

MONROE COUNTY

MONROE COUNTY BOARD OF COMMISSIONERS

INVITATION TO BID

FOR

**HELICAL PIERS PROJECT FOR
TELLICO PLAINS HIGH SCHOOL**

BID NUMBER – BOE1044-08-17

**Monroe County Department of Finance
103 College Street South Ste 9
Madisonville, Tennessee 37354
(423) 442-9383**

Monroe County Board of Commissioners
Madisonville, Tennessee 37354
(423) 442-9383

Bid Prepared By:

Invitation to Bid Number:

Monroe County Finance Department

BOE1044-08-17

August 17, 2017

Sealed bids, subject to the specifications and conditions contained herein and attached hereto, will be received in the Finance Department, J.P. Kennedy Building, until, but no later than **10:00 A.M. (EST.)** local time prevailing, **August 17, 2017**, and then publicly opened and read for the Helical Piers Project for Tellico Plains High School, as authorized by the Monroe County Board of Commissioners.

No bid can be withdrawn after the scheduled closing time for receipt of bids for sixty (60) calendar days.

To be considered, your bid must be submitted on the copy of this Invitation to Bid. Bidders shall sign this form in the space provided and submit bid document to Monroe County Department of Finance, 103 College Street South Ste. 9, Madisonville, TN 37354. Bids shall be returned in the enclosed bid envelope, properly completed and sealed. Bids will not be accepted via fax machine or e-mail.

Time is of the essence and bids received after the announced time and date for submittal, whether by mail or otherwise, will be rejected. The date and time stamp in the Finance Department shall determine the time of receipt. Bidders are responsible for ensuring that the Finance Department personnel stamp their bids before the deadline indicated. Late bids received will be so noted in the bid file in order that the vendor's name will not be removed from any future bid/vendor list.

If you desire not to quote on the Invitation, please forward your acknowledgment of NO BID. Return of the "Terms and Signature Sheet" with authorized signature and indication of NO BID is appropriate. Failure to comply may cause for removal of your company's name from the bid list for subject commodity.

It is the policy of Monroe County, Tennessee to ensure compliance with Title VI of the Civil Rights Act of 1964; 49 CFR, Part 21. No person shall be excluded from participation in or be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance on the grounds of race, color, sex, disability, or national origin.

Terms and Conditions of Request for Bids/Proposals

1. Award

The County reserves the right to reject any or all Bids/Proposals, including without limitation, nonconforming, nonresponsive, unbalanced, or conditional Bids/Proposals. The County further reserves the right to reject the Bid/Proposal of any Bidder/Proposer whom it finds, after reasonable inquiry and evaluation, to not be responsible. The County may also reject the Bid/Proposal of any Bidder/Proposer if the County believes that it would not be in the best interest of the Project to make an award to the Bidder/Proposer. The County also reserves the right to waive all informalities not involving price, time, or changes in the Work and to negotiate contract terms with the Successful Bidder/Proposer. More than one Bid/Proposal for the same work from an individual or entity under the same or different names will not be considered. Reasonable grounds for believing that any Bidder/Proposer has an interest in more than one Bid/Proposal for the Work may be cause for disqualification of the Bidder/Proposer and the rejections of all Bids/Proposals in which that Bidder/Proposer has an interest. If the Contract is to be awarded, the County will award the Contract to the Bidder/Proposer whose Bid/Proposal is the best interest of the Project. Disputes arising from the award of the Bid/Proposal must be submitted in writing to the Monroe County Purchasing Agent and received no later than three (3) calendar days from contract award date. In the event no funds are appropriated by the County for the goods and services specified or insufficient funds exist for future orders, the County is under no obligation to make a contract award, contract renewal, or purchase.

2. Preparation of Bids/Proposals

- (A) Bidder/Proposers are expected to examine all Bid/Proposal documents. Failure to do so will be at the Bidder/Proposer's risk.
- (B) Each Bidder/Proposer shall furnish all information required by the Request. The Bidder/Proposer shall sign the Bid/Proposal documents; erasures or other changes shall be initialed by the person signing the offer.
- (C) Unit price shall include freight unless otherwise specified in the request. In case of discrepancy between any unit price and an extended price, the unit price shall govern.
- (D) Bidder/Proposers must state a definite time for delivery of supplies or for performance of services unless otherwise specified in the invitation.
- (E) Delivery time, when stated as a number of days, will include Saturdays, Sundays, and holidays.

3. Availability of Requested Items

Bidder/Proposers must accept responsibility for verifying availability of specified items prior to submission of Bid/Proposal. Bidder/Proposer shall notify the County no less than 96 hours prior to the Bid/Proposal deadline per Tennessee Code Annotated (T.C.A.) § 12-4-126 if specified items are discontinued, replaced, or will not be available for an extended period of time.

4. Restrictive or Ambiguous Specifications

It is the responsibility of the prospective Bidder/Proposer to notify Monroe County Purchasing if there is a question as to the specifications or bid/proposal procedures being formulated in a manner that would unnecessarily restrict competition. Any such question must be received no less than 96 hours prior to the Bid/Proposal deadline per T.C.A. § 12-4-126. These requirements also apply to specifications or procedures that are in error or ambiguous.

