PROPOSED WORK

THE OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION (OTIC) BRIDGE OVER I-280/SR420 AT MILEPOST 71.4 SHALL BE REHABILITATED UNDER THIS CONTRACT. MAJOR WORK INCLUDES PATCHING CONCRETE STRUCTURES, REPLACING BEARING DEVICES, PERFORMING CONCRETE WEATHERPROOFING, MAINTENANCE OF TRAFFIC, AND MICRO SILICA MODIFIED CONCRETE OVERLAY USING HYDRODEMOLITION OF THE DECK, ABUTMENT SLABS, AND APPROACH SLABS.

DESIGN SPECIFICATIONS

STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, DATED 2002, AND THE OHIO "SUPPLEMENT" TO THESE SPECIFICATIONS.

DESIGN DATA

THE CLASS OF CONCRETE AND THE GRADES OF REINFORCING STEEL FOR THE CONSTRUCTION ARE AS FOLLOWS:

CONCRETE CLASS QC1 COMPRESSIVE STRENGTH 4 KSI (CURB REPAIR)

CONCRETE CLASS QC5 COMPRESSIVE STRENGTH 4 KSI (PATCHING CONCRETE SUBSTRUCTURE)

REINFORCING STEEL - ASTM A615, A616, A617 - GRADE 60, MINIMUM YIELD STRENGTH 60,000 P.S.I.

DESIGN LOADING

HS20-44 (CASE I) AND THE ALTERNATE MILITARY LOADING

PROTECTION OF TRAFFIC

THE CONTRACTOR SHALL SUBMIT A PLAN TO PROTECT THE TRAVELING PUBLIC FROM ALL REMOVAL DEBRIS AND/OR CONSTRUCTION MATERIAL THAT MAY COME IN CONTACT OR POSE A DANGER TO THE TRAVELING PUBLIC. SLURRY AND/OR WASTE SHALL NOT BE PERMITTED TO FLOW ONTO OPEN LANES OF TRAFFIC OR INTO STORM SEWERS. THE CONTRACTOR MAY PERFORM THE WORK DURING A WEEKEND, IN ACCORDANCE WITH SP 104. THE PLAN MUST BE SUBMITTED TO THE COMMISSION AND GOVERNING LOCAL AGENCIES PRIOR TO THE COMMENCEMENT OF ANY WORK

UTILITIES

THERE ARE NO UNDERGROUND UTILITIES SHOWN ON THIS PLAN. THE NATURE OF THE WORK REQUIRED BY THIS PROJECT WILL NOT AFFECT ANY KNOWN UNDERGROUND UTILITIES THAT EXIST UNDER OR ADJACENT TO THE WORK AREA.

THE CONTRACTOR SHALL EXERCISE DUE CAUTION WHILE PERFORMING WORK ACTIVITIES AROUND EXPOSED UTILITIES. THE CONTRACTOR MUST ENSURE THAT THESE UTILITIES ARE NOT DAMAGED AS A RESULT OF WORK ACTIVITIES OR THE OPERATION OF EQUIPMENT, AND THE CONTRACTOR MAY BE REQUIRED TO PROVIDE TEMPORARY PROTECTIVE OR SUPPORT SYSTEMS IN ORDER TO PREVENT DAMAGE TO UTILITY LINES AND THEIR SUPPORTS DURING STRUCTURE REPAIR OPERATIONS. IF ANY UTILITIES ARE DAMAGED DURING CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER AND THE APPROPRIATE UTILITY OWNER(S).

ORIGINAL CONSTRUCTION PLANS

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

EXISTING STRUCTURE VERIFICATION

EXISTING STRUCTURE VERIFICATION: DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE 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 C&MS SECTIONS 102.05, 105.02 AND THE OHIO TURNPIKE INSTRUCTIONS TO BIDDERS ARTICLE 2.1 AND GENERAL CONDITIONS ARTICLE 1.5.

