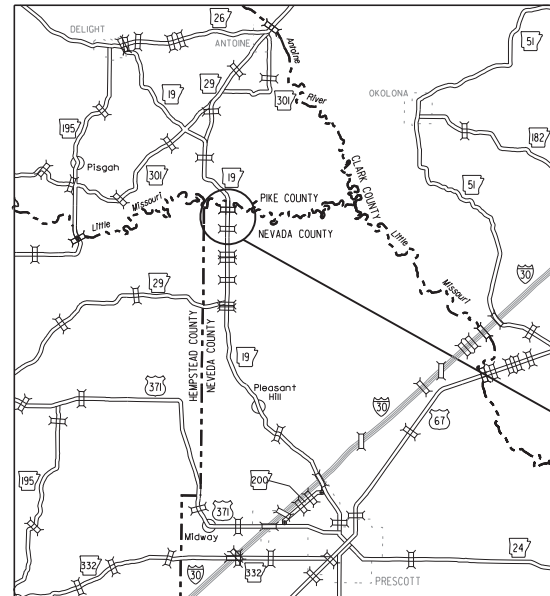


DLTackett
WORKSPACE: AHTD
L:\2017\01550 - Little Missouri River and Relief Drawings\030458.CO.DGN
4/9/2020 3:04:06 PM
REVISED DATE:

ARKANSAS DEPARTMENT OF TRANSPORTATION
CONSTRUCTION PLANS FOR STATE HIGHWAY

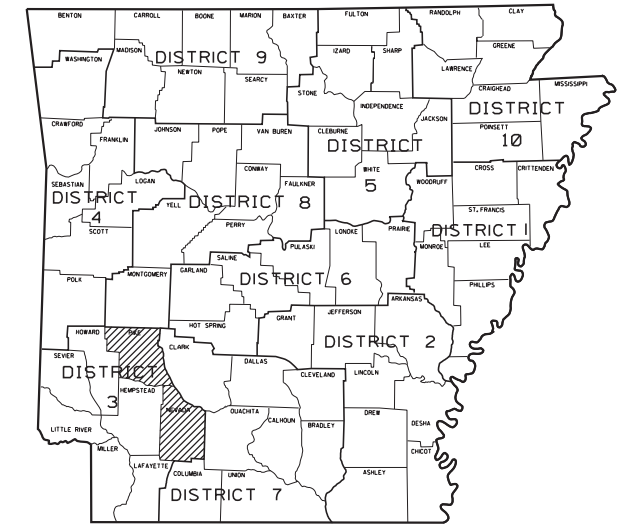
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				6	ARK.			
						JOB NO. 030458	1	98
(2) LITTLE MISSOURI RIVER & RELIEF STRS. & APPRS. (S)								



PROJECT
LOCATION

VICINITY MAP

LITTLE MISSOURI RIVER & RELIEF
STRS. & APPRS. (S)
NEVADA & PIKE COUNTIES
ROUTE 19 SECTIONS 5 & 6
JOB 030458
FEDERAL AID PROJECT NHPP-0050(33)

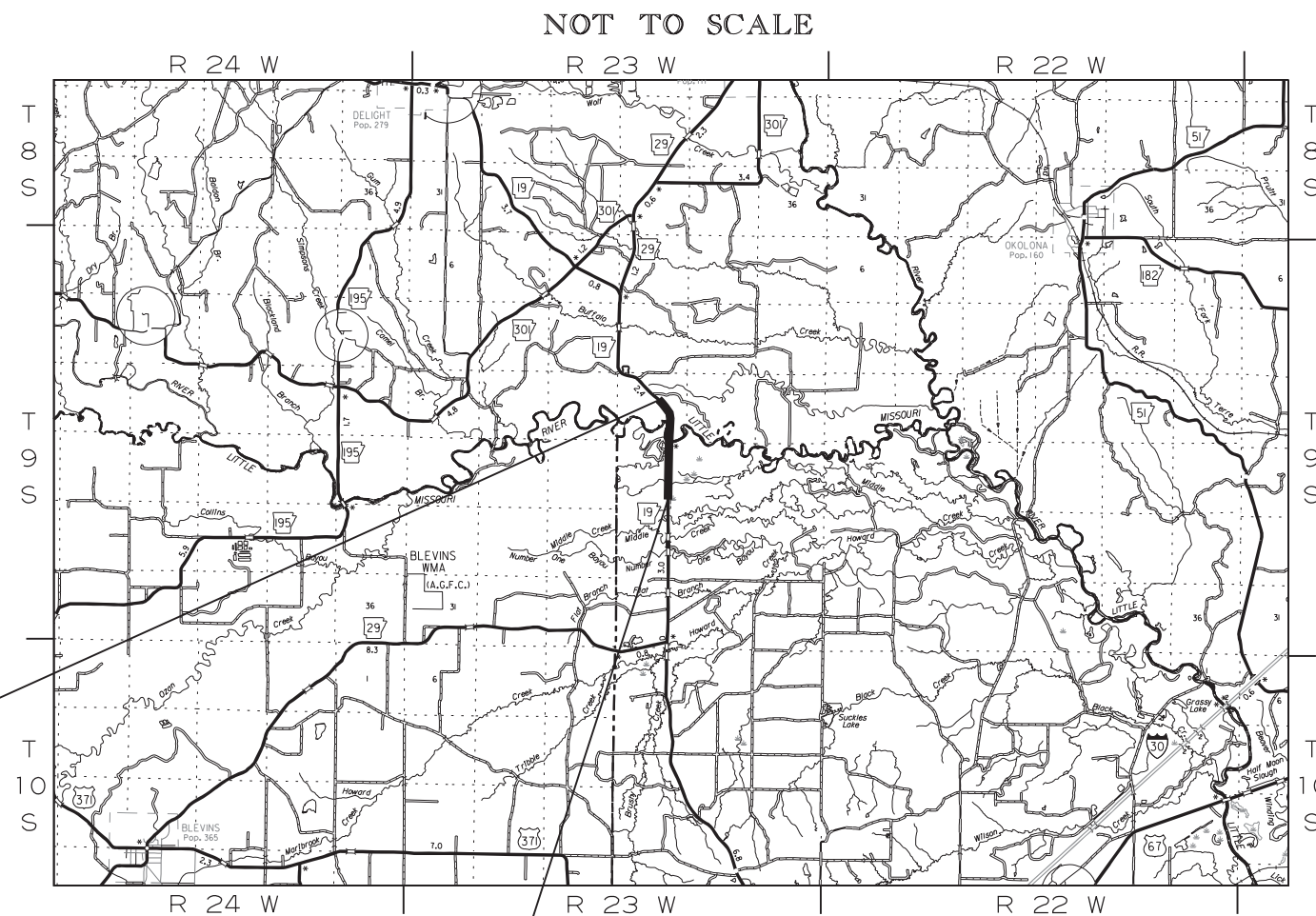


ARKANSAS HIGHWAY DISTRICT 3

BRIDGE CONSTRUCTION DATA

- ① STA. 24+29.96 BRIDGE END
BRIDGE NO. 06347 OVER LITTLE MISSOURI RIVER RELIEF
425'-0" R.C. DECK GIRDER
40'-0" CLEAR ROADWAY
STA. 28+54.96 BRIDGE END
RETAIN AND REPAIR
- ② STA. 55+78.92 BRIDGE END
BRIDGE NO. 07479 OVER LITTLE MISSOURI RIVER
500'-0" CONT. PLATE GIRDER UNIT (100'-150'-150'-100')
40'-0" CLEAR ROADWAY
502'-2" BRIDGE LENGTH
STA. 60+81.08 BRIDGE END

STA. 88+50.00
END JOB 030458



STA. 21+00.00
BEGIN JOB 030458
L.M. 10.80

PROJECT COORDINATES

	BEGIN	MID-POINT	END
LATITUDE	N 33°56'44"	N 33°57'17"	N 33°57'49"
LONGITUDE	W 93°26'39"	W 93°26'37"	W 93°26'43"
STATION	21+00.00	54+75.00	88+50.00

GROSS LENGTH OF PROJECT 6750.00 FEET OR 1.278 MILES
NET LENGTH OF ROADWAY 5822.84 FEET OR 1.103 MILES
NET LENGTH OF BRIDGES 927.16 FEET OR 0.175 MILES
NET LENGTH OF PROJECT 6750.00 FEET OR 1.278 MILES

DESIGN TRAFFIC DATA

DESIGN YEAR ----- 2040
2020 ADT ----- 920
2040 ADT ----- 1,000
2040 DHV ----- 110
DIRECTIONAL DISTRIBUTION ----- 60%
TRUCKS ----- 30%
DESIGN SPEED ----- 55 MPH



DIGITALLY SIGNED 4/10/2020

obhcll 3/18/2020 14:23:21 AM
WORKSPACE: ARDOT Bridge
L:\2017\071550 - Little Missouri River and Relief Drawings\B030458_01.dgn
REVISED DATE:

SCHEDULE OF BRIDGE QUANTITIES - JOB. NO. 030458

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		030458	35	98
				① 06347 & 07479 QUANTITIES				61492

BRIDGE NO.	NAME PLATE TITLE	UNIT OF STRUCTURE	ITEM NO.	205	SP & 509	801	SS & 802	SP, SS, & 802	SS, SP, & 802	803	SS & 804	SS & 804	SS & 805	SP, SS & 807	SS & 807	SS & 807	SS & 808	SS & 809	SS & 809	812	816	816	821
			ITEM	REMOVAL OF EXISTING BRIDGE STRUCTURE (SITE NO. _)	JOINT REHABILITATION (TYPE A)	UNCLASSIFIED EXCAVATION FOR STRUCTURES- BRIDGE	CLASS S CONCRETE- BRIDGE	CLASS S(AE) CONCRETE- BRIDGE	PRECAST CONCRETE BENT CAPS	CLASS I PROTECTIVE SURFACE TREATMENT	REINFORCING STEEL-BRIDGE (GRADE 60)	EPOXY COATED REINFORCING STEEL (GRADE 60)	STEEL PILING (HP14x73) ①	STRUCTURAL STEEL IN PLATE GIRDER SPANS (A709, GR. 50W)	② STRUCTURAL STEEL IN BEAM SPANS (A709, GR. 50W)	PAINTING STRUCTURAL STEEL ③	ELASTOMERIC BEARINGS	SILICONE JOINT SEALANT	ARMORED JOINT WITH NEOPRENE STRIP SEAL	BRIDGE NAME PLATE (TYPE D)	DUMPED RIPRAP	FILTER BLANKET	MODIFICATION OF EXISTING BRIDGE STRUCTURE (BRIDGE NO. _)
			UNIT	LUMP SUM	LIN. FT.	CU. YD.	CU. YD.	CU. YD.	EACH	GAL.	LB.	LB.	LIN. FT.	LB.	LB.	TON	CU. IN.	LIN. FT.	LIN. FT.	EACH	CU. YD.	SO. YD.	LUMP SUM
06347	LITTLE MISSOURI RELIEF ⑥	BENT NO. 9																					
		BENT NO. 10							I							1,804							
		BENT NO. 11							I							1,804							
		BENT NO. 12							I							1,804							
		BENT NO. 13							I							1,804							
		BENT NO. 14							I							1,804							
		BENT NO. 15																					
		25'-0" PREFABRICATED COMPOSITE W-BEAM SPAN (SPAN NO. 9)								0.5							3.9		43				
		25'-0" PREFABRICATED COMPOSITE W-BEAM SPAN (SPAN NO. 10)								0.5							4.3		43				
		25'-0" PREFABRICATED COMPOSITE W-BEAM SPAN (SPAN NO. 11)								0.5							4.3		43				
		25'-0" PREFABRICATED COMPOSITE W-BEAM SPAN (SPAN NO. 12)								0.5							4.3		43				
		25'-0" PREFABRICATED COMPOSITE W-BEAM SPAN (SPAN NO. 13)								0.5							4.3		43				
		25'-0" PREFABRICATED COMPOSITE W-BEAM SPAN (SPAN NO. 14)								0.5							3.9						
		EXISTING BR. NO. 06347			360							④⑤ 470											I
07479	HIGHWAY 19 OVER LITTLE MISSOURI RIVER	TOTALS FOR BRIDGE NO. 06347			360				5	3.0		④⑤ 470			9,020	25.0		215					
		END BENT NO. 1				3	48.47			0.1	5,196		623	951			3,705.7				285	469	
		BENT NO. 2					62.23				15,188						6,352.8				275	489	
		BENT NO. 3					69.50				16,862						4,785.0						
		BENT NO. 4					62.23				15,188						6,352.8						
		END BENT NO. 5				5	48.47			0.1	5,196		614	951			3,705.7				330	544	
		500'-0" CONT. PL GIRDER UNIT						645.70		8.3		160,710		741,468		12.5			84	I			
		SITE NO. 2 (EXISTING BR. NO. 03095)		I																			
		TOTALS FOR BRIDGE NO. 07479				8	290.90	645.70		8.5	57,630	160,710	1,237	743,370		12.5	24,902.0		84	I	890	1,502	
		TOTALS FOR JOB NO. 030458			360	8	290.90	645.70	5	11.5	57,630	161,180	1,237	743,370	9,020	37.5	24,902.0	215	84	I	890	1,502	

BRIDGE NO.	NAME PLATE TITLE	UNIT OF STRUCTURE	ITEM NO.	SP JOB 030458	SP JOB 030458	SP JOB 030458	SP JOB 030458	SP JOB 030458	SP JOB 030458	SP JOB 030458	SP JOB 030458	SP JOB 030458	SP JOB 030458	SP JOB 030458	SP JOB 030458	SP JOB 030458	SP JOB 030458	SP JOB 030458
			ITEM	SPALL REPAIR	SURFACE PATCHING	8'-10" EXT. PREFAB. MODULE	8'-10" INT. PREFAB. MODULE	7'-10" INT. PREFAB. MODULE	8'-10" EXT. PREFAB. MODULE W/ TURNDOWN	8'-10" INT. PREFAB. MODULE W/ TURNDOWN	7'-10" INT. PREFAB. MODULE W/ TURNDOWN	DRILLED SHAFT (84" DIAMETER)	PERMANENT STEEL CASING (90" DIAMETER)	CROSSHOLE SONIC LOGGING (84" DIAMETER)	THERMAL INTEGRITY PROFILING (84" DIAMETER)	CORING DRILLED SHAFT ⑤	POLYMER OVERLAY	BRIDGE DECK REPAIR FOR POLYMER OVERLAYS ⑤
			UNIT	SQ. FT.	SQ. FT.	EACH	EACH	EACH	EACH	EACH	EACH	LIN. FT.	LIN. FT.	EACH	EACH	LIN. FT.	SQ. YD.	SQ. FT.
06347	LITTLE MISSOURI RELIEF ⑥	BENT NO. 9		46	45													
		BENT NO. 10																
		BENT NO. 11																
		BENT NO. 12																
		BENT NO. 13																
		BENT NO. 14																
		BENT NO. 15		14	14													
		25'-0" PREFABRICATED COMPOSITE W-BEAM SPAN (SPAN NO. 9)						2	2	1								
		25'-0" PREFABRICATED COMPOSITE W-BEAM SPAN (SPAN NO. 10)				2	2	1										
		25'-0" PREFABRICATED COMPOSITE W-BEAM SPAN (SPAN NO. 11)				2	2	1										
		25'-0" PREFABRICATED COMPOSITE W-BEAM SPAN (SPAN NO. 12)				2	2	1										
		25'-0" PREFABRICATED COMPOSITE W-BEAM SPAN (SPAN NO. 13)				2	2	1										
		25'-0" PREFABRICATED COMPOSITE W-BEAM SPAN (SPAN NO. 14)							2	2	1							
		EXISTING BR. NO. 06347															1,889	550
		TOTALS FOR BRIDGE NO. 06347		⑤ 60	⑤ 59	8	8	4	4	4	2						1,889	550
07479	HIGHWAY 19 OVER LITTLE MISSOURI RIVER	END BENT NO. 1																
		BENT NO. 2									134	64	2	2	67			
		BENT NO. 3									150	52	2	2	75			
		BENT NO. 4									118	58	2	2	59			
		END BENT NO. 5																
		500'-0" CONT. PL GIRDER UNIT														2,223		
		SITE NO. 2 (EXISTING BR. NO. 03095)																
		TOTALS FOR BRIDGE NO. 07479										402	174	6	6	201	2,223	
TOTALS FOR JOB NO. 030458				60	59	8	8	4	4	4	2	402	174	6	6	201	4,112	550

- ① All Steel piling shall be Grade 50 and are required to have OPL approved driving points which will not be paid for directly but will be considered subsidiary to the item "STEEL PILING (HP14x73)". All piles shall conform to Std. Dwg. No. 55020.
- ② Structural Steel paid for under this item shall consist of Type B fixed and expansion bearings along with anchor bolts. All other structural steel for Bridge 06347 shall be included in the cost of the prefabricated modules.
- ③ All Grade 50W structural steel, except galvanized members, surfaces in contact with concrete, and the expansion device, within five feet and nine feet of the bridge deck expansion joints for Bridge Nos. 06347 & 07479, respectively, shall be painted as specified in Subsection 807.75. The color of paint shall be Brown equal or close to Fed. Std. 595 B, Color Chip No. 30070 and as approved by the Engineer. The finish system may be applied in the shop.
- ④ Quantity shown is to be used in conjunction with the item "BRIDGE DECK REPAIR FOR POLYMER OVERLAYS".
- ⑤ Quantity shown is for estimating and bidding purposes only. Actual quantity, if any, will be determined in the field.
- ⑥ A new name plate will not be provided. Name plate title shown is based on existing name plate that is to remain.

