

STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWING(S):

AS-2-15 REVISED 7/21/2023

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION(S):

843 DATED 1/19/2024

844 DATED 1/17/2025

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 C&MS, 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 THAT HAVE BEEN VERIFIED IN THE FIELD.

PROPOSED WORK

MAH-11-1.003 (SFN 5000211), GARFIELD RD
-REMOVE AND REPLACE THE EXISTING ASPHALT CONCRETE OVERLAY INCLUDING TYPE 3 WATERPROOFING
-PATCH ALL UNSOUND AREAS OF THE CONCRETE BRIDGE DECK PRIOR TO PLACING NEW ASPHALT OVERLAY AND WATERPROOFING
-INSTALL NEW EXPANSION JOINT SYSTEM WITH ELASTOMERIC STRIP SEALS
-REMOVE EXISTING CONCRETE SEALER AND RE-SEAL THE ABUTMENTS AND BACKWALLS WITH EPOXY-URETHANE SEALER (MATCH EXISTING COLOR)
-RESET AND REFURBISH ABUTMENT BEARINGS
-SPALL REMOVAL WITH ZINC RICH PRIMER APPLIED
-SCUPPER CLEANOUT
-CLEARING AND GRUBBING WITHIN 15' OF STRUCTURE

MAH-11-1.469 (SFN 5000246), RENKENBERGER RD
-REMOVE AND REPLACE THE EXISTING ASPHALT CONCRETE OVERLAY INCLUDING TYPE 3 WATERPROOFING
-PATCH ALL UNSOUND AREAS OF THE CONCRETE BRIDGE DECK PRIOR TO PLACING NEW ASPHALT OVERLAY AND WATERPROOFING
-INSTALL NEW EXPANSION JOINT SYSTEM WITH ELASTOMERIC STRIP SEALS
-REMOVE EXISTING CONCRETE SEALER AND RE-SEAL THE ABUTMENTS AND BACKWALLS WITH EPOXY-URETHANE SEALER (MATCH EXISTING COLOR)
-RESET AND REFURBISH ABUTMENT BEARINGS
-SCUPPER CLEANOUT
-CLEARING AND GRUBBING WITHIN 15' OF STRUCTURE

MAH-11-1.922R (SFN 5000300), SR 46
-SEAL EXISTING CONCRETE WEARING SURFACE WITH GRAVITY FED RESIN, INCLUDING THE APPROACH SLABS
-PATCH ALL UNSOUND AREAS OF THE CONCRETE PIERS, SEAL PATCHES WITH EPOXY-URETHANE SEALER (MATCH EXISTING COLOR)
-RESET AND REFURBISH ABUTMENT BEARINGS
-STEEL BEAM COLLISION REPAIR
-SPOT PAINT COLLISION DAMAGE TO BEAMS 2-4 OVER SR 46 SB USING A SINGLE COAT SYSTEM
-REPLACE DAMAGED PORTION OF BOTTOM FLANGE ON BEAM 5 OVER SR 46 SB AND SEAL USING A THREE COAT SYSTEM

PROPOSED WORK CONT...

MAH-11-1.922R (SFN 5000300), SR 46 CONT...
-REMOVE AND REPLACE THE ELASTOMERIC STRIP SEAL GLANDS AT THE FORWARD AND REAR EXPANSION JOINTS
-CLEARING AND GRUBBING WITHIN 15' OF STRUCTURE

MAH-11-1.950L (SFN 5000270), SR 46
-SEAL EXISTING CONCRETE WEARING SURFACE WITH GRAVITY FED RESIN, INCLUDING THE APPROACH SLABS
-PATCH ALL UNSOUND AREAS OF THE CONCRETE PIERS, SEAL PATCHES WITH EPOXY-URETHANE SEALER (MATCH EXISTING COLOR)
-RESET AND REFURBISH ABUTMENT BEARINGS
-REMOVE AND REPLACE THE ELASTOMERIC STRIP SEALS AT THE FORWARD AND REAR EXPANSION JOINTS
-CLEARING AND GRUBBING WITHIN 15' OF STRUCTURE

