

**RESOLUTION 24-75**

**A RESOLUTION TO AUTHORIZE THE MAYOR TO SIGN A SUPPLEMENTAL COST PROPOSAL WITH THE CORRADINO GROUP FOR PORT ROYAL ROAD AND BUCKNER LANE INTERSECTION IMPROVEMENTS**

**WHEREAS**, the City of Spring Hill contracted with The Corradino Group by Resolution 22-19 to provide preliminary design and modification services for the traffic signal and intersection design for the Port Royal Road and Buckner Lane intersection; and

**WHEREAS**, The Corradino Group has submitted a Supplemental Cost Proposal for final design and construction plan services in the amount of \$84,465.00, attached hereto as Exhibit A; and

**WHEREAS**, the supplemental proposal includes services for retaining wall design, bridge design and coordination, hydraulic design to meet the City's UDC regulations, geotechnical services and additional staff time for project management and attending meetings; and

**WHEREAS**, staff recommends approval of supplemental cost proposal; and

**WHEREAS**, payment for the services will be expensed from the Capital Projects Fund.

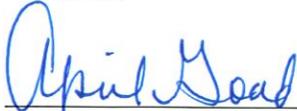
**NOW, THEREFORE BE IT RESOLVED**, the City of Spring Hill Board of Mayor and Aldermen:

1. Approve the Supplemental Cost Proposal with The Corradino Group for final design and construction services for the Port Royal Road and Buckner Lane intersection improvements in the amount of \$84,465, Exhibit A attached hereto.
2. Authorize the Mayor to execute the Supplemental Cost Proposal.

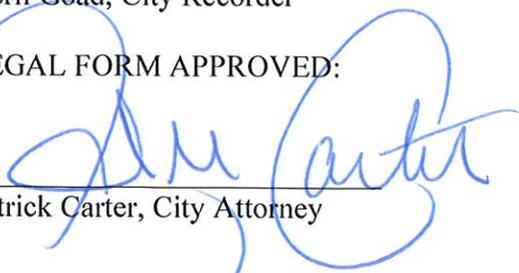
**Passed and Adopted by the Board of Mayor and Aldermen of the City of Spring Hill, Tennessee on the 1<sup>st</sup> day of April, 2024.**

  
Jim Hagaman, Mayor

ATTEST:

  
April Goad, City Recorder

LEGAL FORM APPROVED:

  
Patrick Carter, City Attorney

# THE CORRADINO GROUP, INC.

CORRADINO

ENGINEERS · PLANNERS · PROGRAM MANAGERS · ENVIRONMENTAL SCIENTISTS

March 12, 2024

Ms. Missy Stahl, CMFO  
CIP Manager  
City of Spring Hill  
PO Box 789  
Spring Hill, TN 37174

**Re: Revised Request for Supplement – Final Design & Construction Plans  
Port Royal Road at Buckner Lane Intersection**

Dear Ms. Stahl:

We are submitting the enclosed supplement request proposal for additional services involving the final design and development of construction documents for the referenced project. The additional services outlined in Exhibit A are based our previous discussions with you and the City which consist of additional meetings and coordination time, design of a retaining wall near the Walden Creek Apartments, revising the plans to include a precast arch structure crossing Grassy Branch and revising the hydraulic design for this structure, and additional time for unforeseen conditions. Our proposal also includes cost to perform additional geotechnical investigation to coincide with the arch drainage structure crossing Grassy Branch.

We appreciate your confidence in The Corradino Group to provide these services for such a dynamic and exciting project. Should you have any further questions regarding this information, we are at your disposal to answer any concerns.

Sincerely,  
**THE CORRADINO GROUP, INC.**



Gerald G. Bolden, PE, PTOE  
Vice President

**ACCEPTED BY:**

  
*Signature*

Jim Haseman Mayor  
*Printed Name and Title*

CITY OF SPRING HILL  
*Agency*

April 1, 2024  
*Date*

## EXHIBIT A

### SCOPE OF SERVICES for SUPPLEMENT TO FINALIZE CONSTRUCTION PLANS AND PREPARE BID DOCUMENTS

*Revised March 12, 2024 (Supplemented to the Scope of Services dated February 7, 2022)*

#### PORT ROYAL ROAD AT BUCKNER LANE DESIGN

*The Corradino Group (Corradino) understands the following item(s) to be supplemented within the scope of work for the referenced project:*

The City of Spring Hill has contracted with The Corradino Group for design to improve the intersection of Port Royal Road at Buckner Lane. The project consists of widening a portion of Port Royal Road, from the terminus of the Port Royal Road/Countess Roundabout project to near Lovell Lane. Design involves widening the existing two-lane roadway to four lanes with a center left-turn lane having curb-gutter with a sidewalk and multi-use path. A new signalized intersection at Buckner Lane will be designed to accommodate traffic patterns and future volume along Port Royal Road. Corradino's previous scope of work involved developing preliminary-right-of-way and construction plans per City of Spring Hill and TDOT standards and guidelines.

Preliminary/Right-of-Way plans were submitted to the City on October 6, 2023. Several discussions with the City of Spring Hill have occurred after the submittal that identified the need for additional design elements to be addressed with finalizing construction plans for the project.

This scope of work supplements the original contract and identifies the scope of services for Corradino to provide professional services for those issues and finalize Construction Plans in order to prepare bid documents to allow a contractor to construct the project.