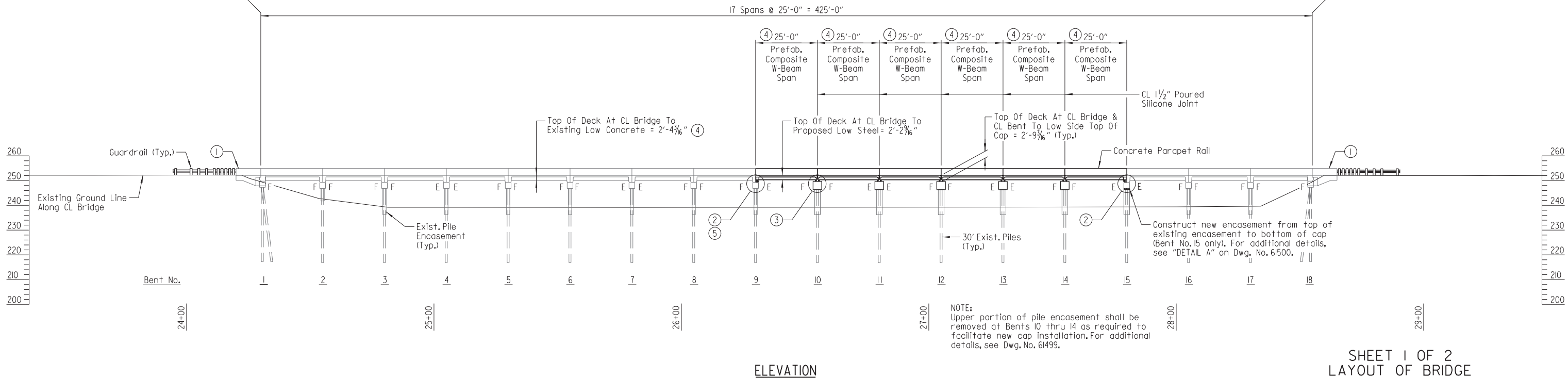
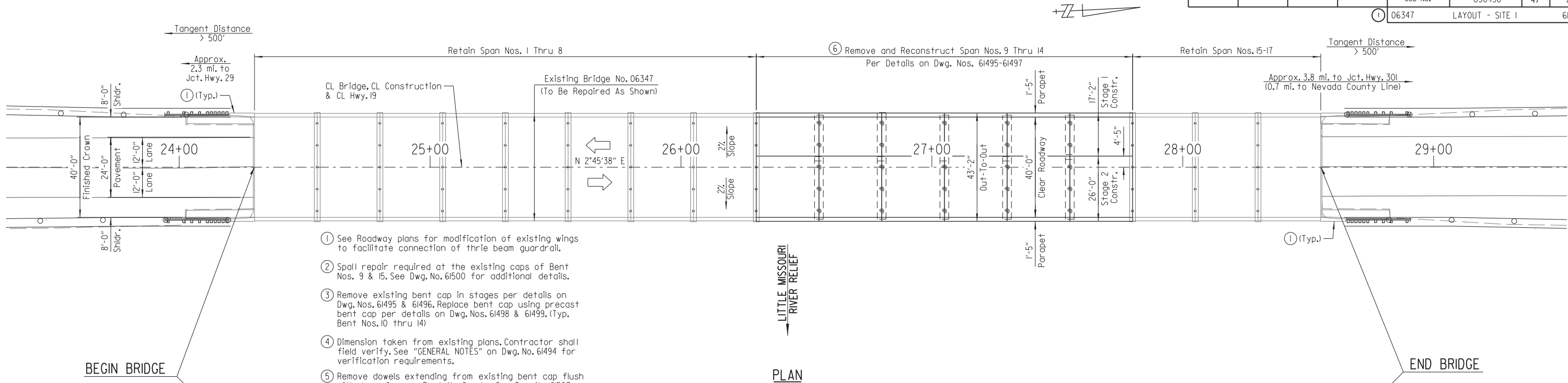


SCHEDULE OF BRIDGE QUANTITIES
LITTLE MISSOURI RIVER & RELIEF
STRS. & APPRS. (S)
NEVADA & PIKE COUNTIES
ROUTE 19 SEC. 5 & 6
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: HEW DATE: JAN. 2020 FILENAME: b030458-q.dgn
CHECKED BY: WMM DATE: JAN. 2020 SCALE: No Scale
DESIGNED BY: JJB DATE: JAN. 2020
BRIDGE NO. 06347 & 07479 DRAWING NO. 61492

3/18/2020 11:23:22 AM
WORKSPACE: ARDOT Bridge
L:\2017\01550 - Little Missouri River and Relief Bridge.dgn
REVISED DATE:

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		030458	47	98
				06347		LAYOUT - SITE 1		61493



LEGEND

- Existing bridge elements to remain
- New bridge elements to be constructed
- E = Expansion
- F = Fixed

NOTE:
For "GENERAL NOTES", see Dwg. No. 61494.

FOR R/W DATA AND GUARDRAIL
DETAILS, SEE ROADWAY PLANS



SHEET 1 OF 2
LAYOUT OF BRIDGE
HIGHWAY 19 OVER LITTLE MISSOURI
RIVER RELIEF
LITTLE MISSOURI RIVER & RELIEF
STRS. & APPRS. (S)
NEVADA COUNTY
ROUTE 19 SEC. 5
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: HEW DATE: DEC. 2018 FILENAME: b030458xl1.dgn
CHECKED BY: JHR DATE: MAY 2019 SCALE: 1" = 20'-0"
DESIGNED BY: ABH DATE: DEC. 2018
BRIDGE NO. 06347 DRAWING NO. 61493

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WORKSPACE: ARDOT Bridge
L:\2017\01550 - Little Missouri River and Relief Drawings\B030458\LL2 (Relief Bridge).dgn
REVISED DATE:

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				6	ARK.			
				JOB NO.		030458	48	98
				① 06347		LAYOUT - SITE 1		61494

GENERAL NOTES

BENCHMARK: Vertical Control Data are shown on the Survey Control Data Sheets.

CONSTRUCTION SPECIFICATIONS: Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction (2014 Edition) with applicable Supplemental Specifications and Special Provisions. Unless otherwise noted in the plans, Section and Subsection numbers refer to the Standard Construction Specifications.

DESIGN SPECIFICATIONS: AASHTO Standard Specifications for Highway Bridges, 17th Edition

LIVE LOADING: HS20

METHOD OF DESIGN: Load Factor Design

SEISMIC PERFORMANCE CATEGORY: A

MATERIALS AND STRENGTHS:
Class S(AE) Concrete (Superstructure) f'c = 4,000 psi
Class S Concrete (Substructure) f'c = 3,500 psi
Reinforcing Steel (AASHTO M 31 or M 322 Type A, Gr. 60) fy = 60,000 psi
Structural Steel (ASTM A709, Gr. 50W) Fy = 50,000 psi
Structural Steel (ASTM A709, Gr. 36) Fy = 36,000 psi

PAINTING: All Grade 50W structural steel, except galvanized members, surfaces in contact with concrete, and the expansion device, within five feet of bridge deck expansion joints shall be painted as specified in Subsection 807.75. The color of paint shall be Brown equal or close to Federal Std. 595B, Color Chip No. 30070 and as approved by the Engineer. The finish system may be applied in the shop. Any damage to the paint system occurring during transport or installation shall be corrected according to the Manufacturer's recommendations at no cost to the Department.

BRIDGE DECK: The bridge deck shall be given a polymer overlay as specified in Special Provision Job No. 030458 "POLYMER OVERLAY".

PROTECTIVE SURFACE TREATMENT: Class I Protective Surface Treatment shall be applied to the roadway face and top of the concrete parapet rails in accordance with Section 803.

ACCELERATED BRIDGE CONSTRUCTION: The use of prefabricated bent caps and precast superstructure modules will be required. Precast bent caps shall be manufactured in accordance with Section 802.21 and Special Provision Job No. 030458 "PRECAST BENT CAPS". Prefabricated Superstructure Modules shall be fabricated in accordance with Special Provision Job No. 030458 "PREFABRICATED SUPERSTRUCTURE MODULES".

EXISTING BRIDGE: Existing Bridge No. 06347 (Log Mile 10.86) is 425' in length, 42.83' wide and consists of reinforced concrete deck girder spans supported by steel H-pile bents. See "REFERENCE TABLE" for a list of existing bridge drawings.

REMODELING OF THE EXISTING BRIDGE: The proposed work consists of removing and replacing the entire superstructure unit for Spans 9 thru 14; removing and replacing intermediate bent caps for Bents 10 thru 14; extending concrete encasement for the existing piles at Bent 15; spall repair where shown in the plans; and a polymer overlay of the new and existing bridge deck. For additional requirements in conducting the work, see Section 821. The cost associated with the removal and disposal of portions of the existing bridge shall be included in the item "MODIFICATION OF EXISTING BRIDGE STRUCTURE (BRIDGE NO. 06347)".

VERIFICATION: Except as noted, components of the existing bridge are to be retained and joined to the proposed work. The information and dimensions shown are based on existing bridge plans. The Contractor is to adhere strictly to the requirements for verification of the geometry of the existing bridge and its relationship to proposed work to the existing structure. See Section 821 for additional requirements. Payment for this work shall be considered subsidiary to the pay item "MODIFICATION OF EXISTING BRIDGE STRUCTURE (BRIDGE NO. 06347)". Verification of the existing bridge geometry must be completed prior to the submission of structural steel shop drawings.

REMOVAL AND SALVAGE: All material removed from the existing bridge under Item 821 shall be disposed of according to Section 205. All material from the existing bridge shall become property of the Contractor.

JOINT REHABILITATION: After placement of the Polymer Overlay, existing joints at Bents 2 thru 8, 16, and 17 shall be given a Type A Joint Rehabilitation as specified in Section 509 and Special Provision Job No. 030458 "JOINT REHABILITATION FOR BRIDGE DECKS".

MAINTENANCE OF TRAFFIC: See Roadway Plans.

DETAIL DRAWINGS:
Staged Construction 61495-61497
Precast Bent Caps 61498-61499
Bent Cap Repairs 61500
25'-0" Prefabricated Composite W-Beam Span 61501-61506
General Notes for Steel Bridge Structures 55006
Details for Steel Bridge Structures 55007
Poured Silicone Joints 55008

REFERENCE TABLE	
BRIDGE NO.	EXISTING DRAWING NO.
06347	30720-30722

PREFABRICATED SUPERSTRUCTURE MODULES

The prefabricated superstructure modules shall be fabricated and assembled in accordance with Special Provision Job No. 030458 "PREFABRICATED SUPERSTRUCTURE MODULES".

The contractor shall be required to submit a Module Fabrication Plan and Assembly Plan in accordance with the requirements of Special Provision Job No. 030458 "PREFABRICATED SUPERSTRUCTURE MODULES". All costs associated with the design, development and execution of the Module Fabrication Plan and Assembly Plan shall be considered subsidiary to the cost of the prefabricated superstructure modules.

SUPERSTRUCTURE MODULE FABRICATION

The contractor is strongly encouraged to combine framing/casting operation for all modules within a given span simultaneously under temporary support conditions that correspond to the relative position of the final bridge substructure seat elevations. Support structural steel framing only at designated bearing locations to allow for accurate deflection of the module units during deck placement.

The contractor is further encouraged to place concrete for given span in one combined pour, using formed blockouts at locations of planned closure pour construction joints.

MOCK CLOSURE POUR PANEL

The contractor shall be required to construct a concrete mock closure pour panel to demonstrate joint surface preparation and closure pour forming and placement operations. See Dwg. No. 61507 for details. The cost of the mock closure pour panel and field cast demonstration shall be considered subsidiary to the prefabricated superstructure modules.

PRECAST BENT CAP FABRICATION

The contractor is strongly encouraged to combine the casting of the staged segments of the precast bent caps in one operation. Form and place concrete for all precast bent caps for the final complete length of the cap using form blockouts at the locations of the planned closure pour construction joints.

PRECAST BENT CAP MOCKUP

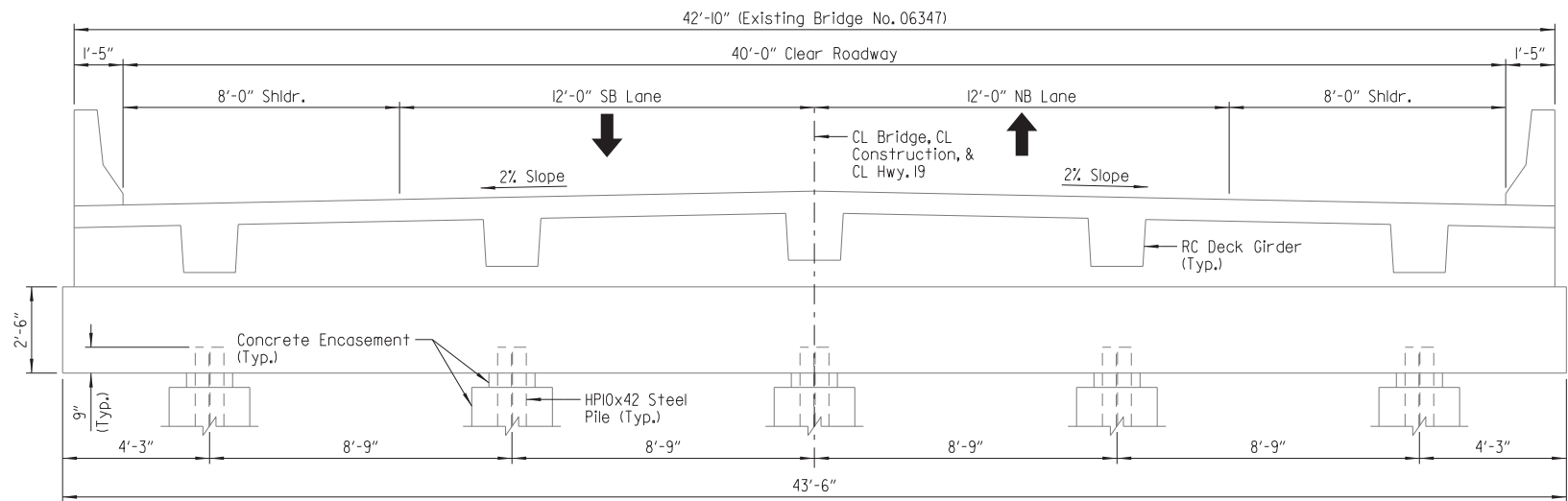
The contractor shall be required to construct a precast cap mockup to demonstrate forming and self-consolidating concrete placement operations. See Dwg. No. 61508 for details. The cost of the mockup and field cast demonstration shall be considered subsidiary to the precast bent caps.



