

# **OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION**

# **ADDENDUM NO.1**

# **PROJECT NO. 43-19-03** BRIDGE DECK REPAIR AND REHABILITATION OHIO TURNPIKE RAMP OVER STATE ROUTE 420 M.P. 71.4, SOUTH BILLMAN ROAD OVER OHIO TURNPIKE M.P. 75.2 WOOD AND OTTAWA COUNTIES, OHIO

# **OPENING DATE: 2:00 P.M. (EASTERN TIME), DECEMBER 20, 2018**

# **ATTENTION OF BIDDERS IS DIRECTED TO: ANSWERS TO QUESTIONS RECEIVED THROUGH 2:00 PM ON DECEMBER 11, 2018**

-AND-

## **GEOTECHNICAL REPORT AND RECORD DRAWINGS**

-AND-

# **MODIFICATIONS TO THE CONTRACT DOCUMENTS**

Plan Sheets: 3, 9, 10, 11, 12, 13, 14, and 24 of 51

Bid Schedule of Items and Estimated Quantities Worksheet Ref. Nos. 13, 28, 42, 68A, 76, 100, 106 through 114

Issued by the Ohio Turnpike and Infrastructure Commission by Anthony D. Yacobucci, Chief Engineer, and Mark R. Musson, Director of Contracts Administration.

12-11-18

Anthony D. Yacobucci

Date

Mark R. Musson

Date

11/18

# ANSWERS TO QUESTIONS RECEIVED THROUGH 2:00 P.M. ON DECEMBER 11, 2018:

## Q#1 Can the soil borings/geotechnical report for bridge MP 71.4 Ramp Bridge be provided?

A#1 The geotechnical report is provided with this Addendum No. 1 solely to share information available to the Commission in accordance with IB 2.1.4

# Q#2 Can the Design Loads & Estimated pile lengths be provided for the HP10x42 MP 71.4 Ramp Bridge?

A#2 The design loads are provided in the geotechnical report, which is provided with this Addendum No. 1 as noted in the response to Q#1. All pile lengths are 35 feet estimated driven length, 40 feet furnished, achieving capacity prior to bedrock refusal. A "Pile Design Loads" note is added to Plan Sheet 9 of 51 through Addendum No. 1.

## Q#3 Are any dynamic load tests required for the HP10x42? If so, a bid item needs to be added.

A#3 Yes, dynamic load tests are required. A "Pile Design Loads" note is added to Plan Sheet 9 of 51 through this Addendum No. 1, which incorpates dynamic load testing. Furthermore, Item 523 – Dynamic Load Testing – 2 EACH is added to Plan Sheet 10 of 51 through this Addendum. The Bid Schedule of Items and Estimated Quantities Worksheet is revised to include Reference No. 112, Dynamic Load Testing, 2 EACH through this Addendum No. 1.

# Q#4 Is any concrete removal required on the existing pier caps of MP 71.4 Ramp Bridge prior to widening & raising the pier caps?

- A#4 The three existing surfaces (top and two ends, per pier) that are to be doweled to new concrete shall be roughened with no more than 1.5 inches of concrete depth to partially expose existing reinforcement prior to drilling for dowels. Saw cuts 1 inch shall be used to provide a clean, straight edge against which the new concrete will be poured. The cost of this work shall be included in Item 202 – Portions of Structure Removed. The "Cut Line Construction Joint Preparation" note is revised on Plan Sheet 9 of 51 to incorporate this requirement through this Addendum No. 1.
- Q#5 The plans call for the following work items to be performed but there is not any bid items setup for these items of work. Can the following bid items & corresponding quantities be added to the Bridge MP 71.4 Ramp Bridge items: Approach Slab Removed, Unclassified Excavation(substructure is being widened), Porous Backfill, 6" Perf Corr Plastic Pipe, 6" Non-perf Plastic Pipe, Semi-Integral Expansion Joint Seal, Semi-Integral Diaphragm Guide, Pressure Relief Joint Ty C, Crushed Aggregate Slope Protection(substructure is being widened), 2" Expansion Joint Filler.

A#5 The MP 71.4 bridge does not have approach slabs. Removal of the abutment slabs shall be included for payment under SP 202 – Portions of Structure Removed.

The following Reference Nos., Items, Item Descriptions and Quantities are added to the Bid Schedule of Items, the Estimated Quantities Worksheet and Plan Sheet 10 of 51:

Ref. No. 106, Item 503, Unclassified Excavation, 242 CU. YD. Ref. No. 107, Item 511, Semi-Integral Diaphragm Guide, 2 EACH Ref. No. 108, Item 516, Semi-Integral Abutment Expansion Joint Seal, 112 FOOT Ref. No. 109, Item 518, Porous Backfill with Geotextile Fabric, 64 CU. YD. Ref. No. 110, Item 518, 6" Perforated Corrugated Plastic Pipe, 72 FOOT Ref. No. 111, Item 518, 6" Non-Perforated Corrugated Plastic Pipe, 80 FOOT Ref. No. 113, Item 526, Type C Installation, 106 FOOT Ref. No. 114, Item 601, Crushed Aggregate Slope Protection, 66 CU. YD.

*Item* 516 – 2" *Preformed Expansion Joint Filler shall be included with Reference No. 100, Item* 526 – *Reinforced Concrete Approach Slabs for payment.* 

The Bid Schedule of Items and Estimated Quantities Worksheet for the above noted Reference Nos. as well as revised Plan Sheet 10 of 51 are incorporated into the Contract Documents through this Addendum No. 1.

- Q#6 The plans call for the following work items to be performed but there is not any bid items setup for these items of work. Can the following bid items & corresponding quantities be added to the Bridge MP 75.2 Billman Rd Bridge items: Approach Slab Removed, Reinforced Concrete Approach Slab(20ft x 13"T).
- A#6 In accordance with the details shown on Plan Sheet 44 of 51, removal of the approach slabs shall be included for payment under SP 202 Portions of Structure Removed.

Item 526 – Reinforced Concrete Approach Slabs (T=13") is revised on Plan Sheet 10 of 51 to include 126 SQ. YD. for the MP 75.2 bridge through this Addendum No. 1. Also, the Bid Schedule of Items and Estimated Quantities Worksheet for Reference No. 100 is revised from 300 SQ. YD. to 426 SQ. YD. through this Addendum No. 1.

- Q#7 Porous backfill w/ filter fabric, 6" perforated plastic pipe, and 6" non-perforated plastic pipe are shown behind the abutments and wingwalls of MP 71.4 on plan sheet 31/51. Where are these items to be paid?
- A#7 See the response to Q#5.

- Q#8 It appears the parapet on structure MP 71.4 is different then what is shown on the provided existing drawings. Please provide all existing drawings for this structure.
- A#8 The parapets were reconstructed in the 1990 rehabilitation project. The 1990 Rehabilitation Plans are provided with this Addendum No. 1 in accordance with IB 2.1.4.

# Q#9 Please provide furnish pile lengths and driving criteria (ultimate bearing value or pile tip elevation) for piles at each pier and abutment for structure MP 71.4.

A#9 See the response to Q#2.

# Q#10 Plan sheets 11 and 12 have width dimensions on existing proposed typical sections which are greatly understated. Please review and correct these typicals.

A#10 The dimensions on the Typical Sections had an incorrect scale factor. Dimensions are revised to show the correct widths on Plan Sheets 11 and 12 of 51 and included as part of this Addendum No. 1.

## Q#11 Bid Item 28, Tied Concrete Block Mat, Type 2: Owner quantity of 192 sy reflects 4 locations on plan sheets 13 and 14 with scaled dimensions of 48' length by 9' width per location. Plan says to refer to ODOT SCD DM-4.1 which shows a 5.5' width for this item. Please verify the width dimension and plan quantity.

- A#11 The width of Tied Concrete Block Mat, Type 2 is revised to 5'-6" on Plan Sheets 13 and 14 of 51, per the July 2018 revision to ODOT SCD DM-4.1. The plan quantity is revised through this Addendum No. 1 to reflect the area reduction from 192 SQ. YD. to 118 SQ. YD. on Plan Sheet 10 of 51. The Bid Schedule of Items and Estimated Quantities Worksheet for Ref. No. 28 is revised from 192 SQ. YD. to 118 SQ. YD. through this Addendum No. 1.
- Q#12 Plan sheets 18 and 19 cross-sections show wingwalls between the outside slope embankment and the existing slope. The owner cross-section fill quantity appears to be greatly understated if the fill between the new wingwall and existing slope is paid for under the roadway embankment item. Please recheck cross-section quantities and verify what is to be paid under roadway embankment item given that there is no structural excavation bid item.
- A#12 The embankment quantities are revised through this Addendum No. 1 to include the area between the existing wing walls and the new wing walls. Plan Sheets 10 and 24 of 51 are revised accordingly. The Bid Schedule of Items and Estimated Quantities Worksheet for Reference No. 13 is revised from 2,440 CU. YD. to 2,558 CU. YD. through this Addendum No. 1.