**Additional Scope of Work items are outlined in the following.**

1. Corradino's original scope of work included project management and up to three meetings for coordination. Coordination and meetings with the City have exceeded the initial estimate of work. Corradino will continue to provide project management and coordination with the City, including various meetings with staff. The following meetings are anticipated in order to continue coordination.
  - i. Up to six (6) meetings with the City to coordinate the project, assuming one(1) meeting per month.
  - ii. Conduct two (2) in-person meetings with utilities to coordinate the project design and relocation of utilities. Estimates an additional two (2) virtual on-line meetings with utilities. (Total of 4 utility coordination meetings)
2. During design and development of Preliminary/Right-of-Way Plans, it was determined that slope limits would have a severe impact to the property for the Walden Creek Apartments. Due to the apartment buildings proximity, a traditional CUT slope could not be attained without affecting the buildings therefore necessitating the need for an alternative solution. Corradino evaluated the

- impact which was also discussed with the City and determined a retaining wall would be necessary to eliminate impacts from the roadway widening and slope limits. As such a cast-in-place structure was deemed the most suitable solution to address the concerns and City's needs. Additional labor is necessary for the following tasks.
- a. Provide a structural design for a cast-in-place wall.
  - b. Develop appropriate details to be included in the plans for constructing the wall.
  - c. Assumes the wall footing is to be constructed on the top of rock. (The City provided to Corradino approximate rock top of location by self-performing test holes along Port Royal Road. This information will be used in designing the structure.)
  - d. The City opted not to obtain additional geotechnical investigation for this structure and indicated to utilize the information obtained from initial borings collected within the project. Therefore no additional geotechnical investigation will be performed.
  - e. Revise the storm drainage design completed during Preliminary/Right-of-Way plans to consider the new wall design.
3. After submittal of Preliminary/Right-of-Way Plans to the City, the City indicated it preferred to implement a prefabricated arch structure in lieu of a traditional box bridge/culvert to allow proposed roadway improvements to cross Grassy Branch. Additional labor is necessary for the following tasks.
- a. Coordinate with a local vendor that specializes in the design, manufacturing, and delivery of the desired structure. Coordination will involve but is not limited to,
    - i. A site visit to identify possible constraints and/or issues for Corradino to address in developing plans.
    - ii. Coordinate with the vendor to gather details and other information necessary for incorporating into final plans.
    - iii. Coordinate with the geotechnical consultant to perform additional soil borings needed for this structure.
      1. Additional geotechnical investigation will be necessary due to the design requirements needed to develop the structure. A detailed proposal outlining the scope of work is included as a supplement to this document.
  - b. Corradino will develop a package for the City to review and compare a traditional cast-in-place box culvert versus a precast concrete arch structure. A cost analysis will also be included in this evaluation.
  - c. Corradino will revise the preliminary plans accordingly to incorporate details and any plan information related to constructing a precast arch structure.
4. Hydraulic design of the structure crossing Grassy Branch was designed per procedures outlined by TDOT for drainage. After submittal of Preliminary/Right-of-Way plans, it was explained by the City Engineer that the City desires the structure to be sized similarly as new developments are designed and therefore should follow the City's Unified Development Code (UDC) guidelines. These guidelines state that downstream water surface is critical to design of a drainage structure and require upstream and downstream cross-section information of the water body to be considered in the design of the structure. This process essentially involves creating a drainage model using HEC-RAS to design the structure. Additional labor is necessary for the following tasks.
- a. Import cross-section information of Grassy Branch for locations upstream and downstream of the proposed drainage structure into HEC-RAS.
  - b. Develop the HEC-RAS model to analyze existing conditions to determine downstream water surface elevations for sizing a proposed culvert crossing.

- c. Update the plans based on a proposed drainage structure and coordinate with design of a precast arch structure previously mentioned for additional services.
5. Corradino is requesting additional time necessary to implement the aforementioned items in order to adequately prepare and complete construction plans for the project.

Considering the information presented herewith, this proposal will supplement the existing contract with Corradino for services related to finalizing the design and construction documents, being a Lump Sum amount of \$ 84,465.00. This fee includes all materials and reimbursable expenses such as copies, plan sheets, mileage, etc. This fee includes a subconsultant fee of \$11,750.00 for additional geotechnical investigation.

SUUPLEMENT REQUEST  
PORT ROYAL ROAD-BUCKNER LANE INTERSECTION

Revised 3/12/2024

PHASE	TOTAL
1. ADDITIONAL MEETINGS & PROJECT MANAGEMENT	\$12,655.00
2. RETAINING WALL DESIGN	\$18,800.00
3. PRECAST CONCRETE ARCH DESIGN & COORDINATION	\$9,600.00
4. HEC-RAS HYDRAULIC DESIGN	\$11,820.00
5. ADDITIONAL TIME	\$19,840.00
Subconsultant Services	
Geotechnical investigation	\$11,750.00
<b>ESTIMATED FEE</b>	<b>\$84,465.00</b>



Via email: mbiggs@corradino.com

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 February 13, 2024

Mr. Michael Biggs, PE, CPESC  
 Transportation Engineer Manager  
 The Corradino Group  
 377 Riverside Drive, Suite 410  
 Franklin, Tennessee 37064

Re: Proposal for Geotechnical Exploration  
 Port Royal Road Improvement – Arch Bridge over Grassy Branch  
 Spring Hill, Tennessee  
 Geotechnology Proposal No. P042224.03

Dear Mr. Biggs:

We understand geotechnical design information is required for the proposed arch bridge over Grassy Branch in Spring Hill, Tennessee. We have prepared this proposal based on the information provided in your emails in the period of January 31 to February 9, 2024 February 1 and February 2, 2024, and our experience as geotechnical engineers in the project area. Presented in the following table is a summary of the proposed geotechnical scope of work and the estimated fee.

**Table 1: Summary of Proposed Scope**

Task	Estimated Fee <sup>a</sup>
Project Planning, Coordination and Boring Stakeout	\$1,550.00
Dozer Clearing (one day)	\$2,000.00
Drilling, Sampling and In Situ Testing	\$5,300.00
Laboratory Testing	\$900.00
Site Supervision, Engineering Analysis and Report	\$2,000.00
<b>Total Estimated Geotechnical Subtotal</b>	<b>\$11,750.00</b>

<sup>a</sup>: Does not include optional services.

Geotechnology, LLC dba UES (UES) is pleased to submit this proposal, and we invite you to review the proposal and contact us with any questions about the scope of work or estimated fees. Presented in the remainder of this proposal is our experience at the site, understanding of the project, and the details of our proposed services.

**1.0 SITE AND PROJECT INFORMATION**

The existing Port Royal Road is a two-lane roadway that runs in an east-west direction parallel to State Route (SR) 396 and SR 247 within the city limit of Spring Hill, Tennessee. At its eastern



end, Port Royal Road turns into a north-south direction at its intersection with Buckner Lane. At its western end, it turns into a north-south direction at its intersection with Commonwealth Drive.

The City of Spring Hill wants to widen Port Royal Road to a five-lane using widening on both sides. The City also wants to improve traffic flow at the intersection with Buckner Lane using a larger radius curve. That new alignment will cross Grassy Branch where a precast (ConSpan) arch structure is being considered. Structural loads and dimensions have not been provided.