5. Delivery

Delivery will be f.o.b. destination unless otherwise specified in the Bid/Proposal document. This will apply to regular and normal stock items and special items which must be ordered direct from manufacturer.

6. Federal Tax and State Sales Tax

Purchases by the County are not subject to any state sales or federal excise taxes. Exemption certificates shall be furnished by the County upon the Contractor's request.

7. Addenda

No modifications to the Bid/Proposal shall be binding upon the County unless made in writing by an authorized representative of the Monroe County Purchasing Department. Bid/Proposal addenda, if issued, are posted on the County's website: www.monroetn.com. Prior to submitting a Bid/Proposal, it is the responsibility of the Bidder/Proposer to ascertain that they have received all addenda issued and bid/propose accordingly. No addenda will be issued later than 48 hours prior to Bid/Proposal deadline per T.C.A. § 12-4-126.

8. Submission of Bids/Proposals

- (A) Bid/Proposal shall be enclosed in a sealed envelope and addressed to the Monroe County Purchasing Department, 103 South College Street, Madisonville, TN 37354. The name and address of the Bidder/Proposer shall be identified on the face of the envelope along with the Bid/Proposal number and title. Bids/Proposals for construction projects exceeding \$25,000.00 must include the required contractor license information on the face of the envelope per T.C.A. § 62-6-119.
- (B) The County does not accept Bids/Proposals by facsimile or any electronic transmission. See Clause 9 under Terms and Conditions of the request for Bid/Proposal regarding Bid/Proposal modifications or withdrawal.
- (C) Samples of items, when required, must be submitted within five (5) calendar days and at no expense to the County unless otherwise specified by the County. If not consumed by testing, samples will be returned at Bidder/Proposer's request and expense unless otherwise specified in the Invitation.

9. Modification or Withdrawal of Bids/Proposals

Bids/Proposals may be modified or withdrawn by signed written notice to Monroe County Purchasing or in person by an authorized Bidder/Proposer representative provided the modification or withdrawal is received prior to the Bid/Proposal deadline. A Bidder/Proposer representative making a modification in person shall have proper identification and shall initial the change. The Bidder/Proposer representative shall sign a receipt for the withdrawal of a Bid/Proposal. A telegraphic notice with an authorized signature would be acceptable for Bid/Proposal modification or withdrawal. It is the Bidder/Proposer's responsibility to confirm receipt of the modification or withdrawal. The telegraphic communications shall not reveal the Bid/Proposal price but shall provide the addition, subtraction or other modifications so that the final prices or terms will not be known by the County until the sealed bid is opened.

10. Late Bids/Proposals

It is the responsibility of the Bidder/Proposer to deliver their Bid/Proposal or modification on or before the deadline date and time. The time of record will be the date/time stamp of the Monroe County Finance Department. Late bids/proposals will not be considered or returned.

11. Qualifications of Bidder/Proposers

In evaluating Bid/Proposal, the County will consider whether or not the Bid/Proposal complies with the prescribed requirements, and such alternates, unit prices and other data, as may be requested in the Bid/Proposal form or prior to the Notice of Award. The County will consider the qualifications of Bidder/Proposer and may consider the qualifications and experience of Subcontractors, Supplies, and other individuals or entities proposed for those portions of the work which the identity of Subcontractors, Suppliers, and other individuals or entities must be submitted. The County may conduct such investigations as the County deems necessary to establish the responsibility, qualifications, and financial ability of Bidder/Proposers, proposed Subcontractors, Suppliers, individuals, or entities proposed for those portions of the Work in accordance with the Contract Documents. The County may make such investigations as are deemed necessary to determine the ability of the Bidder/Proposer to perform the work and the Bidder/Proposer shall furnish all such information and data for this purpose as the County may request. The County reserves the right to reject any Bid/Proposal if the evidence submitted by the investigation of such Bidder/Proposer fails to satisfy the County that such Bidder/Proposer is properly qualified to carry out the obligations of the contract and to complete the work contemplated therein.

12. Subcontracts

The Bidder/Proposer is specifically advised that any person, firm, or other party to whom it is proposed to award a subcontract under this contract must be acceptable to and approved by the County.

13. Non-Collusion

The requirements of State and Federal Antitrust Law, as well as the terms and conditions of the Bid/Proposal, require that all decisions made as to matters concerning this Bid/Proposal be made on an individual firm basis. By signing this Bid/Proposal, the Bidder/Proposer certifies that no company employees, agents, or representatives colluded in any respect with any other person or firm as to the terms and conditions of the company's Bid/Proposal. Any concerted activity with respect to this Bid/Proposal will be reported to the Antitrust Division of the Office of Attorney General, State of Tennessee.

14. Compliance with Applicable Laws

The Bidder/Proposer shall comply with all laws relating to the manufacture, sale and purchases of items or services by County Governments insofar as they pertain to the purchase made under this contract.

