

GENERAL NOTES - STRUCTURE OVER 20 FT.

FHWA REGION	STATE	PROJECT
5	OHIO	

17
32

LAKE COUNTY
LAK-20-19.39

11. CONSTRUCTION JOINT PREPARATION

SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1" DEEP. REMOVE CONCRETE TO A ROUGH SURFACE. WHERE PRACTICABLE, AT LEAST A 1'-0" LENGTH OF PROTRUDING REINFORCING STEEL SHALL BE LEFT IN PLACE. INSTALL DOWEL BARS AS SPECIFIED. PRIOR TO CONCRETE PLACEMENT, ABRASIVELY CLEAN JOINT SURFACE AND EXPOSED REINFORCEMENT TO REMOVE LOOSE AND DISINTEGRATED CONCRETE AND LOOSE RUST. THEN, THE JOINT SURFACE AND EXPOSED REINFORCEMENT SHALL BE THOROUGHLY CLEANED OF ALL DIRT, DUST, OR OTHER FOREIGN MATERIALS BY THE USE OF WATER, AIR UNDER PRESSURE, OR OTHER METHOD THAT PRODUCES RESULTS SATISFACTORY TO THE ENGINEER. THE CONCRETE BONDING SURFACE SHALL BE WET WITHOUT FREE WATER AS CONCRETE IS PLACED.

12. NOT USED.

13. FOUNDATIONS

PILE DESIGN LOADS: THE DESIGN LOAD FOR THE ABUTMENT PILES IS 35 TONS PER PILE AND FOR THE PIER PILES IS 40 TONS PER PILE.

PILES: ALL PILES SHALL BE 12" DIAMETER, CAST-IN-PLACE REINFORCED CONCRETE PILES.

14. STRUCTURAL STEEL MISCELLANEOUS

FOR DETAILS OF FIELD WELDING OF EXISTING CROSS FRAME CONNECTION PLATES TO EXISTING GIRDER FLANGES, SEE SHEET 13/18.

15. PAINTING OF STEEL

ALL NEW STEEL SHALL BE CLEANED AND PRIME PAINTED IN THE SHOP WITH SYSTEM A IN CONFORMANCE WITH ITEM 513. IT SHALL BE FIELD PAINTED WITH SYSTEM OZEU, MODIFIED AS NOTED IN FIELD PAINTING OF NEW STRUCTURAL STEEL.

FIELD PAINTING OF NEW STEEL: THE NEW STEEL SHALL BE PAINTED IN THE FIELD WITH AN INTERMEDIATE AND FINISH COAT OF PAINT. FOR THE PURPOSE OF FIELD PAINTING, NEWLY PRIMED AND ERECTED NEW STEEL SHALL BE CONSIDERED EXISTING STEEL AND BE PAINTED WITH AN INTERMEDIATE AND FINISH COAT OF PAINT IN CONFORMANCE WITH THE PROPOSAL NOTE "FIELD PAINTING OF EXISTING STEEL, SYSTEM OZEU." COST FOR FIELD PAINTING OF NEW STEEL SHALL BE INCLUDED WITH THE TWO SPECIAL ITEMS "FIELD PAINTING OF EXISTING STEEL, INTERMEDIATE COAT, SYSTEM OZEU" AND "FIELD PAINTING OF EXISTING STEEL, FINISH COAT, SYSTEM OZEU."

16. ITEM SPECIAL - PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR

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

- FRONT FACE OF ABUTMENT AS SHOWN ON SHEET 8/18.

B. MATERIALS: THE PATCHING MATERIAL SHALL BE SIKATOP 122 AND 123, THERMAL-CHEM PRODUCT NO. 304, POLYCARB MARK 193.4 AND 194, FIVE STAR HIGHWAY PATCH, UPKO BOSTICK 964, EUCLID CHEMICAL EUCCO VERTICOAT, MASTER BUILDERS SET VERTIPATCH OR DURALTOP AND DURALPATCH GEL. 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 OF AN 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 ONE-HALF OF AN INCH CLEARANCE AROUND THE BAR EXCEPT WHERE OTHER REINFORCING BARS MAKE THIS IMPRACTICAL. AFTER COMPLETION OF THE SECONDARY REMOVAL OPERATION, THE ENGINEER WILL RE-SOUND THE AREAS TO ENSURE 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 NORMAL 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.

D. SURFACE PREPARATION: CLEANING SHALL PRECEDE APPLICATION OF THE PATCHING MATERIAL BY NOT MORE THAN 24 HOURS. THE SURFACE TO BE PATCHED 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. THE SURFACE SHALL BE MADE FREE OF SPALLS, LAITANCE AND ALL TRACES OF FOREIGN MATERIAL. IF NECESSARY, DETERGENT CLEANING SHALL PRECEDE BLAST CLEANING TO ENSURE THE REMOVAL OF CONTAMINANTS THAT ARE DETRIMENTAL TO ACHIEVING AN ADEQUATE BOND. 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 PATCHING MATERIAL WHICH IS USED. ALL UNCHIPPED SURFACES THAT WILL RECEIVE NEW MATERIAL SHALL BE MECHANICALLY ROUGHENED.