SHEET 2 OF 2
LAYOUT OF BRIDGE
HIGHWAY 19 OVER LITTLE MISSOURI
RIVER RELIEF
LITTLE MISSOURI RIVER & RELIEF
STRS. & APPRS. (S)
NEVADA COUNTY
ROUTE 19 SEC. 5
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

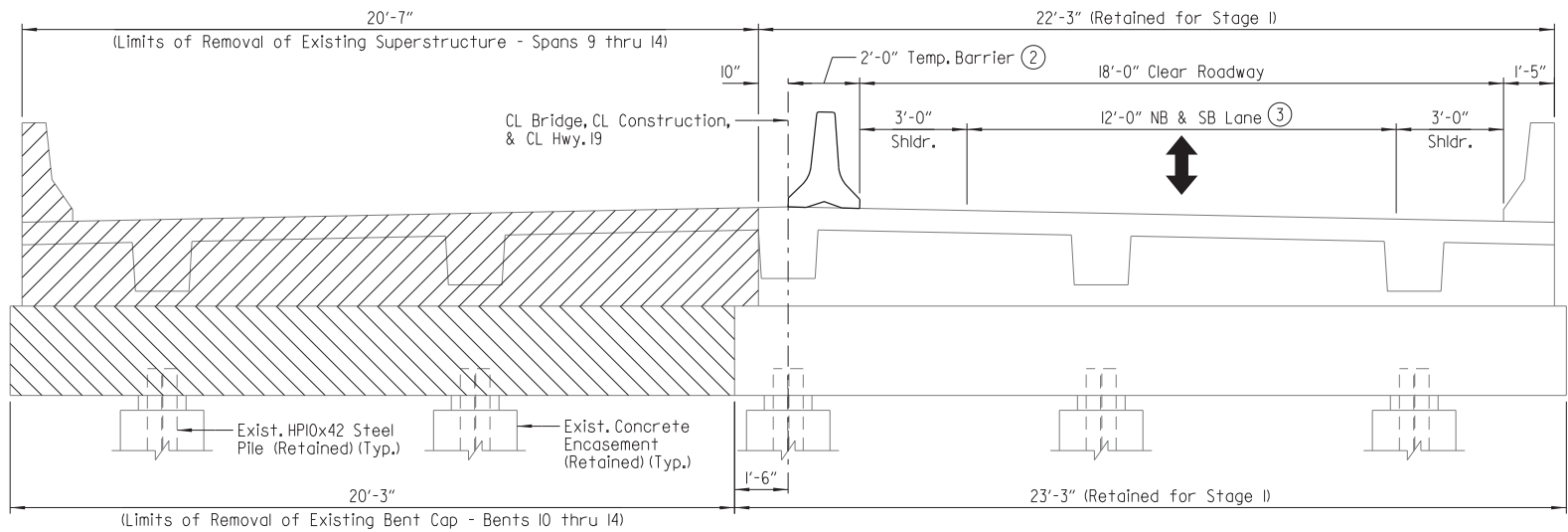
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BRIDGE NO. 06347 DRAWING NO. 61494

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		030458	49	98
				06347		STAGE CONST.		61495



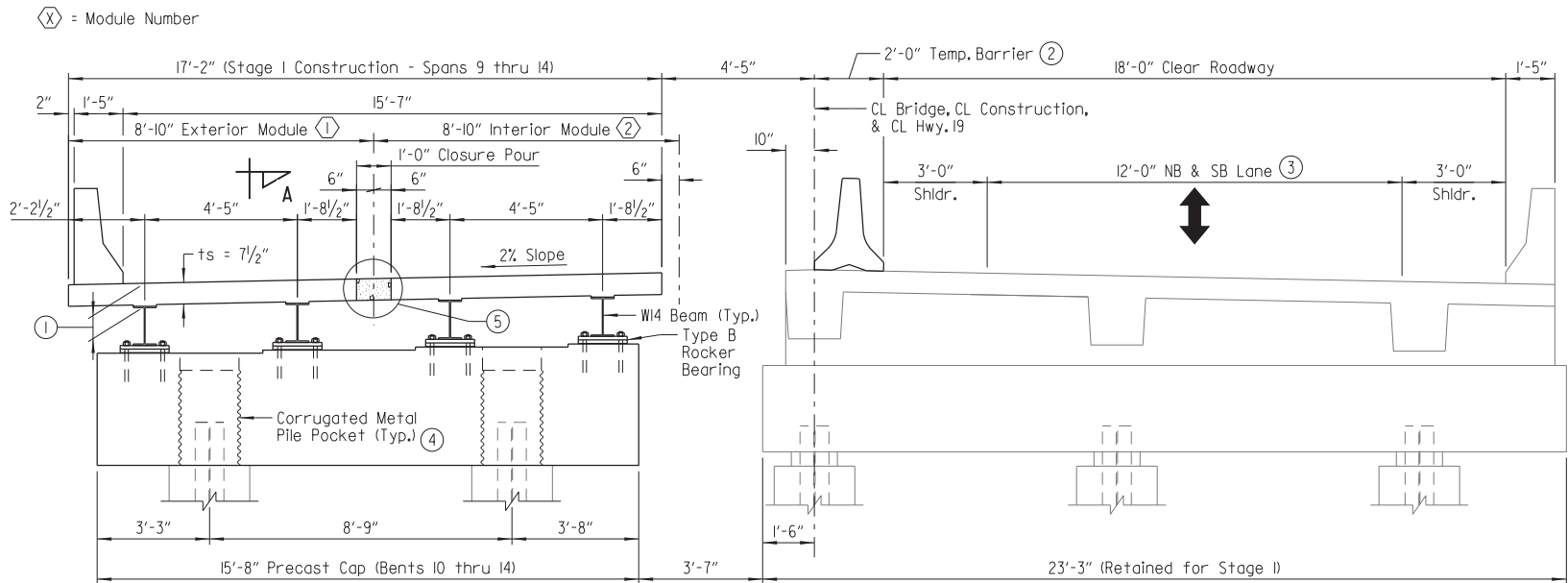
TYPICAL SECTION - EXISTING CONDITION

(Bent Nos. 10-15 shown; other bents similar)
(Looking Ahead)
Scale: $\frac{3}{8}$ " = 1'-0"



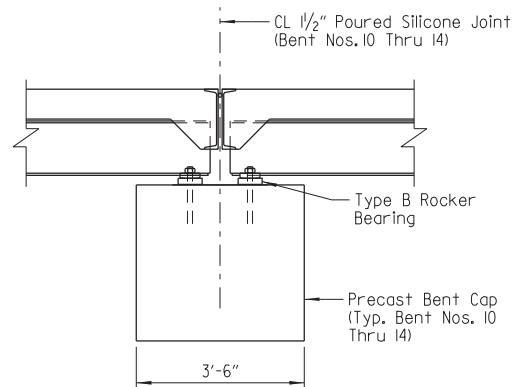
TYPICAL SECTION - STAGE I DEMOLITION

(Looking Ahead)
Scale: $\frac{3}{8}$ " = 1'-0"



TYPICAL SECTION - STAGE I CONSTRUCTION

(Looking Ahead)
Scale: $\frac{3}{8}$ " = 1'-0"



SECTION A-A

Scale: $\frac{1}{2}$ " = 1'-0"

- 8" from top of deck to top of beam flange @ CL Beam (typ.).
- Connect Temporary Precast Barrier to deck on Spans 9 thru 14 per Std. Dwg. TC-4. Do not connect temporary barrier to deck on Spans 1 thru 8 and 15 thru 17.
- Temporary traffic signal required for maintenance of traffic during construction, see Roadway Plans.
- Fill corrugated metal pile pockets with self-consolidating concrete to connect existing piling to new precast bent cap.
- See "LONGITUDINAL CLOSURE POUR DETAIL" on Dwg. No. 61502.

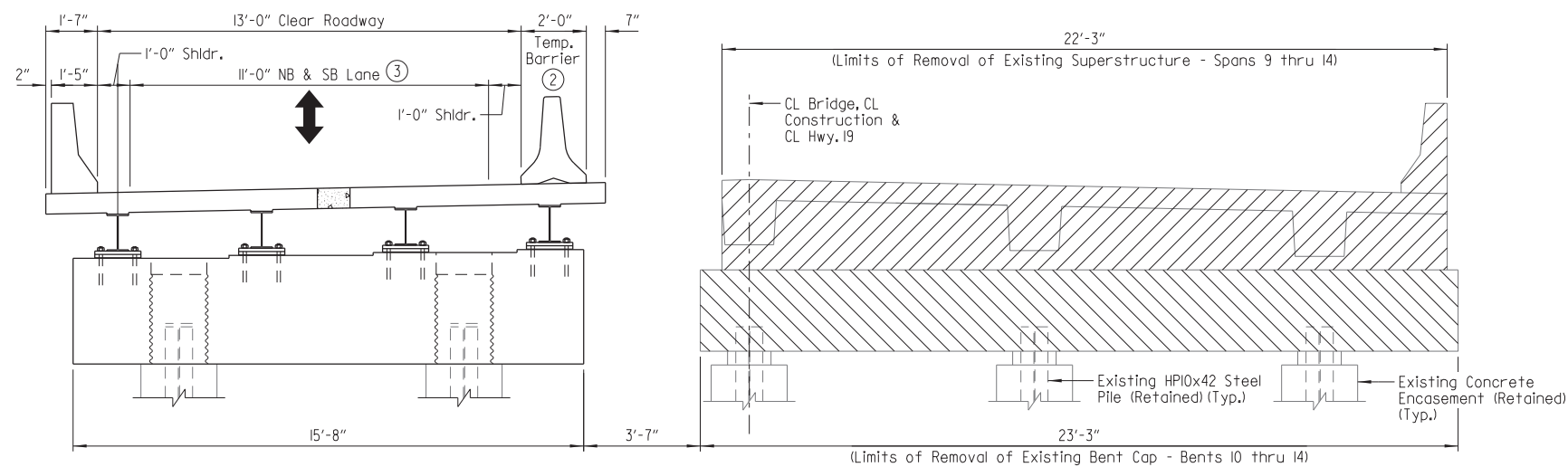


DIGITALLY SIGNED 4/10/2020
BRIDGE ENGINEER

SHEET 1 OF 3
DETAILS OF STAGED CONSTRUCTION
HIGHWAY 19 OVER LITTLE MISSOURI
RIVER RELIEF
LITTLE MISSOURI RIVER & RELIEF
STRS. & APPRS. (S)
NEVADA COUNTY
ROUTE 19 SEC. 5
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

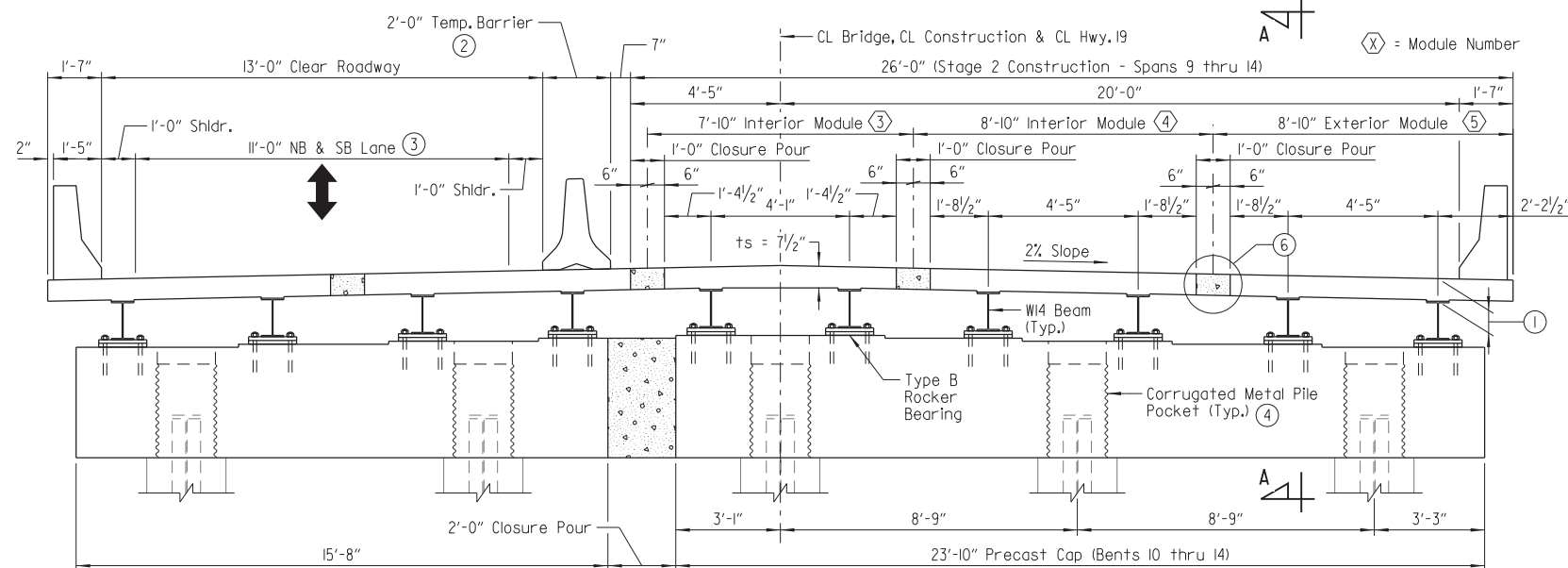
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BRIDGE NO. 06347 DRAWING NO. 61495

3/18/2020 14:23:25 AM
WORKSPACE: ARDOT Bridge
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REVISED DATE:



TYPICAL SECTION - STAGE 2 DEMOLITION

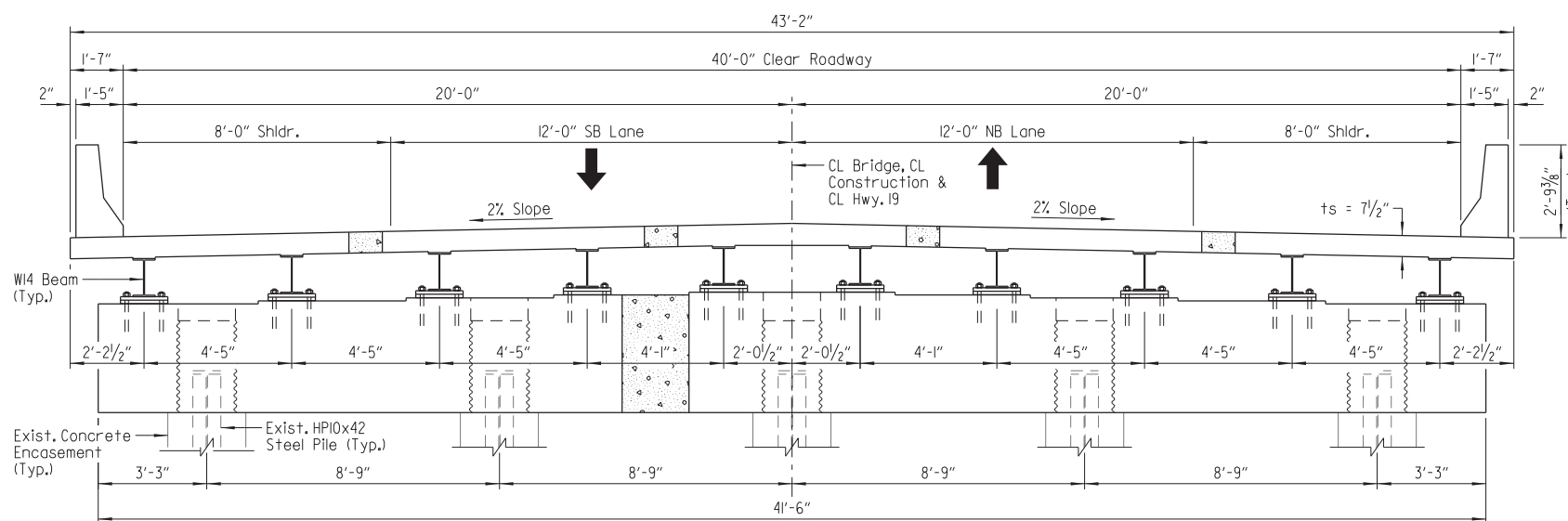
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TYPICAL SECTION - STAGE 2 CONSTRUCTION

(Looking Ahead)
Scale: $\frac{3}{8}$ " = 1'-0"

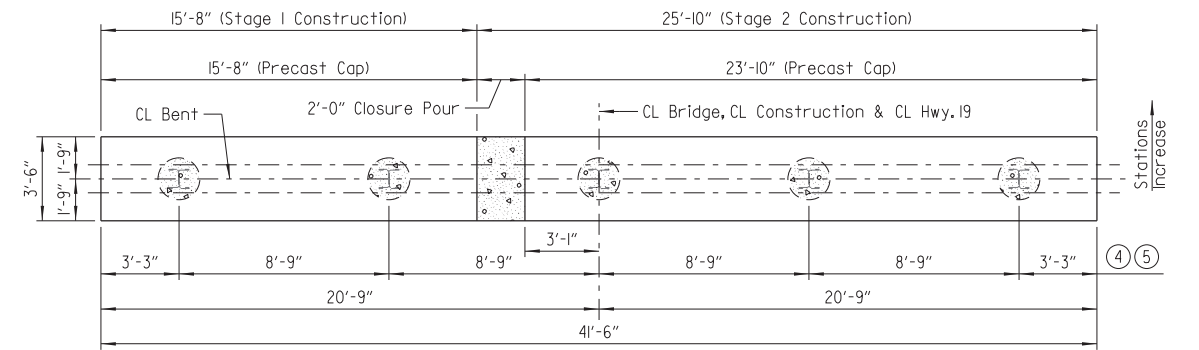
NOTE:
For "SECTION A-A", see Dwg. No. 61495.



