

GENERAL NOTES

LAKE COUNTY
LAK-90-17.42/25.15/27.76

ITEM 516, REFURBISH BEARING DEVICES, AS PER PLAN

THIS ITEM SHALL INCLUDE ALL WORK NECESSARY TO PROPERLY ALIGN BRIDGE BEARINGS AS WELL AS THEIR CLEANING AND PAINTING. INCLUDED SHALL BE THE DISASSEMBLY OF THE BEARINGS, HAND TOOL CLEANING (GRINDING IF NECESSARY), PAINTING AS REQUIRED BY SYSTEM OZEU, REPLACEMENT OF ANY DAMAGED SHEET LEAD (7H.19), INSTALLATION OF ANY NECESSARY STEEL SHIMS OF THE SAME SIZE AS THE BEARINGS TO PROVIDE A SNUG FIT, REALIGNMENT OF THE UPPER BEARING PLATE BY REMOVING EXISTING WELDS AND WELDING SO THAT THE BEARINGS ARE VERTICALLY ALIGNED AT 60° F, LUBRICATING SLIDING SURFACES, AND REASSEMBLY OF THE BEARINGS. THE CONTRACTOR SHALL ENSURE THAT ALL BEARINGS ARE SHIMMED ADEQUATELY AND THAT NO BEAMS AND/OR BEARING DEVICES ARE "FLOATING". AT THE OPTION OF THE CONTRACTOR AND AT NO ADDITIONAL COST TO THE STATE, NEW BEARINGS OF THE SAME TYPE AS THE EXISTING MAY BE INSTALLED IN PLACE OF REFURBISHING THE BEARINGS. STANDARD DRAWING RB-1-55 SHALL BE USED AS REFERENCE FOR FABRICATING NEW BEARINGS. ALL WORK SHALL BE TO THE SATISFACTION OF THE ENGINEER. PAYMENT FOR ALL THE ABOVE DESCRIBED LABOR AND MATERIALS WILL BE MADE AT THE CONTRACT PRICE BID FOR ITEM 516 - REFURBISH BEARING DEVICES, AS PER PLAN.

ITEM 518, 6" PERFORATED CORRUGATED PLASTIC PIPE, AS PER PLAN

CORRUGATED PIPE USED IN ABUTMENT DRAINAGE SHALL BE 6 INCH DIAMETER, PLASTIC CORRUGATED AS PER CMS 707.33, AASHTO M294, TYPE SP.

ITEM 518, 6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS, AS PER PLAN

CORRUGATED PIPE USED IN ABUTMENT DRAINAGE SHALL BE 6 INCH DIAMETER, PLASTIC CORRUGATED AS PER CMS 707.33, AASHTO M294, TYPE S. THIS ITEM SHALL INCLUDE ALL ELBOWS, TEES AND END CAPS REQUIRED TO COMPLETE THE ABUTMENT DRAINAGE SYSTEM.

MECHANICAL CONNECTORS

AN APPROVED TYPE OF MECHANICAL CONNECTOR FOR REINFORCING BARS SHALL BE PROVIDED. INSTALLATION OF CONNECTORS SHALL CONFORM WITH MANUFACTURER'S RECOMMENDED PROCEDURES. IF A DOWEL BAR SPLICE TYPE OF CONNECTOR IS FURNISHED, THE MINIMUM DOWEL BAR LENGTH TO BE INCLUDED WITH THE CONNECTOR SHALL BE GIVEN BY THE DIMENSION "L" SHOWN ON THE PLANS.

CONNECTORS AND DOWEL BARS USED WITH EPOXY COATED BARS SHALL BE EPOXY COATED. COATING FOR BOTH CONNECTORS AND BARS SHALL CONFORM TO THE SAME SPECIFICATIONS. COATINGS WHICH HAVE BEEN DAMAGED OR WHICH OTHERWISE DO NOT MEET SPECIFICATIONS WITH RESPECT TO COLOR, CONTINUITY AND UNIFORMITY MAY BE REPAIRED AS DIRECTED BY THE ENGINEER OR THEY SHALL BE REPLACED WITH MATERIAL WHICH MEETS THE SPECIFICATIONS.

