

STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWING(S):

EXJ-4-87 DATED/REVISED 7-19-02

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION(S):

843 DATED 4-18-03

847 DATED 4-15-11

DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 17TH EDITION, INCLUDING THE 2002 INTERIM SPECIFICATIONS AND THE ODOT BRIDGE DESIGN MANUAL.

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 CMS SECTIONS 102.05, 105.02 AND 513.04.

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS WHICH HAVE BEEN VERIFIED IN THE FIELD.

PROPOSED WORK

SUM-277-0089 (IR277 OVER ABANDONED RAILROAD)
-PATCH ALL UNSOUND AREAS OF THE CONCRETE DECK AND APPROACH SLABS
-SEAL PATCHED CONCRETE DECK AND APPROACH SLABS WITH SRS CONCRETE TREATMENT
-PATCH ALL UNSOUND AREAS OF THE SUBSTRUCTURE AND MEDIAN
-REPAIR OUTSIDE PARAPETS
-REPAIR THE SLOPE PROTECTION AT THE FORWARD AND REAR ABUTMENTS WHERE THE FOOTER IS EXPOSED
-REPAIR EROSION AT THE FORWARD RIGHT CORNER ALONG THE APPROACH SLAB
-SEAL ALL EXPOSED CONCRETE SURFACES OF THE PARAPETS, MEDIAN, ABUTMENTS, AND PIERS WITH EPOXY-URETHANE
-CLEARING AND GRUBBING 10' AROUND THE STRUCTURE FOR SEALING OPERATIONS
-NEW STRUCTURE IDENTIFICATION SIGNS

SUM-277-0113 (IR277 OVER WATERLOO RD)
-REMOVE ALL ASPHALT ON APPROACH SLABS
-PATCH ALL UNSOUND AREAS OF THE CONCRETE DECK AND APPROACH SLABS
-PLACE AN ASPHALT CONCRETE OVERLAY WITH WATERPROOFING ON THE PATCHED CONCRETE DECK AND APPROACH SLABS
-PLACE A POLYMER MODIFIED ASPHALT JOINT
-RAISE EXISTING SCUPPERS TO PROPOSED OVERLAY ELEVATION
-PATCH ALL UNSOUND AREAS OF THE SUBSTRUCTURE AND MEDIAN
-REPAIR OUTSIDE PARAPETS
-REMOVE ALL SPALLED AREAS OF THE BOTTOM DECK FLOOR AND SEAL WITH EPOXY-URETHANE
-REPAIR THE CONCRETE SLOPE PROTECTION AT THE FORWARD LEFT AND REAR MIDDLE ABUTMENTS
-SEAL ALL EXPOSED CONCRETE SURFACES OF THE PARAPETS, MEDIAN, ABUTMENTS, AND PIERS WITH EPOXY-URETHANE
-CLEARING AND GRUBBING 10' AROUND THE STRUCTURE FOR SEALING OPERATIONS
-NEW STRUCTURE IDENTIFICATION SIGNS

SUM-277-0133 (IR277 OVER SR93 MANCHESTER RD)
-REMOVE ALL ASPHALT ON APPROACH SLABS
-PATCH ALL UNSOUND AREAS OF THE CONCRETE DECK AND APPROACH SLABS
-PLACE AN ASPHALT CONCRETE OVERLAY WITH WATERPROOFING ON THE PATCHED CONCRETE DECK AND APPROACH SLABS
-PLACE A POLYMER MODIFIED ASPHALT JOINT
-RAISE EXISTING SCUPPERS TO PROPOSED OVERLAY ELEVATION
-PATCH ALL UNSOUND AREAS OF THE SUBSTRUCTURE AND MEDIAN
-REPAIR OUTSIDE PARAPETS
-REPAIR TOP OF BACKWALL AT THE FORWARD RIGHT ABUTMENT NEAR THE MEDIAN WALL
-REMOVE ALL SPALLED AREAS OF THE BOTTOM DECK FLOOR AND SEAL WITH EPOXY-URETHANE
-TRIM END OF BEAMS AT THE FORWARD ABUTMENT
-REFURBISH EXISTING FORWARD ABUTMENT BEARINGS
-REPAIR CONCRETE SLOPE PROTECTION AT THE FORWARD LEFT
-SEAL ALL EXPOSED CONCRETE SURFACES OF THE PARAPETS, MEDIAN, ABUTMENTS, AND PIERS WITH EPOXY-URETHANE
-CLEARING AND GRUBBING 10' AROUND THE STRUCTURE FOR SEALING OPERATIONS
-NEW STRUCTURE IDENTIFICATION SIGNS

SUM-277-0175 (IR277 OVER OHIO CANAL & LEY DR)
-SEAL CONCRETE DECK AND APPROACH SLABS WITH SRS CONCRETE TREATMENT
-PATCH ALL UNSOUND AREAS OF THE SUBSTRUCTURE AND MEDIAN
-REPAIR OUTSIDE PARAPETS
-REFURBISH EXISTING ABUTMENT BEARINGS
-REPAIR SLOPE PROTECTION AT THE REAR MIDDLE ABUTMENT
-SEAL ALL EXPOSED CONCRETE SURFACES OF THE PARAPETS, MEDIAN, ABUTMENTS, AND PIERS WITH EPOXY-URETHANE
-CLEARING AND GRUBBING 10' AROUND THE STRUCTURE FOR SEALING OPERATIONS
-NEW STRUCTURE IDENTIFICATION SIGNS

SUM-277-0227 (IR277 OVER BREWSTER RUN)
-PATCH ALL UNSOUND AREAS ON THE INSIDE OF THE CULVERTS
-REPAIR THE SCOUR AT THE INLET END
-PIPE CLEANOUT
-CHANNEL CLEANOUT 20' OUT FROM THE INLET AND OUTLET
-REPAIR EROSION BEHIND THE INLET HEADWALL
-CLEARING AND GRUBBING 20' AROUND THE INLET AND OUTLET
-NEW STRUCTURE IDENTIFICATION SIGNS

SUM-277-0246 (SOUTH MAIN ST OVER IR277)
-SEAL CONCRETE DECK AND APPROACH SLABS WITH SRS CONCRETE TREATMENT
-SEAL ALL EXPOSED CONCRETE SURFACES OF THE PARAPETS, ABUTMENTS, AND PIERS WITH EPOXY-URETHANE
-CLEARING AND GRUBBING 10' AROUND THE STRUCTURE FOR SEALING OPERATIONS
-NEW STRUCTURE IDENTIFICATION SIGNS

SUM-277-0304 (IR277 OVER GLENMOUNT AVE)
-PATCH ALL UNSOUND AREAS OF THE CONCRETE DECK AND APPROACH SLABS
-PLACE AN ASPHALT CONCRETE OVERLAY WITH WATERPROOFING ON THE PATCHED CONCRETE DECK AND APPROACH SLABS
-PLACE A POLYMER MODIFIED ASPHALT JOINT
-RAISE EXISTING SCUPPERS TO PROPOSED OVERLAY ELEVATION
-PATCH ALL UNSOUND AREAS OF THE SUBSTRUCTURE AND MEDIAN
-REPAIR OUTSIDE PARAPETS
-REMOVE ALL SPALLED AREAS OF THE BOTTOM DECK FLOOR AND SEAL WITH EPOXY-URETHANE
-SEAL ALL EXPOSED CONCRETE SURFACES OF THE PARAPETS, MEDIAN, ABUTMENTS, AND PIERS WITH EPOXY-URETHANE
-CLEARING AND GRUBBING 10' AROUND THE STRUCTURE FOR SEALING OPERATIONS
-NEW STRUCTURE IDENTIFICATION SIGNS

SUM-277-0367 (IR277 OVER BRANCH BREWSTER RUN)
-CHANNEL CLEANOUT 15' OUT FROM THE INLET AND OUTLET END
-REPAIR EROSION ALONG THE OUTSIDE OF THE CONCRETE GUTTER AT THE REAR RIGHT CORNER OF CULVERT
-CLEARING AND GRUBBING 15' AROUND THE INLET AND OUTLET
-NEW STRUCTURE IDENTIFICATION SIGNS

SUM-277-0369 (IR277 OVER IR77)
-PATCH ALL UNSOUND AREAS OF THE CONCRETE DECK AND APPROACH SLABS
-PLACE AN ASPHALT CONCRETE OVERLAY WITH WATERPROOFING ON THE PATCHED CONCRETE DECK AND APPROACH SLABS
-PLACE A POLYMER MODIFIED ASPHALT JOINT
-RAISE EXISTING SCUPPERS TO PROPOSED OVERLAY ELEVATION
-PATCH ALL UNSOUND AREAS OF THE SUBSTRUCTURE AND MEDIAN
-REPAIR OUTSIDE PARAPETS
-REMOVE ALL SPALLED AREAS OF THE BOTTOM DECK FLOOR AND SEAL WITH EPOXY-URETHANE
-TRIM END OF BEAMS AT THE REAR ABUTMENT
-REPAIR PAINT EXISTING OZEU PAINT SYSTEM
-REFURBISH EXISTING ABUTMENT BEARINGS
-SEAL ALL EXPOSED CONCRETE SURFACES OF THE PARAPETS, MEDIAN, ABUTMENTS, AND PIERS WITH EPOXY-URETHANE
-CLEARING AND GRUBBING 10' AROUND THE STRUCTURE FOR SEALING OPERATIONS
-NEW STRUCTURE IDENTIFICATION SIGNS

SUM-224-1061 (US224 OVER SOUTH ARLINGTON ST)
-REMOVE AND REPLACE THE EXISTING CONCRETE OVERLAY ON THE DECK
-REMOVE EXISTING ASPHALT CONCRETE OVERLAY AND PLACE A CONCRETE OVERLAY ON THE APPROACH SLABS
-PATCH ALL UNSOUND AREAS OF THE SUBSTRUCTURE AND MEDIAN
-REPAIR OUTSIDE PARAPETS
-REMOVE ALL SPALLED AREAS OF THE BOTTOM DECK FLOOR AND SEAL WITH EPOXY-URETHANE
-REPAIR CONCRETE SLOPE PROTECTION AT THE FORWARD MIDDLE AND REAR MIDDLE
-REPAIR EROSION AT THE FORWARD AND REAR RIGHT WINGWALLS WHERE THE FOOTER IS EXPOSED
-SEAL ALL EXPOSED CONCRETE SURFACES OF THE PARAPETS, MEDIAN, ABUTMENTS, AND PIERS WITH EPOXY-URETHANE
-CLEARING AND GRUBBING 10' AROUND THE STRUCTURE FOR SEALING OPERATIONS
-NEW STRUCTURE IDENTIFICATION SIGNS

SUM-224-1105 (KELLY AVE OVER US224)
-SEAL CONCRETE DECK AND APPROACH SLABS WITH SRS CONCRETE TREATMENT
-PATCH ALL UNSOUND AREAS OF THE SUBSTRUCTURE AND PARAPETS
-REPLACE EXISTING EXPANSION JOINT SEALS
-REFURBISH EXISTING FORWARD ABUTMENT BEARINGS
-SEAL ALL EXPOSED CONCRETE SURFACES OF THE PARAPETS, ABUTMENTS, AND PIERS WITH EPOXY-URETHANE
-CLEARING AND GRUBBING 10' AROUND THE STRUCTURE FOR SEALING OPERATIONS
-NEW STRUCTURE IDENTIFICATION SIGNS

SUM-77-0927R (IR77 SB OFF RAMP TO US224 EB)
-PATCH ALL UNSOUND AREAS OF THE CONCRETE DECK, TOP OF BACKWALLS, AND APPROACH SLABS
-PATCH ALL UNSOUND AREAS OF THE SUBSTRUCTURE
-REPAIR OUTSIDE PARAPETS
-SEAL ALL EXPOSED CONCRETE SURFACES OF THE PARAPETS, ABUTMENTS, AND PIERS WITH EPOXY-URETHANE
-CLEARING AND GRUBBING 10' AROUND THE STRUCTURE FOR SEALING OPERATIONS
-NEW STRUCTURE IDENTIFICATION SIGNS

SUM-77-0958L (IR77 NB OFF RAMP TO IR277 WB)
-PATCH ALL UNSOUND AREAS OF THE CONCRETE DECK
-REPAIR DAMAGED EXPANSION JOINT AT REAR ABUTMENT
-PATCH ALL UNSOUND AREAS OF THE SUBSTRUCTURE
-REPAIR OUTSIDE PARAPETS
-REMOVE ALL SPALLED AREAS OF THE BOTTOM DECK FLOOR AND SEAL WITH EPOXY-URETHANE
-SEAL ALL EXPOSED CONCRETE SURFACES OF THE PARAPETS, ABUTMENTS, AND PIERS WITH EPOXY-URETHANE
-CLEARING AND GRUBBING 10' AROUND THE STRUCTURE FOR SEALING OPERATIONS
-NEW STRUCTURE IDENTIFICATION SIGNS

CLEARING AND GRUBBING

ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THE PROJECT, A LUMP SUM QUANTITY IS INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING. ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM ARE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING AND GRUBBING.