TYPICAL SECTION - FINAL CONDITION (SPANS 9 THRU 14)

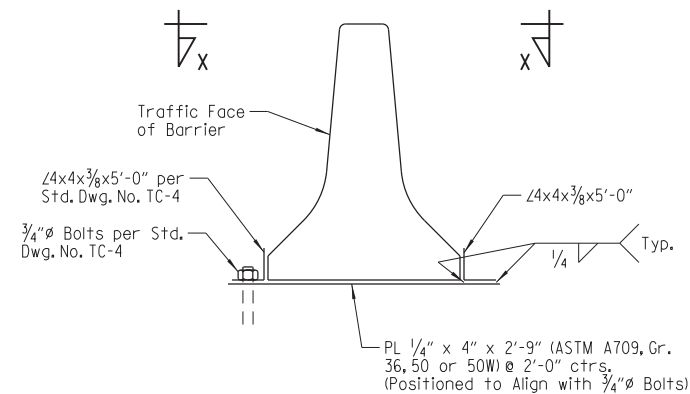
(Bents 10-14 shown; see Dwg. No. 61497 for Bents 9 & 15)

(Looking Ahead)
Scale: $\frac{3}{8}$ " = 1'-0"



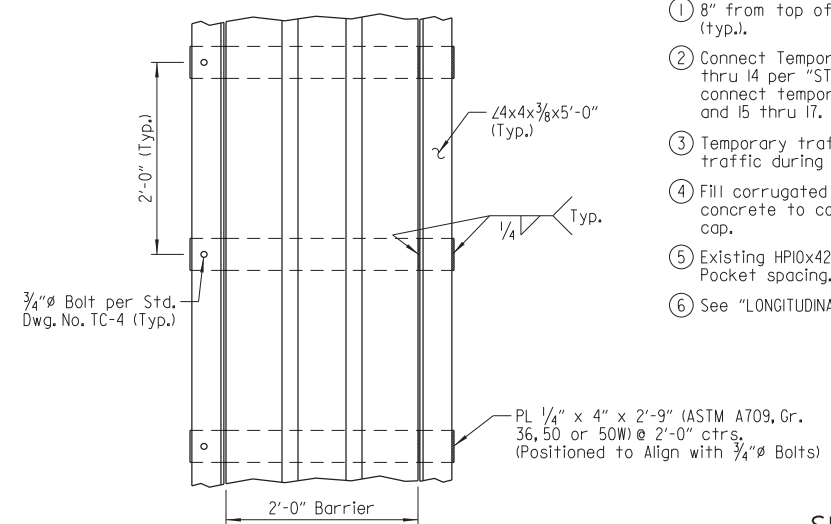
PLAN OF NEW BENT CAP AT BENTS 10-14

Scale: $\frac{1}{4}$ " = 1'-0"



STAGE 2 BARRIER STABILIZATION DETAIL

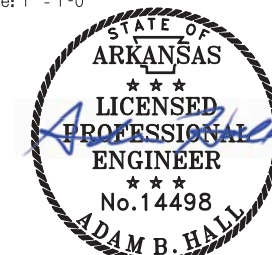
Scale: 1" = 1'-0"



VIEW X-X

Scale: 1" = 1'-0"

- 8" from top of deck to top of beam flange @ CL Beam (typ.).
- Connect Temporary Precast Barrier to deck on Spans 9 thru 14 per "STAGE 2 BARRIER STABILIZATION DETAIL". Do not connect temporary barrier to deck on Spans 1 thru 8 and 15 thru 17.
- Temporary traffic signal required for maintenance of traffic during construction, see Roadway Plans.
- Fill corrugated metal pile pockets with self-consolidating concrete to connect existing piling to new precast bent cap.
- Existing HPI0x42 Steel Pile and new Corrugated Metal Pile Pocket spacing.
- See "LONGITUDINAL CLOSURE POUR DETAIL" on Dwg. No. 61502.

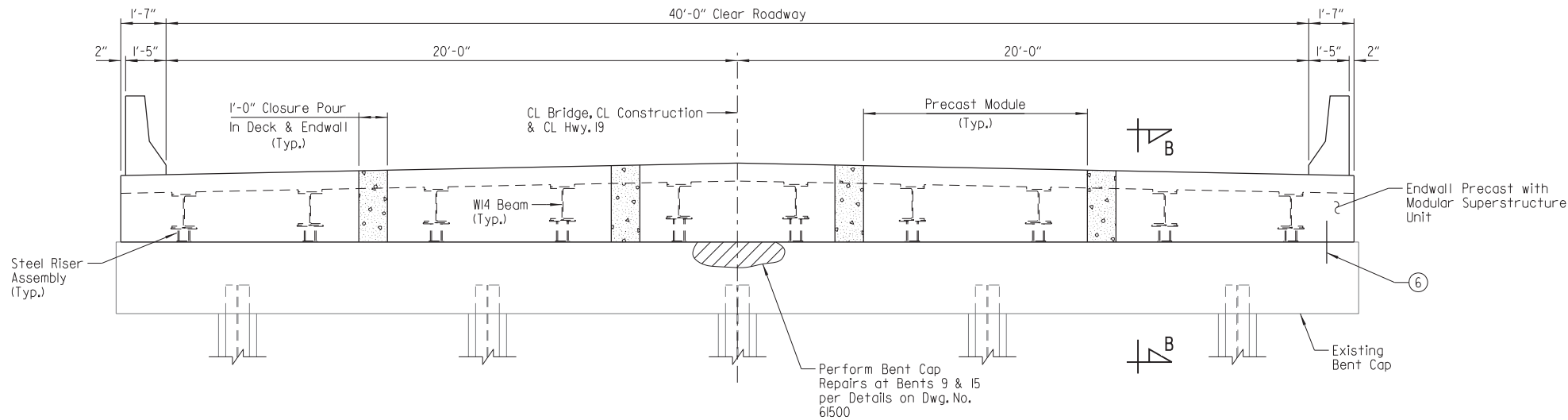


DIGITALLY SIGNED 4/10/2020
BRIDGE ENGINEER

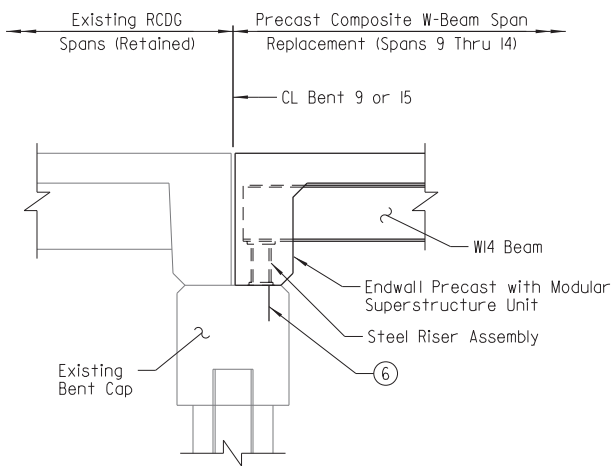
SHEET 2 OF 3
DETAILS OF STAGED CONSTRUCTION
HIGHWAY 19 OVER LITTLE MISSOURI
RIVER RELIEF
LITTLE MISSOURI RIVER & RELIEF
STRS. & APPRS. (S)
NEVADA COUNTY
ROUTE 19 SEC. 5
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: HEW DATE: APR. 2019 FILENAME: b030458x1.sc2.dgn
CHECKED BY: JHR DATE: MAY 2019 SCALE: As Shown
DESIGNED BY: ABH DATE: APR. 2019
BRIDGE NO. 06347 DRAWING NO. 61496

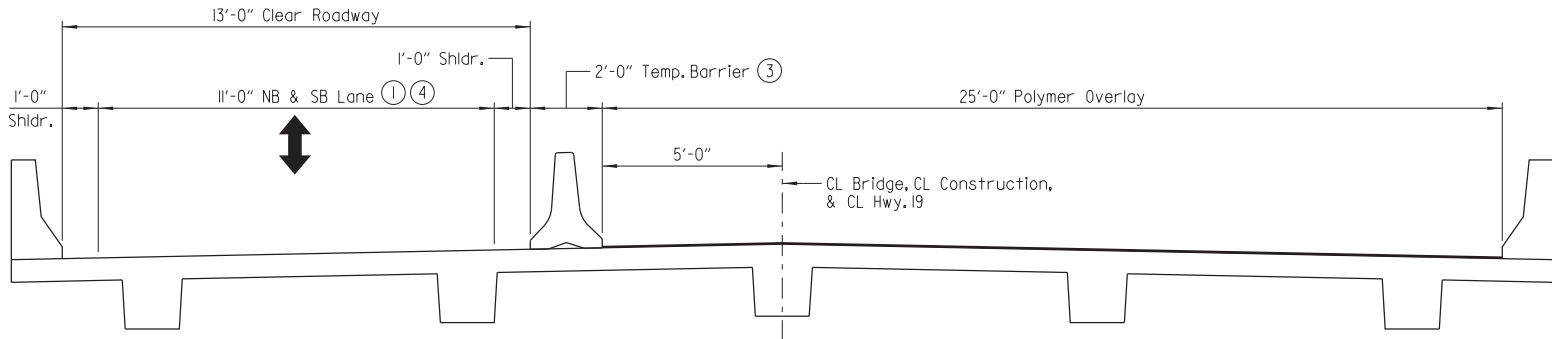
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				6	ARK.			
				JOB NO.		030458	51	98
				06347		STAGE CONST.		61497



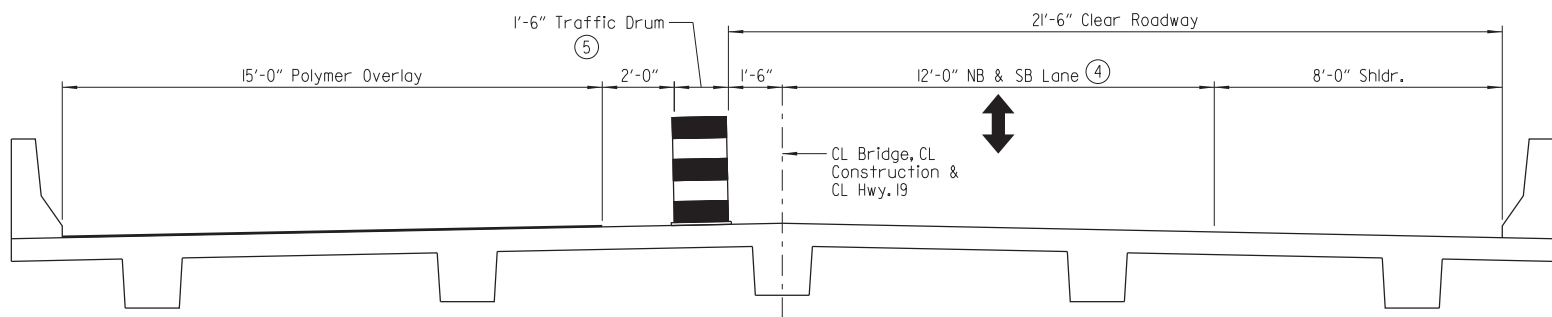
TYPICAL SECTION AT BENTS 9 & 15 - FINAL CONDITION (SPANS 9 THRU 14)
(Looking Ahead)
Scale: 3/8" = 1'-0"



SECTION B-B
Scale: 1/2" = 1'-0"



② TYPICAL SECTION - STAGE 2 CONSTRUCTION POLYMER OVERLAY
(Looking Ahead)
Scale: 3/8" = 1'-0"



② TYPICAL SECTION - STAGE 3 CONSTRUCTION POLYMER OVERLAY
(Looking Ahead)
Scale: 3/8" = 1'-0"

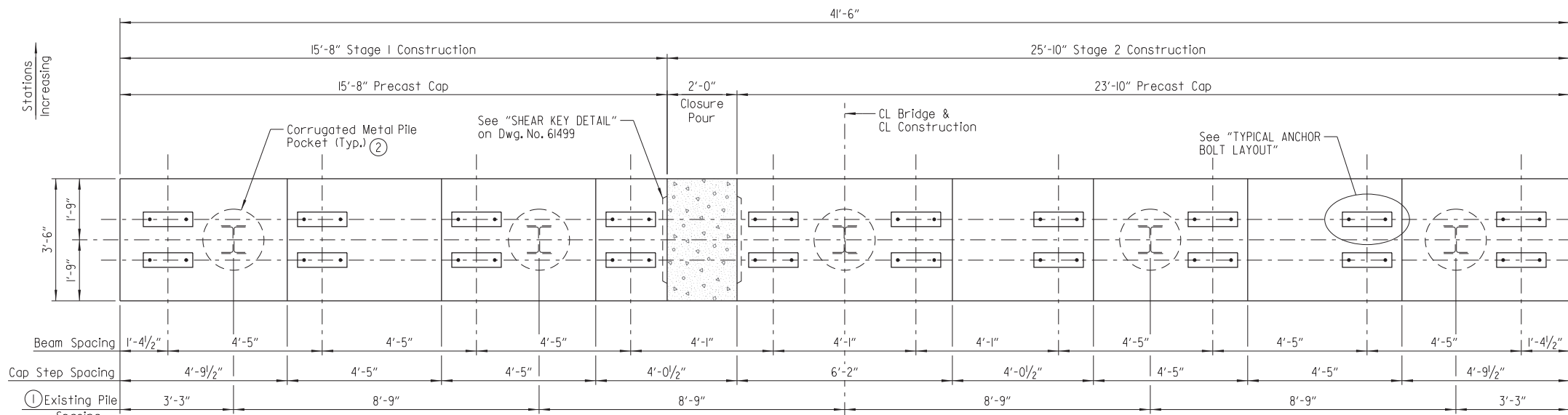
- ① Refer to Dwg. No. 61496 for more information regarding Maintenance of Traffic during Stage 2.
- ② Typical section depicts existing superstructure for Spans 1 thru 8 and 15 thru 17. Superstructure replacement on Spans 9 thru 14 shall be overlaid in a similar fashion.
- ③ Temporary Precast Barrier, see Std. Dwg. TC-4. Do not connect to deck.
- ④ Temporary traffic signal required for maintenance of traffic during construction, see Roadway Plans.
- ⑤ See Std. Dwg. TC-3.
- ⑥ Remove existing No. 4 dowels flush with top of cap - Bent No. 9 only.