MAH-165-17.257 (SFN 5003660), OVER SR-11
-SEAL EXISTING CONCRETE WEARING SURFACE WITH GRAVITY FED RESIN, INCLUDING THE APPROACH SLABS
-PATCH ALL UNSOUND AREAS OF THE CONCRETE PIERS, SEAL PATCHES WITH EPOXY-URETHANE SEALER (MATCH EXISTING COLOR)
-CLEARING AND GRUBBING WITHIN 15' OF STRUCTURE

MAH-11-5.041L (SFN 5000394), CALLA RD
-SEAL EXISTING CONCRETE WEARING SURFACE WITH GRAVITY FED RESIN, INCLUDING THE APPROACH SLABS
-REMOVE AND REPLACE THE ELASTOMERIC STRIP SEAL GLANDS AT THE FORWARD AND REAR EXPANSION JOINTS
-CLEARING AND GRUBBING WITHIN 15' OF STRUCTURE

MAH-11-5.055R (SFN 5000424), CALLA RD
-SEAL EXISTING CONCRETE WEARING SURFACE WITH GRAVITY FED RESIN, INCLUDING THE APPROACH SLABS
-REMOVE AND REPLACE THE ELASTOMERIC STRIP SEAL GLANDS AT THE FORWARD AND REAR EXPANSION JOINTS
-CLEARING AND GRUBBING WITHIN 15' OF STRUCTURE

MAH-11-6.108 (SFN 5000459), WESTERN RESERVE RD
-SEAL EXISTING CONCRETE WEARING SURFACE WITH GRAVITY FED RESIN, INCLUDING THE APPROACH SLABS
-PATCH ALL UNSOUND AREAS OF THE CONCRETE PIERS, SEAL PATCHES WITH EPOXY-URETHANE SEALER (MATCH EXISTING COLOR)
-REMOVE A PORTION OF APPROACH PAVEMENT AND INSTALL A NEW SLEEPER SLAB AND EXPANSION JOINT
-CLEARING AND GRUBBING WITHIN 15' OF STRUCTURE

MAH-11-7.583 (SFN 5000483), LEFFINGWELL RD
-REMOVE AND REPLACE THE EXISTING ASPHALT CONCRETE OVERLAY INCLUDING TYPE 3 WATERPROOFING
-PATCH ALL UNSOUND AREAS OF THE CONCRETE BRIDGE DECK PRIOR TO PLACING NEW ASPHALT OVERLAY AND WATERPROOFING
-INSTALL NEW EXPANSION JOINT SYSTEM WITH ELASTOMERIC STRIP SEALS
-REMOVE AND RE-SEAL THE ABUTMENTS AND BACKWALLS WITH EPOXY-URETHANE SEALER (MATCH EXISTING COLOR)
-RESET AND REFURBISH ABUTMENT BEARINGS
-PATCH ALL UNSOUND AREAS OF THE CONCRETE PIERS, SEAL PATCHES WITH EPOXY-URETHANE SEALER (MATCH EXISTING COLOR)
-PATCH ALL UNSOUND AREAS OF THE ABUTMENTS, SEAL PATCHES WITH EPOXY-URETHANE SEALER (MATCH EXISTING COLOR)
-SPALL REMOVAL WITH ZINC RICH PRIMER APPLIED
-SCUPPER CLEANOUT
-CLEARING AND GRUBBING WITHIN 15' OF STRUCTURE

MAH-11-7.991R (SFN 5000548), RELOC INDIAN RUN
-SEAL EXISTING CONCRETE WEARING SURFACE WITH GRAVITY FED RESIN, INCLUDING THE APPROACH SLABS
-REMOVE AND RE-SEAL THE INSIDE AND TOP SURFACES OF THE PARAPETS WITH EPOXY-URETHANE SEALER (MATCH EXISTING COLOR)
-CLEARING AND GRUBBING WITHIN 15' OF STRUCTURE

PROPOSED WORK CONT...

MAH-11-7.997L (SFN 5000513), RELOC INDIAN RUN
-SEAL EXISTING CONCRETE WEARING SURFACE WITH GRAVITY FED RESIN, INCLUDING THE APPROACH SLABS
-REMOVE AND RE-SEAL THE INSIDE AND TOP SURFACES OF THE PARAPETS WITH EPOXY-URETHANE SEALER (MATCH EXISTING COLOR)
-CLEARING AND GRUBBING WITHIN 15' OF STRUCTURE

ITEM 516 - REFURBISHING BEARING DEVICES, AS PER PLAN

THIS ITEM SHALL INCLUDE ALL WORK NECESSARY TO PROPERLY ALIGN BRIDGE BEARINGS, AS WELL AS THEIR CLEARNING 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 (C&MS 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 FARENHEIT, 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 C&MS 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 A DISTANCE OF THE SEPARATION IN ACCORDANCE WITH C&MS 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 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.