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SUM-76/77/277/224-VAR PID No. 76351	1 / 9 47 / 55	STRUCTURE GENERAL NOTES SUM-277-0089, SUM-277-0113, SUM-277-0133, SUM-277-0175, SUM-277-0227, SUM-277-0246, SUM-277-0304, SUM-277-0367, SUM-277-0369, SUM-224-1061, SUM-224-1105, SUM-77-0927R, AND SUM-77-0958L		DESIGNED LMP CHECKED AAM	DRAWN LMP REVISED	REVIEWED TJP STRUCTURE FILE NUMBER	DATE 07-13-11	DESIGN AGENCY ODOT --- DISTRICT 4 PLANNING AND ENGINEERING

ITEM SPECIAL - PIPE CLEANOUT

THIS WORK SHALL CONSIST OF REMOVING SEDIMENT AND DEBRIS FROM STRUCTURE SUM-277-0227. ALL MATERIAL REMOVED SHALL BE DISPOSED OF AS PER 105.16 AND 105.17. THE STRUCTURE SHALL BE CLEANED OUT TO THE SATISFACTION OF THE ENGINEER.

CLEANOUT OF THE PIPE SHALL BE PAID FOR AT THE UNIT PRICE BID FOR ITEM SPECIAL - PIPE CLEANOUT. THIS PRICE SHALL INCLUDE THE COST FOR MATERIAL, EQUIPMENT, LABOR, AND ALL INCIDENTALS REQUIRED TO COMPLETE THE CLEANOUT.

ITEM 202, REMOVAL MISC.: CHANNEL CLEANOUT

THIS WORK SHALL CONSIST OF RE-ESTABLISHING THE ORIGINAL CHANNEL PROFILE BY REMOVING SEDIMENT BUILDUP, VEGETATION, AND DEBRIS FROM THE EXISTING CHANNEL WITHIN STATE RIGHT-OF-WAY LIMITS AS SPECIFIED IN THE PLANS FOR STRUCTURES SUM-277-0227 AND SUM-277-0367. ANY TREES LOCATED WITHIN CHANNEL OR BANK LIMITS SHALL BE INCLUDED UNDER ITEM 201, CLEARING AND GRUBBING. ALL MATERIALS REMOVED SHALL BE DISPOSED OF IN ACCORDANCE WITH 105.16 AND 105.17 OF THE CMS WITH THE APPROVAL OF THE ENGINEER. NO AREAS OF EXISTING CHANNEL PROTECTION SHALL BE REMOVED IN ORDER TO RESTORE THE ORIGINAL CHANNEL PROFILE. AFFECTED CHANNEL AREAS SHALL BE CLEANED OUT TO THE SATISFACTION OF THE ENGINEER.

CHANNEL CLEANOUT SHALL BE PAID FOR AT THE UNIT PRICE BID FOR ITEM 202 REMOVAL MISC.: CHANNEL CLEANOUT. THIS PRICE SHALL INCLUDE THE COST FOR LABOR, EQUIPMENT, AND ALL INCIDENTALS REQUIRED TO COMPLETE THE CHANNEL CLEANOUT.

ITEM 203, BORROW

THIS WORK WILL CONSIST OF REPAIRING THE EROSION ALONG THE FORWARD RIGHT APPROACH SLAB OF STRUCTURE SUM-277-0089. EROSION REPAIR WILL BE PAID FOR AT THE CU YD BID FOR ITEM 203, BORROW. THIS PRICE WILL INCLUDE THE COST FOR LABOR, EQUIPMENT, AND ALL INCIDENTALS REQUIRED TO COMPLETE THIS WORK.

ITEM 509 REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN

REPLACE ALL EXISTING REINFORCING BARS DEEMED BY THE ENGINEER TO BE UNUSABLE BECAUSE OF CORROSION. THE DEPARTMENT WILL MEASURE THE REPLACEMENT REINFORCING STEEL BY THE NUMBER OF POUNDS ACCEPTED IN PLACE.

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 CONCRETE REMOVAL OPERATIONS WITH NEW EPOXY COATED REINFORCING STEEL OF THE SAME SIZE AT NO COST TO THE DEPARTMENT.

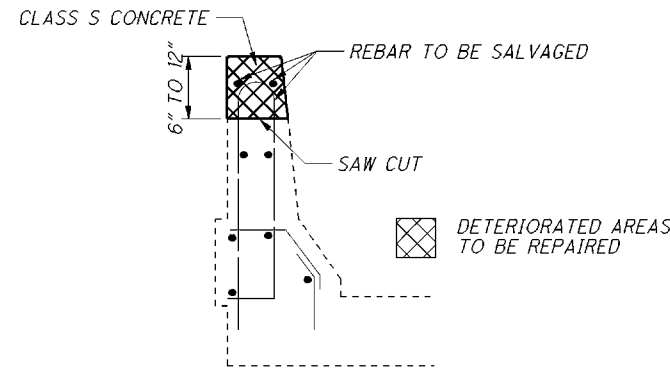
ITEM 512, TYPE 3 WATERPROOFING, AS PER PLAN

APPLY THE PRIMER COAT AT A RATE OF 0.10 TO 0.20 GALLONS (0.50 TO 0.70 LITERS) OF ASPHALT MATERIAL PER SQUARE YARDS (SQUARE METERS), OR AS PER THE MANUFACTURER'S WRITTEN SPECIFICATIONS.

ITEM 511 - CONCRETE MISC.: PARAPET REPAIR

THIS ITEM WILL BE USED TO REPAIR DAMAGED PARAPETS OF STRUCTURES SUM-277-0089, SUM-277-0113, SUM-277-0133, SUM-277-0175, SUM-277-0304, SUM-277-0369, SUM-224-1061, SUM-77-0927R, AND SUM-77-0958L.

SAWCUT AND REMOVE DAMAGED/SPALLED AREAS OF THE EXISTING PARAPETS TO A MINIMUM DEPTH OF 6" AND A MAXIMUM DEPTH OF 12" OR AS DIRECTED BY THE ENGINEER. CARE SHALL BE TAKEN WHEN REMOVING SPALLED CONCRETE TO SALVAGE EXISTING REBAR. CLASS S CONCRETE WILL BE USED TO REPAIR THE DAMAGED PARAPETS. THE REMOVAL OF CONCRETE, PREPARATION OF THE SURFACES, FORMS, AND CLASS S CONCRETE WILL BE INCIDENTAL TO THIS ITEM. PAYMENT WILL BE MADE AT THE CONTRACT PRICE PER FOOT FOR ITEM 511, CONCRETE MISC.: PARAPET REPAIR.

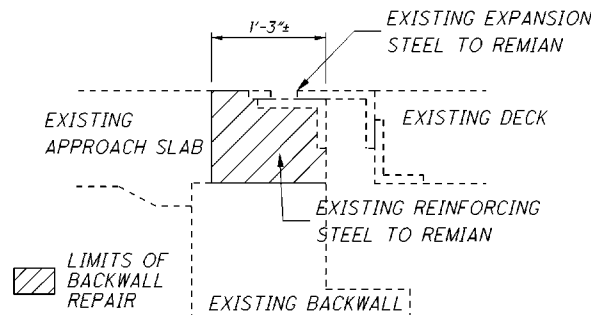


ITEM 511, CONCRETE MISC.: BACKWALL REPAIR

THIS ITEM CONSISTS OF THE REMOVAL OF ALL UNSOUND CONCRETE AT OF THE BACKWALLS OF STRUCTURE SUM-277-0133 TO THE LIMITS SHOWN BELOW OR AS DIRECTED BY THE ENGINEER, THE PREPARATION OF THE SURFACE, FORMS, TEMPORARY SUPPORTS OF THE EXPANSION JOINT, AND PROVIDING AND PLACING OF CLASS S CONCRETE.

TEMPORARY SUPPORT OF THE EXPANSION JOINT WILL BE USED TO MAINTAIN THE PROPER ALIGNMENT AND GRADE OF THE JOINT DURING REMOVAL AND REPLACEMENT OF THE BACKWALL CONCRETE. THE COST OF THIS TEMPORARY SUPPORT WILL BE INCIDENTAL TO THIS ITEM.

PAYMENT WILL BE MADE AT THE CONTRACT PRICE PER CU.YD. FOR ITEM 511, CONCRETE MISC.: BACKWALL REPAIR WHICH WILL INCLUDE ALL MATERIALS AND LABOR INCLUDING REMOVAL AND DISPOSAL OF THE EXISTING CONCRETE REQUIRED TO MAKE THIS ITEM COMPLETE.



ITEM 513, STRUCTURAL STEEL MISC.: REPLACEMENT OF PORTION OF DAMAGED RISER BAR

AFTER EXISTING AREA OF CONCRETE DECK PATCH AREA HAS BEEN REMOVED AND PRIOR TO CONCRETE PATCH MATERIAL PLACEMENT OF STRUCTURE SUM-77-0958L, INSPECT THE RISER BAR AT THE REAR ABUTMENT FOR DAMAGED AREAS. REMOVE DAMAGED RISER BAR AND PREPARE THE EXISTING STEEL FOR WELDING A NEW STEEL RISER BAR. PERFORM A 5/16 INCH FILLET WELDS ACCORDING TO .THE ITEM 513 USING APPROVED ELECTRODES, PROCEDURES, AND WELDERS TO ATTACH THE NEW STEEL BAR. THE NEW RISER BAR WILL BE FIELD VERIFIED FOR SIZE PRIOR TO ORDERING ANY MATERIAL. THE DEPARTMENT WILL INCLUDE ALL MATERIALS, LABOR, AND ALL INCIDENTALS EXCEPT PATCHING OPERATIONS NECESSARY TO COMPLETE THE ABOVE WORK FOR PAYMENT WITH ITEM 513 - STRUCTURAL STEEL MISC.: REPLACEMENT OF PORTION OF DAMAGED RISER BAR.

ITEM 514 - FIELD PAINTING, MISC.; REPAIR PAINTING

PAINTED AREAS THAT ARE DAMAGED OR RUSTED WILL BE DESIGNATED BY THE PROJECT ENGINEER. THE CMS 514.22 PROCESS WILL BE USED TO REPAIR THESE AREAS.

THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH ALL NECESSARY EQUIPMENT TO INSPECT THIS WORK.

THE MAJORITY OF THE AREAS TO BE REPAIR PAINTED ARE: SUM-277-0369: OVER TRAFFIC ON IR77

AREAS TO BE REPAIR PAINTED ARE NOT LIMITED TO THESE AREAS. THE AREAS DESIGNATED BY THE PROJECT ENGINEER WILL BE PAINTED.

