



NEWPORT

KENTUCKY

Memo

To: All interested parties
From: Larisa Sims, Assistant City Manager
Date: 6/5/19
RE: Addendum #3 - "6-434 Newport Riverfront Commons"

The following additional information and addendums are the result of inquiries from 5/29/2019 – 6-5-2019

- 1) Reference is made to a Geotech report. We request a Geotech report for our use.
 - a. I will upload to Dropbox.
- 2) Please verify the 106cy of concrete pavement removed. It looks like it will be less. Is the unit of measure of CY correct?
 - a. There was an error in the volume calculation. It is only 9CY of removal. The bid quantity has been updated.
- 3) Please verify the clearing and grubbing of 91cy is for topsoil stripping?
 - a. Correct.
- 4) It looks like the fence art is being installed by 2 different bid items: remove-reinstall artwork and reinstall fence artwork. Where is the artwork to be priced? Intended to be two line items.
 - a. The Salvage & Replace Medallions/Fence Art was for the removal only. The Reinstall Fence Art is for the new installation. The bid description has been updated accordingly.
- 5) What size rip rap is required on this project? No sizes given.
 - a. Class III/IV rip rap per USACE requirements.
- 6) Note on C101 says to refer to structural drawings for fence removal. No information given on structural drawings-please provide detail.
 - a. Refer to detailing on sheets S105 and S304.
- 7) Is a SWPPP required?
 - a. No, the anticipated area of earth disturbing activities is under 1-acre (i.e. Contract Limits on C200 is 0.67-acres).
- 8) The erosion control item-is this for erosion control blankets? This is usually a lump sum dollar amount for a contingency.
 - a. Erosion control is for blankets, silt fence, and catch basin inlets noted on C300.
- 9) Can a grading plan be provided to show grades to gauge the earthwork required?
 - a. Refer to information on C300, S101, S202, S203, S204, and S301 for details on grades and earthwork required.
- 10) Per addendum #2-augercast pile will be acceptable. Can a specification section be provided? Also, can the testing requirements be clarified for the augercast pile?
 - a. The specifications from the geotechnical report have been converted into the attached Augercast Pile Specification. The plans already depict items for piling and testing. When augercast piles are used, the same quantities listed apply and

the specification would change from KYTC Section 604 to the attached. The augercast piles shall be the same size as the specified pipe piles, and designed for the same or greater plan listed loads. The dynamic load test would be replaced by the augercast pile load test in the attached specification. (See attached)

AUGERCAST PILES

PART 1 – GENERAL REQUIREMENTS

Augercast concrete piles are installed by first augering to the design tip elevation or bearing stratum with continuous-flight hollow-stem augers of the appropriate diameter. Then as the auger is slowly withdrawn from the ground, a high-strength cement grout is pumped under high pressure through the hollow-stem auger, resulting in a continuous column of high-strength cement grout formed from the auger tip elevation to the ground surface.

Pile reinforcement shall be such that it will satisfy the requirements of Section 1810 of the 2013 Kentucky Building Code (KBC 2013). Cages or bars inserted into the fluid grout column shall have centering devices to assure that the steel is installed to within structural tolerances. In addition, the reinforcement shall be projected above the individual top of pile elevation to confirm during construction both horizontal and vertical control of the reinforcement relative to the cast-in-place concrete unit.

The piles shall be installed with proper well-maintained equipment capable of drilling straight and plumb holes to the necessary depths, and then maintaining high grout pressure during uniform withdrawal of the auger to prevent any "necking" of the grout column. The auger shall be slowly rotated during withdrawal and grouting. The installation shall be sequenced so that no pile is drilled less than 20 hours after grout is placed in the adjacent pile within 8 feet, center to center. The pumped grout volumes shall be monitored using automated monitoring equipment.

The piles shall be installed using a bottom center discharge auger to reduce the possibility of grout contamination due to side scour.

Auger refusal during pile installation is not anticipated in the soil overburden. Should auger refusal during the pile installation be encountered, however, within 10 feet of the bottom of pile cap elevation, the obstruction shall be removed with a backhoe, the excavation restored with compacted fill, and then the pile restarted. If an obstruction is noted below a depth of 10 feet, the pile shall be abandoned and shall be grouted from the refusal point to 1 foot below the bottom of pile cap elevation. The Pile Contractor shall be paid for that length as if it were a production pile, as verified and approved by the Geotechnical Engineer. Refusal shall be defined by advancement of the auger at a rate less than 5 inches in 10 minutes of augering of a fully toothed auger under the dead weight of the auger and drill head. Where refusal is encountered, the Project Structural Engineer and the Project Geotechnical Engineer shall be advised and a new pile or a pair of piles installed in accordance with the Engineer's directions.