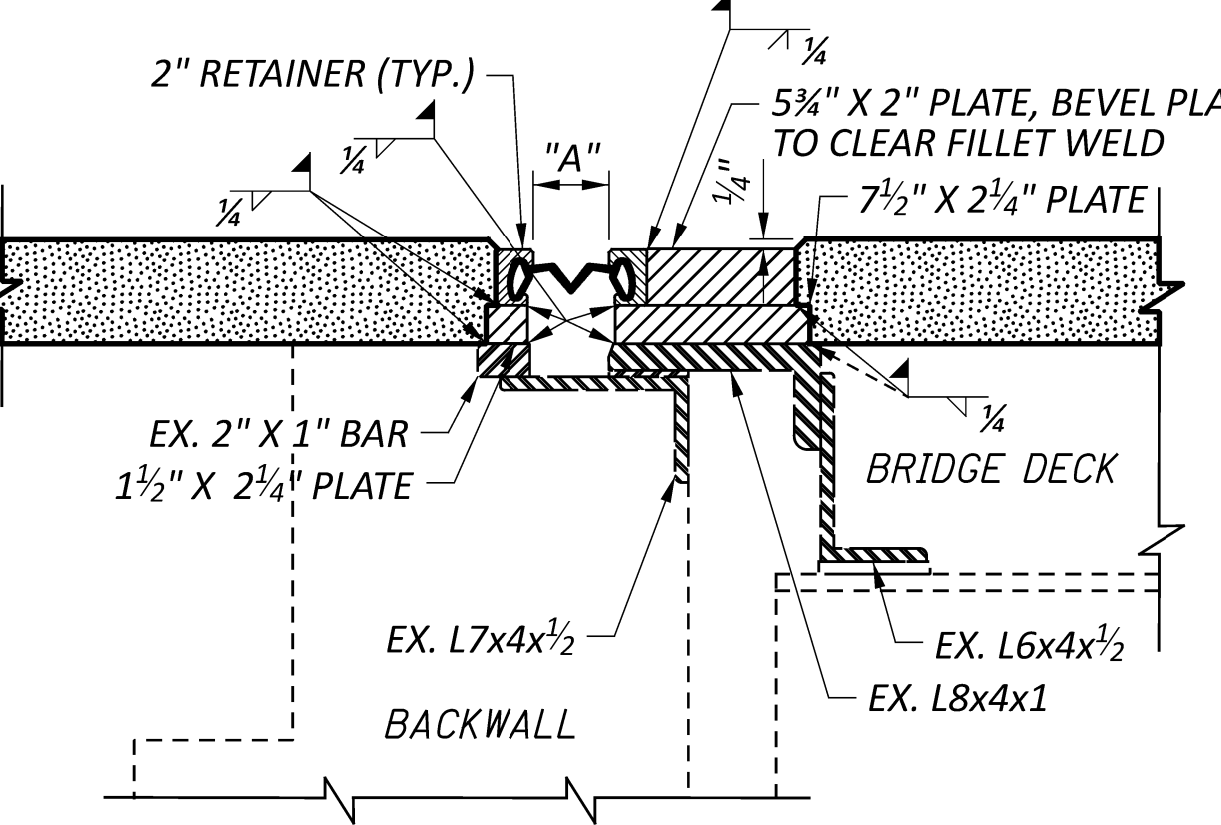
ITEM 201 - CLEARING AND GRUBBING, AS PER PLAN, AROUND BRIDGES/STRUCTURES/CULVERTS

ALTHOUGH NO TREES OR STUMPS ARE SPECIFICALLY MARKED FOR REMOVAL WITHIN THE PLANS, A LUMP SUM QUANTITY IS INCLUDED IN THE STRUCTURE GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING, AS PER PLAN, AROUND BRIDGES/STRUCTURES/CULVERTS. SCALPING IS NOT REQUIRED FOR THIS ITEM OF WORK. ALL VEGETATION SHALL BE REMOVED WITHIN 15 FEET (OR TO THE R/W LIMITS, WHICHEVER IS CLOSER) OF THE HEADWALLS, ABUTMENTS AND/OR PIERS.