CONNECTORS AND DOWEL BAR EXTENSIONS SHALL CONFORM WITH ITEM 509 AND BE INCLUDED IN THE BID PRICE PER POUND FOR ITEM 844.

ITEM 516 - JOINT SEAL (BITUMEN IMPREGNATED FOAM)

1. DESCRIPTION: THIS WORK SHALL CONSIST OF SEALING JOINTS USING BITUMEN IMPREGNATED FOAM IN ACCORDANCE WITH THESE SPECIFICATIONS, IN REASONABLY CLOSE CONFORMITY WITH THE PLANS AND MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS AND AS DIRECTED BY THE ENGINEER.

2. MATERIAL: THE MATERIAL SHALL BE A PRECOMPRESSED BITUMEN IMPREGNATED FOAM JOINT SEALANT SUCH AS EMSEAL PCSA, PERMABAND ROYSTON UNIBAND 8100 OR AN APPROVED EQUAL. EMSEAL U.S.A. IS LOCATED AT 344 MILL ROAD IN STAMFORD, CT. 06903. AND HAS A TELEPHONE NUMBER OF (203) 322-3828. PERMABAND IS AVAILABLE FROM PERMAQUIK (CANADA) LTD WHICH IS LOCATED AT 3043 UNIVERSAL DRIVE IN MISSISSAUGA, ONTARIO L4X2E2; TELEPHONE (416) 625-9444. ROYSTON IS LOCATED AT 128 FIRST ST; PITTSBURG, PA. 15238; TELEPHONE 828-1500.

ALL MATERIALS SHALL BE STORED AND INCORPORATED IN THE WORK AS RECOMMENDED BY THE MANUFACTURER.

3. SURFACE PREPARATION: THE FACES TO WHICH THE SEAL MUST ADHERE SHALL BE SANDBLASTED CLEAN AND BE FREE OF FOREIGN MAERIAL SUCH AS DIRT, DUST, GREASE, OIL, RELEASE AGENTS AND ANY OTHER MATERIAL DETRIMENTAL TO ADHESION OF THE SEALANT.

4. APPLICATION: JOINT SEALS SHALL BE INSTALLED ONLY WHEN THE SURFACES ARE DRY AND THE SURFACE TEMPERATURE IS ABOVE 50F. BOTH CONCRETE SURFACES ADJACENT TO THE JOINT SEAL SHALL BE PRIMED AS RECOMMENDED BY THE MANUFACTURER. THE FOAM SEAL SHALL BE REMOVED FROM THE PACKAGING AND ITS NARROW EDGE INSERTED INTO THE JOINT OPENING. THE DEPTH FACE WITH THE SELF-ADHESIVE BACKING SHALL BE PRESSED AGAINST ONE SIDE OF THE JOINT SO THAT FOAM IS HELD IN PLACE WHILE IT RECOVERS.

AT TEMPERATURES ABOVE 70F THE MATERIAL WILL RECOVER IN A FEW HOURS. AT TEMPERATURES BELOW 70F THE RECOVERY SHALL BE ACCELERATED BY HEATING THE MATERIAL WITH AN OPEN FLAME, GAS BURNER, INFRA-RED LAMP OR HOT-AIR BLOWER.

A CONTINUOUS LENGTH OF JOINT SEAL SHALL BE ACHIEVED BY JOINING INDIVIDUAL STRIPS ONLY BY MEANS OF SCARFED JOINTS CUT AT 45 DEGREES OR LESS RELATIVE TO THE SIDES OF THE JOINT. THE SCARFED ENDS MUST BE PUSHED WELL PAST ONE ANOTHER. THE SEAL SHALL NOT BE PULLED OR STRETCHED SO THAT GAPS BETWEEN SUCCESSIVE LENGTHS ARE PREVENTED.