PART 2 – PILE LOAD TESTING

A minimum of one pile load test shall be conducted on a pile with a tip at El. 425.0 or as determined by consultation with the Geotechnical Engineer to verify the selected pile capacity. The load test shall be located more than 5 feet, but less than 15 feet, from Test Boring 1101. The location of the proposed load test shall be selected by the Project Geotechnical Engineer. The test pile shall be of the same diameter and type as the intended production piles and shall be installed using procedures, equipment and materials identical to those that will be used for production piles.

The pile load test setup shall be designed by the Contractor and the shop drawings for the test pile location, setup, and testing criteria shall be reviewed and approved by the Project Structural Engineer and the Geotechnical Engineer in advance of the performance of the test. The pile load test shall be accomplished in accordance with ASTM D1143, the Maintained Test procedure. After the test has been performed in accordance Paragraph 8.1.3 of the ASTM Procedure mentioned above, the test pile shall be

reloaded in accordance with Paragraph 8.1.4, "Loading In Excess Of Maintained Test" to failure or to the limit of the reaction frame, where the reaction frame has been designed to resist a load equal to at least 3.5 times the production pile design load capacity. The Pile Foundation Contractor shall be responsible for the complete setup and performance of the tests. The Geotechnical Engineer shall be informed of the test schedule to witness the installation of the test pile and the reaction piles, witness the load test, and verify design loads and tip elevation based upon load settlement curves and the Structural Engineer's allowable settlement criteria.

The cost to perform the load tests on the selected test pile shall be paid for as a lump sum cost for each test. If additional tests are required beyond the first test they shall be paid as a lump sum item. If additional tests are deemed necessary due to the failure of the test for reasons of soil conditions that are worse than anticipated, they will be paid as an additional lump sum price per test. If the load test failure is a result of structural defects in the piles or the reaction frame, repair or performance of subsequent tests shall be at the Contractor's expense.

PART 3 – ACCEPTANCE

The production piles shall not be accepted if any of the following conditions occur.

- A. The design pile reinforcement cannot be placed manually in the top of any pile following the completion of the grouting.
- B. The trap door at the bottom discharge outlet fails to open completely, effectively creating a side discharge condition.
- C. Loss of grout head occurs for any reason during pile installation.
- D. There is more than a 20-minute delay during grouting of any individual pile.
- E. There is a drop in grout level after completion of the pile which exceeds the average of the other pile installations by more than 2 feet.
- F. There is a rise in the grout level of any amount.

Should any of these occur, it will be necessary to re-drill and re-grout the individual pile for the pile to be considered acceptable as a production pile. The re-drilling and re-grouting shall be included in the cost of the original pile installation and shall not be considered extra.

The installation of the pile foundations shall be monitored by the Project Geotechnical Engineer or a representative thereof in order to confirm that the installation of the piles is consistent with the intent of the project specifications. The monitoring shall include confirmation of pile lengths, grouting pressures, grout volume, rate of auger withdrawal, changes in levels of completed grout columns and installation of design reinforcement. The pumped grout volumes shall also be monitored.

PART 4 – BACKFILL

The completed formed pile caps shall be backfilled with fill with approved onsite soils or approved borrow material placed in uniform level layers, 6 to 8 inches in thickness, and compacted to not less than 98 percent of the standard Proctor maximum dry density, ASTM D698. The fill shall be compacted in thin level lifts with a moisture content maintained at 2 percent below to 3 percent above the optimum moisture content. The backfill material shall consist of clayey soils classified as CL as per ASTM D4287, and approved by the Engineer or his representative. Any imported soils, which may be transported to the site, must be approved by the Engineer before they are brought to the site.

PART 5 – PILE INSTALLATION CONTRACTOR QUALIFICATIONS

The Pile Installation Contractor shall only be accepted from pre-qualified Contractors. To apply for pre-qualifications, the Contractor (or sub-contractor) shall submit a list of augercast pile projects undertaken in the past five years. At least six of the augercast projects specified shall be of equivalent or greater difficulty and/or scope as this project. No Contractor shall be considered acceptable without a minimum of 5 years of experience in this type of application.

PART 6 – PAYMENT

Payment for augercast piling shall be made as a linear foot pay item at the unit price bid. The quantity for payment may be modified as described in the above sections. The unit price shall include all costs associated with providing and installing the piling, included labor, materials, equipment, backfill, and any incidental items. The unit price shall also include the costs for testing by an independent third-party laboratory for any materials testing not covered under the Pile Load Testing section. Payment for pile testing shall be made at the lump sum unit price per test (each), as noted in the applicable section above.