, any attorneys' fees and expenses incurred by Geo-Hydro, in accordance with Geo-Hydro's prevailing fee schedule and expense reimbursement policy.

#### I. SAMPLES, DATA AND RECORDS.

Geo-Hydro shall be the sole owner of any and all data gathered by Geo-Hydro or its representative or reports prepared by Geo-Hydro. No entity or individual, other than Geo-Hydro, its representatives, or Client, may use or rely upon any data collected by Geo-Hydro or reports prepared by Geo-Hydro. Except as expressly set forth in this Contract, Geo-Hydro and Client do not intend the benefits of this Contract, including, but not limited to, the samples, data, and records created by Geo-Hydro, to inure to any third party, and nothing contained herein shall be construed as creating any right, claim or cause of action in favor of any such third party, against either Geo-Hydro or Client.

Routine test specimens will be discarded immediately upon completion of tests. Geo-Hydro shall retain drilling samples of soil or rock for a period of ninety (90) days following submission of Geo-Hydro's report to Client. If Client requests a longer period of storage, Geo-Hydro will retain test specimens or drilling samples for an agreed upon time period and fee. Records relating to services hereunder shall be maintained by Geo-Hydro for at least three (3) years following completion of Geo-Hydro's services.

#### J. TERMINATION.

Either party may terminate this Contract, or any Project Doc, either: (i) for convenience upon thirty (30) days prior written notice to the other party, or (ii) for cause upon the failure of the other party to cure any material breach of this Contract by it within fifteen (15) days of receiving notice of said breach. Additionally, Geo-Hydro may suspend Services, stop Deliverables, and is to have its obligations per the Contract and each applicable Project Doc deferred and adjusted as such are impacted by the suspension and stop, without liability or consequence to Client or any third party in the event that Client fails to cure any breach of this Contract within three (3) days of knowing of such breach.

Upon termination, (1) all Project Docs for the Contract also terminate, (2) Client shall immediately pay Geo-Hydro in full for all amounts due or are to come due as a result of termination, and (3) Geo-Hydro's obligation to perform further Services or complete and provide Deliverables under this Contract end immediately.

Notwithstanding, in the event that Client requests termination and such request is prior to the completion of Geo-Hydro's work, Geo-Hydro reserves the right to complete such analysis and records as are necessary to place Geo-Hydro's files in order and to complete a report on the work performed to date, with Client to pay Geo-Hydro for such additional work Geo-Hydro's then-current hourly rates. Additionally,



Client acknowledges and agrees that the amount of damages that Geo-Hydro will sustain in the event Client terminates this Contract prior to Geo-Hydro's completion of its work required by the proposal and this Contract will be uncertain or difficult to ascertain. As such, Client agrees that in the event Client terminates this Contract prior to Geo-Hydro's completion of the work required by the proposal and this Contract, Client shall be liable to Geo-Hydro for liquidated damages in the amount equal to thirty-five percent (35%) of all charges incurred as of the date of Client's termination of the Contract (the "*Liquidated Damages*"). Client acknowledges and agrees that the foregoing Liquidated Damages do not represent a penalty, but rather, represent a good faith pre-estimation by the parties of the damages that would be incurred by Geo-Hydro.

#### K. INSURANCE.

Upon notice from a party to this Contract to the other party, the receiving Party will furnish, or have on file with the other party, Certificates of Insurance indicating the applicable insurance coverage and limits as may have in place that pertain to the Contract, its subject matter, and/or the Project.