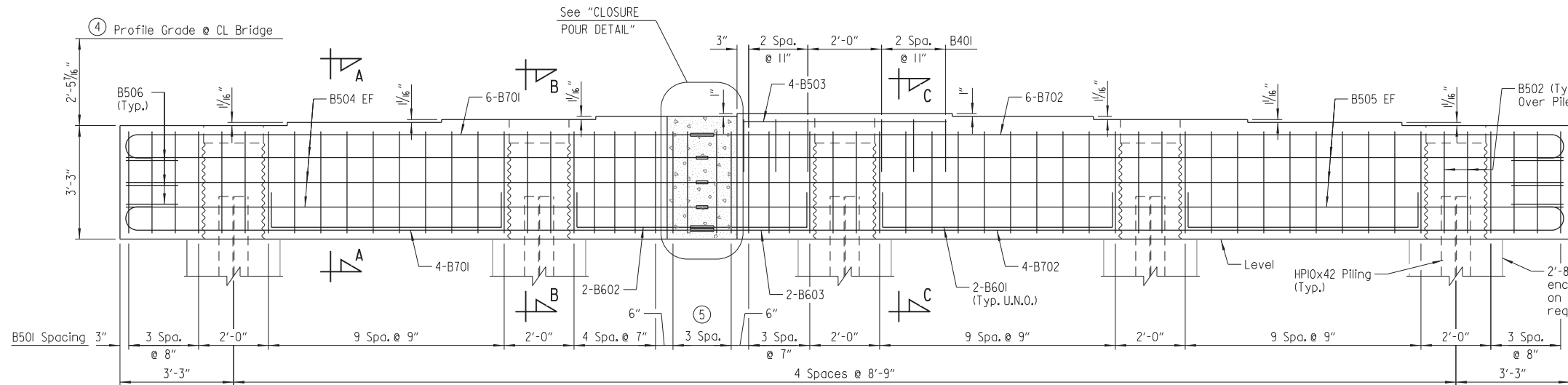
SHEET 3 OF 3
DETAILS OF STAGED CONSTRUCTION
HIGHWAY 19 OVER LITTLE MISSOURI
RIVER RELIEF
LITTLE MISSOURI RIVER & RELIEF
STRS. & APPRS. (S)
NEVADA COUNTY
ROUTE 19 SEC. 5
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: CWT DATE: MAY 2019 FILENAME: b030458xl.sc3.dgn
CHECKED BY: ABH DATE: MAY 2019 SCALE: As Shown
DESIGNED BY: JHR DATE: MAY 2019
BRIDGE NO. 06347 DRAWING NO. 61497

3/18/2020 11:25:56 AM
WORKSPACE: ARDOT Bridge
L:\2017\01550 - Little Missouri River and Relief Drawings\B030458\41.5201.BE (Relief Bridge).dgn
REVISED DATE:

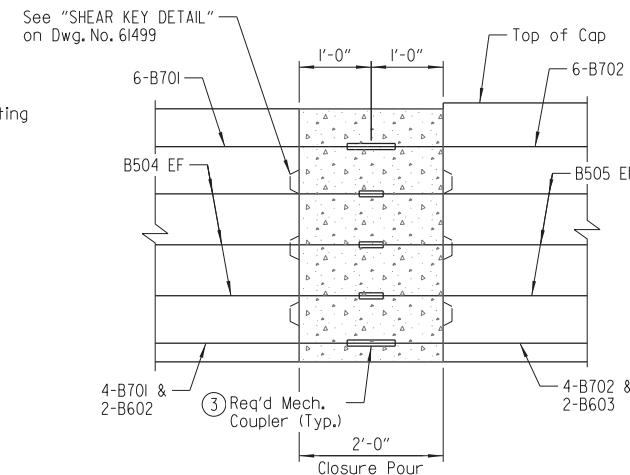


PLAN - BENT NOS.10 THRU 14
Scale: 1/2" = 1'-0"

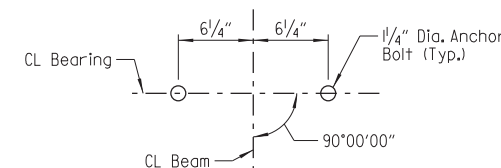


ELEVATION - BENT NOS.10 THRU 14
(Looking Ahead)
Scale: 1/2" = 1'-0"

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		030458	52	98
				06347		PRECAST CAP		61498



CLOSURE POUR DETAIL
Scale: 3/4" = 1'-0"



TYPICAL ANCHOR BOLT LAYOUT
No Scale

- ① Pile spacing shown is based on existing plans. See "VERIFICATION" note on Dwg. No. 61494 for more information regarding verification of existing dimensions.
- ② Pile pockets shall consist of galvanized steel corrugated metal pipe (CMP), Type I, 16 Gage, in accordance with ASTM A760 and Special Provision Job No. 030458 "PRECAST BENT CAPS". CMP for individual pockets shall consist of a single length of pipe splicing of pipe will not be allowed. Nominal CMP size shall be 21". The pile pocket shall be filled to the top of cap using Self-consolidating Concrete in accordance with Special Provision Job No. 030458 "SELF-CONSOLIDATING CONCRETE".
- ③ The mechanical couplers shall be Dayton Superior D250SCA Barlock Couplers or approved equal. Due to space constraints, the shear bolts on the couplers shall not be tightened until both the Stage 1 and Stage 2 caps are in their final positions. It will be necessary to loosely install the couplers on the Stage 1 longitudinal cap reinforcing, remove the center stop pins, and slide the couplers against the Stage 1 cap concrete immediately prior to setting the Stage 2 cap. Once the Stage 2 cap is in place, the mechanical couplers shall be slid over the Stage 2 cap reinforcing and centered between the ends of the Stage 1 and Stage 2 longitudinal bars, prior to re-inserting the center stop pins and torquing the shear bolts.
- To ensure proper rebar alignment, it is highly recommended that each longitudinal reinforcing bar be fabricated and placed as one continuous piece while forming the bent caps, and that each continuous reinforcing bar be cut immediately prior to lifting the Stage 1 cap into its final position. See Special Provision Job No. 030458 "PRECAST BENT CAPS" for additional information.
- The cost of mechanical couplers shall not be measured for separate payment but shall be considered subsidiary to the item "PRECAST BENT CAPS". Mechanical couplers shall develop at least 125% of the specified yield strength of the reinforcing steel.
- ④ Contractor shall field verify determine profile grade and adjust elevation of precast cap as required.
- ⑤ Space B501 Bars within closure pour as required to maintain cover on mech. couplers.

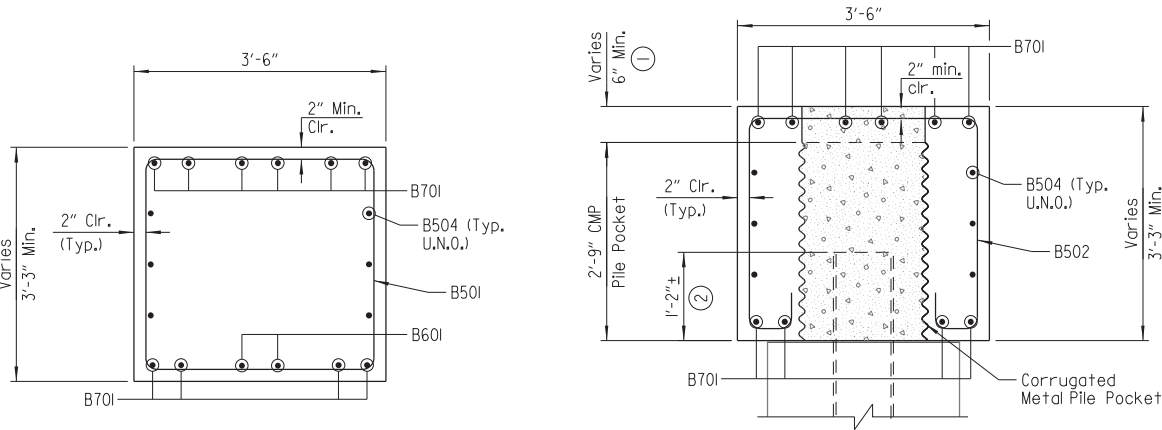
- NOTES:
- Precast bent caps at Bent Nos. 10 through 14 shall be fabricated and installed in accordance with Special Provision Job No. 030458 "PRECAST BENT CAPS".
 - Measurement of each cap shall be based on the final completed length of cap at each bent. Cost associated with constructing the precast caps in two segments with a field cast closure pour shall be included in the unit price per each precast cap.
 - The cost of the concrete and reinforcing steel, including mechanical couplers, shall be included in the unit price bid per each precast cap.
 - Concrete used in the closure pour shall be either Class S concrete or self-consolidating concrete similar to the material used to fill the CMP pile pockets. The closure pour shall be completed and adequate strength gained prior to erecting the precast superstructure modules on the precast cap. See Special Provision Job No. 030458 "PRECAST BENT CAPS" for additional information.
 - For Standard General Notes, see Std. Dwg. No. 55006.



SHEET 1 OF 2
DETAILS OF PRECAST BENT CAPS
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

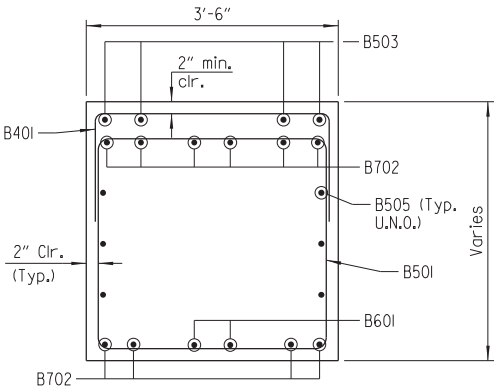
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CHECKED BY: WMM DATE: JAN. 2020 SCALE: As Shown
DESIGNED BY: JHR DATE: DEC. 2019
BRIDGE NO. 06347 DRAWING NO. 61498

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						030458	53	98
						06347	PRECAST CAP	61499



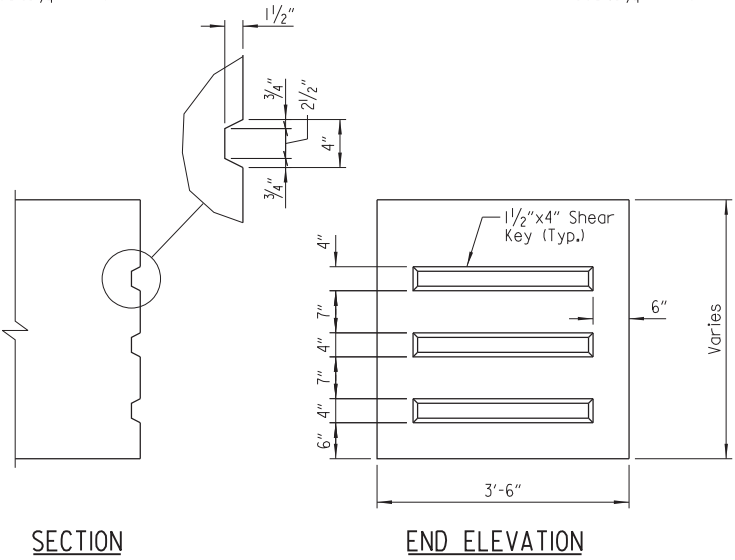
SECTION A-A
Scale: 3/4" = 1'-0"

SECTION B-B
Scale: 3/4" = 1'-0"



SECTION C-C
Scale: 3/4" = 1'-0"

- ① Form 21" diameter blockout above CMP pile pocket using conventional forming.
- ② Contractor shall field verify top of pile elevation. If pile embedment exceeds the dimension shown, the pile shall be cut-off to provide the noted pile embedment.



SECTION

END ELEVATION

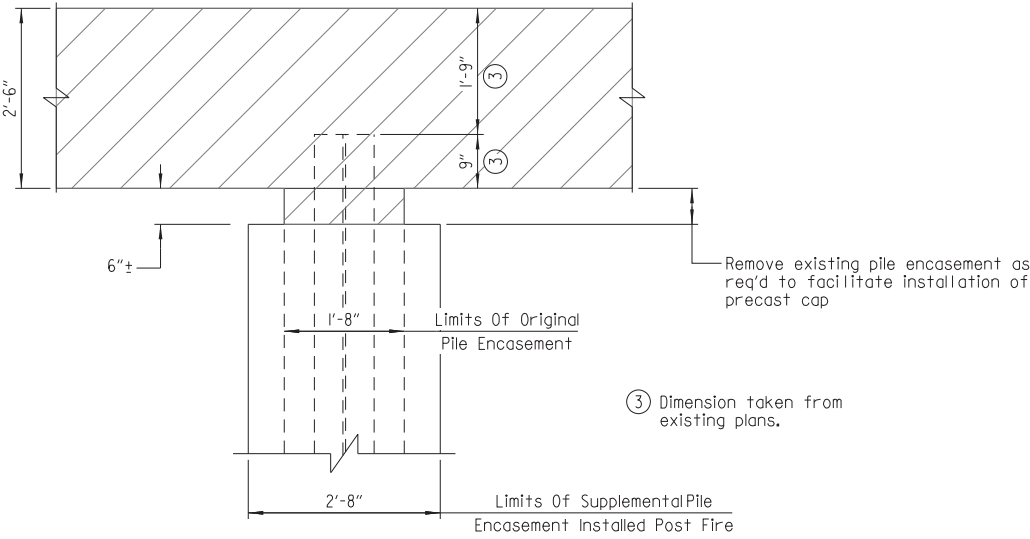
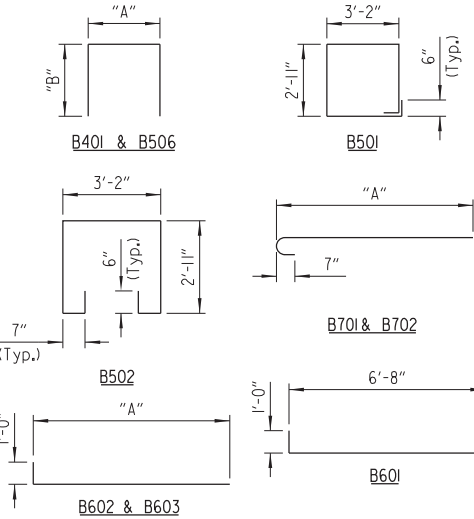
SHEAR KEY DETAIL

LEGEND
U.N.O. = Unless Noted Otherwise

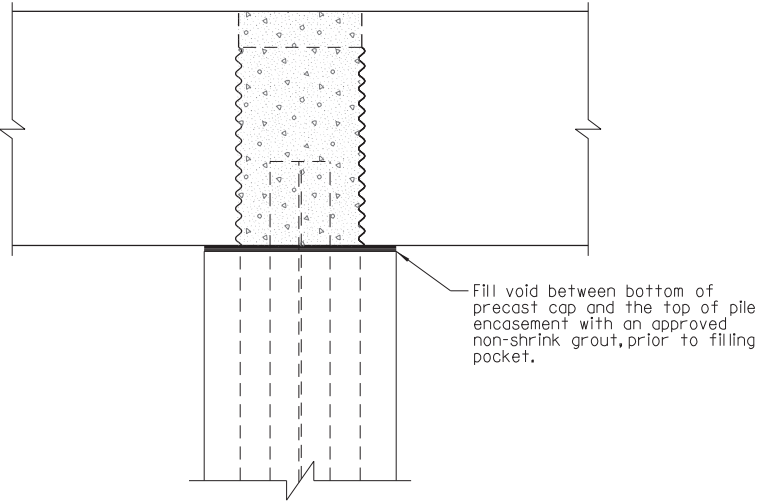
BAR LIST						BAR BENDING DIAGRAMS	
MARK	NO. REQ'D	LENGTH	"A"	"B"	P.D.		
B401	6	7'-0"	3'-2"	2'-0"	2"		
B501	51	12'-8"			2 1/2"		
B502	10	10'-7"			2 1/2"		
B503	4	5'-10"			Str.		
B504	6	16'-6"			Str.		
B505	6	24'-8"			Str.		
B506	6	7'-10"	3'-0"	2'-6"	2 1/2"		
B601	6	8'-4"			4 1/2"		
B602	2	4'-6"	3'-8"		4 1/2"		
B603	2	3'-10"	3'-0"		4 1/2"		
B701	10	17'-4"	16'-6"		5 1/4"		
B702	10	25'-6"	24'-8"		5 1/4"		

NOTES:
Dimension of Bars Are Out-To-Out.