UES performed a subsurface exploration to evaluate the subsurface conditions and provided recommendations for the Port Royal Road improvement. The exploration included two borings near the proposal bridge locations. These borings, however, had to be relocated away from their original locations due to accessibility as the area near the proposed bridge is heavily wooded. The borings encountered refusal at an approximate depth of 12 feet; rock coring was not included in the scope of work.

## 2.0 KEY GEOTECHNICAL ISSUES AND CONSIDERATIONS

We anticipate the planned development will have the following key issues the geotechnical exploration will address:

- Quality and strength properties of near-surface soils and underlying rock
- Depth to rock
- Soil / rock bearing capacity at the proposed bridge structure
- Groundwater depth

## 3.0 SCOPE OF SERVICES

### 3.1 Geotechnical Exploration

The purposes of our services are to explore the subsurface conditions and provide geotechnical information to be used for design and construction of the planned structure. Geotechnology's scope of services will include the following:

- Perform site reconnaissance.
- Perform one day of dozer clearing to access boring locations, unless UES is instructed to shift the boring locations to avoid clearing, or if the clearing is performed by others.
- Drill two borings using a drill rig to a maximum depth of 20 feet or to refusal on rock, whichever is encountered first. Once refusal is encountered, UES will core the rock to a maximum depth of 5 feet below the refusal depth. Soil samples will be obtained by split-spoon sampling methods at regular intervals. Occasionally, Shelby tube samples of the soils will be recovered to obtain a relatively undisturbed soil sample for laboratory testing. Rock will be cored using an NQ core bit. A maximum of 40 feet of auger drilling and 10 feet of rock coring is budgeted.



- Perform laboratory tests on select soil samples to evaluate index and strength properties. Laboratory testing will include various combinations of the following tests: moisture content, Atterberg limits, gradation, rock compressive strength and unconsolidated-undrained triaxial compression.
- Prepare a report that summarizes the results of the borings, laboratory testing and engineering analyses and provides geotechnical design and construction recommendations, including the following:
  - Site excavation and recommendations for placement of fill
  - Drainage considerations
  - Bearing capacity and anticipated structure
- Distribute the report in pdf format to The Corradino Group.

Our scope will also include the following auxiliary services to support the primary geotechnical services described previously:

- Staking and approximately locating the borings in the field by reconnaissance from existing physical features. Ground surface elevations will be approximated from a topographic plan, if provided by the Client.
- **Contacting Tennessee One-Call for member utility companies to locate public utilities within the proximity of the borings prior to sounding or drilling. Locating of private utilities is excluded from our base estimate, and we require private utilities be located around the sounding and boring locations prior to our drill crew arriving at the site. The client is responsible for accurately delineating the locations of all subterranean structures and utilities. UES offers these services at the exploration points as an optional service in this proposal. UES will take reasonable precautions to avoid known subterranean structures.**
- Backfilling the boring holes with auger cuttings and plastic hole plugs upon completion of the drilling activities.

Our scope of services does not include coring through hard material, site (dozer) clearing, any environmental assessment, investigation, or study for the presence or absence of wetlands or hazardous or toxic materials in the soil, surface water, groundwater, or air, on or below or around the site. However, we can provide environmental services if needed for this project. Please advise if you prefer that we either revise this proposal or prepare a separate proposal to include environmental services.

A copy of "Important Information about This Geotechnical Engineering Proposal" published by the Geoprofessional Business Association (GBA) is enclosed for your review.



### **3.2 Site Access and Restoration**

Any restrictions or requirements imposed by governmental agencies or others with regard to site clearing, access limitation, utility clearance, or restoration are considered beyond our scope of services. Drill rig access to boring locations in unpaved areas may leave ruts in the soil or grass. Our scope does not include restoration of ruts or other disturbance caused by the drill rig. We will notify the client of the mobilization date; please notify Geotechnology if our field crew needs to coordinate site access with anyone. Our scope does not include coring concrete or debris materials, onsite safety training, or orientation for the field personnel.

We have assumed we will be able to work during normal business hours. Please contact UES to revise this proposal if drilling is to take place outside normal business hours.

### **3.3 Anticipated Subsurface Conditions**

The budgeted linear footage of drilling and sampling is based on an anticipated subsurface profile of clay and sand overlying rock. If unusual or erratic subsurface conditions are encountered, we will contact you to discuss our recommended changes prior to expanding the scope of services.

### **3.4 Optional Services - Subsurface Utility Locating (SUL) Services**

UES can provide SUL services to assist in locating underground private utilities in the vicinity of proposed boring locations. UES typically uses some or all the following geophysical methods to scan for utilities: electromagnetics; ground penetrating radar (GPR); radio frequency line locating; and magnetometry. Interpreted locations of utilities will be designated on site using spray paint and pin flags.

UES will perform the SUL services in accordance with generally accepted geophysical standard of care that conforms to Quality Level B (QLB) services. We request you obtain and provide us with any available utility drawings of the site. Lack of information regarding suspected utilities limits our ability to detect utilities at a site. The possibility exists that abandoned, forgotten, non-tonable utilities or utilities without a tracer wire, utilities buried excessively deep beyond detection limits of standard SUL methods, or undocumented utilities may be missed using standard utility locating services described above. Non-tonable utilities may sometimes include fiber optic cables (without tracer wires), plastic pipe, clay pipe, or geothermal installations. No geophysical method will eliminate the uncertainty as to the presence of underground utilities. Such certainty is only attained through vacuum excavation at the specific location of interest.

## **4.0 SCHEDULE AND FEE**

Our services are offered in accordance with the accompanying Terms for UES' Geotechnical Services (Terms). The cost of our services will be the lump sum fees provided in Table 1 on page 1 of this proposal.

We anticipate mobilizing within 3 weeks; however, actual mobilization date will be provided upon receiving the Notice to Proceed (NTP). Drilling operations are anticipated to take one to



two workdays, weather permitting. We anticipate submitting a final report within two to three weeks after completion of the fieldwork.