CONTRACT BID PRICES SHALL BE BASED UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE BY THE CONTRACTOR. HOWEVER, ALL PROJECT WORK SHALL BE BASED UPON ACTUAL DETAILS, DIMENSIONS, ELEVATIONS, AND SKEW ANGLES WHICH HAVE BEEN FIELD VERIFIED BY THE CONTRACTOR. THE STRUCTURAL STEEL AND STRUCTURAL STEEL DECK JOINTS SHALL NOT BE FABRICATED UNTIL ACTUAL DETAILS, DIMENSIONS, ELEVATIONS, AND SKEW ANGLES HAVE BEEN FIELD VERIFIED BY THE CONTRACTOR.

ANY ADDITIONAL COSTS RESULTING FROM VARIATIONS FROM PLAN DIMENSIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND NO ADDITIONAL PAYMENT OVER THE UNIT PRICE BID WILL BE AWARDED BY THE COMMISSION.

REMOVAL

~~GENERAL:~~

~~THE CONTRACTOR SHALL REMOVE THE DESIGNATED PORTIONS OF THE EXISTING STRUCTURE TO THE LIMITS SHOWN ON THE PLANS OR TO THE LIMITS AS DIRECTED BY THE ENGINEER. WHEN SO DIRECTED BY THE ENGINEER, THE CONTRACTOR SHALL WET DOWN THE CONCRETE THOROUGHLY DURING REMOVAL OPERATIONS TO PREVENT SPREAD OF DUST. ALL NECESSARY LABOR, EQUIPMENT AND MATERIAL SHALL BE PROVIDED BY THE CONTRACTOR AND INCLUDED WITH ITEM SP 202, PORTIONS OF STRUCTURE REMOVED, FOR PAYMENT.~~

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CONCRETE REMOVAL:

CONCRETE SHALL BE REMOVED BY MEANS OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNT CHISEL EDGED TOOLS AND/OR BY SAW CUTTING THE CONCRETE DECKS AND REMOVING IN SECTIONS.

CARE SHALL BE TAKEN TO ENSURE AGAINST DAMAGE TO THE STEEL AND CONCRETE MEMBERS WHICH ARE TO BE RETAINED AND TO PRESERVE THE BOND OF THE RETAINED REINFORCEMENT TO THE EXISTING CONCRETE. THESE BARS SHALL BE CLEANED OF ALL CONCRETE FRAGMENTS AND FOREIGN MATTER. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH THE BARS; HAND TOOLS SHALL BE EMPLOYED FOR FINAL CLEANING. DAMAGED AREAS OF REINFORCEMENT THAT ARE TO REMAIN SHALL BE CUT AND STRESS TRANSFER ACCOMPLISHED BY EITHER A LAPPED OR MECHANICAL SPLICE. ANY ADDITIONAL REINFORCEMENT OR MECHANICAL SPLICES SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE COMMISSION. OTHER EXISTING REINFORCEMENT WITHIN THE REMOVAL LIMITS SHALL BE REMOVED AND DISPOSED OF.

DISPOSAL OF REMOVED MATERIAL

THE CONTRACTOR SHALL NOT PERMIT ANY REMOVED MATERIAL TO DROP TO THE GROUND. MEANS SHALL BE PROVIDED FOR CATCHING REMOVED MATERIAL. THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER FOR APPROVAL DETAILS OF THE METHODS TO BE USED FOR REMOVING AND COLLECTING THE MATERIAL. ALL CONCRETE, STEEL, REINFORCING STEEL, ASPHALT, ETC. REMOVED FROM THE STRUCTURE, UNLESS SPECIFIED, SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE PROMPTLY REMOVED BY HIM FROM THE SITE.

UNDER NO CIRCUMSTANCES SHALL THE MATERIAL BE PERMITTED TO REMAIN ON THE PREMISES, RIGHT OF WAY OR STREETS PENDING DISPOSAL OF SAME OR FOR ANY OTHER PURPOSES, UNLESS OTHERWISE SPECIFIED BY THE ENGINEER.