E. PATCHING: THE MIXING, PROPORTIONING, PLACING AND CURING PROCEDURES AND TOOLS, EQUIPMENT, LABOR AND MATERIALS USED SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS. THE SURFACE OF THE REPAIR AREA SHALL BE FLUSH WITH THE SURROUNDING AREA.

F. CURING: PATCHES SHALL BE CURED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

G. ESTIMATED QUANTITY: PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN OCTOBER 1988. ESTIMATED QUANTITY HAS BEEN INCREASED BY 75 SQUARE FEET OVER MEASURED QUANTITY TO ALLOW FOR ADDITIONAL DETERIORATION. EXACT DIMENSION OF PATCHING AREAS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD FOR FINAL PAY QUANTITY.

H. METHOD OF MEASUREMENT: THE QUANTITY SHALL BE THE ACTUAL AREA IN SQUARE FEET OF THE EXPOSED SURFACE OF ALL COMPLETED PATCHES, IRRESPECTIVE OF DEPTH OR THICKNESS OF THE PATCH COMPLETE, IN PLACE AND ACCEPTED. IF THE PATCH INCLUDES CORNERS OR EDGES OF MEMBERS ALL OF THE EXPOSED SURFACES SHALL BE INCLUDED. THE COST OF ALL LABOR, EQUIPMENT, INCIDENTALS AND MATERIALS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THIS ITEM.

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

ITEM	UNIT	DESCRIPTION
SPECIAL	SQUARE FEET	PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR

17. SEALING OF CONCRETE SURFACES

A CONCRETE SEALER SHALL BE APPLIED TO THE FOLLOWING CONCRETE SURFACES.

- A. SIDEWALK, PARAPET AND DECK EDGES OVER THE BRIDGE DECK SLAB AS SHOWN ON SHEET 15/18.
- B. PARAPET AND SIDEWALK EDGE OVER THE WINGWALLS AS SHOWN ON SHEET 7/18.
- C. ABUTMENT BACKWALL, BRIDGE SEAT AND EXPOSED FRONT FACE OF ABUTMENT (EPOXY) AS SHOWN ON SHEET 7/18.
- D. ALL EXPOSED SURFACES OF THE PIERS (EPOXY).

SEE THE PROPOSAL NOTE FOR SURFACE PREPARATION REQUIREMENTS, APPLICATION RATES, MATERIAL REQUIREMENTS AND APPLICATION PROCEDURES.

18. STRUCTURAL EXPANSION JOINTS INCLUDING ELASTOMERIC STRIP SEALS

DESCRIPTION: THIS ITEM SHALL CONSIST OF FURNISHING, FABRICATING, AND INSTALLING STRUCTURAL STEEL EXPANSION JOINTS WITH ELASTOMERIC STRIP SEALS.

MATERIALS: STEEL PORTIONS OF THE JOINTS THAT ARE FULLY ENCASED IN CONCRETE MAY BE UNPAINTED ASTM A36. ALL OTHER PORTIONS SHALL BE ASTM A36, PAINTED AS SPECIFIED. ELASTOMERIC STRIP SEALS SHALL BE NEOPRENE MEETING THE REQUIREMENTS GIVEN BELOW. THE ELASTOMERIC EXTRUSIONS AND THE STEEL EXTRUSIONS OR WELDED RETAINERS SHALL BE AS MANUFACTURED BY THE D.S. BROWN COMPANY OF NORTH BALTIMORE, OHIO, THE WATSON BOWMAN AND ACME CORPORATION OF AMHERST, NEW YORK, STRUCTURAL ACCESSORIES OF LENOIR, NORTH CAROLINA; OR AN APPROVED ALTERNATE. ADHESIVE SHALL BE SIKASTIX 323 BY THE SIKA CHEMICAL CORPORATION OF LYNDHURST, NEW JERSEY; FEL-POXY FP-101 BY THE FELT PRODUCTS MANUFACTURING COMPANY OF SKOKIE, ILLINOIS; MARK-184 BY POLY-CARB OF SOLON, OHIO; OR AN APPROVED ALTERNATE.

SIZE: STRIP SEALS SHALL HAVE A MINIMUM MOVEMENT RATING OF 4 INCHES. THE SEAL FOR THE DECK JOINT OF EACH ABUTMENT SHALL BE FURNISHED IN ONE COMPLETE PIECE. CUTS, TEARS, CRACKS OR OTHER SUCH IRREGULARITIES SHALL BE CAUSE FOR REJECTION.

TYPE: THE STEEL EXTRUSION OR RETAINER SHALL BE TYPE A. THE ELASTOMERIC EXTRUSION SHALL BE TYPE 400, S-400, OR 40 SF AS MANUFACTURED BY D.S. BROWN, WATSON BOWMAN - ACME CORPORATION, AND STRUCTURAL ACCESSORIES, RESPECTIVELY. THE ELASTOMERIC AND STEEL EXTRUSIONS OR RETAINERS SHALL BE FURNISHED BY THE SAME MANUFACTURER.

POLYTECH, INC.		3 / 18
CONSULTING ENGINEERS		CLEVELAND, OHIO
GENERAL NOTES		
BRIDGE NO. LAK-20-1939 OVER S.R.2. (EAST BOUND)		
DESIGNED	DRAWN	TRACED
CT	MAC	—
CHECKED	REVIEWED	DATE
GA	BS	4/88