



FLOYD COUNTY BOARD OF EDUCATION  
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**Consent Agenda Item (Action Item):** Consider/Approve awarding geotechnical investigation work to Solid Ground for the Bus Garage Replacement Project.

**Applicable State or Regulations:** Capital Construction Process 702 KAR 4:160.

**Fiscal/Budgetary Impact:** Cost of services is \$7,300.

**History/Background:**

Board approved hiring RossTarrant for Architectural services on May 3, 2022 (Order# 20031). See Memorandum from RossTarrant summarizing proposals received for geotechnical services dated May 19, 2022. They recommend Solid Ground because they have the lowest price and quickest turnaround time (4-6 weeks).

**Recommended Action:** Approve Solid Ground for geotechnical services for the Bus Garage Replacement project.

**Contact Person(s):** Linda Hackworth, Chief Facilities Officer 874-2435

N/A  
Principal

Linda Hackworth  
Director

Anna Whitaker Shepherd  
Superintendent

**Date:** May 20, 2022

May 19, 2022

TO: Michael T. Hughes, AIA, LEED AP

FROM: Emma Moore, EIT  
RossTarrant Architects, Inc.

RE: Floyd County Bus Garage Replacement  
RTA 2231

RTA has received and reviewed the geotechnical proposals from CSI, LE Gregg, and S&ME. I have prepared the following in summary:

Company	Total Turn Around Time	Lump Sum Total
CSI	6-7 Weeks	\$8,300
LE Gregg	10-12 Weeks	\$7,688
S&ME	10 Weeks	\$10,900
Solid Ground	4-6 Weeks	\$7,300

**CSI**

CSI presented a lump sum fee of \$8,300 to perform geotechnical exploration for the project. Fieldwork may begin within fifteen (15) to twenty (20) business days of a notice to proceed. CSI will complete the fieldwork within one (1) to two (2) days. A final report will be issued within two (2) weeks of completion of field work.

**LE Gregg**

LE Gregg presented a lump sum fee of \$7,688 to perform geotechnical exploration for this project. Fieldwork may begin within eight (8) to ten (10) weeks of a notice to proceed. LE Gregg will complete the fieldwork within one (1) workday. A final report will be issued within ten (10) workdays after the completion of field work.

**S&ME**

S&ME presented a lump sum fee of \$10,900 to perform a geotechnical exploration for the project. Fieldwork may begin within seven (7) weeks after notice to proceed has been sent. Drilling is expected to take two (2) workdays to complete. S&ME will provide the final report to RTA within three (3) weeks after drilling has been completed.

**Solid Ground**

Solid Ground presented a lump sum fee of \$7,300 to perform a geotechnical exploration for this project. Fieldwork may begin within ten (10) to fourteen (14) business days after a notice to proceed. Solid Ground will complete the fieldwork within one (1) day. Solid Ground will provide a final report to RTA within two (2) to three (3) weeks after field work is completed.

**Conclusion**

Based on the scope of work to be performed and due to the quick schedule on this project, we are recommending Solid Ground be selected as the preferred firm. If you have any questions, please let me know.

MEMORANDUM  
May 19, 2022  
Page 2

END OF MEMORANDUM  
Sincerely,

Emma Moore, EIT

Enclosures

c: Michael T. Hughes, AIA, LEED AP  
Michael B. Mays, PE  
File 2231-1A  
ME220519-geotech-summary-2231



May 18, 2022

Mr. Michael Mays  
Ross Tarrant Architects  
101 Old Lafayette Avenue  
Lexington, Kentucky 40502

**For: Floyd County Board of Education**

**Subject: Proposal for Geotechnical Engineering Services  
Floyd County Bus Garage  
Solid Ground Proposal No. : 22-081**

Mr. Mays,

Solid Ground Consulting Engineers, PLLC (Solid Ground) is pleased to provide you with this proposal for Geotechnical Exploration for the proposed Floyd County bus garage project. This proposal has been prepared in general accordance with the scope of work outlined in the request for proposal by Ross Tarrant Architects, Inc., dated May 12, 2022, and details project information, proposed scope of services, schedule, base lump sum cost, and alternate cost. The RFP from Ross Tarrant Architects is attached and will be incorporated for project requirements.