ITEM 516 - ELASTOMERIC STRIP SEAL WITHOUT STEEL EXTRUSIONS, AS PER PLAN

THIS ITEM WILL INCLUDE THE REMOVAL AND REPLACEMENT OF THE EXISTING STRIP SEAL GLANDS FROM EDGE TO EDGE OF STRUCTURE SUM-224-1105 DECK. UPON REMOVAL OF THE SEAL, THE CONTRACTOR WILL ATTEMPT TO MATCH THE REPLACEMENT SEAL AS CLOSELY AS POSSIBLE WITH THE EXISTING SEAL SO AS TO PROVIDE A SNUG, WATERTIGHT SEAL. THE EXISTING STRIP SEAL WILL BE FIELD MEASURE PRIOR TO ORDERING MATERIAL. THE STRIP SEAL AND INSTALLATION WILL MEET THE REQUIREMENTS OF STANDARD DRAWING EXJ-4-87.

THIS WORK WILL BE PAID FOR AT THE UNIT PRICE BID FOR ITEM 516, ELASTOMERIC STRIP SEAL WITH STEEL EXTRUSION, AS PER PLAN. THIS PRICE WILL INCLUDE THE REMOVAL OF THE EXISTING STRIP SEAL, LABOR, EQUIPMENT, MATERIAL, AND INCIDENTALS REQUIRED TO REPLACE THE STRIP SEAL.

REQUIRED JOINT OPENING (DIM. "A") - 3" STRIP SEAL

TEMPERATURE (°F)	REAR ABUTMENT (DIM. "A")	FORWARD ABUTMENT (DIM. "A")
30°	1.82"	1.77"
40°	1.75"	1.72"
50°	1.68"	1.67"
60°	1.61"	1.62"
70°	1.54"	1.57"
80°	1.47"	1.52"
90°	1.40"	1.47"

ITEM 516 - REFURBISHING 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 ACCORDING TO ITEM 514, REPLACEMENT OF ANY DAMAGED SHEET LEAD WITH PREFORMED BEARING PADS (711.21), 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 REWELDING SO THAT THE BEARINGS ARE VERTICALLY ALIGNED AT 60 DEGREES F, LUBRICATING SLIDING SURFACES, AND REASSEMBLY OF THE BEARINGS. ASSURE ALL BEARINGS ARE SHIMMED ADEQUATELY AND THAT NO BEAMS AND/OR BEARING DEVICES ARE "FLOATING". AT NO ADDITIONAL COST TO THE STATE, THE CONTRACTOR MAY INSTALL NEW BEARINGS OF THE SAME TYPE AS THE EXISTING IN PLACE OF REFURBISHING THE BEARINGS. ALL WORK SHALL BE TO THE SATISFACTION OF THE ENGINEER. PAYMENT FOR ALL OF THE ABOVE DESCRIBED LABOR AND MATERIALS WILL BE MADE AT THE CONTRACT PRICE BID FOR ITEM 516 - REFURBISH BEARING DEVICES, AS PER PLAN.

ITEM 516, JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN

THIS WORK CONSISTS OF RAISING OR RE-POSITIONING EXISTING STRUCTURES TO THE DIMENSIONS AND REQUIREMENTS DEFINED IN THE PROJECT PLANS.

SUBMIT CONSTRUCTION PLANS IN ACCORDANCE WITH CMS 501.05.

IF, DURING THE JACKING OPERATIONS, CRACKING OF THE CONCRETE SUPERSTRUCTURE, SEPARATION OF THE CONCRETE DECK FROM THE STEEL STRINGERS, OR OTHER DAMAGE TO THE STRUCTURE IS VISUALLY OBSERVED, IMMEDIATELY CEASE THE JACKING OPERATION AND INSTALL SUPPORTS TO THE SATISFACTION OF THE ENGINEER. ANALYZE THE DAMAGE AND SUBMIT A METHOD OF CORRECTION TO THE ENGINEER FOR APPROVAL. EPOXY INJECT ALL BEAMS THAT SEPARATE FROM THE DECK FOR THE DISTANCE OF THE SEPARATION IN ACCORDANCE WITH CMS 512.07. THE DEPARTMENT WILL NOT PAY FOR THE COST OF THIS EPOXY INJECTION OR OTHER REQUIRED REPAIRS. THE BRIDGE BEARINGS SHALL BE FULLY SEATED AT ALL CONTACT AREAS. IF FULL SEATING IS NOT ATTAINED, SUBMIT A REPAIR PLAN TO THE ENGINEER. THE DEPARTMENT WILL NOT PAY FOR THE REPAIR COSTS TO ENSURE FULL SEATING ON BEARINGS.

THE DEPARTMENT WILL MEASURE THIS WORK ON A LUMP SUM BASIS.

THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR ITEM 516, JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.

ITEM 519 - PATCHING CONCRETE STRUCTURES, AS PER PLAN

PRIOR TO THE SURFACE CLEANING SPECIFIED IN 519.04 AND WITHIN 24 HOURS OF PLACING PATCHING MATERIAL, BLAST CLEAN ALL SURFACES TO BE PATCHED INCLUDING THE EXPOSED REINFORCING STEEL. ACCEPTABLE METHODS INCLUDE HIGH-PRESSURE WATER BLASTING WITH OR WITHOUT ABRASIVES IN THE WATER, ABRASIVE BLASTING WITH CONTAINMENT, OR VACUUM ABRASIVE BLASTING.

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SUM-76/77/277/224-VAR
 PID No. 76351
 STRUCTURE GENERAL NOTES
 SUM-277-0089, SUM-277-0133, SUM-277-0227, SUM-271-0246, SUM-277-0304, SUM-277-0367, SUM-277-0369, SUM-224-1061, SUM-224-1105, SUM-77-0927R, AND SUM-77-0958L
 DESIGN AGENCY: ODOT --- DISTRICT 4
 DATE: 07-13-11
 REVIEWED: TJP
 DRAWN: LMP
 DESIGNED: LMP
 CHECKED: AAM
 PLANNING AND ENGINEERING

SPECIAL - STRUCTURE MISC.: CONCRETE SPALL REMOVAL

THIS WORK WILL CONSIST OF REMOVING ALL VISIBLY SPALLED AREAS OF THE BOTTOM DECK FLOOR OF STRUCTURES SUM-271-0113, SUM-271-0133, SUM-277-0304, SUM-277-0369, SUM-224-1061, AND SUM-77-0958L WITHOUT SOUNDING. AFTER SPALLED CONCRETE AREAS HAVE BEEN REMOVED SEAL WITH ITEM 512, SEALING OF CONCRETE SURFACES (EPOXY-URETHANE).

CONCRETE SPALL REMOVAL WILL BE PAID FOR AT THE LUMP SUM BID FOR SPECIAL - STRUCTURE MISC.: CONCRETE SPALL REMOVAL. THIS PRICE WILL INCLUDE THE COST FOR LABOR, EQUIPMENT, AND ALL INCIDENTALS REQUIRED TO COMPLETE THIS WORK.

CONCRETE SLOPE PROTECTION REPAIR

THIS WORK WILL CONSIST OF REMOVING AND REPLACING SLABS OF THE CONCRETE SLOPE PROTECTION UNDER STRUCTURES **SUM-277-0113**, SUM-277-0133, AND SUM-224-1061 WITH ITEM 613, LOW STRENGTH MORTAR BACKFILL AND ITEM 601, CONCRETE SLOPE PROTECTION.

PLACE THE LOW STRENGTH MORTAR BACKFILL TO FILL ALL EROSION UNDER THE OLD CONCRETE SLOPE PROTECTION AND THEN PLACE NEW CONCRETE SLOPE PROTECTION SLABS PER CMS 601.07 AS DIRECTED BY THE PROJECT ENGINEER. REMOVAL OF EXISTING CONCRETE SLOPE PROTECTION SLABS AND MATERIAL WILL BE INCIDENTAL TO ITEM 601, CONCRETE SLOPE PROTECTION.

CONCRETE SLOPE PROTECTION REPLACEMENT WILL BE PAID FOR AT THE UNIT PRICE BID FOR ITEM 601, CONCRETE SLOPE PROTECTION AND ITEM 613, LOW STRENGTH MORTAR BACKFILL. REMOVAL OF EXISTING CONCRETE SLOPE PROTECTION WILL BE PAID FOR AT THE UNIT PRICE BID FOR ITEM 202, CONCRETE SLOPE PROTECTION REMOVED. THE PRICE FOR EACH ITEM WILL INCLUDE THE COST OF LABOR, EQUIPMENT, AND ALL INCIDENTALS REQUIRED TO COMPLETE THIS WORK.

ITEM 601, DUMP ROCK FILL, TYPE D

THIS WORK WILL CONSIST OF REPAIRING THE SLOPE PROTECTION AT THE FORWARD AND REAR ABUTMENT WHERE THE FOOTER IS EXPOSED OF STRUCTURE SUM-277-0089.

THIS WORK WILL CONSIST OF REPAIRING THE SLOPE PROTECTION IN THE MIDDLE OF THE REAR ABUTMENT SLOPE OF STRUCTURE SUM-277-0175.

THIS WORK WILL CONSIST OF REPAIRING THE EROSION BEHIND THE INLET HEADWALL OF STRUCTURE SUM-277-0227.

THIS WORK WILL CONSIST OF REPAIRING THE EROSION BEHIND THE CONCRETE GUTTER AT THE REAR RIGHT CORNER OF STRUCTURE SUM-277-0367.

ALL REPAIRS WILL BE PAID FOR AT THE UNIT BID PRICE FOR ITEM 601, DUMP ROCK FILL, TYPE D. THIS PRICE WILL INCLUDE THE COST FOR LABOR, EQUIPMENT, AND ALL INCIDENTALS REQUIRED TO COMPLETE THIS WORK.

ITEM 601, ROCK CHANNEL PROTECTION, TYPE B WITH AGGREGATE FILTER

THIS WORK WILL CONSIST OF REPAIRING THE SCOUR THAT HAS FORMED AT THE INLET OF STRUCTURE SUM-277-0227. SCOUR REPAIR WILL BE PAID FOR AT THE UNIT PRICE BID FOR ITEM 601, ROCK CHANNEL PROTECTION, TYPE B WITH AGGREGATE FILTER. THIS PRICE WILL INCLUDE THE COST FOR LABOR, EQUIPMENT, AND ALL INCIDENTALS REQUIRED TO COMPLETE THIS WORK.

ITEM 601, DUMP ROCK FILL, TYPE C

THIS WORK WILL CONSIST OF REPAIRING THE EROSION BEHIND THE FORWARD RIGHT AND REAR RIGHT WINGWALLS WHERE THE FOOTERS ARE EXPOSED OF STRUCTURE SUM-224-1061.

REPAIRS WILL BE PAID FOR AT THE UNIT BID PRICE FOR ITEM 601, DUMP ROCK FILL, TYPE C. THIS PRICE WILL INCLUDE THE COST FOR LABOR, EQUIPMENT, AND ALL INCIDENTALS REQUIRED TO COMPLETE THIS WORK.

CORRECTING BRIDGE IDENTIFICATION SIGN NUMBERS:

SOME OF THE EXISTING BRIDGE NUMBER SIGNS HAVE INCORRECT BRIDGE NUMBERS ON THEM. THE FOLLOWING BRIDGE NUMBERS ARE THE CORRECT ONES AND WILL BE USED ON THE NEW BRIDGE IDENTIFICATIONS SIGNS.

STRUCTURE SUM-277-0089 (SFN:7709579) THE EXISTING SIGN SHOWS 0.92. THE CORRECT BRIDGE IDENTIFICATION NUMBER IS 0089.