CUTTING OR BENDING OF REINFORCING BARS

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

DIMENSIONS

DIMENSIONS GIVEN ARE MEASURED HORIZONTALLY AND AT 60° F UNLESS OTHERWISE NOTED. DIMENSIONS GIVEN FOR THE EXISTING STRUCTURE ARE FROM THE ORIGINAL CONSTRUCTION PLANS. SOME VARIATION FROM PLAN DIMENSIONS ARE EXPECTED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER FIT-UP BETWEEN THE PROPOSED AND EXISTING CONSTRUCTION. ADEQUATE MEASUREMENTS SHALL BE MADE IN THE FIELD PRIOR TO THE FABRICATION OR INSTALLATION OF ANY PART TO ENSURE THAT ALL PARTS CAN BE PROPERLY ASSEMBLED AS SPECIFIED IN THE PLANS. ANY ADDITIONAL COST RESULTING FROM VARIATIONS FROM PLAN DIMENSIONS IS THE RESPONSIBILITY OF THE CONTRACTOR AND NO ADDITIONAL PAYMENT WILL BE AWARDED BY THE COMMISSION.

REPAIR OF EXISTING CONCRETE ELEMENTS

EXISTING REINFORCED CONCRETE STRUCTURE ELEMENTS WHICH ARE INCORPORATED IN THIS CONSTRUCTION PROJECT ARE TO BE MODIFIED AND/OR REPAIRED. A CONDITION SURVEY WAS PERFORMED IN JUNE 2022. REPAIR AREAS WERE DETERMINED BY VISUAL INSPECTION. THE STRUCTURAL ELEMENTS INSPECTED INCLUDE CONCRETE ABUTMENTS AND PIERS (EXPOSED SURFACES ONLY). THE RECORDS OF THIS INSPECTION ARE THE BASIS FOR THE REPAIR RECOMMENDATIONS AS DETAILED IN THE PLANS.

THE PIERS SHOULD BE PATCHED AND REPAIRED AS REQUIRED BY SOUNDING AND PHYSICAL INSPECTION DURING CONSTRUCTION. A CONTINGENCY QUANTITY OF 30 SF HAS BEEN INCLUDED IN THE BID TAB FOR SP 519 PATCHING CONCRETE STRUCTURES.

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. AN ESTIMATED QUANTITY OF 100 POUNDS HAS BEEN INCLUDED FOR THIS WORK. 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 REMOVAL OPERATIONS WITH NEW EPOXY COATED REINFORCING STEEL OF THE SAME SIZE AT NO COST TO THE COMMISSION.

SP 516A - CRACK REPAIR USING EPOXY INJECTION

A CONTINGENCY QUANTITY OF 10 LINEAR FEET HAS BEEN INCLUDED IN THE PLANS AND SHALL BE USED TO REPAIR THE CONCRETE SUBSTRUCTURE UNITS AS DIRECTED BY THE ENGINEER.

MEASUREMENT AND PAYMENT:

PAYMENT SHALL INCLUDE FULL COMPENSATION FOR LABOR, MATERIALS, TOOLS, EQUIPMENT, AND ACCESS TO COMPLETE THE REPAIR. THE ACCEPTED QUANTITIES FOR THE COMPLETED WORK AS DESCRIBED WILL BE PAID FOR USING THE FOLLOWING CONTRACT ITEM (PAY ITEM).

ITEM	UNIT	DESCRIPTION
SP 516A	FT	CRACK REPAIR USING EPOXY INJECTION

ITEM SP 536 - CONCRETE WEATHERPROOFING

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

- THE TOP OF NEW ABUTMENT SLABS AND THE TOP OF THE DECK SLAB.
- ALL SLAB SIDE EDGES.

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, TO RECEIVE HMWM SEALER, OR SURFACES TO RECEIVE JOINT SEALER.

A QUANTITY OF 4205 SQ YD. HAS BEEN INCLUDED IN PART A PLANS UNDER ITEM SP 536 FOR PAYMENT.