- Q#13 Bid item 42- Catch Basin CB-1: proposal and general summary on plan sheet 10 show 4 each as estimated quantity. Plan sheets 13 and 14 show 5 each. Please verify the quantity and revise as needed.
- A#13 The quantity for Item SP 611 Catch Basin, No. CB-1 are revised on Plan Sheet 10 of 51 from 4 EACH to 5 EACH through this Addendum No. 1. The Bid Schedule of Items and Estimated Quantities Worksheet for Reference No. 42 is revised from 4 EACH to 5 EACH through this Addendum No. 1.
- Q#14 Plan sheets 15-24: The cross sections do not show the limits of depth on the pavement removal. Please verify if the excavation and embankment volumes under proposed subgrade include replaced embankment between removed 15" of existing pavement (sheet 11) and proposed subgrade.
- *A#14* The excavation and embankment quantities include embankment to be placed between the limits of the removed pavement and the proposed subgrade.

## Q#15 Where is the excavation for the substructure work at structure MP 71.4 to be paid?

- A#15 See the response to Q#5.
- Q#16 Plan sheet 3 of 51 in the MOT notes, item II "Work Hours" gives limits of work hours during the week and on weekends. Although ODOT's web page doesn't show lane closure restrictions for SR 420, there will be scenarios on the bridge over SR 420 where a single permanent lane closure would be beneficial, such as for bridge painting. In addition, on Billman Road the bridge demolition and falsework will require single and double mainline Turnpike lane closures which are more conducive to night work. Please review these scenarios compared to the existing time-restrictive plan note and revise as needed to allow night work to occur.
- A#16 Nightime work activities are permitted when the authorized lane closures are restricted to nondaytime hours. The note on Plan Sheet 3 of 51 is revised through this Addendum No. 1 to include night work where required due to permitted lane closure restrictions.
- Q#17 Bid Item #100 "Reinforced Concrete Approach Slabs" has a total bid quantity of 300 sy for the structure at M.P. 71.4; however, it is missing quantity for the structure M.P. 75.2. Please adjust bid quantity to include the structure at M.P. 75.2.
- *A#17* See the response to #6.

- Q#18 Both bridges have an existing Approach Slab that is to be removed and replaced. Where is the removal of the existing approach slab to be paid?
- *A#18* See the response to *Q#5* and *Q#6* above.
- Q#19 Please provide soil borings for the structure work at M.P. 71.4.
- A#19 See the response to Q#1.
- Q#20 Please provide furnish lengths for the proposed pilings at the piers and abutments. Also, please provide anticipated drive depth. Will these piles be driven to rock?
- A#20 See the response to Q #2.
- Q#21 Where will the structure excavation for pier footers and abutments at M.P. 71.4 be paid? Please create a bid item for Unclassified Excavation.
- A#21 See the response to Q#5.
- Q#22 The Plan and Profile sheets (pgs. 13 & 14) for M.P. 71.4 show to removed existing barrier end section and extend barrier per ODOT SCD RM-4.5. Where is the removal of the existing barrier wall to be paid? Please create a barrier wall removal bid item by the lineal foot.
- A#22 Item 202 Concrete Barrier Removed (56 FOOT) is added to Plan Sheet 10 of 51 for the MP 71.4 bridge. The Bid Schedule of Items and Estimated Quantities Worksheet is revised to include Reference No. 68A, Concrete Barrier Removed, 56 FOOT through this Addendum No. 1.

## Q#23 The plans show that the existing backwalls at M.P. 75.2 will get removed and replaced. Where will the new concrete work be paid? Please create a bid item for this concrete work.

- A#23 Item 511 Class QC1 Concrete, Abutments Including Footings is revised on Plan Sheet 10 of 51 thorugh this Addendum No. 1 to include 4 CU. YD. for the replacement of the upper portion of the backwalls at the MP 75.2 bridge. The Bid Schedule of Items and Estimated Quantities Worksheet for Reference No. 76 are revised from 123 CU. YD. to 127 CU. YD. through this Addendum No. 1.
- Q#24 When the Bridge M.P. 71.4 and ramps are closed and the detour is in place, will a Zone Person be required on a continual basis (24 hours per day, 7 days per week)? If so, please create a bid item for Zone Person.

- A#24 A Zone Person is only required when the Ohio Turnpike mainline roadway is restricted with a Work Zone.
- Q#25 Note 2 on Pg. 5 states to refer to ODOT SCD MT-98.29 for Ramp Closure Details. This standard Drawing shows the installation of a Work Zone Edge Line to close the ramp. Where will this Work Zone Edge Line be Paid? Please create a bid item for the work zone edge line.
- A#25 In accordance with the note in Part IV PAYMENT on Plan Sheet 3 of 51, "Payment for Maintenance of Traffic Items, unless otherwise specified separately, shall be paid for under the Lump Sum Bid for Item SP 614 – Maintaing Traffic." The Work Zone Edge Line shall be included in the Lump Sum bid for Item SP 614 – Maintaining Traffic.
- Q#26 The "Work Hours" note on Pg. 3 of the plans states that Night Work is not permitted due to the residential nature of the surrounding areas; however, there are certain activities (falsework, remove deck slabs, deck pours, etc.) that will have to be performed at night due to the allowable permitted lane closures on both the Ohio Turnpike and SR 420. Please remove this note or re-write to allow critical night activities.
- A#26 See the response to Q#16.
- Q#27 There are no bid items set up for the Structure Drainage items such as: Porous Backfill & \_\_\_\_\_ inch \_\_\_\_ Pipe. Please set up appropriate bid items for the structure drainage at M.P. 71.4.
- A#27 See the response to Q#5.

## MODIFIED CONTRACT DOCUMENTS

With this Addendum No. 1, the Commission substitutes the enclosed material for the following Contract Documents:

Plan Sheets: 3, 9, 10, 11, 12, 13, 14, and 24 of 51 with additions to the Plan Drawings are called out with a cloud and a revision triangle as thus:



With this Addendum No. 1, the Commission modifies the Bid Schedule of Items for the following Reference Numbers: 13, 28, 42, 68A, 76, 100, 106 through 114

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Receipt of Addendum No. 1 Project No. 43-19-03 is hereby acknowledged:

(Firm Name)

(Signature)

(Printed Name)

(Date)

# **BIDDERS MUST RETURN THE ABOVE ACKNOWLEDGEMENT OF RECEIPT OF ADDENDUM NO. 1 WITH THEIR BID.**

## MAINTENANCE OF TRAFFIC SEQUENCE:

THESE PLANS ARE BASED ON THE FOLLOWING SUGGESTED SEQUENCE OF CONSTRUCTION.

#### OHIO TURNPIKE RAMP OVER STATE ROUTE 420

THE OHIO TURNPIKE RAMP OVER STATE ROUTE 420 SHALL BE CLOSED TO THROUGH TRAFFIC AND DETOURED ACCORDING TO THE PLANS. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL DRIVES AND ACCESS ROADS AT ALL TIMES DURING THE PROJECT UNLESS OTHERWISE AUTHORIZED BY THE CHIEF ENGINEER. DETOURS SHALL NOT BE PLACED INTO EFFECT UNTIL THE CONTRACTOR IS READY TO COMMENCE WORK.

#### SOUTH BILLMAN ROAD OVER THE OHIO TURNPIKE

SOUTH BILLMAN ROAD SHALL BE CLOSED TO THROUGH TRAFFIC AND DETOURED ACCORDING TO THE PLANS. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL DRIVES AND ACCESS ROADS AT ALL TIMES DURING THE PROJECT UNLESS OTHERWISE AUTHORIZED BY THE CHIEF ENGINEER. DETOURS SHALL NOT BE PLACED INTO EFFECT UNTIL THE CONTRACTOR IS READY TO COMMENCE WORK.

#### MAINTAINING TRAFFIC

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GENERALLY, THE CONTRACTOR SHALL CONDUCT OPERATIONS AS TO COMPLETE THE PROPOSED IMPROVEMENT WITH A MINIMUM OF HAZARD, DELAY AND INCONVENIENCE TO THE MOTORISTS USING THE HIGHWAY AFFECTED BY THE WORK DONE UNDER THIS CONTRACT.