This proposal and fee estimate have been prepared using UES' standard fee schedule and with the assumption that UES' Terms will be used as the contract mechanism. UES reserves the right to revise this proposal and increase our fee estimate, at any time, if our Terms are not used or if any flow down and/or contract provisions are required by Client or Owner to conform with any local, state or federal wage act requirements, including but not limited to the Davis-Bacon Act, as Amended, the McNamara-O'Hara Service Contract Act, etc., the required use of union labor, or for any required safety, security, vehicle, drug and alcohol testing, or any third party payment fees, or other requirements not specified in the Client's request for proposal or not defined in UES' scope of services.

### 5.0 ACCEPTANCE

If this proposal, including the contractual terms, is acceptable, please initial the spaces below and return one executed copy of the Agreement and this proposal to our office as your authorization for us to proceed. Please initial on the next page to indicate authorization of optional services.

### 5.1 Optional Services

\_\_\_\_\_ I authorize UES to perform subsurface utility locating services at the boring locations for One Thousand Eight Hundred Dollars (\$1,800.00).

\* \* \* \* \*

We appreciate the opportunity to submit this proposal for the referenced project and look forward to hearing from you soon.

Very truly yours

GEOTECHNOLOGY, LLC dba UES

A handwritten signature in blue ink, appearing to read 'Ashraf Elsayed', is written over a horizontal line.

Ashraf Elsayed, Ph.D., P.E., D.GE  
Chief Engineer – Midwest Region

ASE/ABM:ase

Enclosures: GBA's Important Information about This Geotechnical Engineering Proposal  
Terms for UES' Services

## Important Information about This

# Geotechnical Engineering Proposal

Subsurface problems are a principal cause of construction delays, cost overruns, claims, and disputes.

While you cannot eliminate all such risks, you can manage them. The following information is provided to help.

### Participate in Development of the Subsurface Exploration Plan

Geotechnical engineering begins with the creation of an effective subsurface exploration plan. This proposal starts the process by presenting an initial plan. While that plan may consider the unique physical attributes of the site and the improvements you have in mind, it probably does not consider your unique goals, objectives, and risk management preferences. Subsurface exploration plans that are finalized without considering such factors presuppose that clients' needs are unimportant, or that all clients have the same needs. *Avoid the problems that can stem from such assumptions* by finalizing the plan and other scope elements directly with the geotechnical engineer you feel is best qualified for the project, along with the other project professionals whose plans are affected by the geotechnical engineer's findings and recommendations. If you have been told that this step is unnecessary; that client preferences do not influence the scope of geotechnical engineering service or that someone else can articulate your needs as well as you, you have been told wrong. No one else can discuss your geotechnical options better than an experienced geotechnical engineer, and no one else can provide the input you can. Thus, while you certainly are at liberty to accept a proposed scope "as is," recognize that it could be a unilateral scope developed without direct client/engineer discussion; that authorizing a unilateral scope will force the geotechnical engineer to accept all assumptions it contains; that assumptions create risk. *Manage your risk. Get involved.*

### Expect the Unexpected

The nature of geotechnical engineering is such that planning needs to *anticipate the unexpected*. During the design phase of a project, more or deeper borings may be required, additional tests may become necessary, or someone associated with your organization may request a service that was not included in the final scope. During the construction phase, additional services may be needed to respond quickly to unanticipated conditions. In the past, geotechnical engineers commonly did whatever was required to oblige their clients' representatives and safeguard their clients' interests, taking it on faith that their clients wanted them to do so. But some, evidently, did not, and refused to pay for legitimate extras on the ground that the engineer proceeded without proper authorization, or failed to submit notice in a timely manner, or failed to provide proper documentation. *What are your preferences? Who is permitted to authorize additional geotechnical services on your project? What type of documentation do you require? To whom should it be sent? When? How?* By addressing these and similar issues sooner rather than later, you and your geotechnical engineer will be prepared for the unexpected, to help prevent molehills from growing into mountains.

### Have Realistic Expectations; Apply Appropriate Preventives

The recommendations included in a geotechnical engineering report are *not final*, because they are based on opinions that can be verified only during construction. For that reason, most geotechnical engineering proposals offer the construction observation services that permit the geotechnical engineer of record to confirm that subsurface conditions are what they were expected to be, or to modify recommendations when actual conditions were not anticipated. *An offer to provide construction observation*

is an offer to better manage your risk. Clients who do not take advantage of such an offer; clients who retain a second firm to observe construction, can create a high-risk “Catch-22” situation for themselves. *The geotechnical engineer of record cannot assume responsibility or liability for a report’s recommendations when another firm performs the services needed to evaluate the recommendations’ adequacy.* The second firm is also likely to disavow liability for the recommendations, because of the substantial and possibly uninsurable risk of assuming responsibility for services it did not perform. Recognize, too, that no firm other than the geotechnical engineer of record can possibly have as intimate an understanding of your project’s geotechnical issues. As such, reliance on a second firm to perform construction observation can elevate risk still more, because its personnel may not have the wherewithal to recognize subtle, but sometimes critically important unanticipated conditions, or to respond to them in a manner consistent with your goals, objectives, and risk management preferences.

### **Realize That Geoenvironmental Issues Have Not Been Covered**

The equipment, techniques, and personnel used to perform a geoenvironmental study differ significantly from those used to perform a geotechnical study. *Geoenvironmental services are not being offered in this proposal. The report that results will not relate any geoenvironmental findings, conclusions, or recommendations.* Unanticipated environmental problems have led to numerous project failures. If you have not yet obtained your own geoenvironmental information, ask your geotechnical consultant for risk management guidance. *Do not rely on an environmental report prepared for someone else.*

### **Obtain Professional Assistance To Deal with Mold**

Diverse strategies can be applied during building design, construction, operation, and maintenance to prevent significant amounts of mold from growing on indoor surfaces. To be effective, all such strategies should be devised for the express purpose of mold prevention, integrated into a comprehensive plan, and executed with diligent oversight by a professional mold prevention consultant. Because just a small amount of water or moisture can lead to the development of severe mold infestations, a number of mold prevention strategies focus on keeping building surfaces dry. While groundwater, water infiltration, and similar issues may be addressed as part of the geotechnical engineering study described in this proposal, the geotechnical engineer who would lead this project *is not* a mold prevention consultant; *none of the services being offered have been designed or proposed for the purpose of mold prevention.*

### **Have the Geotechnical Engineer Work with Other Design Professionals and Constructors**

Other design team members’ misinterpretation of a geotechnical engineering report has resulted in costly problems. Manage that risk by having your geotechnical engineer confer with appropriate members of the design team before finalizing the scope of geotechnical service (as suggested above), and, again, after submitting the report. *Also retain your geotechnical engineer to review pertinent elements of the design team members’ plans and specifications.*

Reduce the risk of unanticipated conditions claims that can occur when constructors misinterpret or misunderstand the purposes of a geotechnical engineering report. Use appropriate language in your contract documents. Retain your geotechnical engineer to participate in prebid and preconstruction conferences, and to perform construction observation.