15. Bid/Proposal Acceptance

Bid/Proposal prices quoted shall be subject to acceptance by the County for a period of sixty (60) calendar days from the Bid/Proposal deadline, unless Bidder/Proposer indicates otherwise in their Bid/Proposal. If awarded the Bid/Proposal within the time frame specified, Bidder/Proposer agrees to furnish all services described or specified

16. Acceptance of Bid/Proposal Content

The successful contractor's bid/proposal content shall become a contractual obligation if procurement action ensues. Failure of the successful Bidder/Proposer to accept these obligations in a contractual agreement may result in cancellation of the award.

17. Notification to County

If no Bid/Proposal is to be submitted in response to this Bid/Proposal, it is not necessary to return the request; however, notice should be given to the County if the recipient wishes to remain on the County's Bidder/Proposer list for future solicitations.

18. Standard Contract

The County reserves the right to incorporate standard county contract provisions into any contract negotiated as a result of any Bids/Proposals submitted in response to the Request for Bid/Proposal.

19. News Releases

News releases pertaining to this procurement or any part of the Bid/Proposal shall not be made without the written approval of the County Purchasing Director.

Terms and Conditions of Purchase

1. Definitions

- A. The "County" is Monroe County, Tennessee, and includes its designated representatives.
- B. The "Contractor" is those mentioned as such "contractor, seller, vendor, supplier", in the contract and includes their designated representatives.
- C. The "Specifications" include instructions to vendors, the terms and conditions of purchase, the definitions and the technical specifications of the work.
- D. A "Subcontractor" is a person, firm or corporation having a contract with the Contractor to furnish labor and materials or both, or who perform services of the project.
- E. "Calendar Days" are consecutive days, as occurring on a calendar without regard to the day of the week, month, year, or holidays.
- F. The National Institute of Governmental Purchasing (NIGP) Online Directory of Procurement Terms, at www.nigp.org, will govern on questions as to any other definition in this contract.

2. Contract Terms

Upon award, the performance of the contract shall be covered solely by the terms and conditions set forth herein. Authorization to furnish goods/services will be made via purchase order, or blanket order as appropriate, signed by the County Purchasing Agent and Finance Director or other designated personnel. Any language contained on any invoice, shipping order, bill of lading or other document furnished by the seller at any time and the acceptance by the County of any goods/services to be furnished hereunder accompanied by any such document shall not be construed as an acceptance by the County of any terms or conditions contained in such document which are inconsistent with the terms and conditions set forth in this Invitation. Any different or additional terms contained in the seller's acceptance are hereby objected to.

3. Contract Modification

The contract expresses the complete agreement of the parties. Any changes hereto must be in writing and signed by the County Purchasing Agent. No other individual is authorized to modify the contract in any manner.

4. Delivery Requirement

To insure adequate service level to the people, the County requires that all goods or services ordered will be delivered when specified. Time is, therefore, the essence of this contract. If deliveries are not made or services performed at the time agreed upon, the County reserves the right to cancel and purchase elsewhere and hold seller accountable therefore.

5. Transportation Charges

When terms of delivery or conditions of this order are f.o.b. destination, all transportation charges shall be paid by the seller.

6. Packaging

The County will not be liable for any charges for packaging, crating, carting, drayage, or storage in excess of the purchase price of this order unless stated otherwise herein.

7. Quantities

The County assumes no obligation for articles or materials shipped in excess of the quantity ordered hereunder. Any unauthorized quantity is subject to the County's rejection and return at seller's expense.

8. Indemnification and Insurance

If any work covered by this contract is to be done on the County's premises, Contractor agrees to carry liability and Worker's Compensation insurance satisfactory to the County and to indemnify the County against all liability, loss and damage arising out of any injuries to persons and property caused by the Contractor, his employees or agents. The Contractor will furnish written evidence of such insurance coverage if requested.

9. Inspection and Acceptance

The Contractor shall be responsible for all material or service until they are delivered and accepted. No material or service received by the County pursuant to this contract shall be deemed accepted until the County has had reasonable opportunity to inspect said material or service. All material discovered to be defective or does not conform to any warranty of the seller herein, upon initial inspection or at any later time if the effects contained in the material were not reasonably ascertainable upon inspection, may be returned at the seller's expense for full credit or replacement. No goods returned as defective will be replaced without buyer's written authorization. Such return shall in no way affect the County's discount privileges or exclude any other legal, equitable or contractual remedies the County may have therefore. Performance of services shall be completed to the County's satisfaction.

10. Warranty

The seller expressly warrants that all goods and work covered by this contract will conform to each and every specification, drawing, sample or other description which is furnished to or is adopted by the County and that they will be fit and sufficient for the purpose intended, merchantable, of good material and workmanship, and free from defect. Such warranty shall survive delivery and shall not be deemed waived either by reason of the County's acceptance of said goods or work or by payments for them.