ALL OTHER PROVISIONS AS SET FORTH IN THE CMS UNDER THIS ITEM ARE INCLUDED IN THE LUMP SUM BID PRICE FOR ITEM 201 CLEARING AND GRUBBING, AS PER PLAN, AROUND BRIDGES/STRUCTURES/CULVERTS.

ITEM 516 - STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN

THIS ITEM OF WORK CONSISTS OF REMOVING AND INSTALLING NEW ELASTOMERIC STRIP SEALS, RETAINERS, PLATES, AND ALL OTHER COMPONENTS FOR STRUCTURES MAH-11-1.003, MAH-11-1.469 AND MAH-11-7.583 AS DETAILED BELOW AND IN SCD EXJ-4-87. ALL WORK, LABOR, MATERIALS, AND EQUIPMENT NEEDED TO PERFORM THIS WORK SHALL BE PAID FOR UNDER THE UNIT BID PRICE FOR ITEM 516 - STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN.



[Pattern] = EXISTING AND PROPOSED ASPHALT OVERLAY (SEE SHEET 4/10)

[Pattern] = PROPOSED STEEL TO BE INSTALLED

TEMPERATURE (°F)	DIMENSION "A"		
	MAH-11-1.003	MAH-11-1.469	MAH-11-7.583
30°	1.63"	1.32"	1.32"
40°	1.50"	1.21"	1.21"
50°	1.36"	1.10"	1.10"
60°	1.22"	0.99"	0.99"
70°	1.09"	0.88"	0.88"
80°	0.95"	0.77"	0.78"
90°	0.82"	0.66"	0.67"

NOTE REMOVED - ITEM 516, ARMORLESS PREFORMED JOINT SEAL, AS PER PLAN

SFN	
VARIOUS	
DESIGN AGENCY	
DESIGNER	CHECKER
JF	MJA
REVIEWER	
RC 08/24/26	
PROJECT ID	
110642	
SUBSET	TOTAL
1	10
SHEET	TOTAL
P.22	35

ITEM 518 - SCUPPER MISC.: CLEANOUT

THIS WORK WILL CONSIST OF REMOVING ALL DEBRIS FROM ON TOP AND INSIDE OF THE SCUPPERS. SCUPPER CLEANOUT WILL BE PAID FOR AT THE UNIT PRICE BID FOR ITEM 518, SCUPPER MISC.: CLEANOUT. THIS PRICE WILL INCLUDE THE COST FOR LABOR, EQUIPMENT, AND ALL INCIDENTALS REQUIRED TO COMPLETE THIS WORK.

ITEM 519 - PATCHING CONCRETE STRUCTURES, AS PER PLAN

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

REPAIR CONCRETE SHALL BE HYDRAULIC CEMENT-BASED MATERIAL WITH AN ELECTRICAL RESISTIVITY LESS THAN 50,000 OHM-CM ACCORDING TO ASTM C 1760. DO NOT USE NON- CONDUCTIVE REPAIR MATERIALS SUCH AS MAGNESIUM AMMONIUM PHOSPHATE CONCRETE AND EPOXY MORTARS OR BONDING AGENTS. CONCRETE MIXES CONTAINING HIGH LEVELS OF SUPPLEMENTARY CEMENTITIOUS MATERIALS SUCH AS SILICA FUME, GROUND-GRANULATED BLAST FURNACE SLAG, LATEX, FLY ASH OR METAKAOLIN MAY NOT MEET THE RESISTIVITY REQUIREMENT.

MAH-11-1.922R: PIERS
ITEM 519, PATCHING CONCRETE STRUCTURE, AS PER PLAN, 125 SF

MAH-11-1.950L: PIERS
ITEM 519, PATCHING CONCRETE STRUCTURE, AS PER PLAN, 75 SF

MAH-165-17.257: PIERS
ITEM 519, PATCHING CONCRETE STRUCTURE, AS PER PLAN, 50 SF

MAH-11-6.108: PIERS
ITEM 519, PATCHING CONCRETE STRUCTURE, AS PER PLAN, 125 SF

MAH-11-7.583: PIERS AND ABUTMENTS
ITEM 519, PATCHING CONCRETE STRUCTURE, AS PER PLAN, 200 SF

SPECIAL - PATCHING CONCRETE STRUCTURE, CURB REPAIR

THIS ITEM WILL BE USED TO REPAIR THE DETERIORATED FACE OF THE CURB ON THE BRIDGE DECK AND/OR APPROACH SLABS. THIS WORK WILL BE PERFORMED IN ACCORDANCE WITH ITEM 519 - PATCHING CONCRETE STRUCTURES AND AS MODIFIED HEREIN.