STRUCTURE SUM-277-0113 (SFN:7709609) THE EXISTING SIGN SHOWS 1.15. THE CORRECT BRIDGE IDENTIFICATION NUMBER IS 0113.

STRUCTURE SUM-277-0133 (SFN:7709633) THE EXISTING SIGN SHOWS 1.34. THE CORRECT BRIDGE IDENTIFICATION NUMBER IS 0133.

STRUCTURE SUM-277-0227 (SFN:7709714) THE EXISTING SIGN SHOWS 2.32. THE CORRECT BRIDGE IDENTIFICATION NUMBER IS 0227.

STRUCTURE SUM-277-0246 (SFN:7709730) THE EXISTING SIGN SHOWS 2.47. THE CORRECT BRIDGE IDENTIFICATION NUMBER IS 0246.

STRUCTURE SUM-277-0304 (SFN:7709757) THE EXISTING SIGN SHOWS 3.05. THE CORRECT BRIDGE IDENTIFICATION NUMBER IS 0304.

STRUCTURE SUM-277-0369 (SFN:7709811) THE EXISTING SIGN SHOWS SUM-277-3.74 ABOVE ALONG IR277. THE CORRECT BRIDGE IDENTIFICATION NUMBER IS SUM-277-0369. THE EXISTING SIGN SHOWS SUM-77-9.43 BELOW ALONG IR77. THE CORRECT BRIDGE IDENTIFICATION NUMBER IS SUM-77-0942.

STRUCTURE IDENTIFICATION SIGNS

STRUCTURE IDENTIFICATION SIGNS (I-H25a) WILL BE PLACED ON EACH APPROACH OFF THE RIGHT SHOULDER, FACING TRAFFIC, AND BEHIND THE GUARDRAIL IF APPLICABLE. A QUANTITY OF ONE SIGN PER APPROACH WILL BE INSTALLED. THE SIGNS WILL HAVE A NON-REFLECTIVE WHITE SHEETING BACKGROUND.

THE SIGNS WILL BE MOUNTED ON NEW NO. 2 POSTS AND WILL BE INSTALLED AS PER STANDARD CONSTRUCTION DRAWING TC-41.20, MOST CURRENT REVISION. EACH POST WILL BE 7.5' IN LENGTH.

INSTALL SIGNS FOR THE FOLLOWING STRUCTURES: SUM-277-0089 (2 APPROACHES), **SUM-277-0113 (2 APPROACHES)**, SUM-277-0133 (2 APPROACHES), SUM-277-0175 (2 APPROACHES), SUM-277-0227 (2 APPROACHES), SUM-277-0246 (2 APPROACHES), SUM-277-0304 (2 APPROACHES), SUM-277-0367 (2 APPROACHES), SUM-224-1061 (2 APPROACHES), & SUM-224-1105 (2 APPROACHES)

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED FOR EACH APPROACH:
 ITEM 630 - SIGN, FLAT SHEET, 730.20, 1 SQ FT
 ITEM 630 - GROUND MOUNTED SUPPORT, NO. 2 POST, 7.5 FT
 ITEM 630 - REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL, 1 EACH
 ITEM 630 - REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL, 1 EACH

OBJECT MARKERS AND STRUCTURE IDENTIFICATION SIGNS

OBJECT MARKERS WILL BE PLACED ON EACH APPROACH OFF THE LEFT AND RIGHT SHOULDER, FACING TRAFFIC, AND BEHIND THE GUARDRAIL IF APPLICABLE. ONE OM-3L AND ONE OM-3R WILL BE INSTALLED AT EACH APPROACH. THE SIGNS WILL BE MOUNTED ON NEW NO. 2 POSTS AND SHALL BE INSTALLED AS PER STANDARD CONSTRUCTION DRAWING TC-41.20, MOST CURRENT REVISION. EACH POST WILL BE 10.5 FT IN LENGTH.

STRUCTURE IDENTIFICATION SIGNS (I-H25a) WILL BE INSTALLED ON THE SAME POST AND DIRECTLY BELOW THE OBJECT MARKER OFF THE RIGHT SHOULDER ON EACH APPROACH. A QUANTITY OF ONE SIGN WILL BE INSTALLED AT EACH APPROACH. THE SIGNS WILL HAVE A NON-REFLECTIVE WHITE SHEETING BACKGROUND.

INSTALL SIGNS FOR THE FOLLOWING STRUCTURES:
 SUM-277-0369 (2 APPROACHES ABOVE ALONG IR277)
 SUM-77-0942 (2 APPROACHES BELOW ALONG IR77:
 ID SIGNS ONLY)
 SUM-77-0927R (1 APPROACH ABOVE ON IR77 RAMP)
 SUM-77-0927 (1 APPROACH BELOW ALONG IR77 NB:
 ID SIGN ONLY)
 SUM-77-0958L (1 APPROACH ABOVE ON IR77 RAMP)
 SUM-77-0958 (1 APPROACH BELOW ALONG IR77 SB:
 ID SIGN ONLY)

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED FOR EACH APPROACH:
 ITEM 630 - SIGN, FLAT SHEET, 730.20, 1 SQ FT
 ITEM 630 - SIGN, FLAT SHEET, 6 SQ FT
 ITEM 630 - GROUND MOUNTED SUPPORT, NO. 2 POST, 21 FT
 ITEM 630 - REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL, 3 EACH
 ITEM 630 - REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL, 2 EACH

ITEM 847 - MICRO-SILICA MODIFIED CONCRETE OVERLAY, AS PER PLAN
ITEM 847 - MICRO-SILICA MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY, AS PER PLAN
ITEM 847 - FULL DEPTH REPAIR, AS PER PLAN
ITEM 847 - WEARING COURSE REMOVED, ASPHALT, AS PER PLAN
ITEM 847 - EXISTING CONCRETE OVERLAY REMOVED, AS PER PLAN

THESE ITEMS SHALL BE PERFORMED PER SUPPLEMENTAL SPECIFICATION "BRIDGE DECK REPAIR AND OVERLAY WITH CONCRETE USING SCARIFICATION AND CHIPPING" WITH THE FOLLOWING REVISIONS:

THE THICKNESS OF THE CONCRETE OVERLAY REMOVED, ASPHALT WEARING COURSE REMOVED, AND PROPOSED OVERLAY SHALL BE AS SPECIFIED IN THE PLANS. CONSTRUCTION JOINTS WILL NOT BE PERMITTED IN THE WHEEL LINE.

(SEE 847.11) THE COMPONENTS OF THE MICRO-SILICA MODIFIED CONCRETE SHALL BE PROPORTIONED AS FOLLOWS.

AGG TYPE	FINE AGG (LB)	#8 COARSE AGG (LB)	AGG TOTAL (LB)	CEMENT CONTENT (LB)	MICRO SILICA (LB)	WATER TO CEMENT-ITIOUS RATIO	AIR CONTENT +/- 2%	FIBER (1/16" POLYPROPYLENE) (LB)
GRAVEL	1410	1430	2840	600	50	0.4	8	1
LIME STONE	1410	1450	2860	600	50	0.4	8	1
SLAG	1300	1350	2650	600	50	0.4	8	1

* ALL COARSE AGGREGATE SHALL HAVE AN ABSORPTION OF 1.00% OR GREATER AS DEFINED PER ASTM C127

** FIBER MESH SHALL BE 100% VIRGIN POLYPROPYLENE IN A FIBRILLATED NETWORK FORM AND SHALL BE 1 1/2" IN LENGTH.

THE WEIGHTS SPECIFIED IN THE CONCRETE TABLE WERE CALCULATED FOR MATERIALS OF THE FOLLOWING BULK SPECIFIC GRAVITIES (SSD): NATURAL SAND AND GRAVEL 2.62, LIMESTONE SAND 2.68, LIMESTONE 2.65, SLAG 2.30, MICRO-SILICA SOLIDS 2.20, AND PORTLAND CEMENT 3.15. FOR AGGREGATES OF SPECIFIC GRAVITIES DIFFERING MORE THAN PLUS OR MINUS 0.02 FROM THESE, THE WEIGHTS IN THE TABLE WILL BE CORRECTED. FIBER MESH WEIGHTS NOT INCLUDED IN MIX DESIGN.

ALL COARSE AGGREGATE SHALL HAVE AN ABSORPTION OF 1.00% OR GREATER AS DEFINED BY ASTM C127

ALL OTHER REQUIREMENTS OF THE SUPPLEMENTAL SPECIFICATION SHALL REMAIN IN EFFECT.

(SEE 847.18) THE FINAL DECK SOUNDING MAY TAKE PLACE WITHIN 24 HOURS OF A RAIN, AND THE DECK DOES NOT HAVE TO BE COMPLETELY DRY.

(SEE 847.19) FULL DEPTH REPAIR IS NOT REQUIRED IF LESS THAN ONE HALF OF THE DECK ORIGINAL CONCRETE THICKNESS IS SOUND.

(SEE 847.25) THE WET CURE TIME IS REDUCED FROM 72 HOURS TO 24 HOURS OR UNTIL A BEAM BREAK OF 600 PSI IS ACHIEVED, WHICHEVER IS GREATER. AFTER THE 24 HOUR WET CURE, THE FINISHED OVERLAY SURFACE SHALL BE CURED BY SPRAYING A UNIFORM APPLICATION OF CURING MATERIAL OF 705.07, TYPE I OR ID, AS PER CMS 511.17 METHOD (B) MEMBRANE CURING. IF THE CURING COMPOUND CAN NOT BE PLACED WITHIN THE SAME SHORT TERM CLOSURE PERIOD AS THE OVERLAY, THE CONTRACTOR MAY ALLOW TRAFFIC ONTO THE OVERLAY, AND SHALL, AT THE NEXT AVAILABLE SHORT TERM CLOSURE PERIOD, APPLY THE MEMBRANE CURING COMPOUND.

(SEE 847.25) TRAFFIC WILL NOT BE PERMITTED ON THE FINISHED OVERLAY SURFACE UNTIL AFTER THE COMPLETION OF THE 24 HOUR WET CURE, AND AFTER TWO TEST BEAMS HAVE ATTAINED AN AVERAGE MODULUS OF RUPTURE OF 600 PST (4.2 Mpa).

(SEE 847.26) THE OVERLAY SURFACE EVAPORATION RATE REQUIREMENTS ARE IN EFFECT FROM 9:30 AM TO 11:00 PM. THEY ARE NOT IN EFFECT FROM 11:00 PM TO 11:00 AM.