### **Read Responsibility Provisions Closely**

Clients, design professionals, and constructors who do not recognize that geotechnical engineering is far less exact than other engineering disciplines can develop unrealistic expectations. Unrealistic expectations can lead to disappointments, claims, and disputes. To help reduce the risk of such outcomes, geotechnical engineers commonly include a variety of explanatory provisions in their proposals. Sometimes labeled “limitations,” many of these provisions indicate where geotechnical engineers’ responsibilities begin and end, to help others recognize their own responsibilities and risks, thus to encourage more effective scopes of service. *Read this proposal’s provisions closely.* Ask questions. Your geotechnical engineer should respond fully and frankly.

### **Rely on Your Geotechnical Engineer for Additional Assistance**

Membership in the Geoprofessional Business Association (GBA) exposes geotechnical engineers to a wide array of risk management techniques that can be of genuine benefit to everyone involved with a construction project. Confer with a GBA-member geotechnical engineer for more information. Confirm a firm’s membership in GBA by contacting GBA directly or at its website.



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Telephone: 301/565-2733 Facsimile: 301/589-2017  
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# TERMS FOR GEOTECHNOLOGY'S SERVICES

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## 1 - THE AGREEMENT

- a. This AGREEMENT is made by and between: **Geotechnology, LLC (Geotechnology)**, hereinafter referred to as GEOTECHNOLOGY, and **The Corradino Group**, hereinafter referred to as CLIENT.
- b. The AGREEMENT between the parties consists of these TERMS, the attached PROPOSAL identified as Proposal No. **P042224.03**, dated **February 13, 2024** and any exhibits or attachments noted in the PROPOSAL. In the event of a conflict between the TERMS and the PROPOSAL, the provisions of the TERMS shall govern unless the PROPOSAL specifically indicates that it is to govern. Together, these elements will constitute the entire AGREEMENT superseding any and all prior negotiations, correspondence, or agreements either written or oral. Any changes to this AGREEMENT must be mutually agreed to in writing.
- c. This proposal is valid for 30 days from **February 13, 2024**.
- d. The technical pricing information contained in this PROPOSAL submitted by GEOTECHNOLOGY is to be considered confidential and proprietary and shall not be released or otherwise made available to any third party without the express written consent of GEOTECHNOLOGY.
- e. It is intended by the parties to this AGREEMENT that GEOTECHNOLOGY'S services in connection with the project shall not subject GEOTECHNOLOGY'S individual employees, officers or directors to any personal legal exposure for the risks associated with this project. Therefore, and notwithstanding anything to the contrary contained herein, CLIENT agrees that as the CLIENT'S sole and exclusive remedy, any claim, demand or suit shall be directed and/or asserted only against GEOTECHNOLOGY, a Missouri corporation, and CLIENT expressly waives CLIENT's rights against any of GEOTECHNOLOGY'S employees, officers or directors.

## 2 - STANDARD OF CARE

- a. CLIENT recognizes that conditions may vary from those observed at locations where borings, surveys, observations, or explorations are made, and that site conditions may change with time. Data, interpretations, and recommendations by GEOTECHNOLOGY will be based solely on information available to GEOTECHNOLOGY. GEOTECHNOLOGY is responsible for those data, interpretations, and recommendations, but will not be responsible for other parties' interpretations or use of the information developed.
- b. GEOTECHNOLOGY offers different levels of services to suit the desires and needs of different clients. Although the possibility of error can never be eliminated, more detailed and extensive services yield more information and reduce the probability of error, but at increased cost. CLIENT has reviewed the scope of services and has determined that it does not need or want a greater level of service than that being provided.
- c. The standard of care for all professional engineering and related services performed under this AGREEMENT will be the care and skill ordinarily used by members of the subject profession practicing under similar circumstances at the same time and in the same locality. GEOTECHNOLOGY makes no warranties, express or implied, under this AGREEMENT or otherwise, in connection with any services performed or furnished by GEOTECHNOLOGY.

## 3 - SITE ACCESS AND SITE CONDITIONS

- a. CLIENT will grant or obtain free access to the site for all equipment and personnel necessary for GEOTECHNOLOGY to perform the services set forth in this AGREEMENT. CLIENT will notify any and all possessors of the project site that CLIENT has granted GEOTECHNOLOGY free access to the site. GEOTECHNOLOGY will take reasonable precautions to reduce damage to the site, but it is understood by CLIENT that, in the normal course of the services, some damage may occur and the correction of such damage is not part of this AGREEMENT unless so specified in the PROPOSAL.
- b. Unless indicated otherwise in the PROPOSAL, CLIENT is responsible for accurately delineating the locations of all subterranean structures and utilities. GEOTECHNOLOGY will take reasonable precautions to avoid known subterranean structures, and CLIENT waives any claim against GEOTECHNOLOGY arising from damage done to subterranean structures and utilities not identified or accurately located.

## 4 - CHANGED CONDITIONS

- a. If, during the course of performance of this AGREEMENT, conditions or circumstances are discovered which were not contemplated by GEOTECHNOLOGY at the commencement of this AGREEMENT, GEOTECHNOLOGY shall notify CLIENT in writing of the newly discovered conditions or circumstances, and CLIENT and GEOTECHNOLOGY shall renegotiate, in good faith, the terms and conditions of this AGREEMENT.

## 5 - SAMPLES AND CUTTINGS

- a. GEOTECHNOLOGY will dispose of soil and rock samples ninety (90) days after submittal of the report covering those samples. Further storage or transfer of samples can be made at CLIENT'S expense upon CLIENT'S prior written request.
- b. Cuttings, rinse water, well development and other wastes will be left on site and are CLIENT's responsibility to dispose unless specifically addressed in the PROPOSAL.
- c. CLIENT shall take custody of all monitoring wells, probe holes and borings installed by GEOTECHNOLOGY and shall take any and all necessary steps for the proper maintenance, repair or closure for such wells, probes, or borings at CLIENT'S expense.