THE CONTRACTOR'S RESPONSIBILITY TO THE SAFETY OF THE MOTORING PUBLIC WHILE PERFORMING THE REQUIREMENTS OF THE CONTRACT SHALL BE IN ACCORDANCE WITH THESE TEMPORARY TRAFFIC CONTROL PLANS, THE SPECIFICATIONS AND SPECIAL PROVISIONS, THE CURRENT EDITION, LATEST REVISION OF THE "OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" (OMUTCD). IN ADDITION TO THE CONSTRUCTION AND MATERIAL SPECIFICATIONS, THE FOLLOWING SPECIFIC PROVISIONS ARE MANDATORY.

THE CONTRACTOR SHALL FURNISH, ERECT, MAINTAIN AND SUBSEQUENTLY REMOVE ALL TRAFFIC CONTROL DEVICES AS PER SP 614 MAINTAINING TRAFFIC, AND THE DETOUR PLANS INCLUDING BARRICADES AND SIGNS IN ACCORDANCE WITH THE OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION (OTIC) STANDARD DRAWINGS AND OHIO DEPARTMENT OF TRANSPORTATION (ODOT) STANDARD CONSTRUCTION DRAWINGS AND THE OMUTCD. DETOUR SIGNS AND SUPPORTS SHALL BE ERECTED AND MAINTAINED BY THE CONTRACTOR.

#### I. NOTIFICATION

IN ADDITION TO THE NOTIFICATION REQUIREMENTS OF SP 614, THE CONTRACTOR SHALL INCLUDE THE FOLLOWING LOCAL AUTHORITIES.

#### SOUTH BILLMAN ROAD

- OTTAWA & WOOD COUNTIES
- GENOA TOWNSHIP POLICE DEPARTMENT
- GENOA TOWNSHIP FIRE & EMS
- ODOT DISTRICT 2
- GENOA TOWNSHIP MAINTENANCE DEPARTMENT
- GENOA AREA LOCAL SCHOOL DISTRICT

DETOUR ALONG A STATE ROUTE

OTIC WILL OBTAIN A "HIGHWAY USE" PERMIT FROM ODOT DISTRICT 2 FOR THE CONTRACTOR TO INSTALL DETOUR SIGNS ALONG SR 420 AND SR 163. THE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF THE PERMIT, THE ODOT STANDARD CONSTRUCTION DRAWINGS AND THE TEMPORARY TRAFFIC CONTROL PLANS PROVIDED IN THE CONTRACT DOCUMENTS.

#### II. WORK HOURS

NIGHT WORK IS NOT PERMITTED DUE TO THE RESIDENTIAL NATURE OF THE SURROUNDING AREAS EXCEPT WHEN REQUIRED DUE TO LANE CLOSURE RESTRICTIONS. EXCEPT AS INDICATED, LIMIT WORK HOURS TO DAYLIGHT HOURS BETWEEN 7:00 AM AND 9:00 PM, MONDAY THROUGH FRIDAY OR BETWEEN 8:30 AM AND 8:00 PM ON SATURDAY AND SUNDAY.

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III. LANE & SHOULDER CLOSURES

ALL LANE & SHOULDER CLOSURES SHALL BE IN ACCORDANCE WITH SP 614, THE OMUTCD AND APPLICABLE OTIC/ODOT STANDARD DRAWING(S).

OTIC TEMPORARY TRAFFIC CONTROL PHASE DATES, LANE REDUCTION TIME LIMITATIONS, AND LIQUIDATED DAMAGE CLAUSES ARE CONTAINED IN THE FOLLOWING SPECIAL PROVISIONS:

- SP 103, CONSTRUCTION PHASING AND TIME OF COMPLETION
- SP 104, ACCESS TO TURNPIKE AND RESTRICTIONS
- SP 107, TIME OF ESSENCE LIQUIDATED DAMAGES

AS SHOWN IN THE PLANS, LANE & SHOULDER CLOSURES ARE ANTICIPATED TO BE REQUIRED ON STATE ROUTE 420 AND PORTIONS OF

INTERSTATE 280.

- IV. MAINTENANCE OF TRAFFIC SYSTEMS
- A. WHEN REQUIRED

WHENEVER ANY PART OF THE TRAVELED SURFACE IS BEING WORKED UPON OR IS OTHERWISE NOT SUITABLE FOR SAFE AND CONVENIENT USE BY VEHICLES, TRAFFIC CONTROL DEVICES SUFFICIENT TO PROTECT SUCH AREAS TO ASSURE THE SAFE AND CONVENIENT PASSAGE OF VEHICULAR TRAFFIC SHALL BE INSTALLED AND MAINTAINED. SUCH TRAFFIC CONTROL DEVICES AND THE MANNER IN WHICH THEY ARE USED SHALL BE CONSISTENT WITH THESE PLANS, SP 614, THE OMUTCD OR AS SHOWN IN THE OTIC/ODOT STANDARD DRAWING(S). THE TRAFFIC CONTROL DEVICE SYSTEM SHALL CONSTITUTE THE MINIMUM PROVISIONS FOR TRAFFIC CONTROL FOR EACH PARTICULAR SITUATION. WHENEVER THE ENGINEER DEEMS IT NECESSARY ESPECIALLY WHERE A GRADE, CURVE, OR MERGE CONDITIONS EXISTS, HE/SHE MAY DIRECT THAT ADDITIONAL OR ALTERNATIVE DEVICES BE USED.

#### B. CONDITIONS

DURING ALL PARTS OF THIS PROJECT, FLAGGERS, SIGNING, BARRICADES, FLASHING ARROWS, ETC. SHALL BE LOCATED AS INDICATED IN THE OMUTCD OR AS SHOWN IN THE OTIC/ODOT STANDARD DRAWING(S).

C. ADVANCE WARNING SIGNS

ALL ADVANCE WARNING SIGNS FOR ANY CONDITION WHICH RESTRICTS TRAFFIC SHALL BE ERECTED BEFORE ANY SUCH RESTRICTION IS PUT INTO EFFECT. ALL SUCH SIGNS SHALL BE COVERED OR REMOVED FROM THE VIEW OF TRAFFIC WHENEVER THEY ARE NOT APPLICABLE.

### D. FLASHING ARROW REQUIREMENT

WHENEVER ANY PART OF THE TRAVELED SURFACE IS CLOSED, THE MOTORISTS SHALL BE WARNED AND DIRECTED BY THE CONTRACTOR THROUGH THE USE OF ONE FLASHING ARROW FOR EACH LANE CLOSED. ADDITIONALLY, THE PROVISIONS SET FORTH IN SP 614, THE OMUTCD AND THE APPLICABLE OTIC/ODOT STANDARD DRAWING(S) SHALL BE MET.

#### E. FLAGGERS

THE CONTRACTOR SHALL FURNISH ADDITIONAL FLAGGERS AS DIRECTED BY THE ENGINEER.

F. MAINTENANCE OF TRAFFIC CONTROL ZONES

THE CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN THE SIGNS, DRUMS AND TEMPORARY PAVEMENT MARKINGS AT THE LOCATIONS DETAILED IN THE PLANS OR SPECIFIED IN THE OTIC/ODOT STANDARD DRAWINGS. THE CONTRACTOR SHALL IMMEDIATELY CORRECT ANY DEFICIENCY IN TRAFFIC ZONE ALIGNMENT, EQUIPMENT, NUMBER OF DEVICES OR PROCEDURE OF FLAG PERSONS WHICH IS BROUGHT TO HIS/HER ATTENTION BY THE ENGINEER.

G. FAILURE TO COMPLY

IF THERE IS ANY FAILURE TO COMPLY WITH PROVISIONS FOR TRAFFIC CONTROL SET OUT IN THESE PLANS AND NOTES, OR WITH THE PROVISIONS OF SP 614, THE OMUTCD, OR AS SHOWN IN THE OTIC/ODOT STANDARD DRAWING(S), THE HIGHWAY IN THE VICINITY OF THE WORK AREA SHALL NOT BE CONSIDERED IN A CONDITION FOR THE SAFE AND CONVENIENT USE BY THE TRAVELING PUBLIC. ANY FAILURE TO KEEP THE HIGHWAY, IN THE VICINITY OF THE WORK AREA, IN A CONDITION FOR THE SAFE AND CONVENIENT USE BY THE TRAVELING PUBLIC SHALL BE CONSIDERED A BREACH OF THIS CONTRACT. WORK SHALL BE SUSPENDED UNTIL THE CONTRACTOR COMPLIES WITH THE PROVISIONS OF THE AFOREMENTIONED ITEMS.