Should Client and/or other entities require to be provided additional insured status on Geo-Hydro's General Liability Insurance, Auto Liability Insurance, and/or Umbrella/Excess insurance, those entities must be listed below at the time of signing of the contract:

Additional Insured Entities:

#### L. INDEMNIFICATION.

Client shall indemnify and hold harmless Geo-Hydro and its officers, directors, agents, and employees from any and all Claims, including, but not limited to, Geo-Hydro's attorneys' fees and costs, resulting from, relating to, or arising out of the following: (i) subsurface conditions, damage to subsurface structures, whether owned by Client or any third party, the presence or location of which were not revealed to Geo-Hydro by Client in writing at least 7 days prior to the commencement of Geo-Hydro's performance; (ii) any alleged cross-contamination caused by Geo-Hydro's sampling; (iii) unanticipated hazardous materials discovered during the course of Geo-Hydro's work; (iv) any damage to Geo-Hydro's equipment or personnel as a result of actions engaged in by the Contractor.

#### M. CONFIDENTIALITY.

All non-public, confidential or proprietary information of either party ("*Confidential Information*"), including, but not limited to, information about such party's business affairs, products, services, methodologies, confidential intellectual property, trade secrets, third-party confidential information, and other sensitive or proprietary information, disclosed by one party (the "*Disclosing Party*") to the other party (the "*Receiving Party*"), whether disclosed orally or disclosed or accessed in written, electronic, or other form or media, or otherwise learned by the Receiving Party in connection with this Contract is confidential, solely for use in performing this Contract and may not be disclosed or copied unless authorized by the Disclosing Party in writing. The Receiving Party shall protect and safeguard the confidentiality of the Disclosing Party's Confidential Information with at least the same degree of care as the Receiving Party would protect its own Confidential Information, but in no event with less than a commercially reasonable degree of care. Confidential Information does not include any information that: (a) is or becomes generally available to the public other than as a result of the Receiving Party's breach of this Contract; (b) is obtained by the Receiving Party on a non-confidential basis from a third-party that was not legally or contractually restricted from disclosing such information; (c) the Receiving Party establishes by documentary evidence, was in its possession prior to the Disclosing Party's disclosure hereunder; or (d) was or is independently developed by the Receiving Party without using any of the Disclosing Party's Confidential Information. Additionally, the obligations and restrictions applicable to Confidential Information hereunder shall not apply in such instances where disclosure or use is required under applicable federal, state or local law, regulation or a valid order issued by a court or governmental agency of competent jurisdiction, which includes (without limitation) the use and disclosure of Confidential Information to provide notices required by law, regulation or ordinance or when complying with an order to provide information or data when such order is issued by a court, administrative agency, arbitrator, or other legitimate authority, or if disclosure is reasonably necessary for Geo-Hydro to defend itself from any legal action or claim. Either party may issue or release any announcement, statement, press release, or other publicity or marketing materials relating to this Contract, or otherwise use the other party's trademarks, service marks, trade names, logos, symbols, or brand names, in each case, without the prior written consent of (or any accounting to) the other party. When referencing this arrangements and subject matters of the Contract.

The Receiving Party shall be responsible for any breach of this Section caused by any of its employees, contractors, agents, or representatives. On the expiration or termination of the Contract, and at any time during or after the term of this Contract at the Disclosing Party's written request, the Receiving Party shall promptly return to the Disclosing Party all originals and copies, whether in written, digital or other form, the Disclosing Party's Confidential Information; provided, however, a Receiving Party may retain a copy of the Disclosing Party's Confidential Information (and non-confidential information and materials) to the extent, and it may require, to comply with applicable law, regulation, ordinance or order and/to perform its obligations and assert its rights as may arise from or relate to this Contract and its subject matter. Each party's obligations under this Section survive termination or expiration of this Contract.

#### N. NO THIRD PARTY BENEFICARIES.

This Contract is for the sole benefit of the parties hereto and their respective successors and permitted assigns and nothing herein, express or implied, is intended to or shall confer upon any other Person, which includes (without limitation) the Billing Entity, any legal or equitable right, benefit, or remedy of any nature whatsoever, under, or by reason of, this Contract. In the event that any third party, including (without limitation) the Billing Entity, makes any Claim against Geo-Hydro Indemnitees, Client shall defend, indemnify and hold harmless each of the Geo-Hydro Indemnities with regard to such Claims, including, but not limited to, Geo-Hydro's attorneys' fees and costs involving the Claims.