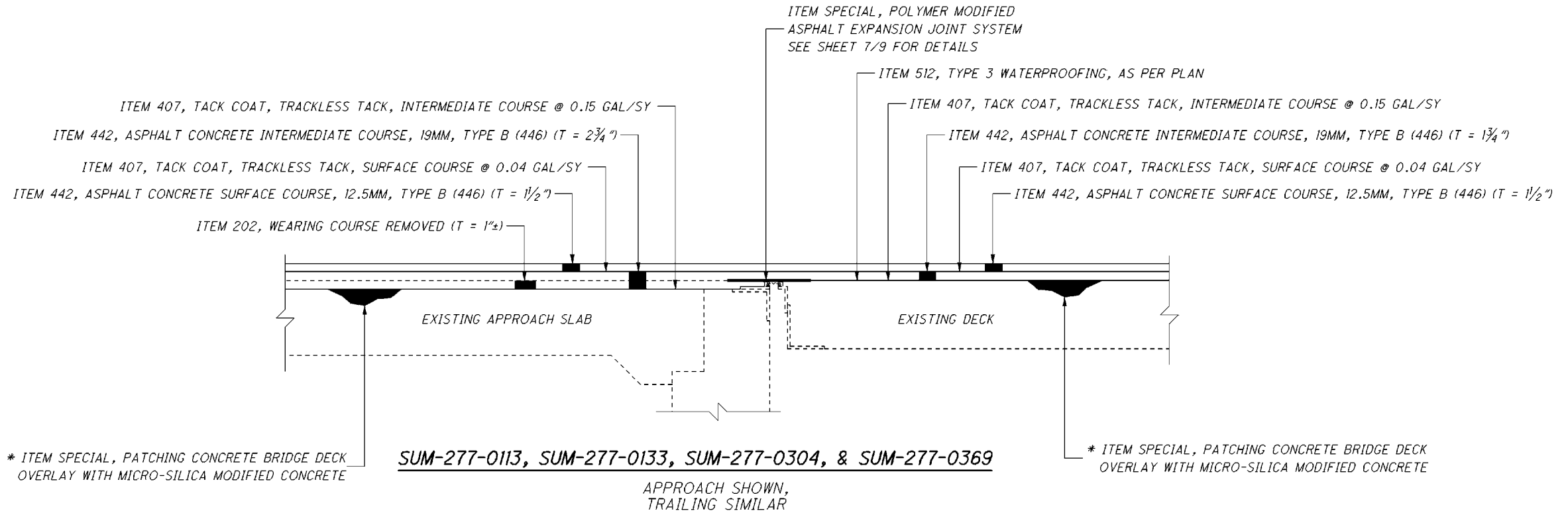
(SEE 847.27) FOR EACH PHASE, THE CONTRACTOR SHALL PROVIDE ENOUGH MATERIAL FOR TWO BEAM BREAKS EACH AT 12 HOURS, 24 HOURS, 36 HOURS, AND 48 HOURS. THE DEPARTMENT WILL PERFORM THE BEAM BREAK TESTS AND DOCUMENT THE TIME OF THE POUR, THE TIME OF THE BEAM BREAK TESTS, AND THE MODULUS OF RUPTURE FOR EACH BEAM UNTIL THE MODULUS OF RUPTURE OF THE TWO TESTS IS NOT LESS THAN 650 PSI (4.5 MPa). TRAFFIC IS ALLOWED ON THE OVERLAY AT 600 PSI (4.5 MPa).

ALL OTHER REQUIREMENTS OF THE SUPPLEMENTAL SPECIFICATION SHALL REMAIN IN EFFECT.

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SUM-76/77/277/224-VAR
 PID No. 76351
 3/9
 49/55
STRUCTURE GENERAL NOTES
 SUM-277-0089, SUM-277-0113, SUM-277-0133, SUM-271-0175, SUM-271-0227, SUM-271-0246, SUM-277-0304, SUM-277-0367, SUM-277-0369, SUM-224-1061, SUM-224-1105, SUM-77-0927R, AND SUM-77-0958L
 DESIGN AGENCY: ODOT --- DISTRICT 4
 DATE: 07-13-11
 REVIEWED: TJP
 DRAWN: LMP
 CHECKED: AAM
 DESIGNED: LMP
 REVISION: REVISED
 FILE NUMBER: STRUCTURE FILE NUMBER
 PLANNING AND ENGINEERING

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* ITEM SPECIAL, PATCHING CONCRETE BRIDGE DECK - TYPE C WILL BE USED ON STRUCTURE SUM-277-0369 WESTBOUND OUTSIDE LANE (EXIT LANE) ONLY.

BRIDGE NUMBER	BRIDGE DECK												APPROACH SLABS																
	LENGTH (BRIDGE LIMITS) FT	BRIDGE WIDTH FT	DECK AREA SQ YD	407	407	442	442	512	512	SPEC	SPEC	SPEC	LENGTH (APPROACH SLABS) FT	APPROACH SLAB WIDTH FT	APPROACH SLAB AREA SQ YD	APPROACH (FORWARD / REAR)	202	407	407	442	442	512	SPEC	SPEC					
				TACK COAT, TRACKLESS TACK, INTERMEDIATE COURSE @ 0.15 GAL/SY GALLON	TACK COAT, TRACKLESS TACK, SURFACE COURSE @ 0.04 GAL/SY GALLON	ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE B (446) (T = 1 1/2") CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE B (446) (T = 1 3/4") CU YD	TREATING OF CONCRETE BRIDGE DECK WITH SRS SQ YD	TYPE 3 WATERPROOFING, AS PER PLAN SQ YD	POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM FT	PATCHING CONCRETE BRIDGE DECK OVERLAY WITH MICRO-SILICA MODIFIED CONCRETE SQ YD	PATCHING CONCRETE BRIDGE DECK - TYPE C SQ YD					WEARING COURSE REMOVED (T = 1") SQ YD	TACK COAT, TRACKLESS TACK, INTERMEDIATE COURSE @ 0.15 GAL/SY GALLON	TACK COAT, TRACKLESS TACK, SURFACE COURSE @ 0.04 GAL/SY GALLON	ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE B (446) (T = 1 1/2") CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE B (446) (T = 2 3/4") CU YD	TREATING OF CONCRETE BRIDGE DECK WITH SRS SQ YD	PATCHING CONCRETE BRIDGE DECK OVERLAY WITH MICRO-SILICA MODIFIED CONCRETE SQ YD	PATCHING CONCRETE BRIDGE DECK - TYPE C SQ YD					
SUM-277-0089	131.54	126.75	1852.52					1852.52			37.05	25.00	130.58	362.72	FWD											362.72	7.25		
												25.00	122.92	341.44	REAR											341.44	6.83		
SUM-277-0113	220.34	104.17	2550.31	382.55	102.01	106.26	123.97					25.00	104.17	289.36	FWD	289.36	43.40	11.57	12.06	22.10							5.79		
												25.00	104.17	289.36	REAR	289.36	43.40	11.57	12.06	22.10							5.79		
SUM-277-0133	217.26	103.83	2506.46	375.97	100.26	104.44	121.84					25.00	103.83	288.42	FWD	288.42	43.26	11.54	12.02	22.03							5.77		
												25.00	103.83	288.42	REAR	288.42	43.26	11.54	12.02	22.03							5.77		
SUM-277-0175	198.10	104.87	2308.31					2308.31				25.00	102.69	285.25	FWD											285.25			
												25.00	107.05	297.36	REAR											297.36			
SUM-277-0246	261.51	67.00	1946.80					1946.80				25.00	67.00	186.11	FWD											186.11			
												25.00	67.00	186.11	REAR											186.11			
SUM-277-0304	118.54	103.08	1357.68	203.65	54.31	56.57	66.00					25.00	103.08	286.33	FWD	286.33	42.95	11.45	11.93	21.87							5.73		
												25.00	103.08	286.33	REAR	286.33	42.95	11.45	11.93	21.87							5.73		
SUM-277-0369	561.20	100.33	6256.13	938.42	250.25	260.67	304.12					25.00	100.33	278.69	FWD	278.69	41.80	11.15	11.61	21.29							5.57	1.39	
												25.00	100.33	278.69	REAR	278.69	41.80	11.15	11.61	21.29							5.57	1.39	

DESIGN AGENCY: ODOT --- DISTRICT 4
 DATE: 07-13-11
 STRUCTURE FILE NUMBER: PLANNING AND ENGINEERING

DESIGNED: LMP
 CHECKED: AAM

DRAWN: LMP
 REVISED:

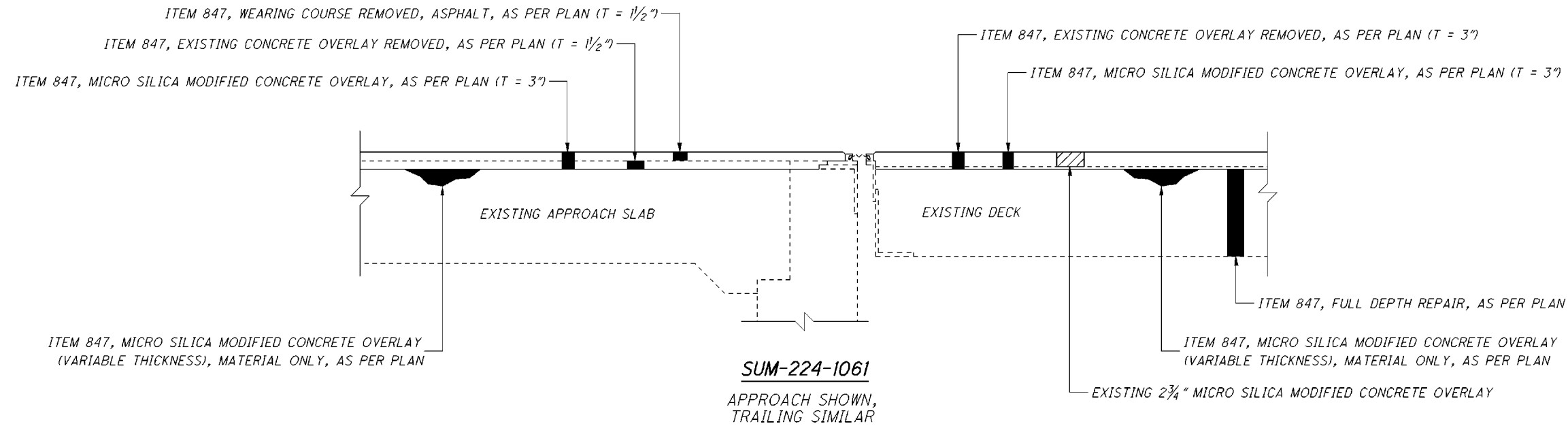
REVIEWED: TJP
 STRUCTURE FILE NUMBER:

SUPERSTRUCTURE DETAILS
 SUM-277-0113, SUM-277-0133, SUM-277-0175, SUM-271-0227, SUM-271-0246, SUM-277-0304, SUM-277-0367, SUM-277-0369, SUM-224-1061, SUM-224-1105, SUM-77-092TR, AND SUM-77-0958L

SUM-76/77/277/
 224-VAR
 PID No. 76351

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51
 55



BRIDGE NUMBER	BRIDGE DECK											APPROACH SLABS														
	LENGTH (BRIDGE LIMITS)	BRIDGE WIDTH	DECK AREA	512	847	847	847	847	847	847	LENGTH (APPROACH SLABS)	APPROACH SLAB WIDTH	APPROACH SLAB AREA	APPROACH (FORWARD / REAR)	202	407	407	442	442	512	847	847	847	847		
	FT	FT	SQ YD	TREATING OF CONCRETE BRIDGE DECK WITH SRS	MICRO SILICA MODIFIED CONCRETE OVERLAY, AS PER PLAN (T = 3")	MICRO SILICA MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY, AS PER PLAN	TEST SLAB	FULL DEPTH REPAIR, AS PER PLAN	EXISTING CONCRETE OVERLAY REMOVED, AS PER PLAN (T = 3")	HAND CHIPPING					SQ YD	SQ YD	SQ YD	WEARING COURSE REMOVED (T = 3 1/4")	TACK COAT, TRACKLESS TACK, INTERMEDIATE COURSE @ 0.15 GAL/SY	TACK COAT, TRACKLESS TACK, SURFACE COURSE @ 0.04 GAL/SY	ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE B (448) (T = 1 1/2")	ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE B (448) (T = 1 3/4")	TREATING OF CONCRETE BRIDGE DECK WITH SRS	MICRO SILICA MODIFIED CONCRETE OVERLAY, AS PER PLAN (T = 3")	MICRO SILICA MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY, AS PER PLAN	WEARING COURSE REMOVED, ASPHALT, AS PER PLAN (T = 1 1/2")
SUM-224-1061	146.50	105.83	1722.68		1722.68	10.77	LUMP	1.00	1722.68	51.68	25.00	72.00	200.00	FWD								200.00	1.25	200.00	200.00	6.00
											25.00	72.00	200.00	REAR								200.00	1.25	200.00	200.00	6.00
											ASPHALT SHOULDERS															
											25.00	33.83	93.97	FWD	93.97	14.10	3.76	3.92	4.57							
											25.00	33.83	93.97	REAR	93.97	14.10	3.76	3.92	4.57							
SUM-224-1105	185.54	44.00	907.08	907.08							20.00	44.00	97.78	FWD						97.78						
											20.00	44.00	97.78	REAR						97.78						