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.

PAYMENT FOR ALL OF THE ABOVE DESCRIBED LABOR AND MATERIALS WILL BE MADE AT THE CONTRACT PRICE BID FOR ITEM SPECIAL - PATCHING CONCRETE STRUCTURE, MISC.: CURB REPAIR AND WILL BE PAID FOR PER FOOT.

MAH-11-7.583:
SPECIAL, PATCHING CONCRETE STRUCTURE, MISC.: CURB REPAIR, 50 FT

SPECIAL - STRUCTURES: CONCRETE SPALL REMOVAL WITH ZINC RICH PRIMER APPLIED

THIS WORK WILL CONSIST OF REMOVING ALL VISIBLY SPALLED AREAS OF THE UNDERSIDE OF THE DECK WITHOUT SOUNDING.

AFTER SPALLED CONCRETE IS REMOVED THE EXISTING EXPOSED REINFORCING STEEL SHALL BE BLAST CLEANED. ACCEPTABLE METHODS INCLUDE HIGH PRESSURE WATER BLASTING WITH OR WITHOUT ABRASIVES IN THE WATER, ABRASIVES WITH CONTAINMENT, OR VACUUM BLASTING. APPLY A ZINC RICH PRIMER, PER CMS 708.02.B, OVER ALL EXPOSED STEEL SURFACES. THE APPLICATION OF THE PRIMER SHALL FOLLOW CMS 514 AND ALL MANUFACTURER REQUIREMENTS.

THE DEPARTMENT WILL MEASURE THIS WORK AS THE ACTUAL AREA IN SQUARE YARDS OF CONCRETE SPALLS REMOVED.

CONCRETE SPALL REMOVAL WILL BE PAID AT THE UNIT BID PRICE FOR SPECIAL STRUCTURE MISC.: CONCRETE SPALL REMOVAL WITH ZINC PRICH PRIMER APPLIED. THIS PRICE WILL INCLUDE THE COST OF LABOR, EQUIPMENT, AND ALL INCIDENTALS REQUIRED TO COMPLETE THIS WORK.

SPALL REMOVAL ON STRUCTURES MAH-11-1.003 & MAH-11-7.583 OVER TRAVEL LANES AND PAVED SHOULDERS

THE FOLLOWING WORK AND QUANTITIES SHALL BE USED ON THIS STRUCTURE TO REPAIR THE CONCRETE SPALLS OVER TRAVEL LANES AND PAVED SHOULDERS:

MAH-11-1.003:
ITEM SPECIAL - STRUCTURES: CONCRETE SPALL REMOVAL WITH ZINC RICH PRIMER APPLIED, 10 SY
ITEM 512 SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), 10 SY

MAH-11-7.583:
ITEM SPECIAL - STRUCTURES: CONCRETE SPALL REMOVAL WITH ZINC RICH PRIMER APPLIED, 25 SY
ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), 25 SY

ITEM 609 - CURB, TYPE 4-A, AS PER PLAN

THIS ITEM OF WORK WILL CONSIST OF REPLACING THE CURB OF THE APPROACH ROADWAY. THE CURB SHALL BE PLACED DIRECTLY ON TOP OF THE SLEEPER SLAB. MECHANICAL CONNECTORS WILL BE USED AS NECESSARY. SEE SECTION D-D ON SHEET 8/10. THIS WORK WILL BE PAID FOR BY THE FOLLOWING ITEMS:

MAH-11-6.108
ITEM 609 - CURB, TYPE 4-A, AS PER PLAN

ITEM 512 - TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN (PATCHED AREAS)

AFTER THE COMPLETION OF THE DECK PATCHING THE CONTRACTOR SHALL TREAT THE PATCHED AREA WITH GRAVITY FED RESIN INCLUDING 6" BEYOND THE EDGE OF THE PATCHED AREA.