#### O. GOVERNING LAW; VENUE.

This Contract is to be governed by, and construed according to, the laws of the state in the USA where the Geo-Hydro project is located for which the services and deliverables are to be performed and provided, without reference to its conflicts-of-law rules of such state. Venue for any legal actions, claims, and/or disputes arising from the Contract or its subject matter, shall be in the state and superior courts



of Cobb County, Georgia and the Federal Courts for the Northern District of Georgia, Atlanta division.

Should a dispute arise,

(1) Geo-Hydro may elect to suspend its performance of this Contract without liability or consequence pending final resolution of any request for relief, cure, claim, appeal, modification, dispute, or action arising from this Contract, with all dates and deadlines per the Contract being tolled for the period that the Contract is suspended plus such number of additional days as Geo-Hydro determines it will reasonably require as a result of the suspension.

(2) Either party may request that each party have am authorized representative(s) conference or meet as soon as conveniently possible, but in no case later than thirty (30) days after such a request is made, to attempt to resolve such dispute or disagreement. Within three (3) days prior to such conference or meeting between the representatives, the parties will exchange relevant information that will assist the parties to discuss resolving their dispute.

(3) If within fifteen (15) days, or such other period as both parties expressly agree upon in writing, after the meeting of authorized representatives the parties have not resolved the dispute on terms satisfactory to both parties, the parties shall submit within thirty (30) days of such period expiring the dispute or disagreement to non-binding mediation. The mediation shall be conducted by a mutually agreeable impartial mediator, or if the parties cannot so agree, a mediator designated by the American Arbitration Association ("AAA") pursuant to its Construction Industry Mediation Rules, with such rules to govern the mediation. Venue for such mediation shall be in Cobb County, GA at the law offices of Geo-Hydro.

(4) In the event that the parties do not resolve the dispute at mediation and such resolution is not memorialized in a writing executed by both parties, then either party may initiate litigation with regard to the dispute in the Contract's designated Venue

#### P. SEVERANCE; SURVIVAL.

If any provision of this Contract is held to be illegal, invalid or unenforceable under any present or future law, and if the rights or obligations of any party hereto under this Contract will not be materially and adversely affected thereby, (a) such provision will be fully severable, (b) this Contract will be construed and enforced as if such illegal, invalid, or unenforceable provision had never comprised a part hereof, (c) the remaining provisions of this Contract will remain in full force and effect and will not be affected by the illegal, invalid, or unenforceable provision or by its severance here from and (d) in lieu of such illegal, invalid or unenforceable provision, there will be added automatically as a part of this Contract a legal, valid, and enforceable provision as similar in terms to such illegal, invalid, or unenforceable provision as may be possible.

#### Q. NOTICES.

All notices, requests, consents, claims, demands, waivers, and other communications hereunder (each, a "*Notice*") shall be in writing and addressed to the parties at the addresses set forth on the signature page of this Contract (or to such other address that may be designated by the receiving party from time to time in accordance with this Section). All Notices shall be delivered by personal delivery, nationally recognized overnight courier (with all fees pre-paid), or email (with confirmation of transmission) or certified or registered mail (in each case, return receipt requested, postage pre-paid). Except as otherwise provided in this Contract, a Notice is effective only (a) upon receipt by the receiving party; and (b) if the party giving the Notice has complied with the requirements of this Section.