- V. MAINTENANCE OF TRAFFIC MATERIALS
- A. SIGNS

SIGN DIMENSIONS AND SPECIFICATIONS, INCLUDING LETTER SIZES SHALL BE AS PROVIDED IN THE OMUTCD, OR IN OTIC/ODOT STANDARD DRAWING(S). THE SIGNS SHALL BE SUBJECT TO APPROVAL OF THE ENGINEER PRIOR TO THE START OF THE PROJECT.

B. GUARDRAIL DELINEATION

GUARDRAIL DELINEATION SHALL CONSIST OF AKT CORPORATION MODEL 567 ONE-WAY DELINEATORS INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTRUCTIONS. THE DELINEATORS SHALL BE SPACED 100' (MIN), WITH ALL GUARDRAIL RUNS HAVING NO LESS THAN TWO (2) DELINEATORS (ONE DELINEATOR ON THE BEGIN AND ONE ON THE END OF THE GUARDRAIL RUN)

PAYMENT FOR GUARDRAIL DELINEATION SHALL BE INCLUDED WITH ITEM SP 614 MAINTAINING TRAFFIC. SUCH PAYMENT SHALL INCLUDE PROVIDING, INSTALLING, MAINTAINING, REPLACING DAMAGED DELINEATORS AND REMOVING, AS SPECIFIED, FOR THE ABOVE SAID GUARDRAIL DELINEATION.

C. TEMPORARY PORTABLE BARRIERS

ALL TEMPORARY PORTABLE BARRIERS SHOWN ON THE PLANS FOR MAINLINE TEMPORARY TRAFFIC CONTROL WILL BE AS PER SP 622. THE SAME BARRIER CAN BE USED FOR THE VARIOUS PHASES. THE COST FOR TRANSPORTING, INSTALLING, MAINTAINING, REMOVAL AND STORING THE TEMPORARY PORTABLE BARRIER FOR EACH PHASE SHALL BE INCLUDED WITH SP 614, MAINTAINING TRAFFIC.

THE CONTRACTOR SHALL REPLACE ANY DAMAGED TEMPORARY PORTABLE BARRIER WITHIN 24 HOURS OF A DAMAGING IMPACT.

#### VI. PAYMENT

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH SP 614, AS SHOWN IN THE OTIC/ODOT STANDARD DRAWING(S), ODOT CONSTRUCTION & MATERIAL SPECIFICATION (C&MS) AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OMUTCD. PAYMENT FOR MAINTENANCE OF TRAFFIC ITEMS, UNLESS OTHERWISE SPECIFIED SEPARATELY, SHALL BE PAID FOR UNDER THE LUMP SUM BID FOR ITEM SP 614 - MAINTAINING TRAFFIC, WHICH SHAL INCLUDE ALL LABOR, EQUIPMENT MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THE WORK AS DETAILED IN THE PLAN.

#### NOTICE OF CLOSURE SIGNS

NOTICE OF CLOSURE SIGNS SHALL BE ERECTED BY THE CONTRACTOR AT LEAST TWENTY-ONE (21) DAYS IN ADVANCE OF THE SCHEDULED ROAD CLOSURE. THE SIGNS SHALL BE ERECTED ON THE RIGHT-HAND SIDE OF THE ROAD FACING TRAFFIC. THEY SHALL BE PLACED SO AS NOT TO INTERFERE WITH THE VISIBILITY OF ANY OTHER TRAFFIC CONTROL SIGNS. THEY SHALL BE ERECTED AT THE POINT OF CLOSURE. THE SIGNS SHALL REMAIN IN PLACE UNTIL THE ROADWAY IS REOPENED TO TRAFFIC.

THE NOTICE OF CLOSURE SIGNS SHALL BE IN ACCORDANCE WITH ITEM 614 AND ODOT SIGN DESIGNS AND MARKINGS MANUAL. EXCEPT THE LAST LINE SHALL READ "OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION".

	ROAD WILL BE
	CLOSED XX-XX-XX
I	FOR XX DAYS
	OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION

#### W20-H14 60" x 36"

THE COST FOR ALL MATERIALS, EQUIPMENT, AND LABOR NECESSARY TO FURNISH, ERECT, MAINTAIN IN AN ACCEPTABLE CONDITION AND REMOVE THE NOTICE OF CLOSURE SIGN SHALL BE INCLUDED IN THE LUMP SUM PRICE TOR SP 614 MAINTAINING TRAFFIC.

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## PERMANENT PAVEMENT MARKINGS

AFTER PLACING THE SURFACE COURSE, THE CONTRACTOR MAY PLACE PERMANENT PAVEMENT MARKINGS INSTEAD OF PLACING WORK ZONE PAVEMENT MARKINGS, WHICH SHALL BE NON-PERFORMED AT THESE LOCATIONS.

PERMANENT PAVEMENT MARKINGS SHALL BE IN PLACE AS INDICATED IN THE PLANS PRIOR TO OPENING THE ROADWAY TO TRAFFIC.

### CONTINUOUS ACCESS

THE CONTRACTOR SHALL MAINTAIN SAFE AND ADEQUATE DRIVEWAYS AND WALKWAYS IN ORDER TO PROVIDE CONTINUOUS ACCESS FOR PASSENGER VEHICLES, TRUCKS, AND SAFETY EQUIPMENT TO ALL ADJOINING PROPERTIES.

THE COST FOR ALL MATERIALS, EQUIPMENT, AND LABOR NECESSARY TO PROVIDE CONTINUOUS ACCESS SHALL BE INCLUDED IN THE LUMP SUM PRICE TOR SP 614 MAINTAINING TRAFFIC.

## COVERING OF GROUND-MOUNTED SIGNS- GENERAL

WHEN REQUIRED BY OTHER ITEMS OR INCIDENTALLY TO SP 614 MAINTAINING TRAFFIC, COVER EXISTING GROUND-MOUNTED SIGNS WITH PLYWOOD OR OSB BLANKS (1/2" MINIMUM THICKNESS) COVERING 80% OF THE SIGN AREA AND ALL OF THE SIGN LEGEND. THE USE OF LOW QUALITY MATERIALS SUCH AS DUCT TAPE AND BLACK PLASTIC IS NOT PERMITTED.

ITEM 630 - SIGNING MISC.: ADDITIONAL SIGNS. GROUND MOUNTED. AS DIRECTED BY THE ENGINEER

WHEN ADDITIONAL SIGNING IS NEEDED TO MAINTAIN TRAFFIC, THE CONTRACTOR SHALL FURNISH THE SIGN OR SIGNS AS DIRECTED BY THE ENGINEER. THESE SIGNS SHALL BE GROUND MOUNTED AND MEET ALL THE SPECIFICATIONS OF THE PLAN, PROPOSAL AND CURRENT YEAR CMS.

PAYMENT TOR THIS ITEM SHALL INCLUDE, BUT NOT BE LIMITED TO, THE COST TO FURNISH AND ERECT THE SIGN, INCLUDING DRIVING POSTS OR OTHER APPROVED METHODS OF SIGN SUPPORT, MAINTAINING THE SIGN AND REMOVAL OF THE SIGN. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER:

### ITEM 614 - REPLACEMENT SIGN

FLAT SHEET SIGNS FURNISHED BY THE CONTRACTOR IN ACCORDANCE WITH THE REQUIREMENTS OF THE PLANS, SPECIFICATIONS AND PROPOSAL WHICH BECOME DAMAGED BY TRAFFIC FOR REASONS BEYOND THE CONTROL OF THE CONTRACTOR SHALL BE REPLACED IN KIND WHEN ORDERED BY THE CHIEF ENGINEER. REPLACEMENT SIGNS SHALL BE NEW. OTHER MATERIALS MAY BE IN USED, BUT GOOD, CONDITION SUBJECT TO APPROVAL BY THE CHIEF ENGINEER.