## 6 - OBSERVATION

- a. CLIENT recognizes that unanticipated or changed conditions may be encountered during construction and, principally for this reason, CLIENT shall retain GEOTECHNOLOGY to observe construction when GEOTECHNOLOGY has provided engineering services. CLIENT understands that construction observation is conducted to reduce – not eliminate – the risk of problems arising during construction and that provision of the service does not create a warranty or guarantee of any type. In all cases, contractors

shall retain responsibility for the quality and completeness of their work and for adhering to the plans, specifications, and recommendations on which their work is based. Should GEOTECHNOLOGY for any reason not provide construction observation during the implementation of GEOTECHNOLOGY'S plans, specifications, and recommendations, or should CLIENT restrict GEOTECHNOLOGY'S assignment of observation personnel, CLIENT shall, to the fullest extent permitted by law, waive any claim against GEOTECHNOLOGY, and indemnify, defend, and hold GEOTECHNOLOGY and its affiliated companies harmless from any claim or liability for injury or loss arising from field problems allegedly caused by findings, conclusions, recommendations, plans, or specifications developed by GEOTECHNOLOGY.

- b. If GEOTECHNOLOGY is retained by CLIENT to provide a site representative for the purpose of monitoring specific portions of construction work or other field activities as set forth in the PROPOSAL, then this paragraph applies. For the specified assignment, GEOTECHNOLOGY will report observations and professional opinions to CLIENT. No action of GEOTECHNOLOGY'S site representative can be construed as altering any AGREEMENT between CLIENT and others. GEOTECHNOLOGY will report to CLIENT observed conditions related to services for which GEOTECHNOLOGY has been retained to perform which, in GEOTECHNOLOGY'S professional opinion, do not conform with plans and specifications. GEOTECHNOLOGY has no right to reject or stop work of any agent of the CLIENT. Such rights are reserved solely for CLIENT. Furthermore, GEOTECHNOLOGY'S presence on site does not in any way guarantee the completion or quality of the work of any party retained by CLIENT to provide field or construction-related services.
- c. GEOTECHNOLOGY shall not be required to sign any document, no matter by whom requested, that would result in GEOTECHNOLOGY having to certify, guarantee, or warrant the existence of conditions whose existence GEOTECHNOLOGY cannot ascertain. CLIENT agrees not to make resolution of any dispute with GEOTECHNOLOGY or payment of any amount due to GEOTECHNOLOGY in any way contingent upon GEOTECHNOLOGY signing any such document.
- d. The use of the word "certify" or "certification" by a registered professional engineer in the practice of professional engineering constitutes an expression of professional opinion regarding those facts or findings which are the subject of the certification, and does not constitute a warranty or guarantee, either express or implied. The definition and legal effect of any and all certifications shall be limited as stated herein.
- e. GEOTECHNOLOGY will strive to perform its construction materials testing services under this AGREEMENT in accordance with generally accepted testing procedures unless other procedures are specifically referenced in the text of the Project plans and/or specifications.
- f. GEOTECHNOLOGY will provide materials testing for samples specified by CLIENT or at a frequency specified by CLIENT and/or will collect samples for materials testing or conduct materials testing when contacted by the CLIENT. GEOTECHNOLOGY will provide foundation testing and/or television camera inspections on drilled shafts or piles constructed by and at a frequency specified by CLIENT. Engineering evaluation of the suitability of the number or types of samples is not provided by GEOTECHNOLOGY.
- g. Construction materials tests performed by GEOTECHNOLOGY on site are taken intermittently and indicate the general acceptability of materials on a statistical basis. GEOTECHNOLOGY'S tests and observation of materials are not a guarantee of the quality of other parties' work and do not relieve other parties from the responsibility to perform their work in accordance with applicable plans, specifications and requirements.

## 7 - JOBSITE

- a. Unless specifically set forth in the PROPOSAL, GEOTECHNOLOGY will not be responsible for and will not have control or charge of specific means, methods, techniques, sequences or procedures of construction or other field activities selected by any other person or entity, or safety precautions and programs incident thereto. GEOTECHNOLOGY shall be responsible only for its activities and that of its employees on any site. Neither the professional activities nor the presence of GEOTECHNOLOGY or its employees or its subcontractors on a site shall imply that GEOTECHNOLOGY controls the operations of others, nor shall this be construed to be acceptance by GEOTECHNOLOGY of any responsibility for jobsite safety.
- b. Unless indicated otherwise in the PROPOSAL, GEOTECHNOLOGY'S services under this AGREEMENT are limited to geotechnical engineering, geophysical surveying, drilling, construction materials testing or deep foundation testing and GEOTECHNOLOGY shall have no responsibility to locate, identify, evaluate, treat or otherwise consider or deal with hazardous materials.
- c. CLIENT represents that CLIENT has made a reasonable effort to evaluate if hazardous materials are on or near the project site, and that CLIENT has informed GEOTECHNOLOGY of CLIENT's findings relative to the possible presence of such materials.
- d. Hazardous materials may exist at a site where there is no reason to believe they could or should be present. GEOTECHNOLOGY and CLIENT agree that the discovery of unanticipated hazardous materials constitutes a changed condition mandating a renegotiation of the scope of work or termination of services. GEOTECHNOLOGY and CLIENT also agree that the discovery of unanticipated hazardous materials may make it necessary for GEOTECHNOLOGY to take immediate measures to protect health and safety. CLIENT agrees to compensate GEOTECHNOLOGY for measures taken to protect health and safety and/or any equipment decontamination or other costs incidental to the discovery of unanticipated hazardous materials.
- e. GEOTECHNOLOGY agrees to notify CLIENT when unanticipated hazardous materials or suspected hazardous materials are encountered. CLIENT agrees to make any disclosures required by law to the appropriate governing agencies. CLIENT also agrees to hold GEOTECHNOLOGY and its affiliated companies harmless for any and all consequences of disclosures made by GEOTECHNOLOGY, which are required by governing law. In the event the project site is not owned by CLIENT, CLIENT recognizes that it is CLIENT's responsibility to inform the property owner of the discovery of unanticipated hazardous materials or suspected hazardous materials.
- f. CLIENT will be responsible for ultimate disposal of any samples secured by GEOTECHNOLOGY, which are found to be contaminated.

