

GENERAL NOTES

FHWA REGION	STATE	PROJECT	
5	OHIO		

6
18

LAKE COUNTY
LAK - 2/44 - (14.28) (16.56) / 5.61

PLAN NO. BR-97-8Z

ITEM 202 - PORTION OF STRUCTURE REMOVED

THIS ITEM SHALL CONSIST OF REMOVING PORTIONS OF THE EXISTING APPROACH SLAB TO THE LIMITS SHOWN ON DETAIL SHEET NO. 10. ALL WORK SHALL BE DONE IN SUCH A MANNER AS NOT TO DAMAGE OR SHATTER THE CONCRETE THAT IS TO REMAIN AND PREVENT THE REINFORCING STEEL THAT IS TO REMAIN FROM BEING CUT, ELONGATED OR DAMAGED IN ANY WAY.

ALL COSTS FOR THE ABOVE MENTIONED WORK SHALL BE INCLUDED IN THE LUMP SUM BID PRICE FOR ITEM 202 - PORTION OF STRUCTURE REMOVED.

ITEM 301 - BITUMINOUS AGGREGATE BASE AC-20 OR RT-11 OR RT-12, AS PER PLAN

THIS ITEM OF WORK SHALL BE USED ON ALL MAINLINE BERMS PRIOR TO MOVING TRAFFIC ONTO THEM. THIS WORK SHALL INCLUDE THE REMOVAL OF 6" OF THE EXISTING SHOULDER MATERIAL AND THE CONSTRUCTION OF A 6" COURSE OF ITEM 301 ON THE EXISTING SUBBASE. THIS ITEM OF WORK SHALL BE PERFORMED FOR THE WIDTHS SHOWN ON THE TRAFFIC CONTROL PLANS. ALL COST OF EXCAVATION AND INSTALLATION SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 301 - BITUMINOUS AGGREGATE BASE AC-20 OR RT-11 OR RT-12, AS PER PLAN. THE CONTRACTOR SHALL PERFORM THE ABOVE MENTIONED WORK BETWEEN THE HOURS OF 9:00 A.M. AND 3:00 P.M. AND SHALL NOT CLOSE MORE THAN ONE LANE IN EACH DIRECTION AT ANY ONE TIME.

ITEM 509 - REINFORCING STEEL, AS PER PLAN

THIS ITEM SHALL BE USED TO REPLACE REINFORCING STEEL WHICH IS BENT, ELONGATED, MISSING, OR EXTREMELY CORRODED. BARS SHALL BE THE SAME SIZE AS THE ORIGINAL BARS AND SHALL BE PLACED AS NEAR AS POSSIBLE TO THEIR ORIGINAL PLAN LOCATION. BARS SHALL BE LAPPED ACCORDING TO SEC. 509.08. PAYMENT FOR THIS ITEM SHALL INCLUDE THE COST OF ALL MATERIALS AND LABOR NECESSARY TO COMPLETE THE ABOVE WORK, INCLUDING REMOVAL OF THE EXISTING STEEL.

ITEM 622 - TEMPORARY CONCRETE BARRIER

PAYMENT FOR THIS ITEM SHALL INCLUDE MOVING BARRIER FROM THE FIRST TRAFFIC CONTROL PHASE TO THE NEXT.

RIGHT OF WAY

ALL WORK WILL BE PERFORMED WITHIN THE EXISTING RIGHT OF WAY.

ITEM SPECIAL - RESET BEARINGS

RESETTING OF BEARINGS SHALL BE ACCOMPLISHED IN ACCORDANCE WITH SHEET No. 11 OF THE PLANS. EXISTING ROCKERS AND BASE PLATES SHALL BE CLEANED OF ALL FOREIGN MATERIAL TO THE SATISFACTION OF THE ENGINEER PRIOR TO RESETTING.

ALL COSTS FOR ABOVE MENTIONED WORK INCLUDING MATERIAL, EQUIPMENT AND LABOR SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM SPECIAL - RESET BEARINGS.

NEW SHIMS AND PERFORMED BEARING PADS SHALL BE PAID FOR SEPARATELY UNDER ITEMS 513 AND 516 RESPECTIVELY.

ITEM 513 - STRUCTURAL STEEL

THIS ITEM SHALL CONSIST OF INSTALLING SIX (6) NEW SHIMS (10 1/4" x 19 1/4" x 3/4") FOR BRIDGE No. LAK-44-0561 L AS SHOWN IN PLAN DETAILS.