PAYMENT FOR THE NEW SIGNS SHALL BE MADE AT THE CONTRACT PRICE PER EACH FOR ITEM 614, REPLACEMENT SIGN, AND SHALL INCLUDE THE COST OF REMOVING AND DISPOSING OF DAMAGED SIGNS, HARDWARE AND SUPPORTS, AND PROVIDING THE NECESSARY REPLACEMENT HARDWARE, SUPPORTS, ETC. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER:

## CONSTRUCTION TRAFFIC

ALL CONSTRUCTION TRAFFIC SHALL USE ACCEPTABLE TRUCK ROUTES TO ACCESS THE CONSTRUCTION AREA. USE OF LOCAL RESIDENTIAL STREETS IS STRICTLY PROHIBITED UNLESS ALLOWED IN WRITING BY THE LOCAL ENFORCEMENT AUTHORITY.

## SUSPENSION OF WORK

IF THE CONTRACTOR FAILS TO COMPLY WITH THE PROVISIONS FOR TRAFFIC CONTROL AS SET FORTH IN THESE PLANS OR WITH PROVISIONS OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, THE CHIEF ENGINEER WILL SUSPEND WORK UNTIL THE CONTRACTOR COMPLIES WITH THE NECESSARY REQUIREMENTS.

(	F	10 10 10 10 000	MAINTENANCE OF TPAFEIC CENEDAL NOTES	DESIGNED	CHECKED	NO.	REVISIONS	BY DA	NTE T	DESIGN AGENCY
5		PROJECI 43-19-03	MAINTENANCE OF TRAFFIC - GENERAL NOTES	MTG	ASW	-	ADDENDUM 1	MTG 12/	/18	KS Associates Inc.
3				DRAWN	IN CHARGE					. 1
)	_	DAIE: 08/21/18	M.P. 71.4 & 75.2 WOOD & OTTAWA COUNTI	ES MTG	НЛН			•	260 BURN	S ROAD, EL YRIA, OHIO 4403
OHIO		OHIO TU	<b>RNPIKE AND INFRAS</b>	<b>STRU</b>	CT	UR	E COMI	MIS	SSIC	

## DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO), 2002 17TH EDITION. AND THE ODOT BRIDGE DESIGN MANUAL

## DESIGN LOADING

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DESIGN LOADING: HS20-44, CASE II AND THE ALTERNATE MILITARY LOADING.

#### DESIGN DATA

CONCRETE CLASS HP4 - COMPRESSIVE STRENGTH 4500 PSI (SUPERSTRUCTURE)

#### CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4000 PSI (SUBSTRUCTURE)

REINFORCING STEEL - ASTM A615 OR A996, GRADE 60, MINIMUM YIELD STRENGTH 60 000 PSI

NEW STRUCTURAL STEEL - ASTM A709 GRADE 50, MINIMUM YIELD STRENGTH 50.000 PSI 

#### PILE DESIGN LOADS

THE ULTIMATE BEARING VALUE IS 102 KIPS PER PILE FOR THE FORWARD AND REAR ABUTMENT PILES. THE ULTIMATE BEARING VALUE IS 166 KIPS PER PILE FOR ALL PIER PILES.

ABUTMENT PILES: HP 10x42 PILES 40 FEET LONG, ORDER LENGTH 1 DYNAMIC LOAD TESTING ITEMS

PIER PILES: HP 10X42 PILES 40 FEET LONG, ORDER LENGTH 1 DYNAMIC LOAD TESTING ITEMS

DECK PROTECTION METHOD

EPOXY COATED REINFORCING STEEL

#### 2-1/2" CONCRETE COVER

#### MONOLITHIC WEARING SURFACE

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1 INCH THICK.

#### ORIGINAL CONSTRUCTION PLANS

ORIGINAL CONSTRUCTION PLANS SHOWING THE ORIGINAL ALIGNMENT, PROFILE, AND DETAILS OF THE BRIDGE ARE AVAILABLE ON BID EXPRESS WITH THE OTHER CONTRACT DOCUMENTS.

#### EXISTING STRUCTURE VERIFICATION

EXISTING STRUCTURE VERIFICATION: DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUC-TURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY. THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 501.02 AND 513.04 AND OTIC INSTRUCTION TO BIDDERS ARTICLE 2.1 AND GENERAL CONDITIONS ARTICLE 1.5.

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAM-INATION OF THE EXISTING STRUCTURE. HOWEVER, THE COMMISSION WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS WHICH HAVE BEEN VERIFIED IN THE FIELD.

#### CUT LINE CONSTRUCTION JOINT PREPARATION

CUT LINE CONSTRUCTION JOINT PREPARATION: SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1 INCH DEEP REMOVE CONCRETE TO A ROUGH SURFACE. LEAVE THE EXISTING REINFORCING STEEL, AS REQUIRED IN THE PLANS, IN PLACE. INSTALL DOWEL BARS IF SPECIFIED. PRIOR TO CONCRETE PLACEMENT ABRASIVELY CLEAN JOINT SURFACES AND EXISTING EXPOSED REINFORCEMENT TO REMOVE LOOSE AND DISINTEGRATED CONCRETE AND LOOSE RUST. THOROUGHLY CLEAN THE JOINT SURFACE AND EXPOSED REINFORCEMENT OF ALL DIRT. DUST. RUST OR OTHER FOREIGN MATERIAL BY THE USE OF WATER AIR UNDER PRESSURE. OR OTHER METHODS THAT PRODUCE SATISFACTORY RESULTS. EXISTING REINFORCING STEEL DOES NOT HAVE TO HAVE A BRIGHT STEEL FINISH, BUT REMOVE ALL PACK AND LOOSE RUST. THOROUGHLY DRENCH EXISTING CON-CRETE SURFACES WITH CLEAN WATER AND ALLOW TO DRY TO A DAMP CONDITION BEFORE PLACING CONCRETE.

## ITEM 510, DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN

ALL SPECIFICATIONS OF ITEM 510 SHALL APPLY. THIS ITEM INCLUDES ALL WORK AND MATERIALS FOR DOWELS TO BE INSTALLED AS SHOWN IN PLANS DRILL DOWEL HOLES WHERE SHOWN IN THE PLANS THE BAR TO BE DOWELED SHALL BE THE SAME SIZE AS THAT WHICH WILL LAP IT. INSTALL REINFORCING STEEL DOWELS USING EPOXY GROUT, 705.20, AND PER MANUFACTURER'S RECOMMENDATIONS. THE TABLE BELOW IS FOR REFERENCE; DOWEL BAR INSTALLATION LENGTHS AND PROCEDURES WILL VARY DEPENDING ON VENDOR. PRIOR TO DRILLING DOWEL HOLES, LOCATE ALL EXISTING REINFORCING STEEL BARS IN THE AREA OF THE HOLE WITH THE AID OF A REINFORCING STEEL BAR LOCATOR (PACHOMETER). IF AN EXISTING BAR IS ENCOUNTERED AT THE SAME LOCATION AS A PROPOSED DOWEL HOLE MOVE THE DOWEL HOLE TO EITHER SIDE OF THE EXISTING BAR. THE COMMISSION WILL PAY FOR DOWEL BARS, DOWEL HOLES. AND GROUTING WITH ITEM 510

	DOWEL INFO	ORMATION	
BAR SIZE	MIN. EDGE DISTANCE	MIN. EMBEDMENT	MIN. LENGTH
4	3	5"	17"
5	31/8 "	6"	18"
6	33/4	7"	19"
7	4 <sup>3</sup> / <sub>8</sub> "	8"	20"
8	5	9"	21"
9	5 <sup>5</sup> /8"	10 <sup>1</sup> / <sub>2</sub> "	23"
10	61/4"	111/2"	24"

THE EXISTING PIER SURFACES (TOP AND TWO ENDS OF EACH PIER) THAT ARE TO RECEIVE DOWELS TO CONNECT NEW CONCRETE TO THE EXISTING SHALL BE ROUGHENED TO A DEPTH OF AT LEAST  $1\frac{1}{2}$ " TO PARTIALLY EXPOSE THE EXISTING REINFORCEMENT PRIOR TO DRILLING FOR DOWELS. 1" SAW CUTS SHALL BE USED TO PROVIDE CLEAN. STRAIGHT EDGES AGAINST WHICH THE NEW CONCRETE WILL BE POURED THE COST TO PERFORM THIS WORK SHALL BE CONSIDERED INCIDENTAL TO ITEM SP 202 - PORTIONS OF STRUCTURE REMOVED. .....

ITEM 509 REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL

ITEM 509 REINFORCING STEEL. REPLACEMENT OF EXISTING REINFORCING STEEL · REPLACE ALL EXISTING REINFORCING BARS DEEMED BY THE ENGINEER TO BE UNUSABLE BECAUSE OF CORROSION. THE COMMISSION WILL MEASURE THE REPLACEMENT REINFORCING STEEL BY THE NUMBER OF POUNDS ACCEPTED IN PLACE.