ITEM 844 - CONCRETE PATCHING WITH GALVANIC ANODE PROTECTION

THE GALVANIC ANODE SIZE AND SPACING IS BASED ON ACHIEVING A CURRENT DENSITY FOR THE EXTREMELY HIGH CORROSION RISK CATEGORY WITH A 20 YEAR INSTALLATION. SUPPLY ANODES WITH A MINIMUM CORE OF 200 GRAMS OF ZINC. SEE THIS SHEET FOR DISTRIBUTION.

THE FOLLOWING QUANTITIES AND ANODE SPACINGS HAVE BEEN PROVIDED FOR EACH STRUCTURE.

MAH-11-1.922R:
PIERS: ANODE SPACING @ 8 IN C/C
ITEM 844, GALVANIC ANODE PROTECTION, 500 EACH

MAH-11-1.950L: PIERS
PIERS: ANODE SPACING @ 8 IN C/C
ITEM 844, GALVANIC ANODE PROTECTION, 300 EACH

MAH-165-17.257: PIERS
PIERS: ANODE SPACING @ 8 IN C/C
ITEM 844, GALVANIC ANODE PROTECTION, 200 EACH

MAH-11-6.108: PIERS
PIERS: ANODE SPACING @ 8 IN C/C
ITEM 844, GALVANIC ANODE PROTECTION, 500 EACH

MAH-11-7.583: PIERS AND ABUTMENTS
PIERS: ANODE SPACING @ 8 IN C/C
ABUTMENTS: ANODE SPACING @ 12 IN C/C
ITEM 844, GALVANIC ANODE PROTECTION, 800 EACH

ITEM SPECIAL - COMPOSITE FIBER WRAP SYSTEM

THE FOLLOWING WORK AND QUANTITIES SHALL BE USED ON THIS STRUCTURE TO PROTECT PATCHING ON THE FOLLOWING LOCATIONS:

MAH-11-1.922R: PIERS
ITEM SPECIAL - COMPOSITE FIBER WRAP SYSTEM, 140 SF

MAH-11-1.950L: PIERS
ITEM SPECIAL - COMPOSITE FIBER WRAP SYSTEM, 90 SF

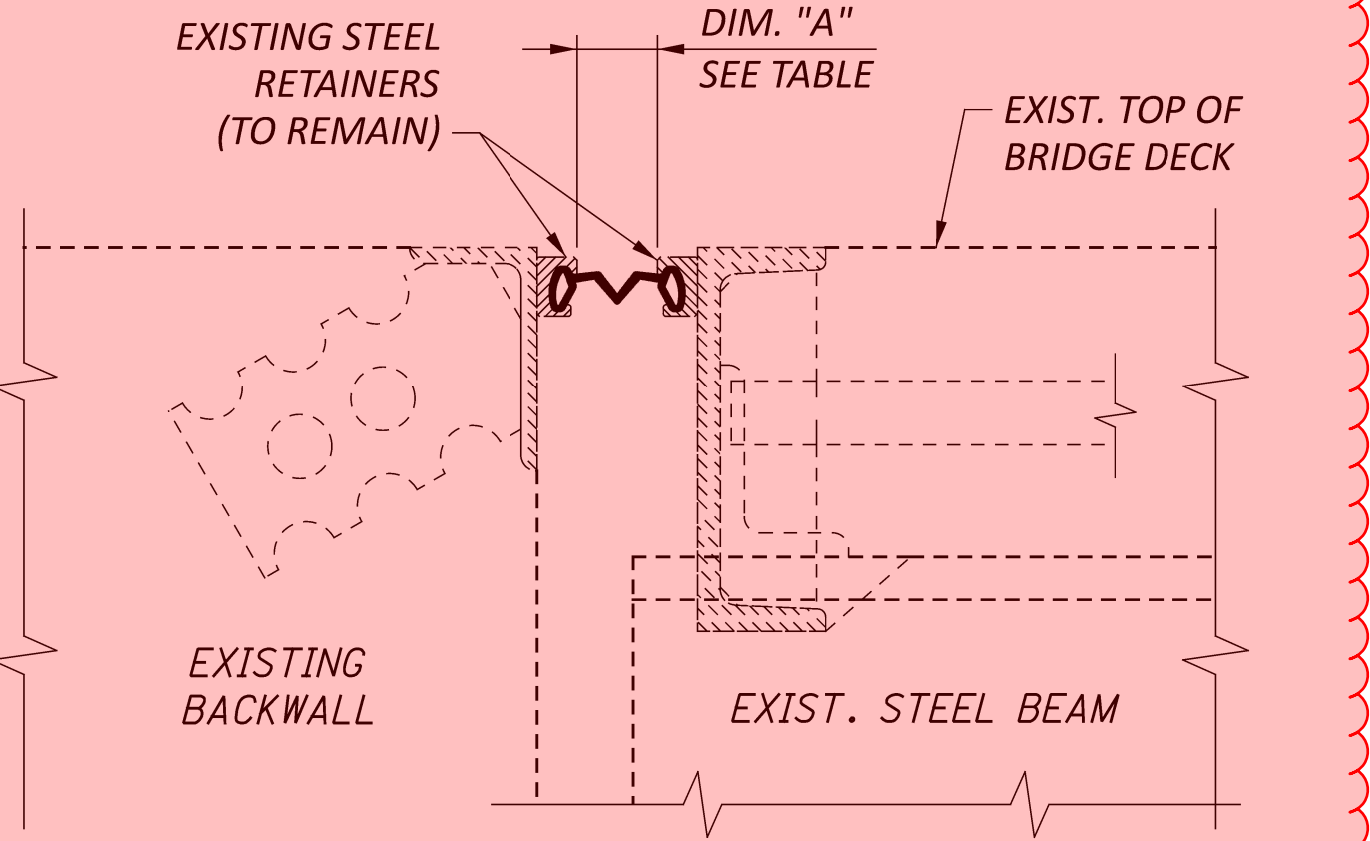
MAH-11-6.108: PIERS
ITEM SPECIAL - COMPOSITE FIBER WRAP SYSTEM, 140 SF

