

ITEM 404 - ASPHALT CONCRETE AC-20

THE FOLLOWING QUANTITY HAS BEEN INCLUDED IN THE ESTIMATED QUANTITIES TO BE USED AS DIRECTED BY THE ENGINEER TO FEATHER EXISTING APPROACH ASPHALT PAVEMENT TO THE NEW ASPHALT ON THE BRIDGE.

ITEM 404 ASPHALT CONCRETE AC-20 . . . . . 2 CUBIC YARDS

ITEM 510 - DOWEL HOLES, AS PER PLAN

THIS WORK SHALL CONFORM TO SS-853 AND SS-956.

ITEM 511 - CLASS C CONCRETE, SUBSTRUCTURE, AS PER PLAN

THIS ITEM SHALL CONSIST OF FURNISHING AND PLACING PORTLAND CEMENT CONCRETE IN ACCORDANCE WITH 511 WITH THE FOLLOWING ADDITIONS:

1. ALL EXISTING CONCRETE SURFACES THAT WILL BE IN CONTACT WITH CLASS C CONCRETE SHALL BE THOROUGHLY SANDBLASTED AND AIR CLEANED.
2. BEFORE THE PLACEMENT OF THE CONCRETE, ALL OF THE EXISTING CONCRETE SURFACES MENTIONED ABOVE SHALL BE COATED WITH A TWO-COMPONENT EPOXY BONDING AGENT. THE BONDING AGENT SHALL CONFORM TO AASHTO M-235-731, CLASS III. BONDING MATERIAL SHALL BE MIXED AND PLACED PER MANUFACTURER'S RECOMMENDATIONS.

ITEM 515 - PRESTRESSED CONCRETE BRIDGE MEMBERS

THIS ITEM SHALL INCLUDE THE INSERTS NECESSARY TO ATTACH THE PHASE II MAINTENANCE OF TRAFFIC TEMPORARY RAIL SYSTEM AS SHOWN IN THE PLANS. ALSO, IN THIS ITEM IS THE COST OF ALL MATERIAL, LABOR, AND EQUIPMENT NECESSARY TO FILL ALL BOX BEAM SHEAR KEYS WITH NON-SHRINKING EPOXY MORTAR IN ACCORDANCE WITH SS-956. PAYMENT WILL BE MADE UNDER:

ITEM	UNIT	DESCRIPTION
515	EACH	PRESTRESSED CONCRETE BRIDGE MEMBER, AS PER PLAN (B 21-36)
515	EACH	PRESTRESSED CONCRETE BRIDGE MEMBER, AS PER PLAN (B 21-48)

ITEM 517 - TEMPORARY RAILING (DEEP BEAM RAIL WITH STEEL TUBULAR BACKUP, STEEL POSTS, BASEPLATES & BOLTS)

THIS ITEM SHALL INCLUDE THE FURNISHING OF ALL NECESSARY MATERIALS, LABOR AND EQUIPMENT NEEDED TO CONSTRUCT TEMPORARY RAIL SYSTEMS AS SHOWN IN THE PLANS. THE RAIL SYSTEMS, INCLUDING ATTACHMENT TO TEMPORARY CONCRETE BARRIER, MUST BE COMPLETELY INSTALLED AND ACCEPTABLE TO THE ENGINEER PRIOR TO COMMENCING REPAIR WORK. UPON COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL CAREFULLY DISMANTLE AND STORE THE TEMPORARY RAIL SYSTEMS AS DIRECTED BY THE ENGINEER. THE RAIL SYSTEMS WILL BECOME THE PROPERTY OF THE STATE OF OHIO AND WILL BE REMOVED FROM THE SITE BY STATE FORCES UPON NOTIFICATION BY THE ENGINEER. MEASUREMENT SHALL BE BASED UPON ONE LENGTH OF TEMPORARY RAIL SYSTEM INSTALLED UNDER EACH MAINTENANCE OF TRAFFIC PHASE.

ITEM 606 - GUARDRAIL REBUILT, TYPE 5, AS PER PLAN.