④ Lengths shown shall be adjusted as required to accommodate mechanical couplers.



EXISTING ENCASEMENT MODIFICATION
Scale: 3/4" = 1'-0"



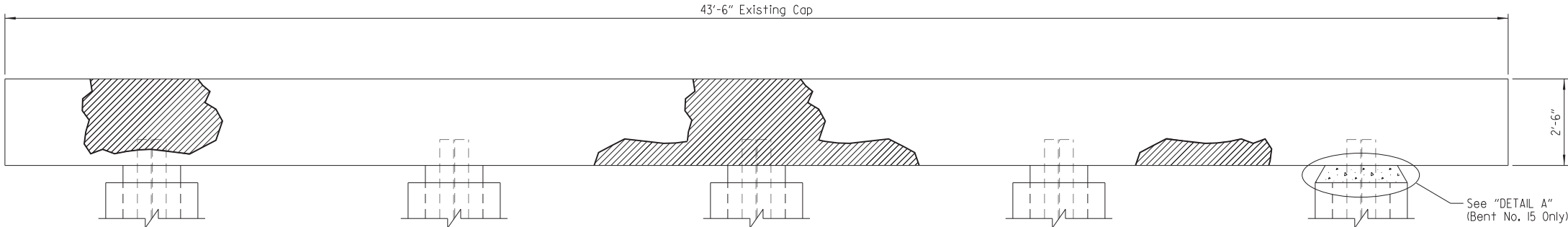
PROPOSED ENCASEMENT
Scale: 3/4" = 1'-0"



SHEET 2 OF 2
DETAILS OF PRECAST BENT CAPS
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: CSW DATE: DEC. 2019 FILENAME: b030458xl_b2.dgn
CHECKED BY: WMM DATE: JAN. 2020 SCALE: As Shown
DESIGNED BY: JHR DATE: DEC. 2019
BRIDGE NO. 06347 DRAWING NO. 61499

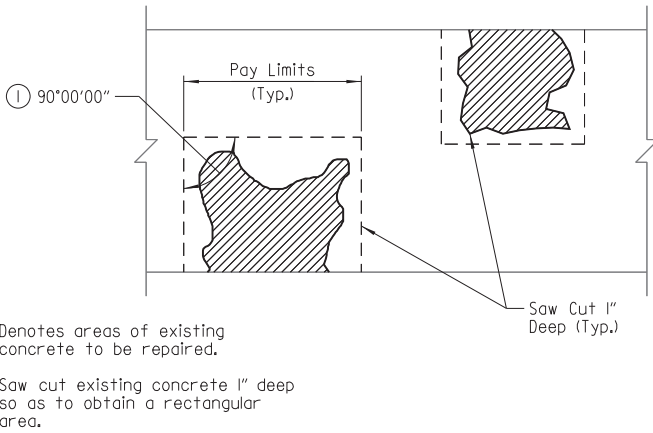
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		030458	54	98
				06347	CAP REPAIRS		6/500	



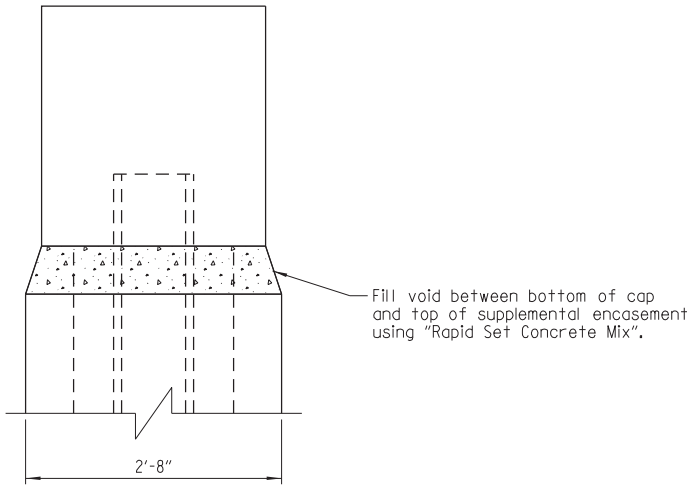
BENT CAP REPAIR - BENT NOS. 9 & 15
Scale: 1 1/2" = 1'-0"

CONCRETE REPAIR NOTES

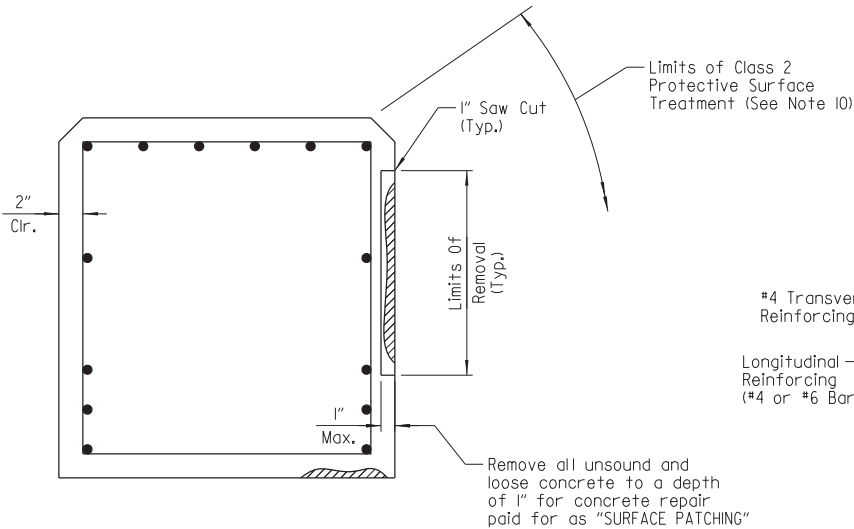
- Concrete repairs at Bent Nos. 9 and 15 shall be performed in accordance with Special Provision Job No. 030458 "CONCRETE REPAIRS".
- Limits shown are not exact areas and locations but are representative of potential spall repair areas to be encountered. The final limits and locations shall be determined by the Engineer after the concrete bent cap has been sounded.
- Concrete repairs shall consist of removing all unsatisfactory concrete described as follows: any loose, delaminated, unsound, severely spalled or deteriorated concrete from the existing bent cap and replacing with an approved material suitable for the type of repair.
- Saw cut around all damaged areas as shown on the "SAW CUT DETAIL". Exercise caution during the saw cutting operation. Any reinforcement damaged during saw cutting will be replaced at the contractor's expense.
- Concrete repairs shall be paid for under the item "SURFACE PATCHING" when the depth of repair is 1" or less.
- Concrete repairs shall be paid for under the item "SPALL REPAIR" when the depth of repair exceeds 1". The minimum depth of spall repair shall extend to the face of transverse reinforcing steel in the cap or to sound concrete. The exposed reinforcing steel shall be blast cleaned prior to applying the concrete repair mortar.
- The surface of the concrete for Surface Patching and Spall Repair shall be prepared in accordance with the repair mortar manufacturer's recommendations.
- Areas to be repaired under the item "SURFACE PATCHING" shall utilize "Rapid Set Mortar Mix" manufactured by CTS Cement. The contractor may submit an alternate product for review and approval.
- Areas to be repaired under the item "SPALL REPAIR" shall utilize either "Rapid Set Mortar Mix" or "Rapid Set Concrete Mix" manufactured by CTS Cement. The appropriate product shall be determined by the actual depth of repair encountered. The Contractor may submit an alternate product for review and approval.
- After all concrete repairs are completed, the entire concrete cap surfaces of Bent Nos. 9 & 15 shall receive a Class 2 Protective Surface Treatment. The cost of the Class 2 Treatment shall be included in the item "MODIFICATION OF EXISTING BRIDGE STRUCTURE (BRIDGE NO. 06347)".



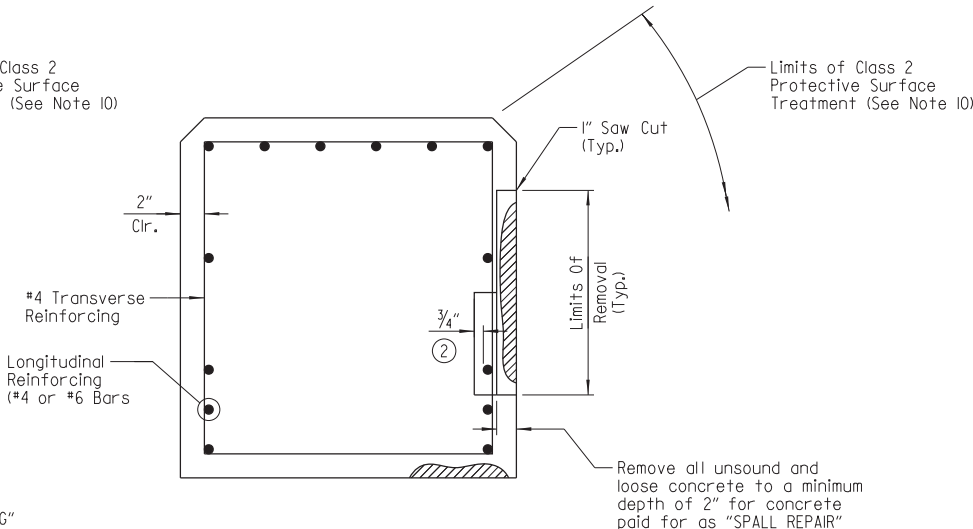
SAW CUT DETAIL



DETAIL "A"
(Bent No. 15 Only)
Scale: 1" = 1'-0"



SURFACE PATCH DETAIL
Scale: 1 1/2" = 1'-0"



SPALL REPAIR DETAIL
Scale: 1 1/2" = 1'-0"

- Where unsound concrete is still present beyond 2" removal depth, further concrete removal is required to achieve a minimum 3/4" depth beyond longitudinal reinforcing.

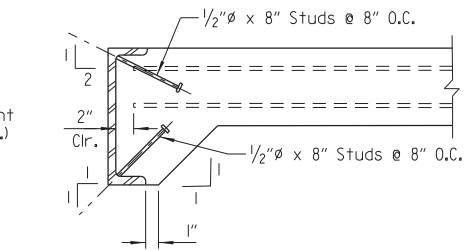
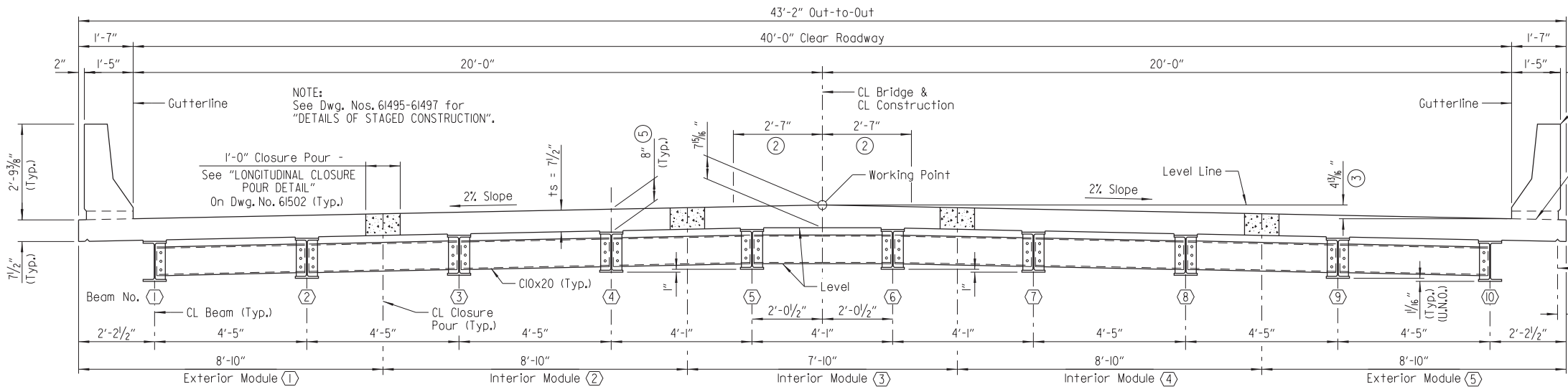


DETAILS OF BENT CAP REPAIRS
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: HEW DATE: SEP. 2019 FILENAME: b030458xl_b3.dgn
CHECKED BY: ABH DATE: JAN. 2020 SCALE: As Shown
DESIGNED BY: JHR DATE: SEP. 2019
BRIDGE NO. 06347 DRAWING NO. 6/500

3/18/2020 14:23:28 AM
WORKSPACE: ARDOT Bridge
L:\2017\101550 - Little Missouri River and Relief Drawings\B030458\41.5401.SX (Relief Bridge).dgn
REVISED DATE:

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		030458	55	98
				06347		25' PREFAB. SPANS		61501



DETAIL OF ALTERNATE ANCHORS AND PLACEMENT OF LONGITUDINAL REINFORCEMENT

NOTE: As an alternate to 5/8" studs, 1/2" x 8" studs spaced as shown may be used. Use weight of 5/8" stud as basis of measurement of Structural Steel in anchors.

EXPANSION DEVICE:

Rdwy. Channel - C15x33.9
Conn. Angles - L8x4x1/2
Detail Device 1/8" High And Provide 1/4" Shims Using 2 - 1/16" And 1 - 1/8" Plates

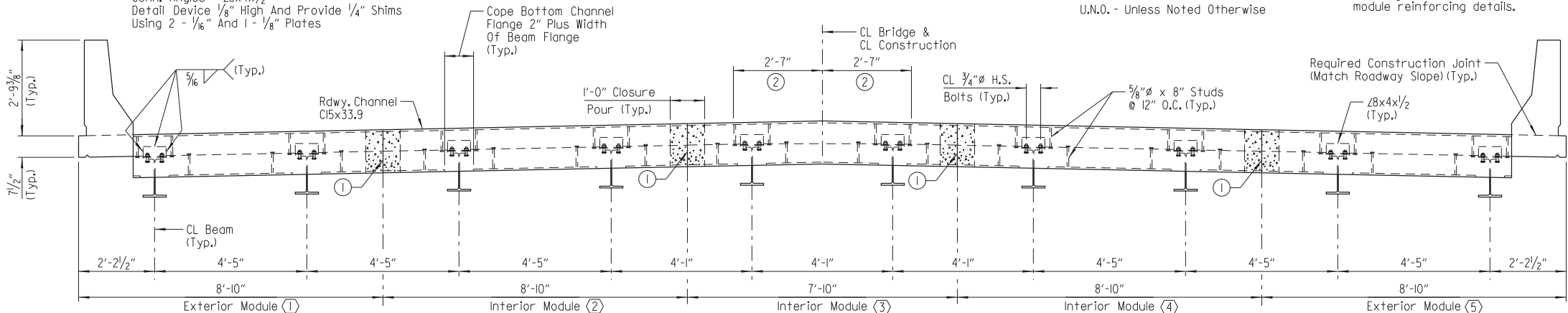
TYPICAL ROADWAY SECTION

Scale: 1/2" = 1'-0"

LEGEND

U.N.O. - Unless Noted Otherwise

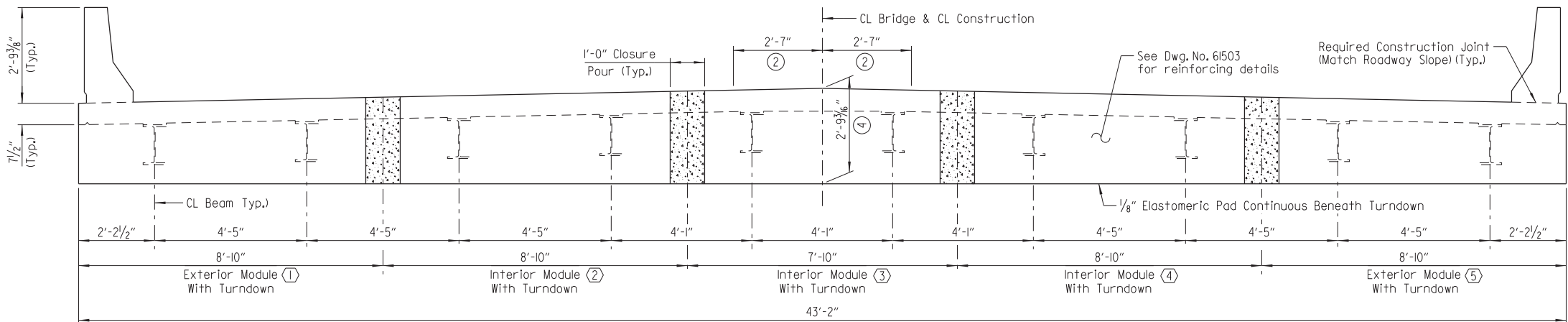
NOTE: See Dwg. No. 61502 for prefabricated module reinforcing details.