#### **R. FORCE MAJEURE.**

Except for any obligations to make payments to the other party hereunder, no party shall be liable or responsible to the other party. nor be deemed to have defaulted under or breached this Contract, for any failure or delay in fulfilling or performing any term of this Contract, when and to the extent such failure or delay is caused by, or results from, events outside of the party's reasonable control ("Force Majeure Events"), including but not limited to: (a) acts of God; (b) flood, rain, water, fire, smoke, earthquake, hurricane, storm, wind, tornado or some form of other natural event or disaster, (c) war, invasion, explosions, hostilities (whether war is declared or not), terrorist threats or acts, riot, or other civil unrest; (d) government order or law; (e) actions, embargoes, or blockades in effect on or after the date of this Contract; (f) action by any governmental authority; (g) national or regional emergency; (h) strikes, labor stoppages or slowdowns or other industrial disturbances; (i) epidemic, pandemic or other form of healthcare concern or hazardous condition; and (i) shortage of adequate power or transportation facilities. The affected party shall resume performance under this Contract as soon as reasonably practicable after the Force Majeure Event has been resolved or terminated.

#### S. INTELLECTUAL PROPERTY.

All reports, documents and other materials prepared or furnished by Geo-Hydro pursuant to the Contract are instruments of Geo-Hydro's Services, with Geo-Hydro exclusively retaining ownership and all property interest therein as well as exclusive ownership in. under and to all Intellectual Property Rights in the same as well as in all data, know-how, methodologies, software, and other materials provided by or used by Geo-Hydro in performing the Services and developed or acquired by the Geo-Hydro prior to, as a result of, or after the Contract (collectively, "Geo-Hydro Materials"). Upon payment in full for the Services rendered and Deliverables prepared or provided, Geo-Hydro grants Client a limited, revocable, non-transferable, nonsublicensable, non-exclusive license to use, display, reproduce, such Geo-Hydro Materials to the extent incorporated in, or otherwise necessary for, the use of the Deliverables for their intended purpose with the Project. All other rights in and to the Geo-Hydro Materials are expressly reserved by Geo-Hydro. For the purposes of this Contract, "Intellectual property Rights" mean any and all rights in, to and under copyrights, patents, patent disclosures and inventions (whether patentable or not), trademarks, service marks, trade secrets, know-how, and other confidential information, trade dress, trade names, logos, corporate names and domain names and other forms of intellectual property rights, together with all of the goodwill associated therewith, derivative works and all other rights. Reuse, misuse, unintended use, distribution or modification of any such Geo-Hydro Materials by Client, without Geo-Hydro's express, prior, written permission, is at Client's sole risk, with Client to indemnify, defend and hold harmless the Geo-Hydro Indemnities from all Claims, including (without limitation) attorneys' fees and legal costs, arising out of such reuse, misuses, unintended use, distribution or modification by Client or by others acting through Client.

#### T. LIMITATION & EXCLUSIONS OF LIABILITY.

GEO-HYDRO SERVICES AND DELIVERABLES PER THE CONTRACT ARE EXCLUSIVELY PROVIDED ONLY TO, AND FOR THE BENEFIT OF, CLIENT AND MAY NOT BE RELIED UPON, OR ENFORCED BY, ANY OTHER PARTY. GEO-HYDRO SHALL NOT BE LIABLE TO CLIENT, OR ANY OTHER PARTY,



FOR ANY INJURIES OR DAMAGES THAT MAY OCCUR FOR GEO-HYDRO'S NOT PERFORMING SERVICES THAT WERE NOT EXPRESSLY INCLUDED IN THE PROPOSAL OR PROJECT DOCS PARTICULAR TO THE CONTRACT. EXCEPT FOR OBLIGATIONS TO MAKE PAYMENT. INDEMNIFICATION OBLIGATIONS. AND/OR LIABILITY FOR BREACH OF CONFIDENTIALITY, IN NO EVENT WILL GEO-HYDRO BE LIABLE TO THE CLIENT FOR: (A) ANY LOSS OF USE, DATA, REVENUE, OR PROFIT OR FOR ANY CONSEQUENTIAL, INCIDENTAL, INDIRECT, EXEMPLARY, SPECIAL, OR PUNITIVE DAMAGES WHETHER ARISING OUT OF BREACH OF CONTRACT, TORT (INCLUDING NEGLIGENCE) OR OTHERWISE, REGARDLESS OF WHETHER SUCH DAMAGE WAS FORESEEABLE AND WHETHER OR NOT SUCH PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES; OR (B) DIRECT DAMAGES OF MORE THAN THE GREATER OF: (I) AN AGGREGATE OF \$50,000.00, AND (II) THE AMOUNT OF THE TOTAL FEE PAID TO GEO-HYDRO IN THE SIX (6) MONTH PERIOD PRECEDING THE EVENT GIVING RISE TO THE CLAIM.