CONSTRUCTION JOINTS

CONSTRUCTION JOINT SURFACES SHALL BE FREE FROM OIL, LAITANCE, FORM RELEASE AGENT, OR ANY OTHER MATERIAL THAT WOULD PREVENT BONDING TO THE CONCRETE SURFACE. ALL LAITANCE AND OTHER CONTAMINANTS SHALL BE REMOVED BY HIGH PRESSURE WATER BLASTING WITH A MINIMUM PRESSURE OF 5,000 P.S.I. HOWEVER, WATER BLASTING SHALL NOT BE REQUIRED WHERE EXISTING CONCRETE HAS BEEN ROUGHENED BY JACKHAMMERS DURING CONCRETE REMOVAL OPERATIONS. SURFACES SHALL BE THOROUGHLY DRENCHED WITH CLEAN WATER AND ALLOWED TO DRY TO A DAMP CONDITION FREE OF STANDING WATER BEFORE PLACING CONCRETE. PREPARATION OF CONSTRUCTION JOINT SURFACES SHALL NOT BE MEASURED FOR PAYMENT. THE COST THEREOF SHALL BE INCLUDED IN THE CONTRACT PRICE OF THE PERTINENT CONCRETE ITEMS.

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 HIS OPERATIONS AS APPROVED BY THE ENGINEER, THE CONTRACTOR SHALL CAREFULLY REMOVE THE FENCE AND REINSTALL THE FENCE 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.

DESIGN AGENCY
KLEINFELDER
Bright People. Right Solutions.

NO.	REVISIONS	BY	DATE
3	ADDENDUM 3- SP 202 NOTE REMOVED	-	-
-	-	-	-
-	-	-	-

DESIGNED	CHECKED
DSS	JLB
DRAWN	IN CHARGE
MPS	MPS

STRUCTURE NOTES
OHIO TURNPIKE OVER I-280/SR-420
M.P. 71.4
WOOD COUNTY

PROJECT 43-24-02
DATE: 05/19/23

OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION

432402_I280_SR420-Bridge Deck Rehab 2-5-24.dwg: 3/26/24 - 9:15am

ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION
			STRUCTURES: M.P. 71.4
~~SP 202~~	~~1~~	~~LS~~	~~PORTIONS OF STRUCTURE REMOVED~~
509	* 100	POUND	REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL
SP 516A	* 10	FOOT	CRACK REPAIR USING EPOXY INJECTION
SP 516G	39	EACH	REPLACE EXPANSION BEARING DEVICE
SP 519	* 52	SQ. FT.	PATCHING OF CONCRETE STRUCTURES
SP 527	1	LS	FALSEWORK, TEMPORARY BRACING AND PROTECTIVE STRUCTURES
609	17	FT	CURB, TYPE 4-A, AS PER PLAN
848	1	LS	TEST SLAB
848	4,205	SQ. YD.	MICRO SILICA MODIFIED CONCRETE OVERLAY USING HYDRODEMOLITION, 1 1/2" THICK
848	4,205	SQ. YD.	SURFACE PREPARATION USING HYDRODEMOLITION
848	10	CU. YD.	MICRO SILICA MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY
848	* 2	CU. YD.	FULL DEPTH REPAIR
848	* 120	SQ. YD.	HAND CHIPPING

* ITEMS TO BE AS DIRECTED BY THE ENGINEER

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DESIGN AGENCY
KLEINFELDER
Bright People. Right Solutions.

NO.	REVISIONS	BY	DATE
3	ADDENDUM 3 - SP 202 ITEM REMOVED	-	-
-	-	-	-
-	-	-	-

DESIGNED	CHECKED
DSS	JLB
DRAWN	IN CHARGE
DSS	MPS

PROJECT 43-24-02
DATE: 05/19/23

ESTIMATED QUANTITIES
OHIO TURNPIKE OVER I-280/SR-420
M.P. 71.4
WOOD COUNTY

OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION

432402_I280_SR420-Bridge Deck Rehab 2-5-24.dwg; 3/26/24 - 9:14am