MAH-11-7.583: PIERS
ITEM SPECIAL - COMPOSITE FIBER WRAP SYSTEM, 110 SF

ITEM 516 - ELASTOMERIC STRIP SEAL WITHOUT STEEL EXTRUSIONS

THIS ITEM OF WORK SHALL INCLUDE THE REMOVAL AND REPLACEMENT OF THE ELASTOMERIC STRIP SEAL GLANDS AT THE FORWARD AND REAR EXPANSION JOINTS PER THE DETAIL SHOWN BELOW. MINIMUM JOINT OPENING (DIMENSION "A") AT TIME OF SEAL GLAND INSTALLATION SHALL NOT BE LESS THAN 1½". FOR ADDITIONAL DETAILS AND NOTES REFER TO STANDARD CONSTRUCTION DRAWING EXJ-4-87.

ALL WORK, LABOR, MATERIALS AND EQUIPMENT NEEDED TO PERFORM THIS WORK SHALL BE PAID FOR UNDER THE UNIT BID PRICE FOR ITEM 516 - ELASTOMERIC STRIP SEAL WITHOUT STEEL EXTRUSIONS.



EXPANSION JOINT DETAIL

MAH-11-5.041L & MAH-11-5.055R

AMBIENT TEMP (°F)	DIMENSION "A"	
	REAR ABUT.	FWD ABUT.
30°	2.30"	2.39"
40°	2.26"	2.30"
50°	2.24"	2.20"
60°	2.20"	2.11"
70°	2.17"	2.01"
80°	2.14"	1.92"
90°	2.11"	1.82"

NOTE ADDED

STRUCTURE GENERAL NOTES

MAH-11-1.003, MAH-11-1.469, MAH-11-1.922R, MAH-11-1.950L, MAH-11-3.045, MAH-11-5.041L
MAH-11-5.055R, MAH-11-6.108, MAH-11-7.583, MAH-11-7.991R, MAH-11-7.997L

SFN	
VARIOUS	
DESIGN AGENCY	
DESIGNER	CHECKER
JF	MJA
REVIEWER	
RC 08/24/26	
PROJECT ID	
110642	
SUBSET	TOTAL
2	10
SHEET	TOTAL
P.23	35