SUM-76 / 77 / 277 / 224-VAR
PID No. 76351

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52 / 55

SUPERSTRUCTURE DETAILS
 SUM-277-0089, SUM-277-0113, SUM-277-0133, SUM-271-0175, SUM-271-0227, SUM-271-0246, SUM-277-0304, SUM-277-0367, SUM-277-0369, SUM-224-1061, SUM-224-1105, SUM-77-092TR, AND SUM-77-0958L

DESIGNED LMP	CHECKED AAM	DRAWN LMP	REVISED	REVIEWED TJP	DATE 07-13-11	STRUCTURE FILE NUMBER

DESIGN AGENCY
 ODOT --- DISTRICT 4
 PLANNING AND ENGINEERING

**GENERAL NOTES AND DETAILS FOR POLYMER MODIFIED ASPHALT
EXPANSION JOINT SYSTEM**

**ITEM SPECIAL - POLYMER-MODIFIED ASPHALT EXPANSION
JOINT SYSTEM**

THIS ITEM WILL BE USED TO SEAL THE EXPANSION/CONTRACTION JOINTS AS PER THESE DETAILS AND THE MANUFACTURER'S REQUIREMENTS USING A POLYMER-MODIFIED ASPHALT SYSTEM. THE PRIME CONTRACTOR WILL OBTAIN THE SERVICES OF ONE OF THE FOLLOWING APPROVED APPLICATORS WHO WILL FURNISH AND INSTALL THE NEW BRIDGE EXPANSION JOINT SYSTEM AFTER ALL PAVING ON THE AFFECTED BRIDGE(S) HAS BEEN COMPLETED.

PRODUCT NAME	SUPPLIER	ADDRESS	PHONE NO.
THORMA-JOINT	DYNAMIC SURFACE APPLICATIONS, LTD	373 VILLAGE RD. PENNSDALE, PA 17756	(570)546-6041
MATRIX 502	CRAFCO INC.	420 N. ROOSEVELT AVE. CHANDLER, AZ 85226	(800)528-8242
EXPANDEX JOINT SYSTEM	WATSON-BOWMAN ACME	95 PINEVIEW DR. AMHERST, NY 14228	(716)691-7566
APJ ASPHALTIC PLUG EXPANSION JOINT	WYOMING EQUIPMENT SALES	281 SIXTH STREET P.O. BOX 287 WEST WYOMING, PA 18644	(570)693-2810

MATERIALS:

BRIDGING PLATE:

MILD STEEL 1/8" OR 1/4" THICK PLATE, 8" WIDE OR 18 GAUGE ALUMINUM, 8" WIDE.

BINDER:

TYPE: POLYMER MODIFIED ASPHALT
SOFTENING POINT: 180 DEGREES F. MIN.
FLOW: 3 mm. MAX. AT 140 DEGREES F.
PENETRATION: 9 mm. MAX. AT 77 DEGREES F.
1 mm. MIN AT 0 DEGREES F.
ASTM D 3407
DUCTILITY: 40 cm. MIN. ASTM D 113
RESILIENCE: 60% MIN. AT 77 DEGREES F.
TENSILE ADHESION: 700% MIN.
SPECIFIC GRAVITY: 1.10 * 0.05
POURING TEMP: 350 - 390 DEGREES F.

AGGREGATE:

TYPE: CRUSHED, DOUBLE WASHED, AND DRIED GRANITE OR BASALT

GRADATION:

THE GRADATION OF THE AGGREGATE VARIES BY MANUFACTURER AND WILL BE AS PER THE MANUFACTURER'S RECOMMENDATIONS FOR THE SYSTEM BEING USED ON THIS PROJECT.

BACKER ROD:

THE BACKER SHALL BE A CLOSED CELL FOAM EXPANSION JOINT FILLER CAPABLE OF WITHSTANDING THE PLACEMENT TEMPERATURE OF THE POLYMER MODIFIED ASPHALT.

NOTE: PRIOR TO PLACEMENT OF ANY PORTION OF THE JOINT SYSTEM, THE PROJECT ENGINEER MUST HAVE CERTIFIED TEST DATA MEETING ALL THE MINIMUM REQUIREMENTS OF ALL THE MATERIALS OF THE JOINT SYSTEM.

INSTALLATION PROCEDURES:

SAWING AND SURFACE PREPARATION:

AFTER ALL PAVING OPERATIONS ARE COMPLETE, THE OVERLAY IS TO BE TRANSVERSELY SAW CUT FULL DEPTH NO LESS THAN TWO INCHES DEEP (20" CENTERED OVER JOINT OPENING, UNLESS OTHERWISE NOTED). REMOVE ALL MATERIAL, INCLUDING WATER-PROOFING MATERIAL, BETWEEN SAW CUTS. THOROUGHLY CLEAN AND DRY EXPOSED CONCRETE, STEEL, AND CUT SURFACES USING COMPRESSED AIR AND A HOT COMPRESSED AIR (HCA) LANCE. THE LANCE MUST PRODUCE A FLAME RETARDED AIR STREAM TEMPERATURE OF 3000 DEGREES F. AT A VELOCITY OF 3,000 FEET PER

SECOND WITH 15 PSIG CHAMBER PRESSURE. IF THERE IS AN INTERRUPTION DUE TO WEATHER OR OTHER CAUSES, THE OPERATION WILL BE REPEATED WITH THE HCA LANCE IMMEDIATELY BEFORE THE BINDER COAT OPERATION. ALSO, 6 INCHES OF THE ROAD SURFACE ON EITHER SIDE OF THE JOINT WILL BE DRIED SO THAT A SUITABLE SURFACE FOR BITUMEN ADHESION IS OBTAINED.

SEALING OF EXPANSION JOINT: (PRE-STRESSED BOX OR CONCRETE SLAB)

THE EXPANSION JOINT GAP IS TO BE SEALED AND A BRIDGING PLATE CENTERED ALONG IT. A VERY NARROW GAP WILL BE SEALED BY POURING HOT BINDER INTO THE GAP. GAPS OF 1/8" OR MORE WILL FIRST BE FILLED WITH AN APPROPRIATELY SIZED BACKER ROD. THE BACKER ROD WILL BE INSTALLED SO THAT IT IS BETWEEN 1/8" AND 1/4" BELOW THE TOP OF THE EXISTING GAP. THE GAP WILL THEN BE FILLED WITH BINDER.

BOND BREAKER:

SPREAD BINDER OVER SURFACE AREA WHERE THE METAL BRIDGING PLATE WILL BE PLACED. CENTER THE BRIDGING PLATE OVER THE EXISTING JOINT AND BED INTO THE HOT BINDER. BUTT JOINT THE BRIDGING PLATES TO ACCOMMODATE THE ENTIRE JOINT LENGTH. SPIKE HOLES WILL BE DRILLED AT 1 FOOT INTERVALS ALONG THE LONGITUDINAL CENTERLINE OF THE PLATES. SECURE BRIDGING PLATE WITH NAILS OR SPIKES. SEAL BUTT JOINTS WITH HOT BINDER AND ALLOW BINDER TO SETUP BEFORE NEXT OPERATION. WHEN ALUMINUM BRIDGING PLATES ARE USED, ONLY THE BINDER IS REQUIRED TO SECURE THE INDIVIDUAL PLATES.

BINDER COAT:

SEAL ALL PREPARED, EXPOSED SURFACES OF THE JOINT WITH BINDER. POUR THE HOT BINDER OVER THE FLOOR AREA OF THE JOINT AND SPREAD TO COAT ALL EXPOSED SURFACES. THE BINDER WILL BE A MINIMUM OF 1/32" THICK ON THE BOTTOM OF THE JOINT CAVITY, WITH POOLS OF GREATER THICKNESS WHERE SURFACE IRREGULARITIES EXIST. THE BINDER APPLICATION TEMPERATURE WILL BE BETWEEN 350 AND 390 DEGREES F. THE BINDER WILL NOT BE ALLOWED TO BE HEATED ABOVE 410 DEGREES F. NOR ALLOWED TO EXCEED 390 DEGREES F. FOR MORE THAN 1 HOUR. A DOUBLE JACKETED OIL MELTER WILL BE USED TO HEAT THE BINDER. THE MELTER WILL BE EQUIPPED WITH A CONTINUOUS AGITATION SYSTEM, TEMPERATURE CONTROLS, AND A CALIBRATED THERMOMETER. ALSO A SYSTEM FOR ACCURATELY MEASURING THE WEIGHTS OF THE BINDER AND THE AGGREGATE WILL BE REQUIRED.

BUILD-UP OF JOINT LAYERS:

AGGREGATE PREPARATION:

HEAT THE AGGREGATE TO A TEMPERATURE OF 275 TO 325 DEGREES F., WITH A SUITABLE ROTATING DRUM WITH ATTACHED HEAT SOURCE OR A HOT COMPRESSED AIR LANCE, TO REMOVE DUST AND MOISTURE.

AGGREGATE PROPORTION AND LAYER THICKNESS:

MIX THE AGGREGATE WITH THE BINDER SUCH THAT THE MINIMUM AGGREGATE CONTENT BY WEIGHT WILL BE 68%. THE HEATED AGGREGATE AND BINDER WILL BE COMBINED IN LAYERS, UNLESS PATENTED INSTALLATION REQUIRES DIFFERENTLY, NOT LESS THAN 3/4 OF AN INCH NOR EXCEEDING 2-1/2 INCHES. THE THICKNESS OF EACH LAYER CAN BE VARIED WITHIN THESE LIMITS, TO ACHIEVE THE REQUIRED JOINT THICKNESS (MIN. 2 INCHES). THE OBJECTIVE IS TO COAT EACH STONE AND FILL THE VOIDS WHILE AVOIDING AN EXCESS OF BINDER. THIS WILL ACHIEVE THE MAXIMUM CONTENT OF STONE CONSISTENT WITH ALL STONES BEING COATED WITH BINDER. RAKE THE MIXTURE TO MIX AND LEVEL.

THE TOP LAYER THICKNESS WILL VARY BETWEEN 1/2 INCH AND ONE (1) INCH. IN PREPARING THE TOP LAYER, THE RATIO OF AGGREGATE TO BINDER WILL BE APPROXIMATELY 6:1 BY WEIGHT. OVERFILL THE TOP LAYER AND COMPACT TO THE LEVEL OF THE ADJACENT SURFACES USING A ROLLER OR VIBRATORY PLATE COMPACTOR. IMMEDIATELY AFTER COMPLETION OF THE COMPACTION, POUR SUFFICIENT BINDER OVER THE JOINT TO FILL THE SURFACE VOIDS AND COAT THE SURFACE STONE. DUST THE FINISHED JOINT WITH A FINE, DRY AGGREGATE TO PREVENT TACKINESS.