THE GUARDRAIL SHALL BE COMPLETELY INSTALLED ON THE EAST SIDE DURING PHASE 1 PRIOR TO THE IMPLEMENTATION OF PHASE 2 AND ON THE WEST SIDE DURING PHASE 2 PRIOR TO OPENING THE ROAD TO TRAFFIC. THE REMOVAL OF ALL GUARDRAIL SHALL AT ALL TIMES BE AS DIRECTED BY THE ENGINEER. THE LOCATION OF GUARDRAIL RUNS, AS SHOWN IN THESE PLANS, ARE SUBJECT TO ADJUSTMENT PRIOR TO FINAL ACCEPTANCE. THE ENGINEER SHALL BE SATISFIED THAT ALL INSTALLATIONS WILL AFFORD MAXIMUM PROTECTION FOR TRAFFIC.

ITEM 622 - TEMPORARY CONCRETE BARRIER

THE TEMPORARY BARRIER SHALL BE PIN-CONNECTED AND HAVE TAPERED END TERMINALS. THE BARRIER SHALL BE PLACED AS SHOWN IN THESE PLANS BEFORE ANY REMOVAL OPERATIONS BEGIN. THE BARRIER SECTIONS WILL REMAIN THE PROPERTY OF THE CONTRACTOR AND BE REMOVED FROM THE SITE BY HIM AT THE COMPLETION OF THE PROJECT. MEASUREMENT SHALL BE BASED UPON THE LENGTH OF BARRIER INSTALLED UNDER EACH MAINTENANCE OF TRAFFIC PHASE.

ITEM SPECIAL - TEMPORARY SUPPORT SYSTEM

THIS ITEM SHALL CONSIST OF ALL MATERIALS, LABOR, AND EQUIPMENT NECESSARY TO CONSTRUCT THE TEMPORARY SUPPORT SYSTEM AS SHOWN IN THE PLANS AND AS DIRECTED BY THE ENGINEER FOR USE DURING PHASE ONE. COSTS FOR STRUCTURAL STEEL COMPONENTS SUCH AS THE GIRDER, FLOORBEAMS, CHANNELS, THREADED ROD, ANGLES, NUTS, BOLTS, AND WASHERS ARE A PART OF THIS ITEM. ALSO INCLUDED IS THE COST OF THE REMOVAL AND DISPOSAL OF THE TEMPORARY SUPPORT SYSTEM AFTER COMPLETION OF PHASE ONE CONSTRUCTION AND THE INSTALLATION OF THE PHASE TWO MAINTENANCE OF TRAFFIC SYSTEM. PAYMENT WILL BE MADE AT CONTRACT PRICE BID FOR ITEM SPECIAL-LUMP SUM-TEMPORARY SUPPORT SYSTEM.

ITEM SPECIAL - ENCASED POST, REMOVED AND REPLACED

THIS ITEM SHALL CONSIST OF REMOVING ONE DAMAGED CONCRETE ENCASED POST AND REPLACING IT ACCORDING TO GR-4 OF THE STANDARD CONSTRUCTION DRAWINGS.

ITEM SPECIAL - MAGNESIUM PHOSPHATE CONCRETE WITH AGGREGATE

A. DESCRIPTION: THIS ITEM CONSISTS OF THE REMOVAL OF ALL LOOSE AND DISINTEGRATED CONCRETE, PREPARATION OF THE SURFACE, AND THE FORMING, MIXING, PLACING, FINISHING AND CURING OF THE REPAIR AREAS AS SHOWN IN THE PLANS AS DIRECTED BY THE ENGINEER.

B. MATERIALS: THE MATERIAL TO BE USED SHALL BE A BLEND OF MAGNESIA AND SELECT AGGREGATE WITH AN ACTIVATOR. THE MATERIAL SHALL BE HORN 240 CONCRETE, FAST CRETE, BOSTIK 276, OR SET 45. ALL MATERIALS SHALL BE STORED AND INCORPORATED IN THE WORK AS RECOMMENDED BY THE MANUFACTURER.