ALL COSTS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 513 - STRUCTURAL STEEL.

ITEM 404 - ASPHALT CONCRETE (APPROACHES AT BRIDGES)

THE FINAL GRADE OF THE ASPHALT OVERLAY ON THE APPROACH SLAB SHALL BE DETERMINED BY EXTENDING THE BRIDGE STRUCTURE GRADE ACROSS THE APPROACH SLAB. MAXIMUM VARIATION FROM SET GRADE SHALL NOT EXCEED ± 1/4 INCH AT THE ROADWAY END OF THE APPROACH SLAB. TRANSITIONING FROM THAT POINT SHALL PROCEED AT A RATE OF 25 FEET PER INCH AS PER BP-5. THE CONTRACTOR SHALL ESTABLISH CONTROL AT 25 FOOT INTERVALS, BOTH ACROSS THE APPROACH SLAB AND IN THE TRANSITION AREA. VARIATIONS FROM THE SET GRADE ACROSS THE APPROACH SLAB IN EXCESS OF 1/4 INCH SHALL REEM THE WORK UNACCEPTABLE AT WHICH TIME A MINIMUM OF 1 INCH OF ASPHALT ON THE APPROACH SLAB SHALL BE REMOVED AND REPLACED AT NO ADDITIONAL COST TO THE STATE.

ITEM SPECIAL - EPOXY SEALING OF CONCRETE

THIS ITEM SHALL CONSIST OF CLEANING, BY ABRASIVE BLASTING OR APPROVED HIGH-PRESSURE WATER BLASTING, EXISTING & NEW CONCRETE SURFACES AND SEALING BY APPLYING TWO COATS OF AN EPOXY SEALER. THE SEALER SHALL BE AMERICAN METASEAL P.E. 1854 OR OTHER EPOXY SEALER OF AT LEAST 50% SOLIDS CONTENT DETERMINED, BY TEST METHODS OUTLINED IN NCHRP 244. TO BE EQUAL IN PERFORMANCE TO P.E. 1854. AFTER BLASTING AND AIR CLEANING, THE EPOXY SHALL BE APPLIED TO THE CONCRETE SURFACES UNDER CONDITIONS AND IN THE MANNER SPECIFIED BY THE MANUFACTURER, AT THE RATE OF 120 SQUARE FEET PER GALLON, EACH COAT.

TREATMENT SHALL BE APPLIED TO EXPOSED BRIDGE SIDEWALKS, MEDIANS, BACKWALLS, CURBS, PARAPETS (ALL SIDES), PIERS AND PIER CAPS LOCATED ADJACENT TO A ROADWAY, ABUTMENTS AND WINGWALLS. THE EDGES OF THE DECK, THE UNDERSIDE OF THE DECK IN ANY INTERIOR BAY LOCATED BENEATH AN OPEN JOINT (OR SEALED OPEN JOINT) AND THE UNDERSIDE OF THE DECK EXTENDING BEYOND THE EXTERIOR BEAMS SHALL ALSO BE TREATED.

THIS TREATMENT SHALL NOT BE PERFORMED UNTIL ALL CONCRETE REPAIRS TO A GIVEN BRIDGE HAVE BEEN COMPLETED. LATEX MODIFIED CONCRETE SHALL NOT BE TREATED.

PAYMENTS WILL BE MADE FOR THE NUMBER OF SQUARE YARDS OF SURFACE TREATED INCLUDING SURFACE PREPARATION, MATERIAL AND APPLICATION, AND THE BID PRICE SHALL INCLUDE ALL COSTS FOR TESTING TO QUALIFY THE PRODUCT USED.

ITEM SPECIAL - PRISMATIC RETRO-REFLECTOR REPLACED

WITHIN THE REMOVAL LIMITS OF THE EXISTING PAVEMENT MARKINGS FOR BRIDGE NO'S. LAK - 2 - 1656 L & R AND

LAK - 44 - 0561 L & R. THE PRISMATIC RETRO-REFLECTOR UNITS OF THE EXISTING RAISED PAVEMENT MARKERS ALONG THE LANE LINES SHALL ALSO BE REMOVED AND REPLACED AS PER GENERAL NOTE ON SHEET NO. 7.

RAISED PAVEMENT MARKERS (REFLECTORS AND CASTINGS) ON THE BRIDGE DECKS ONLY SHALL BE REMOVED AND NOT REPLACED AND BE PAID FOR UNDER THE REMOVAL OPERATIONS OF ITEM 845.