REPLACE ALL EXISTING REINFORCING STEEL BARS WHICH ARE TO BE INCORPORATED INTO THE NEW WORK AND ARE DEEMED BY THE ENGINEER TO BE MADE UNUSABLE BY CONCRETE RE-MOVAL OPERATIONS WITH NEW EPOXY COATED REINFORCING STEEL OF THE SAME SIZE AT NO COST TO THE COMMISSION.

ANY CUTTING OR BENDING OF BARS NECESSARY TO ACCOMMODATE ANY ESSENTIAL ELEMENT OF WORK RELATED TO THE PROJECT SHALL BE INCLUDED IN THE UNIT BID PRICE BID FOR ITEM 509 REINFORCING STEEL REPLACEMENT OF EXISTING REINFORCING STEEL AND/OR ITEM SP 509 EPOXY COATED REINFORCING STEEL UNLESS OTHERWISE NOTED

#### ITEM 513 - STRUCTURAL STEEL

ALL PROVISIONS OF 513 APPLY. NEW STRUCTURAL STEEL SHALL BE SHOP PRIMED AND TOUCHED UP AS NECESSARY AFTER INSTALLATION PRIOR TO RECEIVING INTERMEDIATE AND FINAL COATS PER SP 514A THE COST OF SHOP PRIMING SHALL BE INCLUDED WITH ITEM 513 -STRUCTURAL STEEL

#### ITEM SP 536 - CONCRETE WEATHERPROOFING

ITEM SP 536 - CONCRETE WEATHERPROOFING SHALL BE APPLIED TO THE FOLLOWING NEW EXPOSED CONCRETE SURFACES OF THE BRIDGE:

- THE TOP OF NEW APPROACH SLABS AND NEW DECK
- ALL SLAB SIDE EDGES
- THE BOTTOM SURFACE OF THE NEW DECK FROM THE EDGE TO THE EXTERIOR STRINGER FLANGE
- ALL EXPOSED CONCRETE SURFACES OF ALL ABUTMENTS AND PIERS SEALING SHALL NOT BE DONE UNTIL ALL CONCRETE PATCHING REPAIRS HAVE BEEN COMPLETED AND CURED

CARE SHALL BE TAKEN NOT TO APPLY WEATHERPROOFING ON CONSTRUCTION JOINT SURFACES, SURFACES TO RECEIVE JOINT SEALER, OR FASCIA BEAM PAINT.

#### EXISTING RIGHT OF WAY FENCE

IT IS THE INTENT OF THE PROJECT FOR THE EXISTING RIGHT OF WAY FENCE NEAR THE BRIDGE TO REMAIN. HOWEVER, IF THE CONTRACTOR DEEMS IT NECESSARY TO REMOVE THE FENCE FOR CONSTRUCTION OPERATIONS AS APPROVED BY THE ENGINEER THE CONTRACTOR SHALL CAREFULLY REMOVE THE FENCE AND REINSTALL IN ACCORDANCE WITH ITEM 607. IF THE FENCE BECOMES DAMAGED DUE TO THE CONTRACTORS OPERATIONS, THE FENCE SHALL BE REPLACED AT NO COST TO THE COMMISSION

ALL LABOR, MATERIALS, EQUIPMENT, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT AND NO ADDITIONAL COMPENSATION SHALL BE GRANTED.

#### EROSION CONTROL

IT IS THE INTENT OF THE PROJECT TO NOT DISTURB ANY SEEDED AREAS AND/OR DRAINAGE ELEMENTS. ANY WORK INVOLVING SEEDED AREAS. DRAINAGE ELEMENTS. OR EROSION CONTROL SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT COST AND SHALL BE REPAIRED/PROTECTED AS DIRECTED BY THE ENGINEER.

ALL LABOR, MATERIALS, EQUIPMENT, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT AND NO ADDITIONAL COMPENSATION SHALL BE GRANTED.

#### WELD ATTACHMENTS

WELD ATTACHMENT OF SUPPORTS FOR CONCRETE DECK FINISHING MACHINE TO AREAS OF THE FASCIA STRINGER FLANGES DESIGNATED "COMPRESSION". DO NOT WELD ATTACHMENTS TO AREAS DESIGNATED "TENSION". FILLET WELDS TO COMPRESSION FLANGES SHALL BE AT LEAST 1" FROM EDGE OF FLANGE, BE NO MORE THAN 2" LONG, AND BE AT LEAST 1/4" FOR THICKNESSES UP TO 3/4" OR 5/16" FOR GREATER THAN 3/4" THICK.

#### DECK SLAB CONCRETE QUANTITY

THE ESTIMATED QUANTITY OF DECK SLAB CONCRETE IS BASED ON THE CONSTANT DECK SLAB THICKNESS, AS SHOWN, PLUS THE QUANTITY OF CONCRETE THAT FORMS FACH BEAM/GIRDER HAUNCH THE ESTIMATE ASSUMES A CONSTANT HAUNCH THICKNESS OF 2 INCHES AND A CONSTANT HAUNCH WIDTH EQUAL TO THE TOP FLANGE WIDTH. DEVIATE FROM THIS HAUNCH THICKNESS AS NECESSARY TO PLACE THE DECK SURFACE AT THE FINISHED GRADE.

THE HAUNCH THICKNESS WAS MEASURED AT THE CENTERLINE OF THE BEAM/GIRDER. FROM THE SURFACE OF THE DECK TO THE BOTTOM OF THE TOP ELANGE MINUS THE DECK SLAB THICKNESS THE AREA OF ALL EMBEDDED STEEL PLATES HAS BEEN DEDUCTED FROM THE HAUNCH QUANTITY IN ACCORDANCE WITH 511.23.