MAINTENANCE OF TRAFFIC:

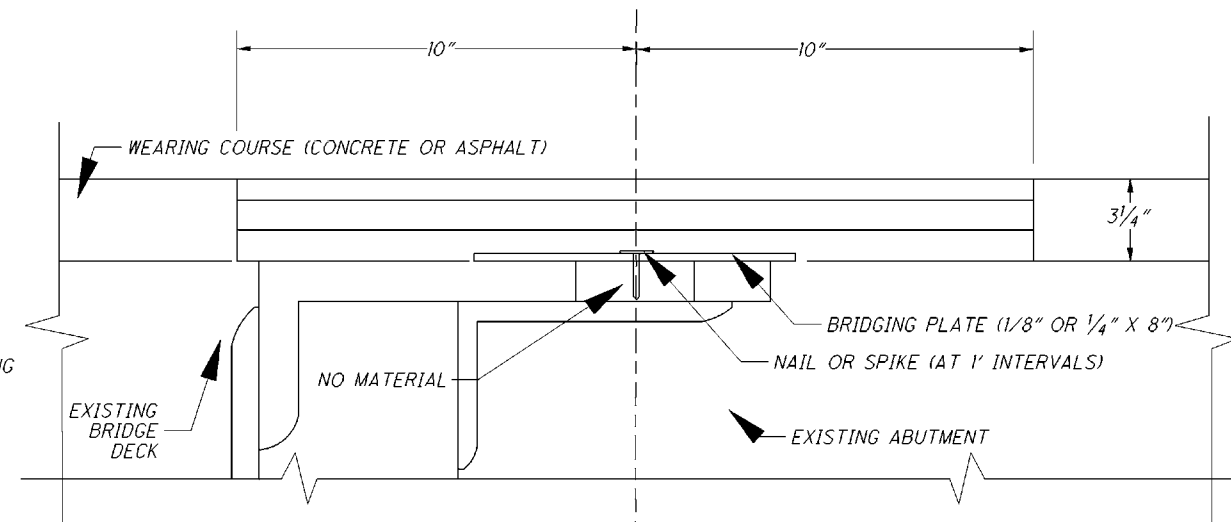
IF NECESSARY TO FACILITATE TRAFFIC MAINTENANCE, THE JOINT WILL BE INSTALLED IN TWO (2) HALF-WIDTH PHASES. DURING PHASE 1 APPROXIMATELY HALF OF THE TOTAL JOINT WILL BE INSTALLED. DURING PHASE 2, A MINIMUM OF TWO (2) INCHES OF THE PHASE 1 JOINT WILL BE REMOVED, AT OR NEAR THE CENTERLINE, WITH THE REMAINDER OF THE JOINT INSTALLED. IN ALL CASES, OPERATIONS WILL BE SCHEDULED SO THAT ALL LANES CAN BE OPEN TO TRAFFIC DURING ALL NON-WORKING HOURS.

TESTING:

CERTIFICATION WILL BE SUPPLIED FOR EACH PROJECT SHOWING BINDER COMPLIANCE WITH REQUIRED PROPERTIES. A ONE QUART SAMPLE OF BINDER WILL BE RETRIEVED FROM EACH BRIDGE FOR FURTHER TESTING BY THE O.D.O.T OFFICE OF MATERIALS MANAGEMENT.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT:

THE DEPARTMENT WILL MEASURE THE JOINT BY THE NUMBER OF FEET AND WILL PAY FOR ACCEPTED QUANTITIES AT THE CONTRACT PRICE AS: ITEM SPECIAL, FEET, POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM.

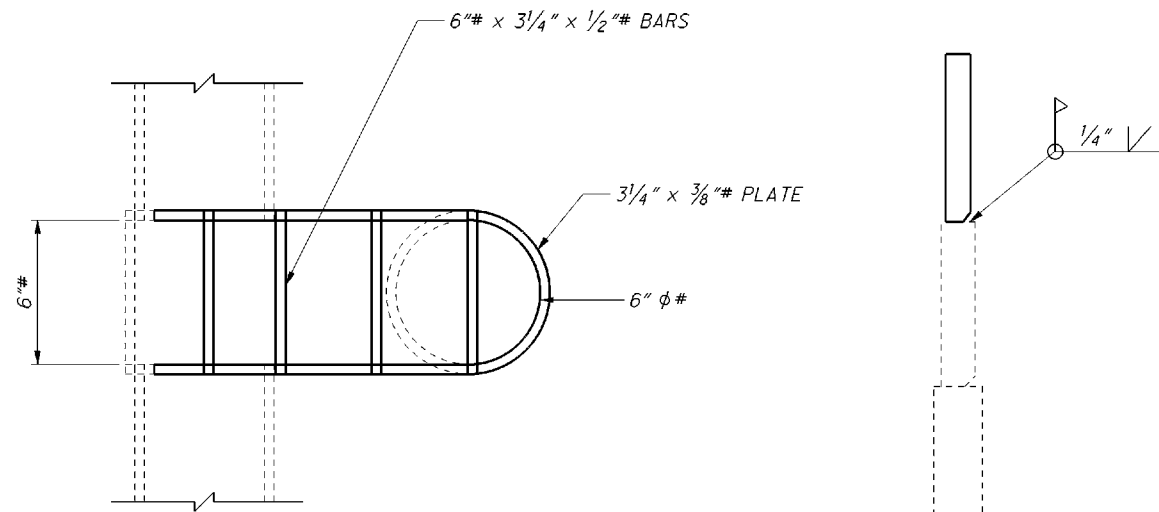


TYPICAL STEEL BEAM EXPANSION JOINT

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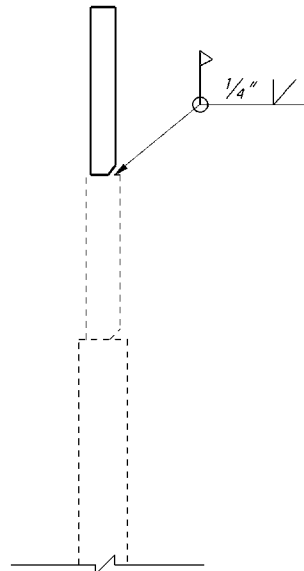
SUM-76/77/277/ 224-VAR	PID No. 76351	POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM	DESIGNED CHECKED	DRAWN REVISED	REVIEWED STRUCTURE FILE NUMBER	DATE	DESIGN AGENCY OFFICE OF STRUCTURAL ENGINEERING
		SUM-277-0089, SUM-277-0113, SUM-277-0133, SUM-271-0175, SUM-271-0227, SUM-271-0246, SUM-277-0304, SUM-277-0367, SUM-277-0369, SUM-224-1061, SUM-224-1105, SUM-77-0927R, AND SUM-77-0958L					
7/9		53 55					

SCUPPER VERTICAL EXTENSION DETAIL

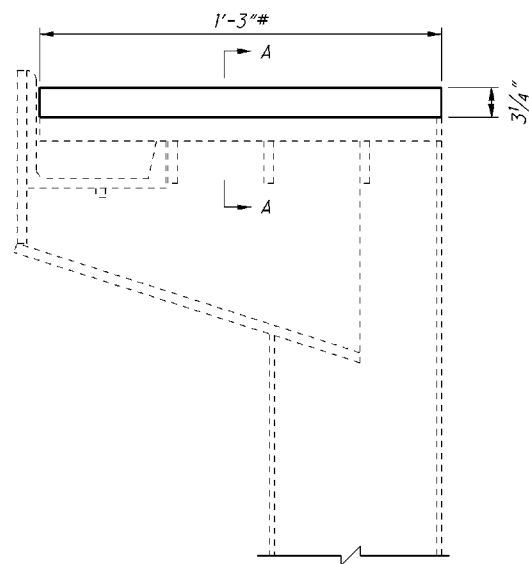


SCUPPER EXTENSION PLAN

FIELD VERIFY DIMENSION



SECTION A-A



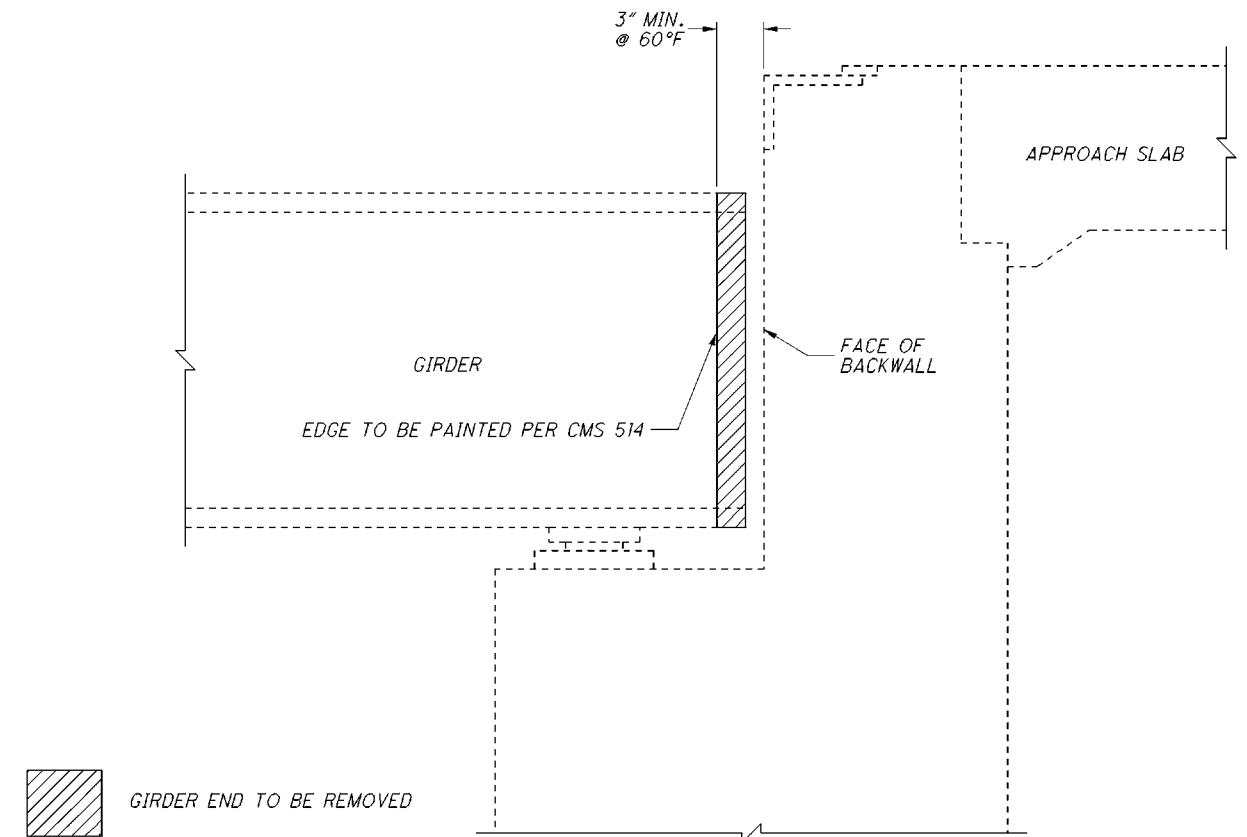
SCUPPER EXTENSION ELEVATION

FIELD VERIFY DIMENSION

NOTES:

- EXISTING SCUPPERS FOR STRUCTURES SUM-277-0113, SUM-277-0133, SUM-277-0304, AND SUM-277-0369 WILL BE RAISED TO MEET THE PROPOSED ASPHALT CONCRETE OVERLAY ELEVATION.
- FOR ADDITIONAL INFORMATION SEE STANDARD CONSTRUCTION DRAWING GSD-1-96.
- ALL MATERIAL, LABOR, EQUIPMENT, AND ANY INCIDENTAL REQUIRED TO COMPLETE THIS WORK WILL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 518, SCUPPER, VERTICAL EXTENSION, AS PER PLAN.