### **Requested Geotechnical Exploration Program**

As requested, we have proposed six (6) borings to be performed for this geotechnical exploration approximately where shown in the RFP. The borings will be advanced to 15 feet or auger refusal, with a minimum of one (1) boring advanced to auger refusal to meet Kentucky Building Code requirements for determining the seismic site class. If bedrock is encountered above 15 feet below existing grade, the bedrock will be cored to a minimum depth of ten (10) feet in one of the building borings to determine rock characteristics including degree and extent of weathering, voids, seams, and fractures encountered. Standard Penetration Testing (SPT's) will be performed in the borings at selected intervals. The soil will be sampled at the SPT intervals. The samples will be retrieved and transported to the laboratory for further analysis. ***The borings will be observed and directed by a***



**project geologist or engineer under the direction of a registered professional engineer.**  
The requested boring locations are depicted on the diagram below.

We typically recommend the building corners be established prior to our site visit. However, the boring locations can be approximately located by Solid Ground during the site visit using differential leveling techniques and measuring from existing site features.

### **Laboratory Testing**

As the geotechnical professional, we will examine the recovered samples and visually classify them according to the Unified Soil Classification System (USCS) (ASTM D-2488). Depending on the conditions encountered, the following laboratory tests may be performed:

- ▲ Natural moisture contents
- ▲ Atterberg Limits
- ▲ Grain size analysis
- ▲ California Bearing Ratio (CBR)
- ▲ Peak Stress of Soil
- ▲ Shear Strengths of Fill Soils
- ▲ Expansion Index

### **Scope of Services**

After the field exploration is completed, we will issue a written report describing the conditions encountered. The report will include the following:

- ▲ A discussion of site surface conditions including if applicable, presence of springs and/or sinkholes.
- ▲ A discussion of subsurface conditions encountered as well as a discussion of the published geologic conditions at the site including frost penetration depth.
- ▲ A summary of field and laboratory testing results including a brief review our test procedures.





- ▲ Boring logs and laboratory tests will be summarized in the report and listed in the appendix.
- ▲ A discussion of specific geotechnical conditions and concerns which may affect the design or construction of the project.
- ▲ Recommendations for site preparation and construction of compacted fills including use of alternative construction practices.
- ▲ Groundwater management recommendations.
- ▲ Liquefaction potential and mitigation recommendations.
- ▲ Determination of soil expansion index if dictated by site conditions.
- ▲ Recommend general design and construction criteria for light and heavy duty, rigid and flexible pavements. Traffic loading to be provided by the client.
- ▲ Evaluation of overall stability of rock and soil cut/ fill slopes.
- ▲ Recommendations for foundation design including use of alternative foundation systems.
- ▲ Considerations for retaining wall design including lateral earth coefficients for active, passive, and at-rest conditions.
- ▲ Recommendations for slab-on-grade and subbase.
- ▲ A recommendation for seismic site class according to International Building Code which was adopted by the 2018 Kentucky Building Code (KBC).

Additional services following completion and issue of the geotechnical report include:

- ▲ Review of project specifications related to the geotechnical report.
- ▲ One (1) meeting at Ross Tarrant offices in Lexington, Kentucky prior to construction bidding.
- ▲ Two (2) site visits by a professional engineer during construction to evaluate "found conditions" if applicable.

### **Anticipated Schedule and Deliverables**

Typically, we can begin this project within 10-14 business days after receiving written authorization. We expect the field exploration to take one day. **The entire project is**





**expected to take approximately two to three weeks to complete after field work is completed, including issuing the report.** We can normally provide preliminary verbal recommendations soon after the exploration has been completed.