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		5	0
<u>PE OF WORK (MP 71.4)</u> REMOVE AND REPLACE EXISTING 30:6" DECK WITH NEW		0 440	OHIO
WIDENED 52-0" COMPOSITE DECK (ADD SHEAR STUDS PER PLAN), SINGLE SLOPE BRIDGE RAILING (SBR-1-13), AND MEDIAN CURB	VCY	RIA, OHI	
REMOVE AND REPLACE EXISTING APPROACH SLABS WITH SEMI INTEGRAL APPROACHES	ESIGN AGEI	AD, ELY	z
RAISE EXISTING SUPERSTRUCTURE TO PLAN ELEVATIONS		V S R C	ō
CONVERT EXISTING ABUTMENT TO SEMI-INTEGRAL AND WIDEN SYMMETRICALLY		60 BURN	SIC
WIDEN ALL PIERS SYMMETRICALLY WITH ADDITION OF NEW CAP EXTENSION AND COLUMN ON DRIVEN PILE FOUNDATION	DA TE 12/18	5	<u>io</u>
REPLACE ALL EXISTING BEARINGS WITH ELASTOMERIC BEARINGS	BY RAP	•	5
SEALING OF CONCRETE SURFACES PER SP 536			
PE OF WORK (MP 75.2)			
REMOVE AND REPLACE EXISTING DECK WITH NEW COMPOSITE DECK (REUSING EXISTING SHEAR STUDS) AND SINGLE SLOPE BRIDGE RAILING (SBR-1-13) AND CHAIN LINK SAFETY FENCE (CL-2)	REVISIONS		U U U
REMOVE AND REPLACE EXISTING APPROACH SLABS AND DECK EXPANSION JOINTS			Ш
SUBSTRUCTURE PATCHING PER SP 519	<u>- vo</u>		
SEALING OF CONCRETE SURFACES PER SP 536	ED	GE	2
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	DES DES	12 <b>X</b>	L L L
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ITEM	TOTAL	UNIT	ITEM DESCRIPTION	GENERAL	M.P. 71.4	M.P. 75.2	SHT NO.	]	ITEM	TOTAL	UNIT	ITEM DESCRIPTION	GENERAL	M.P. 71.4	M.P. 75.2	SHT NO.	
			GENERAL	02/12/012				1	630	12	SQ. FT.	ADDITIONAL SIGNS, GROUND MOUNTED, AS DIRECTED BY THE ENGINEER		12			tos
IR ART 6	LUMP SUM	I UMP SUM	PREMIUM FOR CONTRACT PERFORMANCE BOND AND PAYMENT BOND	I LIMP SUM				1	642	0.7	MILE	EDGE I INE 4" TYPE 1		0.5	02		
SP 614				LUMP SUM				1	642	0.1	MILE	CENTER LINE TYPE 1		0.0	0.1		AGEN
SP 610								-	650	2 170	NIILL SO VD		_	2 170	0.7	┢───┤	
SF 019	LUMP SUM	LUMP SUM		LUMP SUM				-	650	3,470	GU VD			3,470	┝────┘	$\vdash$	- DES
SP 623	LUMP SUM	LUMP SUM		LUMP SUM				-	059	380	CU. YD.		_	380	───′	$\vdash$	
624	LUMP SUM	LUMP SUM	MOBILIZATION	LUMP SUM				4	670	282	SQ. YD.	DITCH EROSION PROTECTION	_	282	<b>└───</b> ′	$\vdash$	-   🗹
								4	670	360	SQ. YD.	VEGETATED BIOFILTER, AS PER PLAN		360	<b>└───</b> ′	8	
			ROADWAY						832	10,000	EACH	EROSION CONTROL		10,000	<u> </u>		
201	LUMP SUM	LUMP SUM	CLEARING AND GRUBBING	LUMP SUM					832	LUMP SUM	LUMP SUM	STORM WATER POLLUTION PROTECTION PLAN	LUMP SUM		<u> </u>		DA TE 2/18
202	1,221	FOOT	GUARDRAIL REMOVED		1,096	125		1	SPECIAL	57	FOOT	PIPE CLEANOUT, 24" AND UNDER		57	(	14	7 d
202	8	EACH	BRIDGE TERMINAL ASSEMBLY REMOVED		4	4		1	SPECIAL	2	EACH	18" PRECAST CONCRETE END SECTION		2	· · · · ·	25	1 B 5
= 202	56	FOOT	CONCRETE BARRIER REMOVED		56	5		1	SPECIAL	1	EACH	PRECAST REINFORCED CONCRETE OUTLET		1	· · · · · ·	14	11
202	2 002	SO VD			2 002			1							<sup> </sup>		
202	2,002	EAQU			2,002			-		┝────┦		STELICTURES			┝────┘		-
202	5	EACH			5			-	0.0.000							<u> </u>	
202	$\Lambda^{190}$	FOOT	PIPE REMOVED		190				5P 202	LUMP SUM	LUMP SUM	PORTIONS OF STRUCTURE REMOVED	_	LUMP SUM	LUMP SUM	┢───┤	EVIS DENE
202	<u></u>	EACH	HEADWALL REMOVED					44	503		LUMP SUM	CUFFERDAMS AND EXCAVATION BRACING		LUMP SUM	<b>└──</b> ′	$\vdash$	ADI A
203	2,558	CU. YD.	EMBANKMENT		{ <i>2,558</i> }				503	242	CU. YD.	UNCLASSIFIED EXCAVATION	h	242	<b>↓</b> ′		
203	246	CU. YD.	EXCAVATION		246				505	LUMP SUM	LUMP SUM	PILE DRIVING EQUIPMENT MOBILIZATION		LUMP SUM			
204	2,253	SQ. YD.	SUBGRADE COMPACTION		2,253				507	1,400	FOOT	STEEL PILES, HP10x42, DRIVEN		1,400	1		$ \downarrow\downarrow$
209	302	FOOT	LINEAR GRADING, AS PER PLAN		302		8	1	507	1,600	FOOT	STEEL PILES, HP10x42, FURNISHED		1,600	[]		1 <u>8</u> -
254	313	SO YD	PAVEMENT PLANING, ASPHALT CONCRETE (3")			313	-	1	SP 509	183.623	POUND	EPOXY COATED REINFORCING STEEL. GRADE 60		127.381	56.242		1
50 204	256		ACCEPCATE BASE		256	010		1	510	1 310	FACH	DOWEL HOLES WITH NONSHRINK NONMETALLIC GROUT AS PER PLAN		310	1	0	D KED
3r 304	350	CO. YD.	AUGREUATE DAGE		350			1	510	× 10		CLASS OCT CONODETE ABUTMENTS INCLUDING EDOTINGS		100	+	3	<u>s</u> JI
SP 402	101	CU. YD.	ASPHALT CONCRETE BASE COURSE OR RECYCLED ASPHALT CONCRETE		101				511		CU. YD.	CLASS QUI CONCRETE, ADUIMENTS INCLUDING FOUTINGS		123	$\downarrow 4$	┥──┤	
			BASE COURSE, PG70-22 (1-5/4 )					1/1	511	170	CU. YD.	CLASS QC1 CONCRETE, PIERS		170	Ļ'		
SP 404	87	CU. YD.	ASPHALT CONCRETE SURFACE COURSE, USING CRUSHED SLAG, PG70-22 (1-1/2")		87				511	2	EACH	SEMI-INTEGRAL DIAPHRAGM GUIDE		2	<u> </u>		
407	144	GAL.	NON-TRACKING TACK COAT		125	19			SP 511B	567	CU. YD.	CLASS HP4 CONCRETE, SUPERSTRUCTURE DECK SLAB		350	217		C
407	180	GAL.	NON-TRACKING TACK COAT FOR INTERMEDIATE COURSE		156	24		1	SP 511B	150	CU. YD.	CLASS S CONCRETE, BARRIERS AND PARAPETS, USING TYPE 1 CEMENT		67	83		1 -
448	16	CU. YD.	1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE. TYPE 2. PG64-22			16		1	SP 511B	12	CU. YD.	CLASS HP4 CONCRETE FOR PREPLACEMENT TESTING		6	6		11
448	15		1 1/4" ASPHALT CONCRETE SURFACE COURSE TYPE 1 PG64-22			15		1	513	179.901	ΡΟUΝD	STRUCTURAL STEEL		179.901	<b>!</b>		11
451	104	500T			104	10		1	513	6.816	EACH			6.816	<u>├</u> ────┦		
451	104	FOOT	SPECIAL - PRESSURE RELIEF JUINT, TYPE B		104			-	373	0,010	EACH			0,070	<u>!</u> '	$\vdash$	- 1
452	$A^{2,094}$	SQ. YD.	12-1/2" NON-REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT		$\Lambda^{2,094}$			4	SP 514A	LUMP SUM	LUMP SUM	SURFACE PREPARATION OF EXISTING STEEL, SYSTEM OZEU	_	LUMP SUM	<u>↓                                    </u>		- 1
601 4		CU. YD.	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER	4				4	SP 514A	LUMP SUM	LUMP SUM	FIELD PAINTING OF EXISTING STEEL, PRIME COAT, SYSTEM OZEU	_	LUMP SUM	<b>└───</b> ′		- 1
601	{ 118 }	SQ. YD.	TIED CONCRETE BLOCK MAT, TYPE 2		{ 118 }				SP 514A	LUMP SUM	LUMP SUM	FIELD PAINTING OF NEW AND EXISTING STEEL, INTERMEDIATE COAT, SYSTEM OZEU		LUMP SUM			၂လ
SP 605	698	FOOT	6" SHALLOW PIPE UNDERDRAIN, WITH FABRIC WRAP		698				SP 514A	LUMP SUM	LUMP SUM	FIELD PAINTING OF NEW AND EXISTING STEEL, FINISH COAT, SYSTEM OZEU		LUMP SUM	1 /		112
606	1,038	FOOT	GUARDRAIL, TYPE MGS, USING STEEL POSTS		913	125		1	SP 514A	20	HOURS	REMEDIATION OF CHLORIDES		52	'		111
606	8	EACH	MGS BRIDGE TERMINAL ASSEMBLY. TYPE 1. USING STEEL POSTS		4	4		1	SP 514A	32	HOURS	GRINDING FINS, TEARS, SLIVERS		84	· · · · ·		<b>Z</b>
606	4	FACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2 LISING STEEL POSTS		4			1	516	20	FACH	ELASTOMERIC BEARING PAD		20	<b>!</b>		13
606	2	EACH			7			14	516	112				112			o
000	2	EACH			2							SEMI-INTEGRAL ADDITION EXPANSION JOINT SEAL			('	<u>                                     </u>	
606	4	EACH	MGS ANCHOR ASSEMBLY, TYPE T		4			-	SP 516A	100	F001	CRACK REPAIR USING EPOXY INJECTION	_	50	50	$\vdash$	
609	80	SQ. YD.	CONCRETE MEDIAN		80			4	SP 516B	992	FOOT	SEALING OF CONSTRUCTION JOINTS	_	446	546	$\vdash$	<b>∐</b> ≱
609	80	FOOT	CURB, TYPE 4-C		80			1.	SP 516G	20	EACH	REPLACE EXPANSION BEARING DEVICE		20	Ļ'		11Ē
SP 611	80	FOOT	6" CONDUIT, TYPE F, 707.33		80				SP 516J	5	EACH	REPLACE FIXED BEARING DEVICE		5			
SP 611	51	FOOT	12" CONDUIT, TYPE B		51				518	64	CU. YD.	POROUS BACKFILL WITH GEOTEXTILE FABRIC		64	k		-
SP 611	223	FOOT	12" CONDUIT, TYPE F, 707.33		223			1 '	518	72	FOOT	6" PERFORATED CORRUGATED PLASTIC PIPE		72	Į į		11
SP 611	<u> </u>	FOOT	18" CONDUIT. TYPE A. 706.02		<u> </u>			1	518	80	FOOT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE		80	<u>}</u>		11
SP 611	$\frac{1}{5}$	EACH			1	1		1 A '	SD 540	200				h	200	<u>⊢</u>	11
01-011	<u>ک</u> ش	EACH			$\overline{\sum_{i=1}^{n}}$	4		14							200	┝───┤	11
SP 611		EACH						+ 7	523	2	EACH	DYNAMIC LOAD TESTING		2	<u>;</u> '	┝───┤	41
614	LUMP SUM	LUMP SUM	DETOUR SIGNING	LUMP SUM				4	SP 525A	LUMP SUM	LUMP SUM	WORKER PROTECTION	_	LUMP SUM	<b>└───</b> ′	$\vdash$	┤┝──
614	3	EACH	REPLACEMENT SIGN		3			1	SP 525A	40	EACH	PROTECTIVE CLOTHING/EQUIPMENT SET		40	ļ'		11
620	4	EACH	DELINEATOR		4				SP 525A	LUMP SUM	LUMP SUM	ESTABLISH REGULATED AREAS		LUMP SUM			<u></u>
622	118	FOOT	CONCRETE BARRIER, TYPE D		118				SP 525A	LUMP SUM	LUMP SUM	PAINT WASTE/HAZARDOUS WASTE CLASSIFICATION, HANDLING, AND DISPOSAL		LUMP SUM			
622	4	EACH	CONCRETE BARRIER END SECTION, TYPE D		4			1	SP 525A	LUMP SUM	LUMP SUM	CONTAINMENT SYSTEM		LUMP SUM	· · · · ·		<u>۲</u>
626	51	FACH	BARRIER REFLECTORS, 1-WAY		43	8			526	426	SO YD	REINFORCED CONCRETE APPROACH SLABS		300	126		1 8
SD 627	20				20			14		100					لستثنيها	<u> </u>	⊢
//	- 28	CU. YD.	SIONE SHOULDER PROTECTION		28			- 7	520	106				100	<u> </u>	<u> </u>	1
3F 027	2	EACH	SIGN ERECTED, FLAT SHEET, AS PER PLAN		2		8	1	SP 527	LUMP SUM	LUMP SUM	FALSEWORK, TEMPORARY BRACING AND PROTECTIVE STRUCTURES		LUMP SUM	LUMP SUM		112
630		FOOT	GROUND MOUNTED STRUCTURAL BEAM SUPPORT, W10X12		32				SP 533	72	FOOT	3" CONTINUOUS STRIP SEAL IN STRUCTURAL STEEL JOINT			72		102
630 630	32		GROUND MOUNTED STRUCTURAL BEAM SUPPORT FOUNDATION		4				SP 536	2,561	SQ. YD.	CONCRETE WEATHERPROOFING, DECK AND APPROACH SLABS		1,477	1,084		
630 630 630	32 4	EACH								<u> </u>					<u>'</u>	L	1
630 630 630 630	32 4 3	EACH EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL		3			1 🛆	SP 536	976	SQ. YD.	CONCRETE WEATHERPROOFING, SUBSTRUCTURE		634	342	1 1	11
630 630 630 630 630	32 4 3 3	EACH EACH EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL REMOVAL OF GROUND MOUNTED POST AND DISPOSAL		3				SP 536	976 66	SQ. YD.	CONCRETE WEATHERPROOFING, SUBSTRUCTURE		634	342	<b>  </b>	
630 630 630 630 630 630 630	32 4 3 3 2	EACH EACH EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL REMOVAL OF GROUND MOUNTED POST AND DISPOSAL REMOVAL OF GROUND MOUNTED MAJOR SIGN AND REFERENCE		3 3			]Ą	SP 536 601	976 66	SQ. YD. CU. YD.	CONCRETE WEATHERPROOFING, SUBSTRUCTURE CRUSHED AGGREGATE SLOPE PROTECTION		634 66	342		