5. METHOD OF MEASUREMENT: FOOTAGE UNDER THIS ITEM SHALL BE THE LINEAR FEET OF BITUMEN IMPREGNATED FOAM SEAL INSTALLED IN THE OPEN JOINTS THAT ARE COMPLETE, IN PLACE AND ACCEPTED.

6. BASIS OF PAYMENT: THE ACCEPTED QUANTITIES OF SEALED JOINTS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER LINEAR FOOT, WHICH PRICE AND PAYMENT SHALL BE FULL COMPENSATION FOR PREPARING THE SURFACES, FURNISHING AND PLACING ALL MATERIALS AND ALL LABOR AND EQUIPMENT NECESSARY TO COMPLETE THE JOINT SEAL ACCORDING TO SPECIFICATIONS. PAYMENT WILL BE MADE UNDER THE FOLLOWING:

ITEM	UNIT	DESCRIPTION
516	LIN. FT.	4"x4" JOINT SEAL (BITUMEN IMPREGNATED FOAM)

ITEM SPECIAL - POURED POLYURETHANE JOINT SEAL

1. DESCRIPTION: THIS WORK SHALL CONSIST OF SEALING JOINTS WITH POURED POLYURETHANE JOINT SEAL IN ACCORDANCE WITH THESE SPECIFICATIONS IN REASONABLY CLOSE CONFORMITY WITH THE PLANS AND MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS AND AS DIRECTED BY THE ENGINEER.

2. MATERIAL: THE MATERIAL FOR THIS ITEM IS A TWO-PART, COLD APPLIED, CHEMICALLY CURING, SELF LEVELING, ELASTOMERIC, POLYURETHANE JOINT SEALANT MEETING THE REQUIREMENT OF FEDERAL SPECIFICATIONS TT-S-00227E AND ASTM C-920. ALL MATERIALS SHALL BE STORED AND INCORPORATED IN THE WORK AS SPECIFIED BY THE MANUFACTURER.

3. APPLICATION: THE CONCRETE SURFACES TO WHICH THE SEALER IS TO ADHERE SHALL BE THOROUGHLY CLEANED BY ABRASIVE BLASTING. POLYURETHANE JOINT SEAL SHALL BE Poured OVER THE FULL LENGTH OF THE BITUMEN IMPREGNATED FOAM SEAL PREVIOUSLY INSTALLED IN THE OPEN JOINT AND SHALL BE APPLIED ONLY WHEN THE CONCRETE IS DRY AND ITS TEMPERATURE IS ABOVE 50F. THE POURED JOINT SEALER SHALL ACT AS A SECOND SEAL UNDERNEATH AND ON TOP OF THE BITUMEN IMPREGNATED FOAM JOINT SEAL. THE INSTALLED AND CURED MATERIAL SHALL BE THE DEPTH AS SHOWN IN THE PLANS AND SHALL BE BONDED TO THE CONCRETE SIDES OF THE JOINT. ANY UNBONDED SECTION SHALL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE. DAMS AS REQUIRED TO CONTAIN THE POURED SEALER SHALL BE INCIDENTAL TO THIS ITEM OF WORK.

4. METHOD OF MEASUREMENT: FOOTAGE UNDER THIS ITEM SHALL BE THE LINEAR FEET OF URETHANE JOINT SEAL POURED OVER THE FOAM JOINT SEAL THAT ARE COMPLETE, IN PLACE AND ACCEPTED.

