OHIO TURNPIKE AND
INFRASTRUCTURE COMMISSION

ADDENDUM NO. 6
ISSUED: MAY 26, 2023

PROJECT NO. 43-23-04

BRIDGE REPLACEMENT OHIO TURNPIKE OVER TINKERS CREEK M.P. 185.6 SUMMIT & PORTAGE COUNTIES, OHIO

ISSUED APRIL 13, 2023

OPENING DATE: 2:00 P.M. (EASTERN TIME) ~~MAY 11 18 25~~ JUNE ~~1~~ 6, 2023

ATTENTION OF BIDDERS IS DIRECTED TO:

ANSWERS TO QUESTIONS RECEIVED THROUGH 12:00 P.M. ON MAY 24, 2023

MODIFICATIONS TO THE CONTRACT DOCUMENTS

Plan Sheets: 50, 51, 76, 77, 80, 81 of 119
-AND-
Bid Schedule of Items and Estimated Quantities Worksheet
Reference Nos.: 3, 114, 115, 116, and 117
-AND-
Item 530 Special – Structures, Ground Improvement
-AND-
Special Provision: SP 619

EXTENSION OF THE BID OPENING TO 2:00 PM ON JUNE 6, 2023

Issued by the Ohio Turnpike and Infrastructure Commission through Aimee W. Lane, Esq., Director of Contracts Administration.

Aimee W. Lane

Aimee W. Lane, Esq.,
Director of Contracts Administration

May 26, 2023
Date

ANSWERS TO QUESTIONS RECEIVED THROUGH 12:00 P.M. ON MAY 24, 2023:

Q#76 The settlement period prior to piling is defined as settlement less than 0.01 feet held for one week. This is unreasonable in a construction project with other piling operations running while surveying. This small of a reading difference could be due to thermal expansion of the platform, or survey equipment accuracy. Please allow for a larger settlement range.

A#76 The Geotechnical engineer believes that 0.02-ft over 14 days is achievable, and the notes within Item 530 Special - Structures, Ground Improvement, included with this addendum, has been revised to reflect this. Notes on plan sheets 76, 77, 80, and 81 have also been revised to clarify intent. Revised plan sheets are included with this addendum.

Q#77 We cannot bid the project unless the previous questions in Addendum No 3 are answered. At Sta 720, the significant amount of Peat cannot be treated with DMM. An alternate method of ground improvements must be used. Will OTIC please change the spec to allow other methods?

A#77 Questions from Addendum 3 were answered as part of the Addendum 4.

Studies are available which supplement the FHWA Guide Document and indicate that w/c ratios less than 5 should produce design strengths of at least 125psi, including within high organic content soils. An example is the following, refer to section 5.3, and in particular Figure 5.18 on pdf 127/151. (https://digitalcommons.usf.edu/cgi/viewcontent.cgi?article=7272&context=etd).

If a particular supplier wishes to use a lower design strength, this would be allowable with adjustment to the size and/or spacing of the DMM columns. This performance design would be required to be submitted for approval with shop drawings and other procedures in accordance with the specification and plans.

Item 530 Special - Structures, Ground Improvement, included with this addendum, has been revised to a performance specification as well which does not require DMM.

Q#78 The foundation sub-contractors that we have met with have stated that they are not able to quote the base bid method of DMM. Please consider this possible outcome and attempt to address this situation so prime contractors can submit a bid to the Commission. Some have stated if they do quote the base bid, the price will be so high bids will be rejected. This is not the outcome the Commission or prime bidders want to be in on bid day.

A#78 The Design Engineer has discussed the project with several specialty suppliers, and suggest contacting the following:

Hayward Baker/Keller (https://www.keller-na.com/)
Nicholson Construction (https://www.nicholsonconstruction.com/)
Menard (https://www.menardusa.com/)
Geo-Solutions (https://www.geo-solutions.com/)

This list is not a requirement, and any supplier meeting the requirements of the plans and specifications is acceptable, this list is provided for contractor convenience only.

Item 530 Special - Structures, Ground Improvement, included with this addendum, has been revised to a performance specification as well which does not require DMM.

Q#79 Foundation sub-contractors will not stamp alternate methods of ground improvements if the sheeting is removed. This will be a condition on their stamped plans. Please add an item for sheeting left in place. They have stated the vibration from the removal operation will make their proposal null and void.

A#79 If the alternate method requires the sheet pile to be left in place, then that is an incidental cost to that alternate, and should be bid as such. As designed, the sheet pile is not required to be left in place. This has been clarified in the revised Item 530 Special - Structures, Ground Improvement, included with this addendum.

Q#80 Sheeting will be needed in the centerline of the DMM areas, between the left and right structure, to create a cut off wall for the ground water so that some dewatering of the work area can be performed. Please include this quantity of sheeting to the sheeting left in place bid item, if added.

A#80 If the conditions of the performance system require additional sheet pile for dewatering that would be included in the Item 530 Special – Ground Improvement Production Works.

Q#81 Question withdrawn.

Q#82 What is the allowable minimum ground coverage above the proposed footers shown on plan sheet 97 of 119?