											CALC:		JF	DATE:		9/25/2025
											CHECKED:		MJA	DATE:		12/16/2025
ESTIMATED QUANTITIES																
BRIDGE NO. / STRUCTURE FILE NO.											ITEM	EXTENSION	UNIT	DESCRIPTION	SEE SHEET	
MAH-11-1.003 5000211 02/NHS	MAH-11-1.469 5000246 02/NHS	MAH-11-1.922R 5000300 02/NHS	MAH-11-1.950L 5000270 02/NHS	MAH-165-17.257 5003660 02/NHS	MAH-11-5.041L 5000394 02/NHS	MAH-11-5.055R 5000424 02/NHS	MAH-11-6.108 5000459 02/NHS	MAH-11-7.583 5000483 02/NHS	MAH-11-7.991R 5000548 02/NHS	MAH-11-7.997L 5000513 02/NHS						
LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	201	11001		CLEARING AND GRUBBING, AS PER PLAN, AROUND BRIDGES/STRUCTURES/CULVERTS	1 / 10	
1046	899							1042			202	23500	SY	WEARING COURSE REMOVED (T = 4.5")		
							134				254	01000	SY	PAVEMENT PLANING, ASPHALT CONCRETE (T = 3")		
							14				301	56000	CY	ASPHALT CONCRETE BASE, PG64-22, (449)		
							12				304	20000	CY	AGGREGATE BASE		
77	66						4	77			407	13900	GAL	TACK COAT, 702.13		
59	50						26	58			407	20000	GAL	NON-TRACKING TACK COAT		
40	34						20	41			441	70100	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), PG70-22M		
80	68							80			441	70300	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (449)		
103	84	14	9	6			14	119	243	243	512	10100	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)		
		25									512	10600	FT	CONCRETE REPAIR BY EPOXY INJECTION		
912	765							886			512	33010	SY	TYPE 3 WATERPROOFING		
		961	1081	1295	776	776	1320		894	887	512	73500	SY	TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN		
93	84							88	243	243	512	74000	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES		
		711	747	998	536	536	1017		791	785	512	74500	FT	REMOVAL OF EXISTING PAVEMENT MARKING		
					92	92					516	01300	FT	ELASTOMERIC STRIP SEAL WITHOUT STEEL EXTRUSIONS	2 / 10	
							70				516	10010	FT	ARMORLESS PREFORMED JOINT SEAL		
48	50							58			516	11211	FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN	1 / 10	
							6				516	13900	SF	2" PREFORMED EXPANSION JOINT FILLER		
							70				516	31010	FT	2" DEEP JOINT SEALER		
8	8	10	10					8			516	45305	EACH	REFURBISH BEARING DEVICE, AS PER PLAN	1 / 10	
LS	LS	LS	LS					LS			516	47001		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN	1 / 10	
12	8							10			518	12500	EACH	SCUPPER, MISC.: CLEANOUT	2 / 10	
		140	90				140	110			SPECIAL	51900100	SF	COMPOSITE FIBER WRAP SYSTEM		
		125	75	50			125	200			519	11101	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	2 / 10	
								50			SPECIAL	51911720	FT	PATCHING CONCRETE STRUCTURE: CURB REPAIR	2 / 10	
17	12							27			519	12304	SY	PATCHING CONCRETE BRIDGE DECK - TYPE C		
							70				526	90031	FT	TYPE C INSTALLATION, AS PER PLAN	6 / 10	
10								25			SPECIAL	53000800	SY	STRUCTURES: CONCRETE SPALL REMOVAL WITH ZINC RICH PRIMER APPLIED	2 / 10	
							24				609	24001	FT	CURB, TYPE 4-A, AS PER PLAN	2 / 10	
90								225			843	50000	SF	PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR		
		54	33	22			54	86			844	20000	EACH	GALVANIC ANODE PROTECTION		

ITEM ADDED,
QUANTITIES
MOVED FROM ITEM
516 = ARMORLESS
PREFORMED JOINT
SEAL

STRUCTURE ESTIMATED QUANTITIES

MAH-11-1.003, MAH-11-1.469, MAH-11-1.922R, MAH-11-1.950L, MAH-11-3.045, MAH-11-5.041L
MAH-11-5.055R, MAH-11-6.108, MAH-11-7.583, MAH-11-7.991R, MAH-11-7.997L

SFN

VARIOUS

DESIGN AGENCY

DESIGNER

JF

CHECKER

MJA

REVIEWER

RC

08/24/26

PROJECT ID

110642

SUBSET

3

TOTAL

10

SHEET

P.24

TOTAL

35