## 8 - BILLING AND PAYMENT

- a. CLIENT will pay GEOTECHNOLOGY in accordance with the procedures indicated in the PROPOSAL and its attachments. Invoices will be submitted to CLIENT by GEOTECHNOLOGY, and will be due and payable thirty (30) days from the date of the invoice. If CLIENT objects to all or any portion of any invoice, CLIENT will so notify GEOTECHNOLOGY in writing within fourteen

- (14) calendar days of the invoice date, identify the cause of disagreement, and pay when due that portion of the invoice not in dispute. The absence of written notification described above, shall constitute an unqualified acceptance of the invoice amount due and payable, and waiver by CLIENT of all claims with respect thereto.
- b. CLIENT recognizes that late payment of invoices results in extra expenses for GEOTECHNOLOGY. GEOTECHNOLOGY retains the right to assess CLIENT interest at the rate of one percent (1%) per month, but not to exceed the maximum rate allowed by law, on invoices which are not paid within thirty (30) days from the date of the invoice. In the event undisputed portions of GEOTECHNOLOGY'S invoices are not paid when due, GEOTECHNOLOGY reserves the right, after seven (7) days prior written notice, to suspend the performance of its services under this AGREEMENT until all past due amounts have been paid in full.
  - c. If test results that indicate failure of a material to meet the intended specification require retesting of the material after additional work by parties responsible for that material, the cost of retesting will be invoiced to the CLIENT.
  - d. GEOTECHNOLOGY may elect to adjust its rates under this AGREEMENT to account for changes in overhead rates and salary adjustments no sooner than one year from the date of this AGREEMENT, and no more often than once per year at the end of each subsequent year.

## 9 - TERMINATION

- a. This AGREEMENT may be terminated by either party seven (7) days after written notice in the event of any breach of any provision of this AGREEMENT or in the event of substantial failure of performance by the other party, or if CLIENT suspends the work for more than three (3) months. Both parties shall have the opportunity to initiate a mutually agreeable remedy for failure of performance within fifteen (15) days after notice of termination. In the event of termination, GEOTECHNOLOGY will be paid for services performed prior to the date of termination plus reasonable termination expenses, including, but not limited to the cost of cleanup, demobilization, completing analyses, records, and reports necessary to document job status at the time of termination.

## 10 - ALLOCATION OF RISK

### 10.1 LIMITATION OF LIABILITY

- a. GEOTECHNOLOGY and CLIENT have evaluated the risks and rewards associated with this project, including GEOTECHNOLOGY'S fee relative to the risks assumed, and agree to allocate certain of the risks, so, to the fullest extent permitted by law, the total aggregate liability of GEOTECHNOLOGY to CLIENT and third parties granted reliance is limited to the greater of \$50,000 or GEOTECHNOLOGY'S fee, for any and all injuries, damages, claims, losses, expenses, or claim expenses (including attorney's fees) arising out of GEOTECHNOLOGY'S services or this agreement regardless of cause or causes. Such causes include, but are not limited to, GEOTECHNOLOGY'S negligence, errors, omissions, strict liability, statutory liability, negligent misrepresentation, breach of contract, breach of warranty, or other acts giving rise to liability based on contract, tort or statute. If CLIENT prefers to have higher limits of liability coverage, GEOTECHNOLOGY agrees, upon receipt of CLIENT'S written request at the time of accepting our PROPOSAL, to increase the limits of liability up to a maximum of \$1,000,000.00 at an additional cost of 5 percent of our total fee or \$1,000.00, whichever is greater.
- b. Neither party shall have any liability to the other party for loss of product, loss of profit, loss of use, or any other indirect, incidental, special or consequential damages incurred by the other party.

### 10.2 INDEMNIFICATION

- a. Subject to the provisions of the Limitation of Liability described in 10.1a. above, CLIENT and GEOTECHNOLOGY each agree to indemnify and hold harmless the other party and the other party's affiliated companies, officers, directors, partners, employees, and representatives, from and against losses, damages, and judgments, including reasonable attorneys' fees and expenses recoverable under applicable law, but only to the extent they are legally determined to be caused by a negligent act, error, or omission of the indemnifying party or any of the indemnifying party's officers, directors, members, partners, agents, employees, or subconsultants in the performance of services under this AGREEMENT. If claims, losses, damages, and judgments are legally determined to be caused by the joint or concurrent negligence of CLIENT and GEOTECHNOLOGY, they shall be borne by each party in proportion to its negligence.
- b. CLIENT shall indemnify and hold harmless GEOTECHNOLOGY, its affiliated companies, agents, subcontractors, directors, officers, and employees, from and against any and all claims, suits, liability, damages, injunctive or equitable relief, expenses, including reasonable attorney's fees or other loss arising from damage to subterranean structures or utilities which were not identified or located by CLIENT to GEOTECHNOLOGY in advance of our work or the discovery of unanticipated hazardous materials or suspected hazardous materials, including, but not limited to, any costs created by delay of the project and any costs associated with possible reduction of the property's value.
- c. For the purposes of this AGREEMENT only, and except as provided under Paragraph 10.2 (a) above regarding the negligent performance of GEOTECHNOLOGY, CLIENT shall reimburse GEOTECHNOLOGY for or otherwise indemnify, defend, and save GEOTECHNOLOGY, its affiliated companies, agents, subcontractors, directors, officers and employees harmless from any and all demands, suits, judgment, expenses, attorney's fees, and losses arising out of or in connection with bodily injury (including death) to persons or damage to property which may arise from the presence or origination of hazardous substances, pollutants, or contaminants on CLIENT'S property, irrespective of whether such materials were generated or introduced before or after execution of this AGREEMENT; provided, however, that nothing hereinabove set forth is intended to shift any responsibility for employee claims that the parties may bear under the Worker's Compensation laws of the state in which the work is to be performed.
- d. GEOTECHNOLOGY shall under no circumstances be considered the generator of any hazardous substances, pollutants, or contaminants encountered or handled in the performance of the work. Without contradiction of any assertion by CLIENT or third-party liability as described in Paragraph 10.2 (b) above and for the purposes of this AGREEMENT only, it is agreed that any hazardous materials, pollutants, or contaminants generated or encountered in the performance of the work shall be the responsibility of CLIENT.