TYPICAL SECTION THRU JOINT AT BENT NOS. 10-14

Scale: 1/2" = 1'-0"

NOTE: For additional details of poured silicone joint, see Std. Dwg. No. 55008.



TYPICAL SECTION THRU JOINT AT BENT NOS. 9 & 15

Scale: 1/2" = 1'-0"

(X) = Module Number

SILICONE JOINT DATA

Location	"A" Width Perpendicular To Joint At 24 Hour Average Temperature (8) Of:			"B" Width Perpendicular To Joint At 60°F	Bumper Plate Size
	40°F	60°F	80°F		
Bent Nos. 10, 12 & 14	1 1/2"	1 1/2"	1 1/2"	2 1/2" ±	1" x 3/4"
Bent Nos. 11 & 13	1 1/6"	1 1/2"	1 1/6"	2 1/2" ±	1" x 3/4"

(8) The temperature used to set the joint opening shall be the approximate average air temperature during the 24 hour period immediately before the bolts are tightened. The Engineer shall establish the temperature. Interpolation of the table may be necessary.

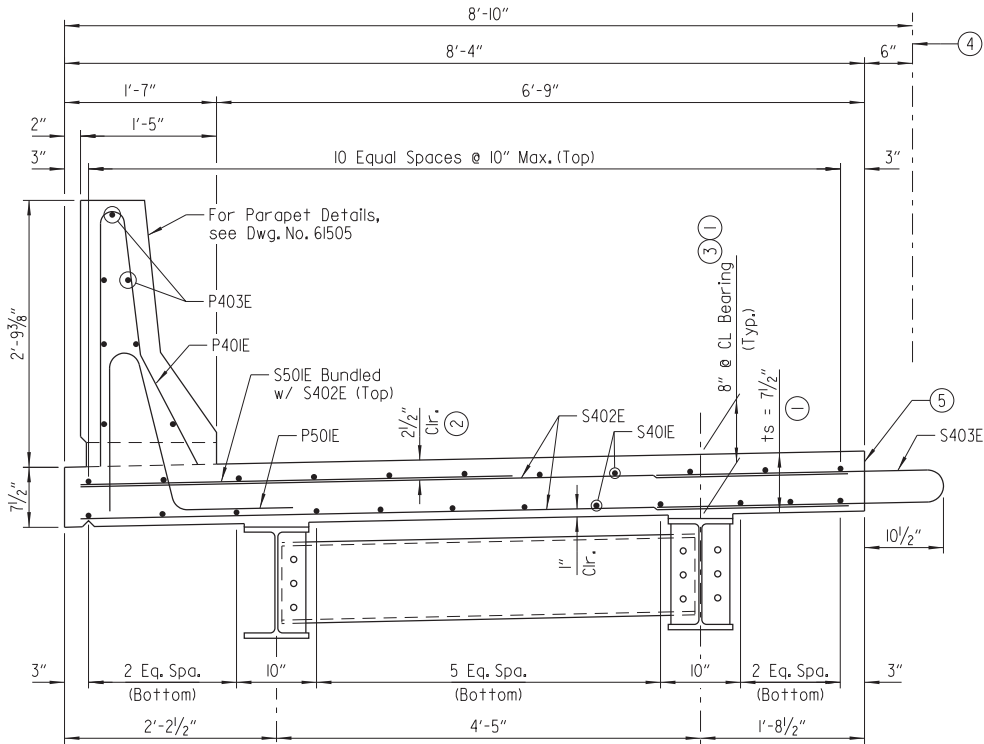


SHEET 1 OF 6
DETAILS OF 25'-0" PREFABRICATED
COMPOSITE W-BEAM SPANS
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: HEW DATE: DEC. 2019 FILENAME: b030458xl.sl.dgn
CHECKED BY: ABH DATE: JAN. 2020 SCALE: As Shown
DESIGNED BY: CSW DATE: DEC. 2019
BRIDGE NO. 06347 DRAWING NO. 61501

3/18/2020 14:23:29 AM
WORKSPACE: ARDOT Bridge
L:\2017\101550 - Little Missouri River and Relief Drawings\B030458\4.S402.MD Relief Bridge.dgn
REVISED DATE:

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		030458	56	98
				06347		25' PREFAB. SPANS		61502



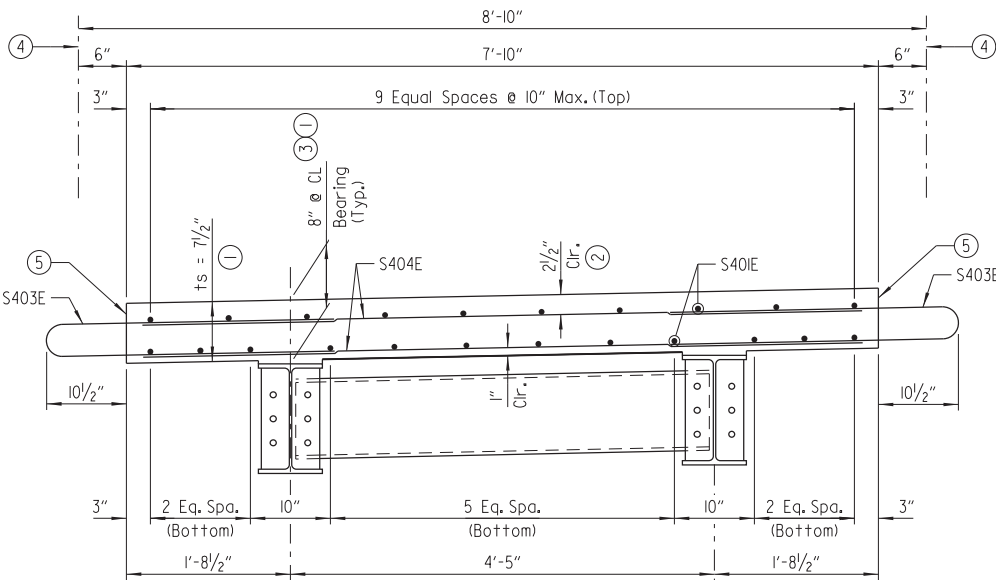
8'-10" EXTERIOR MODULE (1) & (5)
REINFORCING DETAIL

Drawn for Module (1)
Module (5) Similar
Scale: 1" = 1'-0"

(X) = Module Number

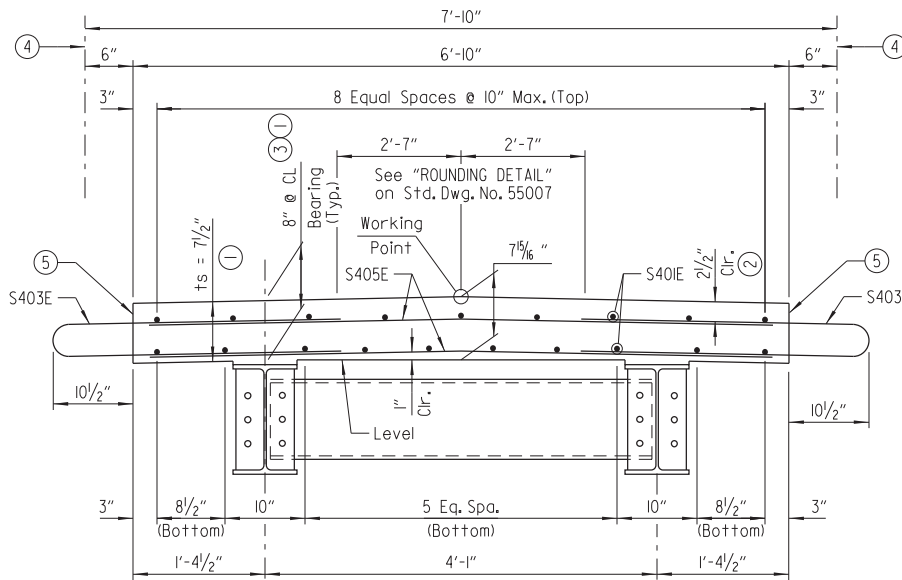
NOTE:
Parapet to be poured during construction of precast 8'-10"
Exterior Modules (1) & (5) prior to lifting.

SLAB REINFORCING:
Transverse: S402E, S404E or S405E @ 5" o.c. Top and Bottom
S403E @ 5" o.c. (Bundled with No. 4 Bars As Shown)
S501E @ 5" o.c. (Bundled with S402E Beneath Barrier)
Longitudinal: S401E in Top and Bottom As Shown



8'-10" INTERIOR MODULE (2) & (4)
REINFORCING DETAIL

Drawn for Module (2)
Module (4) Similar
Scale: 1" = 1'-0"



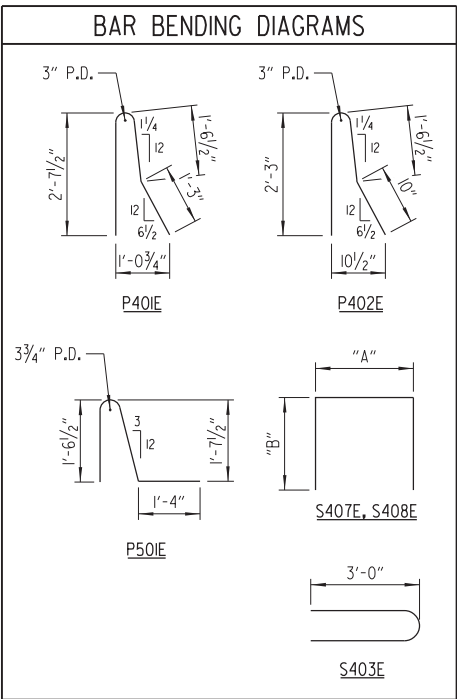
7'-10" INTERIOR MODULE (3)
REINFORCING DETAIL

Scale: 1" = 1'-0"

NOTE:
Bar positions and clearances from the forms shall be maintained
by means of stays, ties, hangers, or other approved devices per
Subsection 804.06. Placement of slab bolsters or high-chairs with
full-length lower runners directly on removable deck forms will
not be allowed.

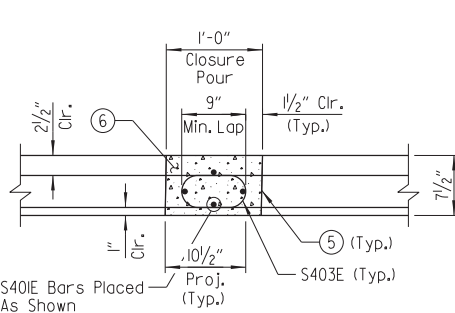
BAR LIST (SPANS 9 & 14)					
MARK	NO. REQ'D	LENGTH	"A"	"B"	P.D.
S401E	125	24'-6"			Str.
S402E	248	8'-0"			Str.
S403E	476	6'-2"			3"
S404E	252	7'-6"			Str.
S405E	124	6'-6"			Str.
S406E	36	2'-1"			Str.
S407E	48	4'-4"	9"	1'-10 1/2"	2"
S408E	84	4'-7"	9"	2'-0"	2"
S409E	12	1'-9"			Str.
S501E	118	4'-6"			Str.
P401E	72	5'-6"			3"
P402E	28	4'-8 1/2"			3"
P403E	28	12'-1"			Str.
P404E	8	5'-8"			Str.
P501E	72	4'-7"			3 3/4"

BAR LIST (SPANS 10-13)					
MARK	NO. REQ'D	LENGTH	"A"	"B"	P.D.
S401E	125	24'-6"			Str.
S402E	236	8'-0"			Str.
S403E	476	6'-2"			3"
S404E	240	7'-6"			Str.
S405E	118	6'-6"			Str.
S501E	118	4'-6"			Str.
P401E	72	5'-6"			3"
P402E	28	4'-8 1/2"			3"
P403E	28	12'-1"			Str.
P404E	8	5'-8"			Str.
P501E	72	4'-7"			3 3/4"

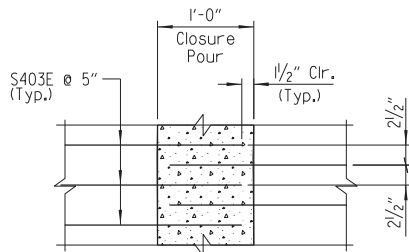


NOTES:
Number of bars shown is for each span.

Dimensions of bars are out-to-out.
Bar designations ending with "E" indicate
epoxy coated bars.



SECTION



PLAN

LONGITUDINAL CLOSURE POUR DETAIL

Scale: 1" = 1'-0"

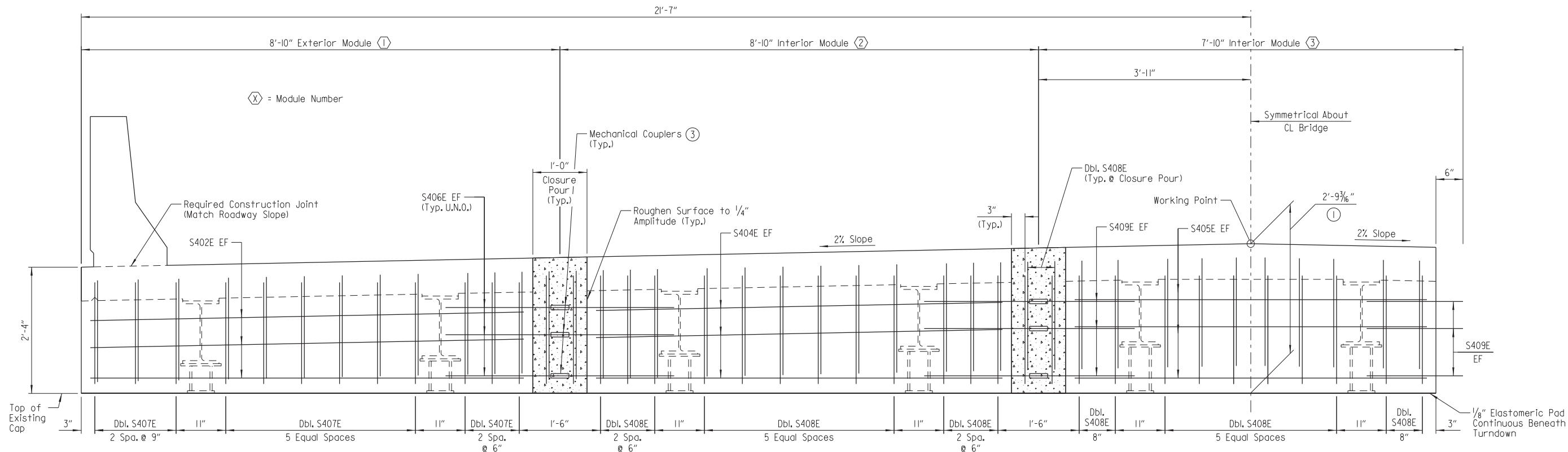
- NOTES:
- The prefabricated superstructure modules shall be fabricated and assembled in accordance with Special Provision Job No. 030458 "PREFABRICATED SUPERSTRUCTURE MODULES".
 - The cost of the concrete, reinforcing steel and structural steel shall be included in the unit cost of each prefabricated module.
 - The concrete used for the closure pour shall be in accordance with Special Provision Job No. 030458 "PREFABRICATED SUPERSTRUCTURE MODULES". The cost of the closure pour concrete will not be measured separately but shall be considered subsidiary to the cost of the prefabricated superstructure modules.