11. Invoices

Invoices shall be submitted to address as noted on Purchase Order. Invoices shall contain the following information: purchase order number, item number, contract description of supplies or services, quantities, unit prices and extended totals. Delay in receiving invoices and errors in omissions on statements or invoices will be considered just cause for withholding settlement without losing privileges.

Terms and Conditions of Purchase

12. Notice and Service Thereof

Any notice to any contractor from the County relative to any part of this contract will be in writing and considered delivered and the service thereof complied when said notice is posted with said contractor or his authorized representative.

13. Acts of God

Neither party shall be liable for delays, or defaults in the performance of this contract due to Acts of God or the public enemy, riots, strikes, fires, explosions, accidents, governmental action of any kind or any other causes of similar character beyond their control and without their fault or negligence.

14. Patents

The seller guarantees that the articles described herein and the sale or use of them will not infringe upon any U.S. or foreign patent. The seller covenants that he will, at his own expense, defend every suit which may be brought against the County, or those selling or using the County's product (provided seller is promptly notified of such suit and all papers therein are delivered to the seller) for any alleged infringement of any patent by reason of the sale or use of such articles and seller agrees that he will pay all costs, damages and profits recovered in any such suit.

15. Bankruptcy or Insolvency

In the event of any voluntary or involuntary proceedings by or against either party in bankruptcy or insolvency, or for the appointment of a receiver, trustee or an assignee for the benefit of creditors of the property of seller, or in the event of breach of any of the terms hereof including the warranties of the seller, the County may cancel this contract or affirm the contract and hold the seller responsible for damages.

16. Public Notice – Title VI of the 1964 Civil Rights Act

"No person in the United States shall, on the ground of race, color or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance."

Anyone who believes that an agency or local government receiving federal financial assistance has discriminated against someone on the basis of race, color, or national origin has a right to file a complaint within 180 days of the alleged discrimination. Inquiries and charges of violations concerning Title VI should be directed to the Human Resource Director of Monroe County.

17. Non-Conflict

No employee, officer or agent of The County shall participate in the selection, or award of, or administration of a contract if a conflict of interest, real or apparent, would be involved.

18. Provisions Required by Law Deemed Inserted

Each and every provision of law and clause required by law to be inserted in this contract will be deemed to be inserted herein and the contract will be read and enforced as though it were included herein, and if through mistake or otherwise any such provision is not inserted, or is not correctly inserted, then upon application of either party the contract will forthwith be physically amended to make such assertion or correction.

19. Termination of Contract

The County reserves the right to terminate the contract at any time if any of the provisions of the contract are violated by the contractor or by any of his subcontractors, in the sole judgement and discretion of the Purchasing Agent. In the event of such termination, the Contractor shall be liable for any excess cost incurred by County. If the contract is so terminated the County may purchase, upon such terms and in such manner as the County Purchasing Agent may deem appropriate, supplies or services similar to those so terminated and the Contractor will be liable for excess cost occasioned thereby. In the event the contract is terminated by the County for due cause, the vendor may be barred from bidding on County contracts for a period of 12 months. The Contract may be cancelled without cause by either party with the giving of written notice of no less than 60 calendar days.

The Monroe County Government will be accepting bids on behalf of the Monroe County Board of Education to install (4) four helical piers that meet the requirements set forth within the Soils Report, prepared by Engineering & Testing Solutions, LLC and defined as the following;

Subsurface Exploration Finds and Recommendations
Tellico Plains High School – Building Distress Evaluation
Tellico Plains, Tennessee
ETS Project Number 17-68

For site visits to Tellico Plains High School for project review, please contact Phillip Carroll, Maintenance Supervisor at 423-442-3916.

For additional information or clarifications within the soils report, please email Sam Moser, with Main Street Studio, Architects at sam.moser@mms-arch.net.

Attached you will find the Subsurface Exploration Findings & Recommendations, Soil Reports, and Helical Pier Detail.

All bidders must be licensed Contractors as required by the Contractors Licensing Act of 1976 (TCA Title 62, Chapter 6). No bid will be opened unless the outside of the sealed envelope containing the bid provides the following information: the Contractor's license number, the date of the license's expiration, and a quotation of that part of his classification applying to the bid.

With the bid, each Bidder must deposit security in the amount of five percent (5%) of the amount of the bid, in the form of a bid bond security.

No bidder may withdraw his bid within sixty (60) days after the actual date of the opening thereof.

Please provide three references within the state of Tennessee for whom your company has installed Helical Piers similar to the details specified in this Invitation to Bid within the previous five years.

Name: _____ Phone Number: _____

Address: _____ # of Helical Piers: _____

Name: _____ Phone Number: _____

Address: _____ # of Helical Piers: _____

Name: _____ Phone Number: _____

Address: _____ # of Helical Piers: _____

How long vendor has been in business: _____

Time frame for completion: _____

Bid Total: \$ _____

ENGINEERING & TESTING SOLUTIONS, LLC

May 12, 2017

Monroe County School System
Attn: Mr. Phillip Carroll, Director of Maintenance
205 Oak Grove Road
Madisonville, TN 37354

Subject: Subsurface Exploration Findings & Recommendations
Tellico Plains High School – Building Distress Evaluation
Tellico Plains, Tennessee
ETS Project Number 17-68

Dear Mr. Carroll:

At your request, representatives with Engineering and Testing Solutions, LLC (ETS) have visited the subject site to observe localized building distress and perform a limited subsurface exploration. Our services were performed in general accordance with the terms and conditions listed in our proposal dated March 30, 2017.