	BY DATE DESIGN AGENCY	KS Associates Inc.	260 BURNS ROAD, ELYRIA, OHIO 44035	
	REVISIONS			COM
	VED CHECKED NO.		· HAH	UCTUR
	EXISTING TYPICAL SECTIONS	OHIO TURNPIKE RAMP OVER STATE ROUTE 420	M.P. 71.4 WOOD COUNTY CFE	JRNPIKE AND INFRASTRI
G ASPHALT PAVEMENT (T=3" ±) G CONCRETE PAVEMENT (T=12" ±) G AGGREGATE BASE (T=8" ±)	T   PROJECT 43-19-03	$\overline{11}$	UDATE: 08/21/18	OHIO TC



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![](_page_13_Figure_0.jpeg)

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![](_page_14_Figure_0.jpeg)

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	ΕΛ	ID AREA	VC	DLUME	SE	EDING
STATION	CUT	FILL	СИТ	FILL	END WIDTH	SQUARE YARDS
4+08.25	0	0			5	
			2	39		62
4+50.00	2	51			21	
			2	153		213
5+00.00	0	114			55	
			5	276		334
5+50.00	5	184			65	
			9	234		242
5+80.03	11	236			80	
			4	81		78
5+88.53	12	A 281		4	84	
		14 m	3	138		106
6+00.00	0	365			83	
			0	210 }		131
6+13.53	0	{ 435 }			92	
		X///X/////////////////////////////////	X/////////////////////////////////////	[]]]]]]]]]]]]]]]]]]]]]]]]]]]]]]]]]]]]]]		
8+08.53	18	<u>} 414</u>	<i>\////////////////////////////////////</i>	///////////////////////////////////////	108	
			25	{ 327 }		314
					118	
8+33.53	37	292			110	
8+33.53	37	292	12	89	110	112
8+33.53 8+42.03	37 42	292 274	12	89	118	112
8+33.53 8+42.03	37 42	292 274	12 12 12	89 78	118	112 104
8+33.53 8+42.03 8+50.00	37 42 39	292 274 253	12 12 12	89 78	118 118 117	112 104
8+33.53 8+42.03 8+50.00	37 42 39	292 274 253	12 12 12 73	89 78 435	118	112 104 641
8+33.53 8+42.03 8+50.00 9+00.00	37 42 39 40	292 274 253 217	12 12 73	89 78 435	118 118 117 114	112 104 641
8+33.53 8+42.03 8+50.00 9+00.00	37 42 39 40	292 274 253 217	12 12 12 73 68	89 78 435 327	118 118 117 114	112 104 641 634
8+33.53 8+42.03 8+50.00 9+00.00 9+50.00	37 42 39 40 33	292 274 253 217 136	12 12 12 73 68	89 78 435 327	118 118 117 114 114	112 104 641 634
8+33.53 8+42.03 8+50.00 9+00.00 9+50.00	37 42 39 40 33	292 274 253 217 136	12 12 73 68 31	89 78 435 327 159	118 118 117 114 114	112 104 641 634 449
8+33.53 8+42.03 8+50.00 9+00.00 9+50.00 10+00.00	37 42 39 40 33 0	292 274 253 217 136 35	12 12 73 68 31	89 78 435 327 159	118 118 117 117 114 114 47	112 104 641 634 449
8+33.53 8+42.03 8+50.00 9+00.00 9+50.00 10+00.00	37 42 39 40 33 0	292 274 253 217 136 35	12 12 73 68 31 0	89 78 435 327 159 12	118 118 117 114 114 47	112 104 641 634 449 58
8+33.53 8+42.03 8+50.00 9+00.00 9+50.00 9+50.00 10+00.00 10+11.03	37 42 39 40 33 0 0	292 274 253 217 136 35 25	12 12 73 68 31 0	89 78 435 327 159 12	118 118 117 114 114 47 47	112 104 641 634 449 58

![](_page_15_Figure_1.jpeg)

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![](_page_15_Figure_3.jpeg)