#### U. <u>INDEPENDENT CONTRACTORS</u>.

The parties are independent contractors, and nothing contained in this Contract shall be construed as creating any agency, partnership, joint venture or other form of joint enterprise, employment, or fiduciary relationship between them. Neither party shall be authorized to contract for or bind the other party in any manner whatsoever.

#### V. SIGNATURES.

By having executed the signature page associated with this document, or by having executed any Project Doc that expressly references and incorporates this document as part of a Contract, this document, and the Proposal and any applicable written, executed Project Docs that reference this document, constitutes the entire, and fully integrated, Contract by and between Client and Geo-Hydro regarding its subject matter, and it supersedes all other prior and contemporaneous negotiations, representations, arrangements, agreements, and understandings, whether written or oral with regard to such subject matter except to the extent otherwise expressly noted in this Contract. This Contract may not be modified, altered, or amended except in a subsequent written instrument executed by each of the parties which refers to this Contract and specifies the amendment made. No waiver of any breach of this Contract shall be deemed or considered a waiver of any other or subsequent breach. Paragraph headings are used to facilitate reference to the various provisions and do not affect the meaning or construction of any provision. This Contract binds, and the benefits hereunder inure to, the respective parties, their legal representatives, executors, administrators, successors, and assigns. The parties hereto have executed this Contract as of the dates shown below, and it may be executed in any number of counterparts, each of which shall be an original and all of which shall constitute together one and the same document.



## Underground Utilities Fact Sheet

Geo-Hydro's work often includes drilling below the ground surface to evaluate subsurface materials. One of our biggest concerns is that we may accidentally encounter underground utilities which may create a safety hazard for our personnel and others or result in a loss of service. Location of underground utilities prior to our work is important to all parties. Unfortunately, location of underground utilities is a difficult task, and accurate location of underground utilities is often not possible.

Geo-Hydro is required by Georgia law to contact the Utilities Protection Center (UPC) prior to drilling. The UPC requires at least 72 hours prior notification. The UPC contacts member utilities, and the member utilities dispatch utility locators. Normally the utility locators will not locate underground utilities on private property, and will only locate utilities from the main service line to the property owner's meter. It is not uncommon for utility locators to improperly locate underground utilities for a variety of reasons.

Geo-Hydro requires that the property owner provide clearly marked locations on the ground of any underground utilities in the work area. If necessary, Geo-Hydro can refer the owner to companies that provide underground utility location services. Alternatively, Geo-Hydro can hire the utility location company and pass this cost through to our client.

Private underground utility location companies do not guarantee that they have located all underground utilities or that underground utilities have been accurately located. In fact, some underground utilities (e.g., irrigation lines, non-metallic lines, etc.) simply cannot be located using non-destructive techniques.

Geo-Hydro will make reasonable efforts to avoid damaging underground utilities that are clearly marked in the field. Due to the uncertainties of locating underground utilities, Geo-Hydro cannot be responsible for damage to unmarked underground utilities. Since Geo-Hydro's work is being performed for the benefit of its client, the client must accept the risk that Geo-Hydro's work could result in damage to underground utilities. As such, it is ordinarily the responsibility of Geo-Hydro's client to accept the responsibility for repairing damage to unmarked underground utilities unless that responsibility has clearly been transferred to another party.