Project Discussion

Tellico Plains High School is located at 9180 State Route 68 in Monroe County, Tennessee. It is our understanding the school was constructed in the early 1990's. Over the course of the past couple of years, some building distress has been noted at one corner of the existing building. The corner of concern is on the north perimeter wall. A site reconnaissance was performed by Mr. Sam Moser with Main Street Studio Architects, Mr. Ryan Gerken with Michael Brady Inc, and Chad Smock with ETS on March 20, 2017. This portion of the building is designated for athletics (i.e. locker rooms, showers). The distress is mainly in the form of diagonal distress cracking in the exterior brick veneer. The cracking is visible on the interior concrete masonry also. No obvious distress in the form of settlement or cracking was noted along the vinyl composition tile (vct) flooring. We have not been provided any documentation regarding building construction activities. Some photographs of the area of concern are shown on the following page.



View of typical building distress in brick veneer on March 20, 2017

Geologic Conditions

Review of the Tennessee Division of Geology, Bulletin no. 58 indicates this site is geologically mapped to be underlain by the Rome Formation. The Rome Formation is variegated (red, green, yellow) shale and siltstone with some gray fine grained sandstone in middle and west part of Valley and Ridge. Some limestone and dolomite are also present in the east portion of the formation. Some completely weathered shale was recovered at depth in our soil test borings.

Based on review of topographic information for the surrounding area, there are several closed depressions within about a one mile radius of the existing school. No open voids or signs of sinkhole activity were observed during drilling activities or within our retrieved samples. Both borings were backfilled with bentonite pellets full depth to minimize surface water intrusion at each respective location.

Subsurface Conditions

Two soil test borings were performed in the vicinity of the distressed corner of the existing building. The boring locations shown on the attached Boring Location Plan should be considered approximate.

The borings encountered fill soils overlying residual soils full depth. Fill soils are soils that have been placed in their current location by man. Residual soils are soils that have developed from the in-place weathering of the underlying parent bedrock. Both borings were advanced to a termination depth of 60 feet.

The fill soils encountered generally consisted of an orange brown silty clay and extended to a depth of about 3 feet. Standard Penetration Test (SPT) N values for the fill indicated firm to stiff consistencies. The residual soils encountered in the borings typically consisted of red brown and yellow brown silty clay. SPT N values for the residuum indicated soft to hard consistencies. Natural moisture contents for the soils ranged from 24.5 percent to 67.5 percent. Plasticity index (PI) tests performed on eight samples of residuum indicated PI's between 21 and 26 for the fill and residual soils.

Groundwater was not observed within our test borings at the time of our drilling. We note, the borings were backfilled upon completion of drilling activities and therefore, long-term readings were not obtained. Based on the project information provided and conditions encountered at the time of our exploration, we do not anticipate groundwater control measures will be required for the proposed remedial work.

Subsurface Discussion & Recommendations

Based on the subsurface information obtained and discussion with the project team, we recommend foundation support be restored by utilizing a minimum of 4 helical piers along the existing foundation. The intent of the helical piers is to stabilize the structure against further settlement, structural lift is not required. The conceptual pier layout is shown on the attached Helical Pier Detail Sheet. Interior remedial work does not appear to be warranted at this time.

The helical piers should be designed to support a service load of 25 kips. We recommend the helical section contain at least 3 helix plates. The overall length, helix configuration, and minimum torsional resistance of each helical pile shall be determined by the specialty contractor. Regardless of torsional resistance during installation, all piers should extend to a minimum depth of 10 feet below the existing foundation.

We recommend the bid documents require that each prospective specialty contractor provide documentation of at least 5 years of helical pier installation experience and a list of at least 3 similar projects recently completed utilizing helical piers. Work will not begin until a submittal has been reviewed and approved by the project team.

Upon approval by the owner's authorized representative, the specialty contractor should provide a submittal which consists of, but not limited to, the following items:

- Proposed helical pier layout plan with pier spacing
- Product designations for helical lead, plates, extensions, and all other ancillary products
- Calculated mechanical and theoretical geotechnical capacities of the proposed piles
- Inclination angle and location tolerance requirements

In addition to the recommended helical piers, care should be taken to confirm all roof drains function properly and daylight at least 10 feet from the building perimeter. Positive drainage should also be confirmed along the entire building perimeter.

We trust this correspondence meets your needs. If you have any questions, please contact us at 865.474.6200.

Sincerely,

ENGINEERING AND TESTING SOLUTIONS, LLC



Trenton D. Smith, E.I.
Staff Professional
tsmith@ets-tn.com



Chad B. Smock, P.E.
Principal
csmock@ets-tn.com

cc(elec copy) Mr. Sam Moser, AIA - Main Street Studio Architects
Mr. Ryan Gerken, P.E. – Michael Brady Inc.