C. REMOVAL OF CONCRETE: ALL LOOSE, SOFT, HONEY-COMBED, AND DISINTEGRATED CONCRETE PLUS ONE-FOURTH INCH DEPTH OF SOUND CONCRETE SHALL BE REMOVED. WHERE THE BOND BETWEEN THE CONCRETE AND A REINFORCING BAR HAS BEEN DESTROYED, OR WHERE MORE THAN ONE-HALF OF THE PERIPHERY OF SUCH A BAR EXPOSED, THE ADJACENT CONCRETE SHALL BE REMOVED TO A DEPTH THAT WILL PROVIDE A MINIMUM THREE-FOURTH INCH CLEARANCE AROUND THE BAR EXCEPT WHERE OTHER REINFORCING BARS MAKE THIS IMPRACTICAL. AFTER COMPLETION OF THE SECONDARY REMOVAL OPERATION, THE ENGINEER WILL RESOUND THE AREAS TO INSURE THAT ONLY SOLID CONCRETE REMAINS. ALL WORK SHALL BE DONE IN A MANNER THAT WILL NOT DAMAGE OR SHATTER THE CONCRETE THAT IS TO REMAIN AND WILL NOT CUT, ELONGATE OR DAMAGE THE REINFORCING STEEL IN ANY WAY. CONCRETE MAY BE REMOVED BY CHIPPING OR HAND DRESSING. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 35 POUND CLASS. WHERE EXISTING REINFORCING BARS WOULD BE LESS THAN ONE-INCH FROM THE PROPOSED FINISH SURFACE OF CONCRETE, THEY SHALL, IF PRACTICAL, BE DRIVEN BACK INTO RECESSES CUT IN THE MASONRY TO OBTAIN THAT COVERAGE UNLESS OTHERWISE APPROVED BY THE ENGINEER.

D. SURFACE PREPARATION: CLEANING SHALL PRECEDE APPLICATION OF THE MATERIAL OR ERECTION OF THE FORMS BY NOT MORE THAN 24 HOURS. THE AREAS TO BE REPAIRED AND THE EXPOSED REINFORCING STEEL SHALL BE THOROUGHLY CLEANED BY SANDBLASTING FOLLOWED BY AN AIR BLAST. IT MAY BE NECESSARY TO USE HAND TOOLS TO REMOVE SCALE FROM THE REINFORCING STEEL. SURFACES SHALL BE MADE FREE OF SPALLS, LAITANCE AND ALL TRACES OF FOREIGN MATERIAL. FOR MATERIAL WHICH DOES NOT USE WATER AS THE ACTIVATOR, THE PREPARED SURFACE SHALL BE DRY. FOR MATERIAL WHICH REQUIRES WATER AS THE ACTIVATOR, THE PREPARED SURFACE SHALL BE LEFT IN THE CONDITION AS RECOMMENDED BY THE MANUFACTURER. ANY ADDITIONAL SURFACE PREPARATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS FOR THE MATERIAL WHICH IS USED. ALL UNCHIPPED SURFACES THAT WILL RECEIVE NEW MATERIAL SHALL BE MECHANICALLY ROUGHENED.

E. FORMS: WHEN REQUIRED TO RESTORE VERTICAL OR HORIZONTAL SURFACES IN AN ACCEPTABLE MANNER, FORM SHALL BE ERECTED FLUSH WITH THE FACES OF REPAIR AREAS TO INSURE THAT THE MATERIAL DOES NOT ESCAPE FROM THE REPAIR AREA.

F. PLACEMENT: THE MIXING, PROPORTIONING, PLACING AND CURING PROCEDURES AND THE TOOLS, EQUIPMENT, LABOR AND MATERIAL USED SHALL BE ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS. CLEAN, SOUND 3/8 INCH AGGREGATE SHALL BE ADDED TO THE MAGNESIUM PHOSPHATE MATERIALS AT THE RATE OF 25 POUNDS PER BAG OF CEMENT.

G. CURING: REPAIR AREAS SHALL BE CURED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

H. METHOD OF MEASUREMENT: THE QUANTITY SHALL BE THE ACTUAL VOLUME IN CUBIC FEET OF THE REPAIR AREAS COMPLETED, IN PLACE, AND ACCEPTED.