## 11 - CONTINUING AGREEMENT

- a. The indemnity obligations and limitations of liabilities established throughout this AGREEMENT, regardless of paragraph number, shall survive the assignment, transfer, expiration or termination of this AGREEMENT.

## 12 - PREVAILING WAGE AND UNION MEMBERSHIP

- a. Unless CLIENT specifically informs GEOTECHNOLOGY in writing or it is specifically identified in our PROPOSAL and/or WORK AUTHORIZATION that prevailing wage regulations or union membership are required for the Project and the Scope of Services identifies it as covered, CLIENT will reimburse, defend, indemnify and hold harmless GEOTECHNOLOGY and its affiliated companies from and against any liability resulting from a subsequent determination that prevailing wage regulations or union membership cover the Project, including all additional costs, fines and attorneys' fees.

## 13 - THIRD PARTY RELIANCE UPON REPORTS

- a. All Documents are prepared solely for use by CLIENT (and Owner, if applicable) and shall not be provided to any other person or entity without GEOTECHNOLOGY'S written consent. CLIENT shall defend, indemnify and hold harmless GEOTECHNOLOGY, its affiliated companies, officers, shareholders and employees, from and against any action or proceeding brought by any person or entity claiming to rely upon information or opinions contained in reports or other documents provided to such person or entity, published, disclosed or referred to without GEOTECHNOLOGY'S written consent.

## 14 - NON-SOLICITATION OF EMPLOYEES

- a. CLIENT recognizes that GEOTECHNOLOGY, as a part of the services covered by this AGREEMENT, may provide one or more of its employees to work with members of CLIENT'S project staff or specifically on a CLIENT'S project. For purposes of this AGREEMENT, an employee of GEOTECHNOLOGY may be a permanent or temporary employee assigned to provide services to CLIENT. CLIENT hereby agrees that CLIENT will not hire, either directly or indirectly, or provide inducement to hire an employee of GEOTECHNOLOGY either as an employee of CLIENT or as an employee of a subcontractor or supplier to CLIENT, such suppliers to include providers of contract labor, during the term of this AGREEMENT and for a period of six months after the termination of this AGREEMENT. Any hiring or inducement to hire any GEOTECHNOLOGY employee during the term of this AGREEMENT and for a period of six months after termination of this AGREEMENT will be subject to a fee equal to 25% of the total fee for services generated by that employee during a nominal 12-month period.

## 15 - DISPUTES RESOLUTION

- a. All claims, disputes, and other matters in controversy between GEOTECHNOLOGY and CLIENT arising out of or in any way related to this AGREEMENT will be submitted to mediation as a condition precedent to litigation. Notwithstanding any other provision of the Agreement, unless prohibited by law, GEOTECHNOLOGY shall have, in addition to any other right or option set forth herein, the right to proceed in creating a lien upon the building or other improvements and upon the real estate on which the building or improvements are situated for the work and labor done and the labor and materials furnished on and to said real estate and to enforce its mechanic's lien pursuant to all rights and remedies available to it under law.
- b. If a dispute at law arises from matters related to the services provided under this AGREEMENT and that dispute requires litigation, then:
  - (1) the claim will be brought and tried in St. Louis County, Missouri and CLIENT waives the right to move the action to any other county or judicial jurisdiction, and
  - (2) the prevailing party in any arbitration or litigation between GEOTECHNOLOGY and CLIENT shall be entitled to recovery of all reasonable costs incurred, including staff time, court costs, attorneys' fees, expert witness costs, and other claim related expenses. For purposes of this paragraph, a party prevails if (i) the judgment is equal to or in excess of the Plaintiff's last written demand for settlement, the Plaintiff shall also be entitled to recover its costs, expenses and reasonable attorney's fees from Defendant; (ii) the judgment is equal to or less than the Defendant's last written offer of settlement, the Defendant shall be entitled to recover its costs, expenses and reasonable attorney's fees from the Plaintiff; (iii) the judgment is in between the Plaintiff's last written demand for settlement and the Defendant's last offer of settlement, then neither party shall recover any of its costs, expenses or attorney's fees from the other.

## 16 - GOVERNING LAW AND SURVIVAL

- a. The law of the State of Missouri will govern the validity of these TERMS, their interpretation and performance.
- b. If any of the provisions contained in this AGREEMENT are held illegal, invalid, or unenforceable, the enforceability of the remaining provisions will not be impaired.

## 17 - SUCCESSORS AND ASSIGNS

- a. This AGREEMENT shall inure to the benefit of and be binding upon the parties hereto and their respective successors and assigns. Neither party may assign its interests herein (unless assignee assumes in writing assignor's obligations hereunder) without the prior written consent of the other party, which consent will not be unreasonably withheld. No assignment shall operate to relieve the assignor of its obligations under the AGREEMENT.

## 18 - OTHER PROVISIONS

- a. It is agreed that this AGREEMENT is entered into by the parties for the sole benefit of the parties to the AGREEMENT, and that nothing in the AGREEMENT shall be construed to create a right or benefit for any third party.
- b. Neither party shall hold the other responsible for damages or delay in performance caused by weather and other acts of God, strikes, lockouts, accidents, or other events beyond the reasonable control of the other or the other's employees and agents.

c. The titles used in this AGREEMENT are for general reference only and are not part of the AGREEMENT.

**19 -FUTURE SERVICES**

a. All future services rendered by GEOTECHNOLOGY at CLIENT'S request for the project described in the PROPOSAL and/or WORK AUTHORIZATION shall be conducted under the terms of this AGREEMENT.

**20 -SIGNATURES**

a. The parties have read the foregoing, including any attachments thereto, understand completely the terms, and willingly enter into this AGREEMENT that will become effective on the date signed below by CLIENT.

**Client**

**Geotechnology, LLC**

 (Signature)

 (Signature)

By: Jim Hagaman (Print Name)

By: Ashraf S. Elsayed, Ph.D., P.E. (Print Name)

Position: Mayor

Position: Chief Engineer – Midwest Region

Date: April 1, 2024

Date: February 13, 2024