Attachments

- Soil Data Summary
- Boring Location Plan
- Boring Log Key Sheet
- Soil Test Boring Records
- Helical Pier Detail

Soil Data Summary

Tellico Plains High School - Settlement Evaluation Tellico Plains, Tennessee						
Boring No.	Depth (feet)	Moisture Content	Atterberg Limits			Unconfined Compressive Strength (ksf)
			LL	PL	PI	
B-1	1.5-3.0	25.1	46	25	21	
B-1	4.0-5.5	28.1	50	27	23	
B-1	6.5-8.0	32.4	52	31	21	
B-1	9.0-10.5	29.8	52	30	22	
B-1	14.0-15.5	51.3				
B-1	19.0-20.5	51.8				
B-1	24.0-25.5	48.6				
B-1	29-30.5	57.4				
B-1	34.0-35.5	50.8				
B-1	39.0-40.5	40.1				
B-1	44.0-45.5	44.4				
B-1	49.0-50.5	67.5				
B-1	54.0-55.5	49.8				
B-1	59.0-60.5	46.2				
B-2	1.5-3.0	29.9	54	30	24	
B-2	4.0-5.5	27.1	49	23	26	
B-2	6.5-8.0	24.5	48	27	21	
B-2	9.0-10.5	33.7	53	32	21	
B-2	14.0-15.5	55.6				
B-2	19.0-20.5	48.0				
B-2	24.0-25.5	46.6				
B-2	29-30.5	63.5				
B-2	34.0-35.5	52.6				
B-2	39.0-40.5	38.3				
B-2	44.0-45.5	45.3				
B-2	49.0-50.5	44.3				
B-2	54.0-55.5	50.7				
B-2	59.0-60.5	28.1				





Note: Plan adapted from recent Google Maps Image.





<p>LEGEND</p> <p>B-1</p> <p>BORING LOCATION</p>	<p>ETS</p> <p>ENGINEERING & TESTING SOLUTIONS</p> <p>Sevierville, TN Knoxville, TN</p> <p>865-428-4468 865-474-6200</p> <p>www.ets-tn.com</p>	<p>BORING LOCATION PLAN</p> <p>TELICO PLAINS HIGH SCHOOL</p> <p>SETTLEMENT EVALUATION</p> <p>TELICO PLAINS, TENNESSEE</p>			
		<p>ETS NUMBER :</p> <p>17-68</p>	<p>DATE:</p> <p>4/18/2017</p>	<p>SCALE:</p> <p>N/A</p>	<p>EDITED BY:</p> <p>BC</p>

BORING LOG KEY SHEET

LEGEND TO SOIL AND ROCK SYMBOLS

	TOPSOIL		ASPHALT / GRAVEL
	SILTSTONE		ALLUVIAL
	BEDROCK		RESIDUAL
	DOLOMITE		COLLUVIAL
	LIMESTONE		FILL

DRILLING SYMBOLS

	water table @ time of drilling		split spoon sample
	water table, 24 hours		undisturbed sample

Correlation of Penetration Resistance to Consistency and Relative density

Silts & Clays		Sands & Gravels	
N Value	consistency	N Value	relative density
0-2	very soft	0-4	very loose
3-4	soft	5-10	loose
5-8	firm	11-30	firm
9-15	stiff	31-50	dense
16-30	very stiff	50+	very dense
31-50	hard		
50+	very hard		

Particle Size Identification

Silts & Clays	Less than 0.075 mm
Fine Sand	0.075 mm to 0.425 mm
Medium Sand	0.425 mm to 2.00 mm
Coarse Sand	2.00 mm to 4.75 mm
Fine Gravel	4.75 mm to 19.0 mm
Coarse Gravel	19.0 mm to 75 mm
Cobbles	75 mm to 300 mm
Boulders	Greater than 300 mm

ENGINEERING AND TESTING SOLUTIONS

DEPTH	SOIL DESCRIPTION AND REMARKS SEE KEY SHEET FOR EXPLANATION OF SYMBOLS AND ABBREVIATIONS	LEGEND	DEPTH	SAMPLES				SPT (bpf)										Lab Results		
				TYPE	BLOWS			N VALUE	5	10	15	20	25	30	%	M	PL	PI		
					1st 6"	2nd 6"	3rd 6"													
0	Firm to stiff orange brown silty clay with occasional organics - Fill		0	spt	4	6	6	12										25.1	25	21
-5	Stiff dark red brown silty clay - Residual		-5	spt	3	5	5	10										28.1	27	23
		spt	4	6	9	15											32.4	31	21	
-10		spt	4	7	7	14											29.8	30	22	
-15		spt	2	3	3	6											51.3			
-20	Firm to soft yellow brown & red brown silty clay - Residual		-20	spt	2	1	3	4										51.8		
-25		spt	2	2	3	5											48.6			
-30		spt	2	1	3	4											57.4			
		spt	2	2																
Remarks:				SOIL TEST BORING RECORD																
Groundwater was not encountered at the time of drilling. Borings were backfilled after drilling. Therefore, long term groundwater depth was not measured.				PROJECT: Tellico Plains High School - Settlement Evaluation Tellico Plains, Tennessee																
This is an interpretation of subsurface conditions at the boring location. Subsurface conditions may differ at other times and other locations. The interfaces shown between strata are approximate. Transitions between strata may be gradual.				DRILLED: 4/6/2017 BORING: B-1 Page 1 of 2																
				ETS PROJECT NO. 17-86																