**Compensation**

Based on the work scope described previously, we propose following lump sum fee schedule for the proposed services. A breakdown of cost of services is included as a separate attachment to this proposal. **If awarded Special Inspections for the project, the Project Specifications Review and Site Visits by a PE during construction will be incidental to the Special Inspections contract cost.**

<b>Geotechnical Exploration</b>	<b>\$5,800.00</b>
<b>Project Specifications Review</b>	<b>\$500.00</b>
<b>P.E. Site Visits (2) During Construction</b>	<b>\$1,000.00</b>

The lump sum fee estimate is based on the scope of services outlined in this proposal. *This proposal assumes the site is drill rig accessible. If a dozer is required to access the boring locations, additional down time cost of a \$150.00 per hour will be charged to the client or client's representative for the onsite engineer and drilling contractor.*

**Authorization**

To authorize the proposed Geotechnical Exploration, please sign the attached Proposal Acceptance Sheet and return one complete original of the proposal to us.

**Qualifications and Limitations**

It is assumed, unless notified otherwise, that we will have permission to work on the site with our equipment and personnel. We will contact the local utility locators (Kentucky Call-Before-You-Dig) prior to the site visit. The utility location services will only mark public utility lines; therefore, assistance will be needed locating private lines or underground structures, if they exist. If private underground utilities exist, they should be located prior to the site visit. The owner shall understand that Solid Ground cannot be held responsible for damage to utility lines or loss of service if utility locations are not made known to us or are mislocated by others.





It should be noted that the drilling equipment will leave some areas disturbed, particularly in soft or wet winter weather conditions. Solid Ground will coordinate with the owner and/or architect in an to limit the site disturbance, however, the fee included with this proposal does not include restoring the site to its original condition. The borings will be backfilled during the site visit. The backfill material will consist of the materials that are excavated, unless specifically requested by the client.

**If additional landscaping or other measures are necessary to restore the site to original conditions, Solid Ground can make arrangements to provide this work following completion of drilling when an assessment of the extent of ground disturbance can be reasonably made. This work will be quoted at an additional fee.**

#### **Payment Terms**

The client understands that Solid Ground will be compensated for performing the services in accordance with the scope of work detailed in this proposal. The lump sum invoice will be issued once the final report is issued. Ross Tarrant Architects will approve all invoices before being submitted to the Board. The client agrees to pay all charges not in dispute within 30 days of receipt of the invoice and recognizes that charges not paid within 30 days are subject to a late payment charge of 1.5 percent. The 30 days starts when Ross Tarrant Architects forwards approval to the Board. The Client shall provide notification within 10 days of receipt of the invoice should the invoice contain charges the Client intends to dispute.

#### **Insurance Coverages**

We hereby engage Solid Ground Consulting Engineers, PLLC to perform this work with the following coverages: Professional liability \$1,000,000.00 each occurrence/ \$2,000,000 aggregate; general liability \$500,000.00 each occurrence/ \$1,000,000 aggregate; automobile liability \$500,000.00 each occurrence; workers compensation coverage as required by state law. Solid Ground will provide a certificate naming Estill County Board of Education as additional insured if selected for the proposed project.

#### **Proposal Acceptance**







We appreciate the opportunity to provide our consulting services to you. We look forward to working with you on this project. If you have any questions, we would be glad to address them. If this proposal is acceptable as written, please have the person responsible for payment sign one copy and return it to our office. That will be our indication to begin work. Once again, thank you for considering our firm for this project.

CONSULTANT: **SOLID GROUND CONSULTING ENGINEERS, PLLC**

SIGNATURE: \_\_\_\_\_  \_\_\_\_\_

PRINTED NAME & TITLE: Vance Mitchell, CMO

DATE: May 18, 2022

CLIENT or CLIENT REP: \_\_\_\_\_

SIGNATURE: \_\_\_\_\_

PRINTED NAME & TITLE: \_\_\_\_\_

DATE: \_\_\_\_\_

Please submit one copy to Solid Ground Consulting Engineers, PLLC by email correspondence or mail.