I. BASIS OF PAYMENT: PAYMENT WILL BE MADE AT CONTRACT PRICE BID FOR:

ITEM	UNIT	DESCRIPTION
SPECIAL	CU. FT.	MAGNESIUM PHOSPHATE CONCRETE WITH AGGREGATE.

ITEM SPECIAL - PATCHING CONCRETE STRUCTURES WITH SUPERIOR BONDING MATERIALS

A. DESCRIPTION: THIS ITEM CONSISTS OF THE REMOVAL OF ALL LOOSE AND DISINTEGRATED CONCRETE, PREPARATION OF THE SURFACE, AND THE FORMING, MIXING, PLACING FINISHING AND CURING OF THE PATCHES AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE PERFORMED UPON THE FOLLOWING EXPOSED CONCRETE BRIDGE COMPONENTS IN ACCORDANCE WITH THESE SPECIFICATIONS, IN REASONABLE CLOSE CONFORMITY WITH THE PLANS AND THE MANUFACTURER'S SPECIFICATION AND RECOMMENDATIONS.

1. ABUTMENTS
2. WINGWALLS

B. MATERIALS: THE PATCHING MATERIAL SHALL BE HORN 240 CONCRETE, FAST CRETE, BOSTIK 276, SET 45, SIKATOP 122 AND 123, THERMAL-CHEM PRODUCT NO. 304 OR POLY CARB MARK 193.4 OR 194. THE MATERIAL SHALL BE TINTED TO CURE TO THE COLOR OF THE EXISTING CONCRETE. ALL MATERIALS SHALL BE STORED AND INCORPORATED IN THE WORK AS RECOMMENDED BY THE MANUFACTURER. A MANUFACTURER'S REPRESENTATIVE SHALL BE PRESENT AT THE JOB SITE UNTIL SUCH TIME AS HE AND THE ENGINEER ARE SURE THAT THE CONTRACTOR IS QUALIFIED IN ALL ASPECTS OF PATCHING CONCRETE STRUCTURES WITH THE SELECTED MATERIAL.

C. REMOVAL OF CONCRETE: THE ENGINEER SHALL SOUND THE STRUCTURE AND OUTLINE THE AREAS TO BE REMOVED. ALL LOOSE, SOFT, HONEY-COMBED, AND DISINTEGRATED CONCRETE PLUS ONE-FOURTH INCH DEPTH OF SOUND CONCRETE SHALL BE REMOVED. WHERE THE BOND BETWEEN THE CONCRETE AND A REINFORCING BAR HAS BEEN DESTROYED, OR WHERE MORE THAN ONE-HALF OF THE PERIPHERY OF SUCH A BAR HAS BEEN EXPOSED, THE ADJACENT CONCRETE SHALL BE REMOVED TO A DEPTH THAT WILL PROVIDE A MINIMUM THREE-FOURTH INCH CLEARANCE AROUND THE BAR EXCEPT WHERE OTHER REINFORCING BARS MAKE THIS IMPRACTICAL. AFTER COMPLETION OF THE SECONDARY REMOVAL OPERATION, THE ENGINEER WILL RESOUND THE AREAS TO INSURE THAT ONLY SOLID CONCRETE REMAINS. ALL WORK SHALL BE DONE IN A MANNER THAT WILL NOT DAMAGE OR SHATTER THE CONCRETE THAT IS TO REMAIN AND WILL NOT CUT, ELONGATE OR DAMAGE THE REINFORCING STEEL IN ANY WAY. CONCRETE MAY BE REMOVED BY CHIPPING OR HAND DRESSING. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 35 POUND CLASS. WHERE EXISTING REINFORCING BARS WOULD BE LESS THAN ONE INCH FROM THE PROPOSED FINISHED SURFACE OF CONCRETE, THEY SHALL, IF PRACTICAL, BE DRIVEN BACK INTO RECESSES CUT IN THE MASONRY TO OBTAIN THAT COVERAGE UNLESS OTHERWISE APPROVED BY THE ENGINEER.

STATE OF OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 12 BRIDGE DEPARTMENT						3 / 11
STRUCTURE NOTES BRIDGE LAK-86-0195 OVER KELLOGG CREEK						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
EJA	SDG	SDG	DWL	GWM	8/13/85	