ENGINEERING AND TESTING SOLUTIONS

DEPTH	SOIL DESCRIPTION AND REMARKS SEE KEY SHEET FOR EXPLANATION OF SYMBOLS AND ABBREVIATIONS	LEGEND	DEPTH	SAMPLES				SPT (bpf)											Lab Results			
				TYPE	BLOWS			N VALUE												%	PL	PI
					1st 6"	2nd 6"	3rd 6"															
35			-35				3	5		5	10	15	20	25	30	50.8						
40	Tan brown silty clay - Residual		-40	spt	4	5	7	12								40.1						
45			-45	spt	4	5	6	11								44.4						
50	Soft to firm dark brown silty clay with occasional rock fragments - Residual		-50	spt	WOH	2	2	4								67.5						
55			-55	spt	2	3	5	8								49.8						
60	Boring Terminated @ 60.5 feet		-60	spt	2	3	2	5								46.2						
65			-65																			



Remarks:	SOIL TEST BORING RECORD
Groundwater was not encountered at the time of drilling. Borings were backfilled after drilling. Therefore, long term groundwater depth was not measured.	
This is an interpretation of subsurface conditions at the boring location. Subsurface conditions may differ at other times and other locations. The interfaces shown between strata are approximate. Transitions between strata may be gradual.	

PROJECT:	Tellico Plains High School - Settlement Evaluation	
	Tellico Plains, Tennessee	
DRILLED:	4/6/2017	BORING: B-1
ETS PROJECT NO.	Page 2 of 2	
	17-86	

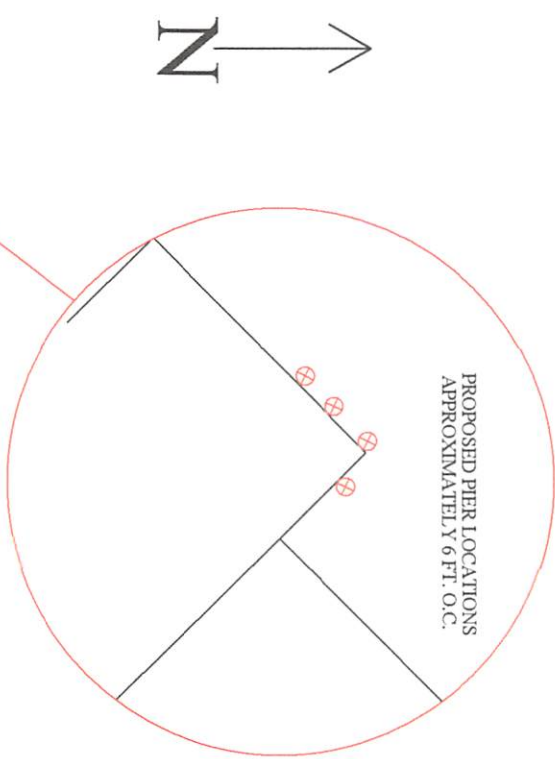
ENGINEERING AND TESTING SOLUTIONS

DEPTH	SOIL DESCRIPTION AND REMARKS SEE KEY SHEET FOR EXPLANATION OF SYMBOLS AND ABBREVIATIONS	LEGEND	DEPTH	SAMPLES				SPT (bpf)						Lab Results							
				TYPE	BLOWS									%	M	PL	PI				
					1st 6"	2nd 6"	3rd 6"	N VALUE													
0	Firm orange brown silty clay with occasional organics - Fill		0	spt	2	4	4	8													
5	Stiff dark red brown silty clay - Residual		-5	spt	3	7	7	14													
				spt	4	15	16	31													
10			-10	spt	4	7	7	14													
15			-15	spt	2	3	3	6													
20			-20	spt	3	3	3	6													
25	Firm to soft yellow brown & red brown silty clay - Residual		-25	spt	2	4	3	7													
30			-30	spt	WOH	2	1	3													
				spt	1	2															
Remarks:				SOIL TEST BORING RECORD																	
Groundwater was not encountered at the time of drilling. Borings were backfilled after drilling. Therefore, long term groundwater depth was not measured.				PROJECT: Tellico Plains High School - Settlement Evaluation Tellico Plains, Tennessee																	
This is an interpretation of subsurface conditions at the boring location. Subsurface conditions may differ at other times and other locations. The interfaces shown between strata are approximate. Transitions between strata may be gradual.				DRILLED: 4/7/2017 BORING: B-2 Page 1 of 2																	
				ETS PROJECT NO. 17-86																	