TRIMMING OF BEAM END DETAIL
(SUM-277-0133 & SUM-277-0369)



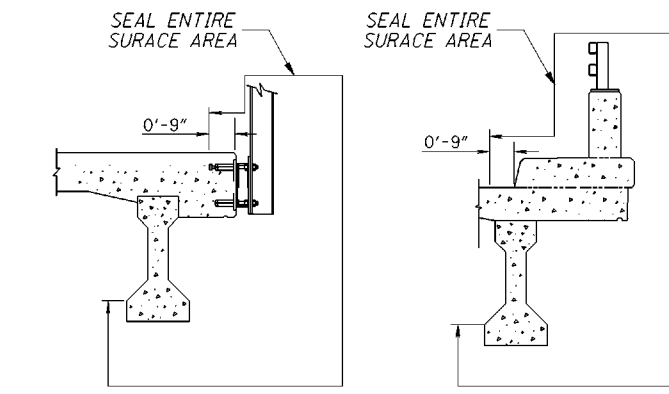
 GIRDER END TO BE REMOVED

NOTES:

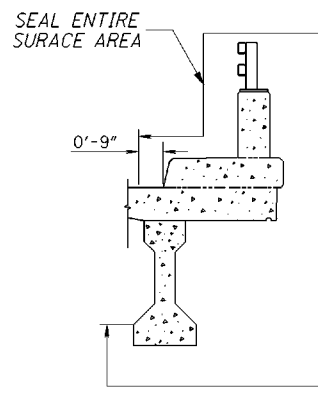
- THE ENDS OF THE EXISTING GIRDERS AT THE FORWARD ABUTMENT OF STRUCTURE SUM-277-0133 AND THE EXISTING GIRDERS AT THE REAR ABUTMENT OF STRUCTURE SUM-277-0369 WILL BE TRIMMED ON A VERTICAL LINE AS REQUIRED TO OBTAIN A 3" MINIMUM CLEARANCE AT 60°F BETWEEN THE END OF THE GIRDER AND THE FACE OF THE BACKWALL.
- ALL TRIMMING OF BEAM ENDS AND REFURBISHING OF BEARINGS OF STRUCTURE SUM-277-0133 SHALL BE PERFORMED AFTER BACKWALL REPAIRS AT THE FORWARD ABUTMENT.
- ALL WORK LISTED AND SHOWN ABOVE INCLUDING THE PAINTING OF THE BEAM END TRIM AREA ACCORDING TO ITEM 514 WILL BE PAID FOR AT THE UNIT BID PRICE FOR ITEM 513, TRIMMING OF BEAM END. THIS PRICE WILL INCLUDE THE COST OF LABOR, MATERIALS, EQUIPMENT, AND ALL INCIDENTALS REQUIRED TO COMPLETE WITH WORK.

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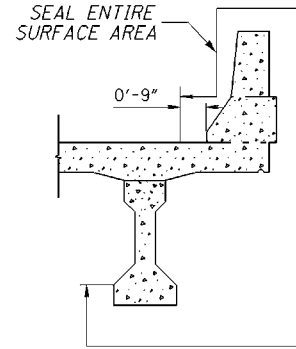
SUM-76/77/277/ 224-VAR PID No. 76351	SCUPPER DETAILS AND TRIMMING OF BEAM END DETAILS SUM-277-0089, SUM-277-0133, SUM-277-0175, SUM-271-0227, SUM-271-0246, SUM-277-0304, SUM-277-0367, SUM-277-0369, SUM-224-1061, SUM-224-1105, SUM-77-092TR, AND SUM-77-0958L		DESIGNED LMP	CHECKED AAM	DRAWN LMP	REVISED	REVIEWED TJP	DATE 07-13-11	STRUCTURE FILE NUMBER	DESIGN AGENCY ODOT --- DISTRICT 4 PLANNING AND ENGINEERING
	8 / 9	54 55								



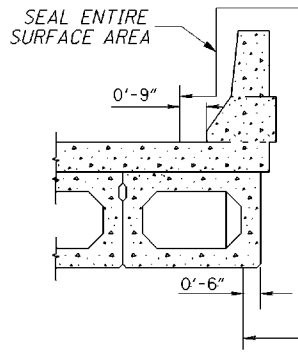
DETAIL A
CONCRETE DECKS WITH
OVER THE SIDE DRAINAGE



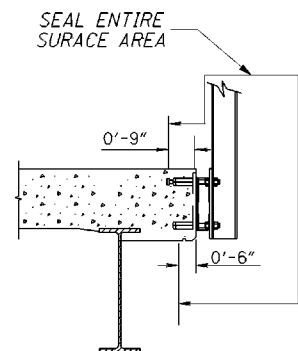
DETAIL B
CONCRETE DECKS WITH CURBS,
SIDEWALKS AND PARAPET



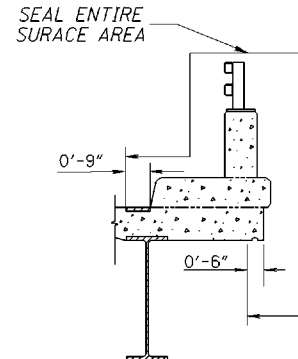
DETAIL C
CONCRETE DECK WITH
DEFLECTOR PARAPET



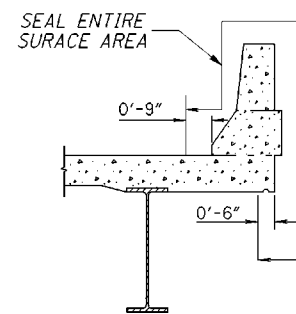
DETAIL D
PRESTRESSED BOX BEAM DECK
WITH DEFLECTOR PARAPET



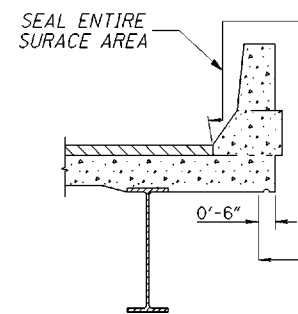
DETAIL E
CONCRETE DECKS WITH
OVER THE SIDE DRAINAGE



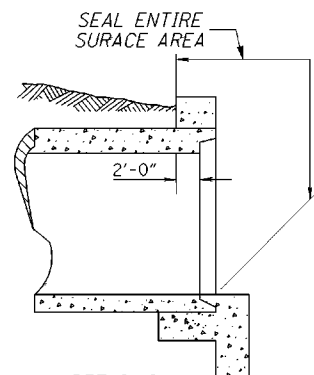
DETAIL F
CONCRETE DECKS WITH CURBS,
SIDEWALKS AND PARAPET



DETAIL G
CONCRETE DECK WITH
DEFLECTOR PARAPET



DETAIL H
ASPHALT DECK WITH
DEFLECTOR PARAPET



DETAIL I
PRECAST REINFORCED
CONCRETE BOX CULVERT

BRIDGE NO.	STRUCTURE TYPE	PROPOSED SEALING	FEDERAL COLOR NUMBER	ESTIMATED QUANTITIES				
				ABUT SQ YD	PIER SQ YD	SUPER SQ YD	GEN SQ YD	TOTAL SQ YD
SUM-277-0089	3 SPAN CONTINUOUS REINFORCED CONCRETE SLAB	SEAL PARAPETS PER DETAIL G SEAL ALL EXPOSED CONCRETE AT ABUTMENTS SEAL ALL EXPOSED CONCRETE AT PIERS	13522 (BUFF)	247	1240	597		2084
SUM-277-0113	3 SPAN CONTINUOUS STEEL BEAM	SEAL PARAPETS PER DETAIL H SEAL ALL EXPOSED CONCRETE AT ABUTMENTS AND PIERS SEAL SPALL REMOVAL AREAS OF BOTTOM DECK FLOOR	13522 (BUFF)	359	781	700	100	1940
SUM-277-0133	3 SPAN CONTINUOUS STEEL GIRDERS	SEAL PARAPETS PER DETAIL H SEAL ALL EXPOSED CONCRETE AT ABUTMENTS AND PIERS SEAL SPALL REMOVAL AREAS OF BOTTOM DECK FLOOR	13522 (BUFF)	339	736	690	100	1865
SUM-277-0175	3 SPAN CONTINUOUS STEEL BEAM	SEAL PARAPETS PER DETAIL G SEAL ALL EXPOSED CONCRETE AT ABUTMENTS SEAL ALL EXPOSED CONCRETE AT PIERS	13522 (BUFF)	222	656	899		1777
SUM-277-0246	4 SPAN CONTINUOUS STEEL BEAM	SEAL PARAPETS PER DETAIL G SEAL ALL EXPOSED CONCRETE AT ABUTMENTS SEAL ALL EXPOSED CONCRETE AT PIERS	13522 (BUFF)	221	609	605		1435
SUM-277-0304	3 SPAN CONTINUOUS REINFORCED CONCRETE SLAB	SEAL PARAPETS PER DETAIL H SEAL ALL EXPOSED CONCRETE AT ABUTMENTS AND PIERS SEAL SPALL REMOVAL AREAS OF BOTTOM DECK FLOOR	13522 (BUFF)	92	423	377	50	942
SUM-277-0369	6 SPAN CONTINUOUS STEEL GIRDERS	SEAL PARAPETS PER DETAIL H SEAL ALL EXPOSED CONCRETE AT ABUTMENTS AND PIERS SEAL SPALL REMOVAL AREAS OF BOTTOM DECK FLOOR	13522 (BUFF)	384	2358	1783	100	4625
SUM-224-1061	3 SPAN PRESTRESSED PRECAST CONCRETE I-BEAMS	SEAL PARAPETS PER DETAIL G SEAL ALL EXPOSED CONCRETE AT ABUTMENTS AND PIERS SEAL SPALL REMOVAL AREAS OF BOTTOM DECK FLOOR	13522 (BUFF)	332	526	665	50	1573
SUM-224-1105	4 SPAN CONTINUOUS STEEL BEAM	SEAL PARAPET PER DETAIL F SEAL ALL EXPOSED CONCRETE AT ABUTMENTS SEAL ALL EXPOSED CONCRETE AT PIERS	13522 (BUFF)	223	357	589		1169
SUM-77-0927R	3 SPAN CONTINUOUS STEEL GIRDERS	SEAL PARAPETS PER DETAIL G SEAL ALL EXPOSED CONCRETE AT ABUTMENTS SEAL ALL EXPOSED CONCRETE AT PIERS	17778 (LIGHT NEUTRAL)	204	150	541		895
SUM-77-0958L	3 SPAN CONTINUOUS STEEL BEAM	SEAL PARAPETS PER DETAIL G SEAL ALL EXPOSED CONCRETE AT ABUTMENTS AND PIERS SEAL SPALL REMOVAL AREAS OF BOTTOM DECK FLOOR	17778 (LIGHT NEUTRAL)	173	217	445	50	885

- NOTES:
- EPOXY-URETHANE SEALER SHALL BE USED UNLESS SHOWN OTHERWISE
 - DETAILS E, F, G AND H ALSO APPLY TO CONCRETE SLAB BRIDGES

SEALING OF BEAM SEATS

SEALING OF BEAM SEATS: IF THE BEAMS SEATS ARE SEALED WITH AN EPOXY OR NON-EPOXY SEALER PRIOR TO SETTING THE BEARINGS, DO NOT APPLY SEALER TO THE CONCRETE SURFACES UNDER THE PROPOSED BEARING LOCATIONS. IF THESE LOCATIONS ARE SEALED, REMOVE THE SEALER TO THE SATISFACTION OF THE ENGINEER PRIOR TO SETTING THE BEARINGS. THE DEPARTMENT WILL NOT PAY FOR THIS REMOVAL.

DESIGN AGENCY: ODOT --- DISTRICT 4
 PLANNING AND ENGINEERING
 DATE: 07-13-11
 REVIEWED: TJP
 DRAWN: LMP
 CHECKED: AAM
 DESIGNED: LMP
 CONCRETE SEALING DETAILS
 SUM-76/77/277 / 224-VAR
 PID No. 76351
 SUM-277-0089, SUM-277-0113, SUM-277-0133, SUM-271-0175, SUM-271-0227, SUM-271-0246, SUM-277-0304, SUM-277-0367, SUM-277-0369, SUM-224-1061, SUM-224-1105, SUM-77-0927R, AND SUM-77-0958L

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