A#82 6" is the minimum coverage over the footers.

Q#83 The response to pre-bid question #34 states that the DMM is performed by a specialty contractor who will provide final design and related information based on performance criteria. If the contractor meets the minimum strengths and geometry detailed in the plans and specifications, then no design should be needed from the contractor. Please clarify what "final design" is needed from the contractor.

A#83 Item 530 Special - Structures, Ground Improvement, included with this addendum, has been revised to a performance specification which does not require DMM.

Q#84 The proposed haul road, plan notes, and question responses detail matting in the wetlands. Proposed erection procedure from the designer indicates cranes sitting on these mats. Did the engineer check the existing soil's capability to handle loading on mats without ground improvements? If so, please provide calculations.

A#84 The soil capacity is dependent on the area of the matting engaged in the support, and the contractors means and methods including matting type. This also may vary over the site. The boring logs provide some information on surface level testing that could be helpful to the contractor. For instance, Boring B-003-0-20 indicates 2.5-3.0 tsf at the surface level (HP test column), Boring B-004-0-20 indicates 1.0-2.5 tsf, Boring B-007-0-20 indicates 3.0 tsf, etc. Other items of interest may be the consolidation tests of the peat, unconfined compression tests, and direct shear tests.

Particularly, in the peat, this was tested up to 16 tsf; and the controlling criteria will be how much deflection is allowable for the equipment. For instance, if the peat is known to be 5' deep and the allowable deflection is 6" of total displacement at the surface, then a strain of 10% provides an allowable pressure of around 3 tsf or 6 ksf, from Boring 7 consolidation testing.

Q#85 Please clarify plan note on page 76/119 calls for pipe to have a <u>Minimum Nominal Wall Thickness of .500".</u> There is a 5% variation in weights between nominal wall and minimum wall and both types are specified. Please clarify if a true minimum wall thickness of .500" (.525" Nominal) or a nominal wall thickness of .500" (.475" minimum)? ASTM A252 allows a 5% less weight variation than theoretical weight. Please see plan spec requirements below.

ALL PILES SHALL HAVE A MINIMUM NOMINAL WALL THICKNESS OF ½ INCH. CONTRACTOR TO COORDINATE PLACEMENT OF PROPOSED PILES TO AVOID CONFLICTS WITH EXISTING PILING OR NEW GROUND IMPROVEMENTS. NOTIFY ENGINEER IF ANY CONFLICTS ARE FOUND.

A#85 The nominal wall thickness needs to be ½ inch as stated.

Q#86 Please confirm that the settlement monitoring is for the mass installed from the top of subgrade improvements to bottom of new abutment footers. Once the settlement requirements are met, the contractor can then drive piles and proceed with abutment and final MSE construction. No other settlement monitoring or settlement parameters are required for the final MSE fill above bottom of footer elevation.

A#86 Item 530 Special - Structures, Ground Improvement, included with this addendum, has been revised to a performance specification, and settlement criteria have been clarified, reference Part 2.A. The plan notes on plan sheets 76, 77, 80, and 81 have also been revised to clarify intent. Revised plan sheets are included with this addendum.

In general, the procedure is:

- *Place Item 530 Special ground improvements and MSE walls to the level of the bottom of abutment footers and allow to settle for 30 calendar days. This settlement is limited to 3" for ground improvement design.*
- *Drive piling.*

- *Continue construction of abutments and MSE embankment to full height (minus 1 ft subgrade, pavement, and copings). A total settlement of 0.4 inches after the 30-calendar day waiting period is allowable.*
- *Monitor settlement until attenuation is achieved, at 0.02 ft/14 days.*
- *Place final subgrade lifts, pavement, and coping.*

Q#87 Will the Commission allow the use of stay in place forms on this project?

A#87 Stay in place forms will be allowed, provided they meet a G235 or greater galvanizing and weigh less than 10 psf when filled. Foam or other material may be used to mitigate concrete weight in the SIP forms. Cambers and deflections may need to be modified based on the final SIP form weight and the actual concrete break strengths provided. This modification will be the responsibility of the fabricator to assess during the shop drawing process.

Q#88 In the first paragraph of the note Item 203 Special – Settlement Platforms on plan sheet 76 of 119, the first sentence states "and subgrades are compacted with a drainage layer". What drainage layer? There is no drainage layer detailed on the plans.

A#88 This would have been the first drainage layer below the MSE wall, but the language has been removed along with clarifications in the revised Item 530 Special - Structures, Ground Improvement, included with this addendum.

Q#89 In the third paragraph of the note Item 203 Special – Settlement Platforms on plan sheet 76 of 119, the second sentence states "The estimated timeframe for achieving this attenuation is 30 calendar days". How many calendar days are to be used in our baseline schedule?

A#89 The settlement criteria have been clarified, see answer to question #88 and revised Item 530 Special - Structures, Ground Improvement, included with this addendum.

Note: The Bid Opening Date has been extended from June 1, 2023, at 2:00 PM until June 6, 2023, at 2:00 PM.

END OF ADDENDUM NO. 6