ENGINEERING AND TESTING SOLUTIONS

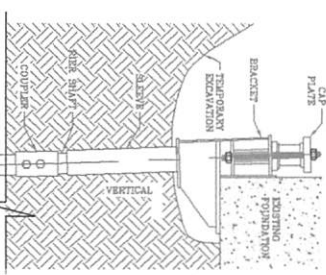
DEPTH	SOIL DESCRIPTION AND REMARKS SEE KEY SHEET FOR EXPLANATION OF SYMBOLS AND ABBREVIATIONS	LEGEND	DEPTH	SAMPLES				SPT (bpf)	Lab Results								
				TYPE	BLOWS				%	PL	PI						
					1st 6"	2nd 6"	3rd 6"					N VALUE					
-35	Firm to soft yellow brown & red brown silty clay - Residual		-35			1	3		5	10	15	20	25	30	52.6		
-40			spt	2	3	4	7								38.3		
-45			spt	3	5	7	12								45.3		
-50			spt	3	6	4	10								44.3		
-55			spt	2	2	5	7								50.7		
-60	Very stiff yellow brown shaley clay - Residual		-60	spt	10	13	17	30							28.1		
	Boring Terminated @ 60.5 feet																
-65			-65														
Remarks:				SOIL TEST BORING RECORD													
Groundwater was not encountered at the time of drilling. Borings were backfilled after drilling. Therefore, long term groundwater depth was not measured.				PROJECT: Tellico Plains High School - Settlement Evaluation Tellico Plains, Tennessee													
This is an interpretation of subsurface conditions at the boring location. Subsurface conditions may differ at other times and other locations. The interfaces shown between strata are approximate. Transitions between strata may be gradual.				DRILLED: 4/7/2017 BORING: B-2 Page 2 of 2													
				ETS PROJECT NO. 17-86													

HELICAL PIER DETAIL

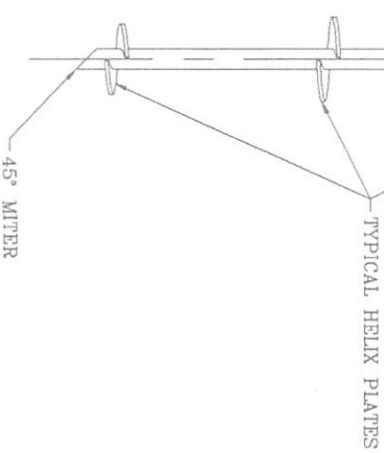


NOTE: THIS SHEET IS CONCEPTUAL ONLY. SPECIALTY CONTRACTOR TO PROVIDE SUBMITTAL FOR APPROVAL PRIOR TO CONSTRUCTION.

TYPICAL HELICAL PIER SECTION



OVERALL LENGTH, HELIX PLATE, AND SPACING TO BE DETERMINED BY SPECIALTY CONTRACTOR. HELICAL PIER SHOULD HAVE CAPACITY OF 25 KIPS.



HELICAL PIER DETAIL
TELICO PLAINS HIGHCHOOL
TELICO PLAINS, TENNESSEE
ETS PROJECT 17-68



ENGINEERING & TESTING SOLUTIONS
geotechnical and construction materials consultants
Sevierville, TN Knoxville, TN
865.428.4468 865.474.6200
www.ets-tn.com

PIER DETAIL	DATE 12/15/17
DESIGN 12/15/17	CREATED 12/15/17
CAD 12/15/17	DATE 6/9/17
SCALE 1"=1'-0"	SCALE 1"=1'-0"
17-68	17-68
S 1.0	17-68

BIDDER INFORMATION:

Name of Bidder: _____

(Typed or Printed: Firm, Corporation, Business or Individual)

Business Address: _____

Business has been in business under its present name since: _____

At this present time we understand all requirements and state that as a serious bidder we will comply with all the stipulations included in this package.

The above named bidder affirms and declares:

1. That the bidder is of lawful age and that no other person, firm or corporation with other person firm or corporation has any interest in this Bid/Proposal or in the contract proposed to be entered into.
2. That this Bid/Proposal is made without any understanding, agreement, or connection with any other person, firm or corporation making a proposal for the same purpose, and is in all respects fair and without collusion or fraud.
3. That the bidder is not in arrears to Monroe County upon debt or contract and not a defaulter, as surety or otherwise, upon any obligation to Monroe County.
4. That no officer or employee whose salary is payable in whole or in part from the County Treasury shall be or become interested, directly or indirectly, surety or otherwise in this proposal, in the performance of the Contract, in the supplies, materials, equipment and work or labor to which they relate, or in any portion of the profits thereof.

BIDDER: _____

BY: _____

(Authorized Signature in Ink)

PRINTED NAME OF SIGNER: _____

TITLE OF SIGNER: _____

DATE SIGNED: _____

PHONE NUMBER OF SIGNER: _____

ALL VENDORS MUST SUBMIT A W-9 FORM WITH THEIR BID RESPONSE