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/OR 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/S SECTIONS 102.05 AND 105.02.

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 AND DIMENSIONS WHICH HAVE BEEN VERIFIED BY THE CONTRACTOR IN THE FIELD.

ITEM SPECIAL - PRESSURE RELIEF JOINTS, TYPE C

THIS ITEM SHALL BE AS PER BP-11 OF THE STANDARD DRAWINGS.

ITEM 516 - VERTICAL EXTENSION OF STRUCTURAL EXPANSION JOINTS AS PER PLAN

THE CONTRACTOR SHALL FURNISH AND WELD WITH A CONTINUOUS BEAD, STEEL BARS TO THE EXISTING EXPANSION JOINTS AS SHOWN IN THE PLANS. THE BARS SHALL CONFORM TO THE DIMENSIONS SHOWN ON THE DETAIL SHEETS.

ALL COSTS OF MATERIALS AND INSTALLATION SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 516 - VERTICAL EXTENSION OF STRUCTURAL EXPANSION JOINTS AS PER PLAN

ITEM SPECIAL - PATCHING CONCRETE STRUCTURES WITH MAGNESIUM PHOSPHATE CONCRETE

A. **DESCRIPTION:** THIS ITEM CONSISTS OF THE REMOVAL OF ALL LOOSE AND DISINTEGRATED CONCRETE, PREPARATION OF THE SURFACE, AND FORMING, MIXING, PLACING, FINISHING AND CURING OF THE MAGNESIUM PHOSPHATE CONCRETE PATCHES.

B. **MATERIALS:** PATCHING MATERIAL SHALL BE MADE USING A BLEND OF MAGNESIA AND SELECTED AGGREGATE WITH AN ACTIVATOR. THESE MATERIALS SHALL BE MIXED AND PLACED PER MANUFACTURER'S RECOMMENDATIONS. THE PATCHING MATERIAL SHALL BE ONE OF THE FOLLOWING PRODUCTS: HORN 240 CONCRETE, FAST CRETE, BOSTIK 276, SET 45, OR AN APPROVED EQUAL.

C. **REMOVAL OF CONCRETE:** 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.

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 IMPRACTICABLE. 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 SUCH A MANNER AS TO NOT DAMAGE OR SHATTER THE CONCRETE THAT IS TO REMAIN AND TO PREVENT THE REINFORCING STEEL THAT IS TO REMAIN FROM BEING CUT, ELONGATED OR DAMAGED IN ANY WAY. THE PATCH DEPTH SHALL NOT BE LESS THAN ONE-HALF INCH.

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. SURFACES SHALL BE MADE FREE OF SPALLS, LANTANCE AND ALL TRACES OF FOREIGN MATERIAL. IF NECESSARY DETERGENT CLEANING SHALL PRECEDE BLAST CLEANING TO INSURE THE REMOVAL OF CONTAMINANTS DETRIMENTAL TO ACHIEVING AN ADEQUATE BOND. FOR PATCHES WHICH DO NOT USE WATER AS THE ACTIVATOR, THE PREPARED SURFACE SHALL BE DRY. FOR PATCHES WHICH REQUIRE 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 PATCHING MATERIAL WHICH IS USED. ALL UNCHIPPED SURFACES THAT WILL RECEIVE NEW CONCRETE SHALL BE MECHANICALLY ROUGHENED.

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

F. **PATCHING:** THE MIXING, PROPORTIONING, PLACING AND CURING PROCEDURES, TOOLS, EQUIPMENT, LABOR AND MATERIALS SHALL BE ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS. WHEN FORMS ARE USED CONCRETE SHALL BE PLACED THROUGH AT LEAST ONE HOLE AT THE HIGHEST POINT OF THE AREA TO BE PATCHED. THE FORMS SHALL BE TAPPED TO VIBRATE THE CONCRETE AND INSURE THAT IT REACHES THE LOWEST REGIONS OF THE PATCH AREA. THE SURFACE OF THE REPAIR AREA SHALL BE FLUSH WITH THE SURROUNDING AREA.

G. **CURING:** PATCHES SHALL BE CURED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION.

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, OR IF A PATCH EXTENDS COMPLETELY THROUGH A MEMBER BOTH EXPOSED SURFACES SHALL BE INCLUDED.

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

ITEM	UNIT	DESCRIPTION
SPECIAL	SG.FT.	PATCHING CONCRETE STRUCTURES WITH MAGNESIUM PHOSPHATE CONCRETE