



SOLID GROUND
CONSULTING ENGINEERS, PLLC
Engineering Innovation; Providing Solutions to Your Challenges.

July 8, 2019

Marion County Public Schools

c/o Mr. Kevin A. McCalla
Ross Tarrant Architects
101 Old Lafayette Avenue
Lexington, Kentucky 40962

**Subject: Proposal for Geotechnical Engineering Services
Marion County Middle School Renovation & Addition
Marion County Public County Schools
Lebanon, Kentucky
19-128**

Mr. McCalla,

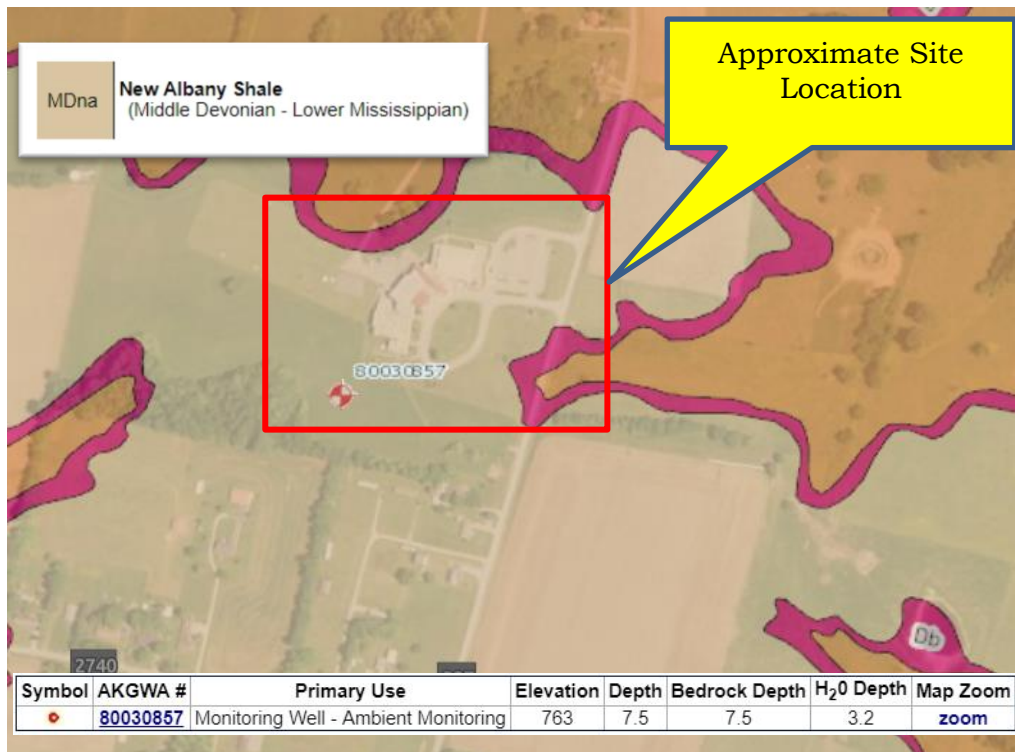
Solid Ground Consulting Engineers, PLLC (Solid Ground) is pleased to provide you with this proposal for Geotechnical Exploration for the proposed Marion Co. Middle School Addition and Renovation to be located on the existing Marion County Middle School campus located in Lebanon, Marion County, Kentucky. This proposal has been prepared in general accordance with the scope of work outlined in the request for proposal by RossTarrant Architects, Inc., dated July 2, 2019 and details project information, proposed scope of services, schedule and lump sum cost. The RFP from Ross Tarrant Architects is attached and will be incorporated for project requirements.

Project Information

Project information was provided by you through email correspondence. It is understood that the proposed project will consist of a new 2,100-sf classroom addition to be located on the south end of the existing building. The project is located on the Marion County Middle School campus located at 1155 State Hwy 327, Lebanon, Kentucky. The addition is expected to be single-story, masonry construction with slab on grade. Additional site improvements will consist of concrete walkways to connect egress routes with existing drives.

Structural loading is understood to be 6 kips/foot or less for continuous wall loads and 75 kips or less for isolated column loads. The finished floor elevation for the proposed addition is assumed to match that of the existing school.

Solid Ground conducted a preliminary review of available geologic information from the Kentucky Geological Survey (KGS). The site is underlain by bedrock belonging to the New Albany Shale Formation. The New Albany consists of black pyritic shale, which is known to be expansive when exposed to the elements. The generalized geology is depicted below.



The KGS mapped water well located just off the southwest corner of the building indicates that the depth to bedrock is approximately 7.5 feet.

Requested Geotechnical Exploration Program

As requested, we have proposed five (5) borings, to be performed for this geotechnical exploration within the approximate footprint of the proposed addition. The borings will be advanced to 15 feet or auger refusal, with a minimum of one 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 five (5) feet. 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 in the field by a project engineer under the supervision of a registered professional engineer.*** The boring locations have not been established at this time. The locations will be coordinated with the design team.

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
- ▲ Soil unit weight, wet and dry.
- ▲ Soil unconfined compressive strength.
- ▲ Swell test for highly plastic clays

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.
- ▲ A discussion of subsurface conditions encountered as well as a discussion of the published geologic conditions at the site.

- ▲ A summary of field and laboratory testing results including a brief review of 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.
- ▲ Recommended general design and construction criteria for the project foundations and floor slab.
- ▲ A recommendation for seismic site class according to International Building Code, which was adopted by the Kentucky Building Code (KBC), current edition.
- ▲ Assessment of liquefaction potential of subsurface soils.
- ▲ Determination of soil expansion index if dictated by site conditions.
- ▲ Recommendations for design and construction of below grade walls, if applicable.
- ▲ Recommendations for protection of existing structure foundations, if applicable.

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

- ▲ Review of project specifications related to the geotechnical report.
- ▲ One (1) meeting at RossTarrant 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 5 to 10 business days after receiving written authorization. We expect the field exploration to take two days. **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.

The final report will be issued as a bound 8 ½ x 11 hard copy with a 30"x42" boring log and location sheet. In addition, a full PDF version of the report will be included.

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.**

Geotechnical exploration	\$5,000.00
Project Specifications Review	\$500.00
P.E. Site Visits (2) During Construction	\$1,000.00

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. The borings will be backfilled with the onsite material.*

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 we 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 \$2,000,000.00 each occurrence/ \$4,000,000 aggregate; automobile liability \$1,000,000.00 each occurrence; workers compensation coverage as

required by state law. Solid Ground will provide a certificate naming Clay County Board of Education as additional insured if selected for the proposed project.

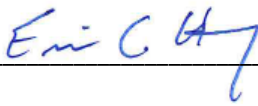
Proposal Acceptance

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.

SERVICES REQUESTED

- ☐ GEOTECHNICAL EXPLORATION - \$5,000.00
- ☐ PROJECT SPECIFICATIONS REVIEW - \$500.00
- ☐ P.E. SITE VISITS (2) DURING CONSTRUCTION - \$1,000.00

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

SIGNATURE: 

PRINTED NAME & TITLE: ERIC "CHRIS" HALEY / REGIONAL GEOTECHNICAL MANAGER

DATE: July 8, 2019

CLIENT or CLINET REP: _____

SIGNATURE: _____

PRINTED NAME & TITLE: _____

DATE: _____

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