5. BASIS OF PAYMENT: THE ACCEPTED QUANTITIES OF POURED POLYURETHANE JOINT SEAL SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER LINEAR FOOT, WHICH PRICE AND PAYMENT SHALL BE IN FULL COMPENSATION FOR PREPARING THE SURFACES, FURNISHING AND PLACING ALL MATERIALS AND ALL OTHER MATERIAL, LABOR AND EQUIPMENT NECESSARY TO COMPLETE THE JOINT SEAL ACCORDING TO SPECIFICATIONS. PAYMENT WILL BE MADE UNDER:

ITEM	UNIT	DESCRIPTION
SPECIAL	LIN. FT.	POURED POLYURETHANE JOINT SEAL

ITEM SPECIAL, VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC

VANDAL PROTECTION FENCE SHALL CONFORM TO STANDARD DRAWING VPF-1-90M WITH THE FOLLOWING REQUIRED DETAILS AND EXCEPTIONS:

- 1) THE POST SECTION TYPE SHALL BE PS-4. THE REQUIRED BASE PLATE TYPE SHALL BE BP-5.
- 2) STEEL FABRIC SHALL BE II GAGE CORE WIRE WITH CLASS 2B PVC COATING.
- 3) 3/4" DIAMETER HIGH STRENGTH ANCHORS SHALL BE CAST-IN-PLACE THREADED FERRULE CONCRETE INSERTS AS APPROVED BY THE DIRECTOR.
- 4) PAYMENT FOR VANDAL PROTECTION FENCE SHALL BE MADE UNDER ITEM SPECIAL VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC.

BAR LAP LENGTHS

UNLESS OTHERWISE SHOWN, BAR LAPS SHALL BE NOT LESS THAN:

BAR NO.	4	5	6	7	8	9
LAP LENGTH FOR EPOXY COATED	1'-7"	2'-0"	2'-4"	3'-0"	3'-11"	5'-0"

UTILITY LINES

UTILITY LINES: ALL EXPENSE INVOLVED IN RELOCATION (INSTALLING) THE AFFECTED UTILITY LINES SHALL BE BORNE BY THE UTILITY(IES). THE CONTRACTOR AND UTILITY(IES) ARE TO COOPERATE BY ARRANGING THEIR WORK IN SUCH A MANNER THAT INCONVENIENCE TO EITHER WILL BE HELD TO A MINIMUM.

CONCRETE REPAIR APPLICATIONS

ITEM 519 - PATCHING CONCRETE STRUCTURES, AS PER PLAN

ITEM 843 - PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR

THESE ITEMS SHALL BE USED AS DIRECTED BY THE ENGINEER TO REPAIR DAMAGED CONCRETE AREAS. ITEM 519 IS SPECIFIED WHERE THE REPAIR DEPTH IS 3 INCHES OR GREATER AND THE SURFACE CAN BE READILY FORMED AND POURED. ALL SURFACES TO BE PATCHED AND THE EXPOSED REINFORCING STEEL WITHIN SHALL BE THOROUGHLY CLEANED BY ABRASIVE BLASTING PRIOR TO THE CLEANING SPECIFIED BY 519.04 AND 520.05. CLEANING SHALL PRECEDE APPLICATION OF THE PATCHING MATERIAL OR ERECTION OF THE FORMS BY NOT MORE THAN 24 HOURS. TROWELABLE MORTARS ARE SPECIFIED WHERE THE REPAIR DEPTH IS ... LESS THAN 3 INCHES AND THE SURFACE CANNOT BE READILY FORMED AND POURED.

THE OSBORN ENGINEERING COMPANY		3/52	
CONSULTING ENGINEERS CLEVELAND, OHIO 44114			
GENERAL NOTES			
BRIDGE NO. LAK-90-17 42/2515/27 76			
LAKE COUNTY		OHIO	
DESIGNED	DRAWN	TRACED	CHECKED
LYH	BFG		JRS
REVIEWED	DATE	REVISIONS	
GA	2/94	0	
			O.D.T. 6/17/94 52489

File Name: K:\MILL\2007\0182\STRUCT\01825766
 Plot Date: 6/17/94
 Drawn By: bfg