SHEET 2 OF 6
DETAILS OF 25'-0" PREFABRICATED
COMPOSITE W-BEAM SPANS
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: HEW DATE: DEC. 2019 FILENAME: b030458xl_s2.dgn
CHECKED BY: ABH DATE: JAN. 2020 SCALE: As Shown
DESIGNED BY: CSW DATE: DEC. 2019
BRIDGE NO. 06347 DRAWING NO. 61502

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
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				JOB NO.		030458	57	98
				06347	25' PREFAB. SPANS		6/503	

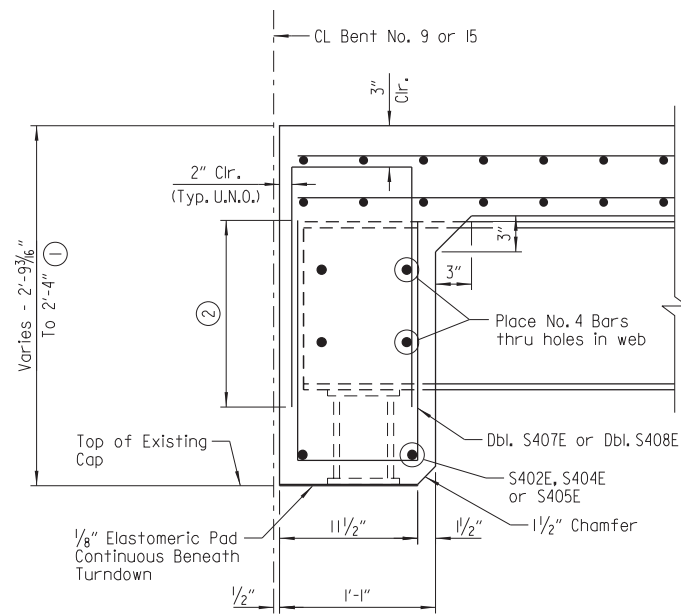


TURNDOWN REINFORCING - BENT NOS. 9 & 15

Scale: 1" = 1'-0"

LEGEND

U.N.O. = Unless Noted Otherwise
EF = Each Face

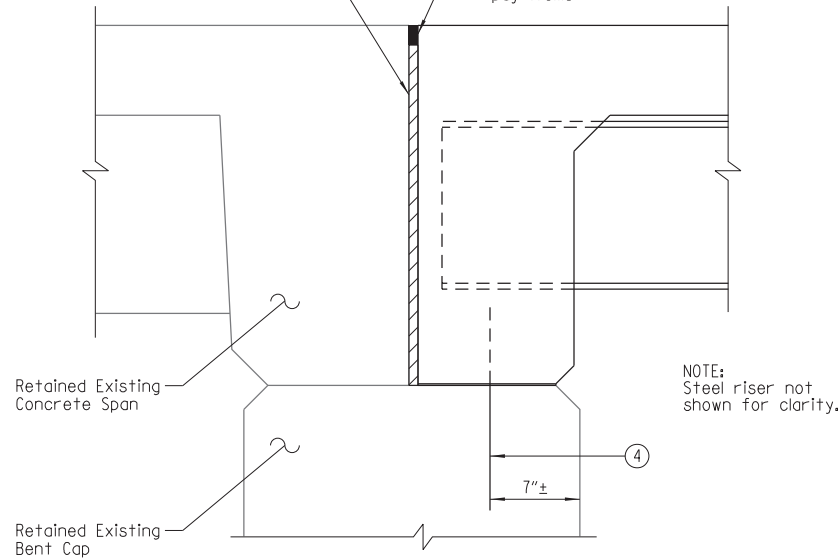


SECTION THRU TURNDOWN

Scale: 1 1/2" = 1'-0"

1/2" Min. Preformed Joint Material (AASHTO M 153, Type II per Subsection 501.02(h)(1)). Payment will not be made directly but will be considered Subsidiary to other pay items

1/2" Min. x 1" Poured Joint Sealer (Type 3 or 4) per Subsection 501.02(h)(2) Backer rod is not required. Payment will not be made directly but will be considered Subsidiary to other pay items



JOINT DETAIL @ BENT NOS. 9 & 15

Scale: 1 1/2" = 1'-0"

- Dimension shown taken from plans of existing bridge. Contractor shall field verify.
- Provide 1'-8" min. lap splice.
- The mechanical couplers shall be Dayton Superior D250SCA Barlock Couplers or approved equal and shall maintain the clearance shown. Due to space constraints, the shear bolts on the couplers between adjacent modules shall not be tightened until both modules are in their final positions. It will be necessary to loosely install the couplers on each module's longitudinal reinforcing, remove the center stop pins, and slide the couplers against the module's concrete immediately prior to setting an adjacent module. Once the adjacent module is in place, the mechanical couplers shall be slid over the adjacent module's reinforcing and centered between the ends of the modules, prior to re-inserting the center stop pins and torquing the shear bolts.

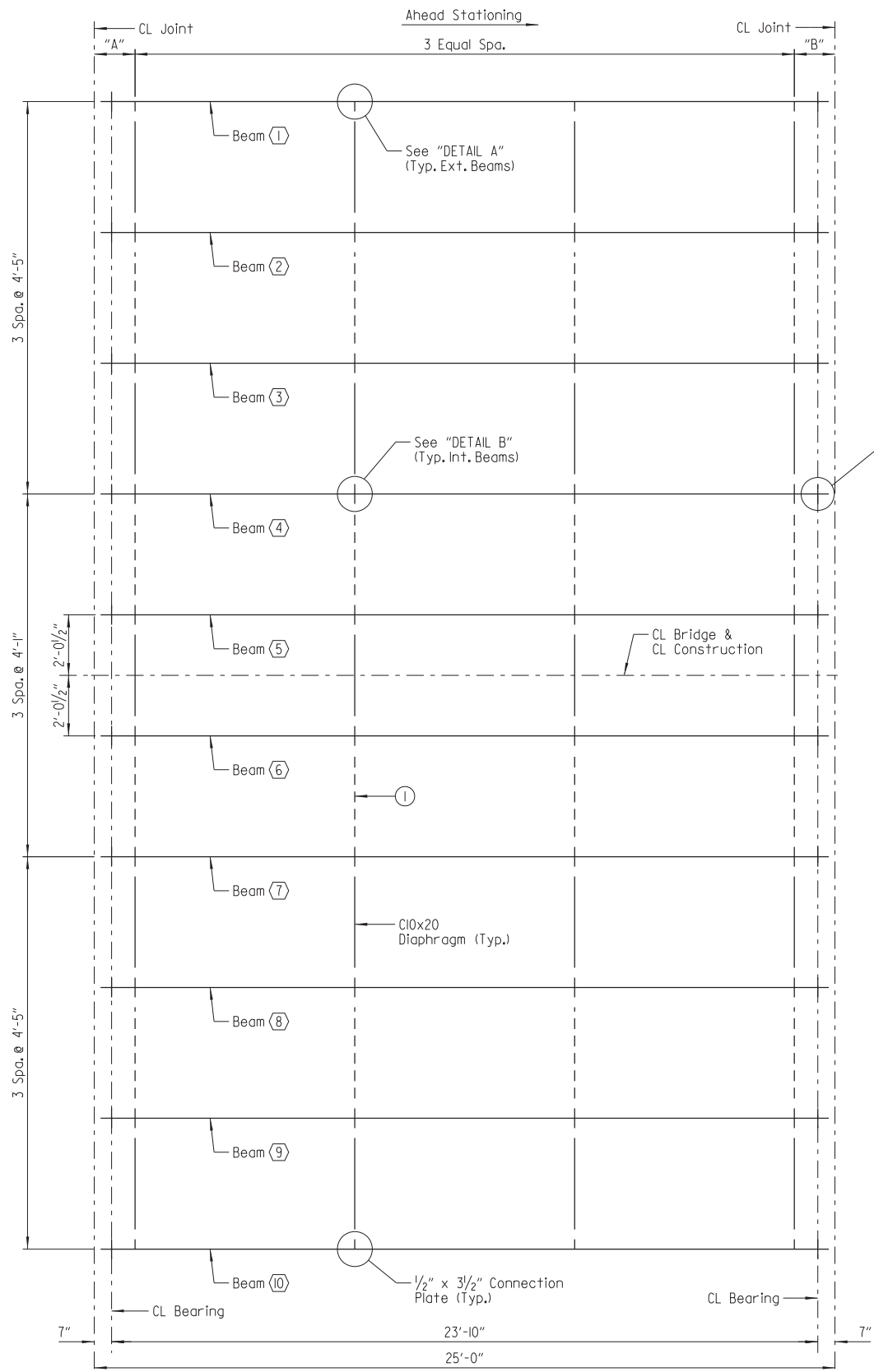
The cost of mechanical couplers shall not be measured for separate payment but shall be included in the price bid for the prefabricated module. Mechanical couplers shall develop at least 125% of the specified yield strength of the reinforcing steel.
- Remove No. 4 existing dowels (28 total) flush with top of cap - Bent No. 9 only. Payment for removal of dowel bars shall be included in the item "MODIFICATION OF EXISTING BRIDGE STRUCTURE (BRIDGE NO. 06347)".



SHEET 3 OF 6
DETAILS OF 25'-0" PREFABRICATED
COMPOSITE W-BEAM SPANS
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: HEW DATE: DEC. 2019 FILENAME: b030458xl.s3.dgn
CHECKED BY: ABH DATE: JAN. 2020 SCALE: As Shown
DESIGNED BY: CSW DATE: DEC. 2019
BRIDGE NO. 06347 DRAWING NO. 6/503

3/18/2020 14:23:30 AM
WORKSPACE: ARDOT Bridge
L:\2017\101550 - Little Missouri River and Relief Drawings\B030458\1.5404_SF (Relief Bridge).dgn
REVISED DATE:

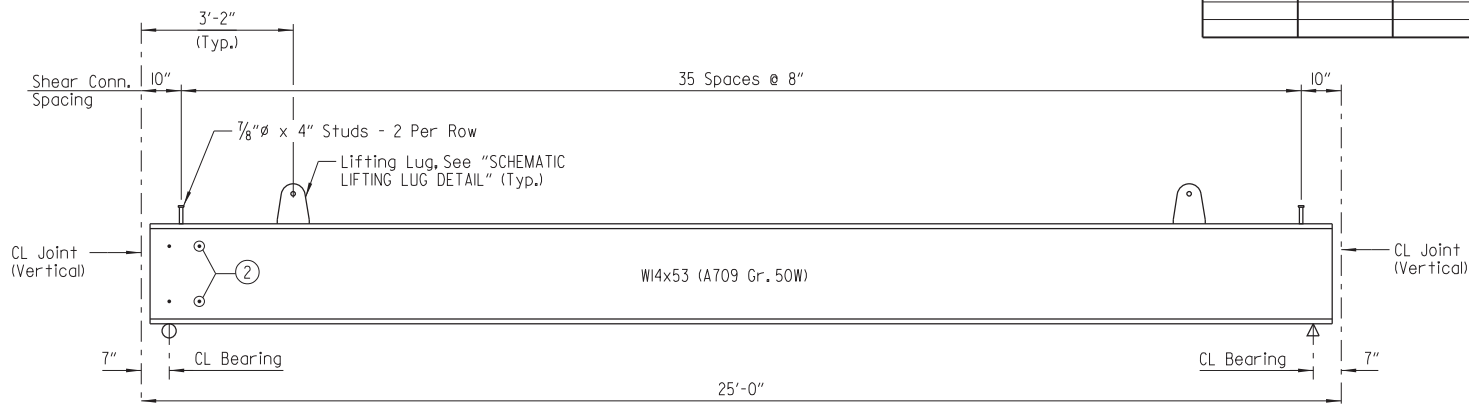


(X) = Beam Number

FRAMING PLAN
Scale: 3/8" = 1'-0"

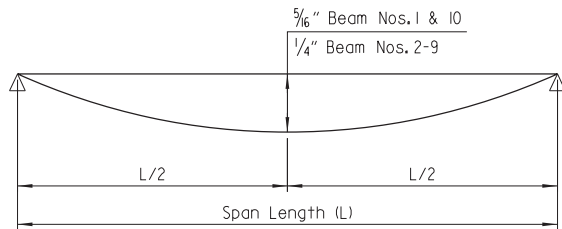
SPAN	"A"	"B"
9	2'-0"	1'-1"
10-13	1'-1"	1'-1"
14	1'-1"	2'-0"

- ① Diaphragms between modules shall be installed after precast modules are installed and prior to constructing closure pours.



- ② 3/4" Dia. Holes thru web. See "DETAIL C" - Spans 9 & 14 only @ ends with turndown slab.

BEAM ELEVATION
No Scale



DEAD LOAD DEFLECTION

Install beam with mill camber upwards. Dead load deflection shown is for total dead load and shall be accounted for in the forming of the deck.

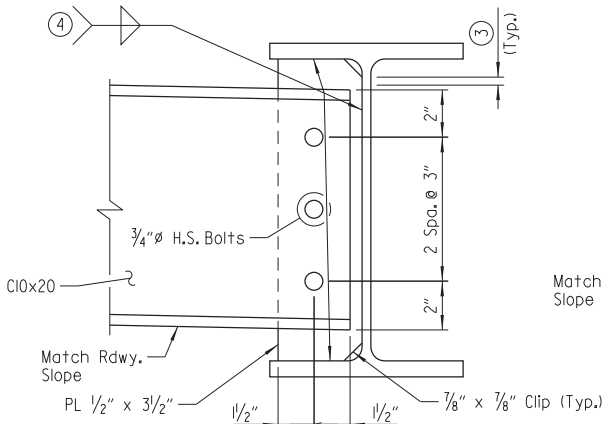
NOTES:
For Standard General Notes, see Std. Dwg. No. 55006.

All structural steel shall be ASTM A709, Gr. 50W unless noted otherwise. The cost of the structural steel shall be included in the price per each of the Prefabricated Superstructure Modules in which the structural steel is assembled. Diaphragms placed between individual modules shall be included in the cost of the prefabricated modules.

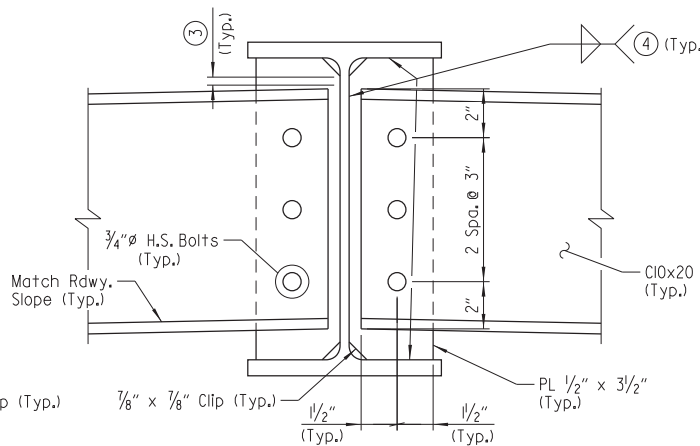
For "SHEAR CONNECTOR DETAIL", see Std. Dwg. No. 55007.

For painting of girder ends, see "GENERAL NOTES" on Dwg. No. 61494.

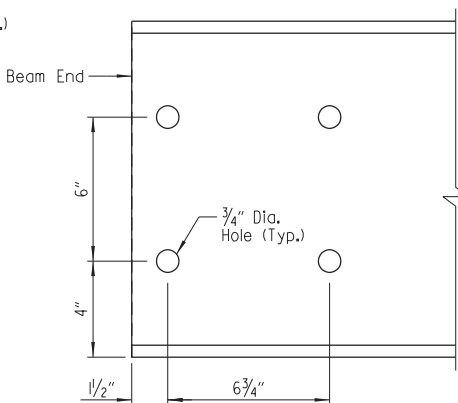
- ③ Stop weld 1/4" to 1" from end of clip.
④ See "WELD TABLE" on Std. Dwg No. 55007 for min. weld size.



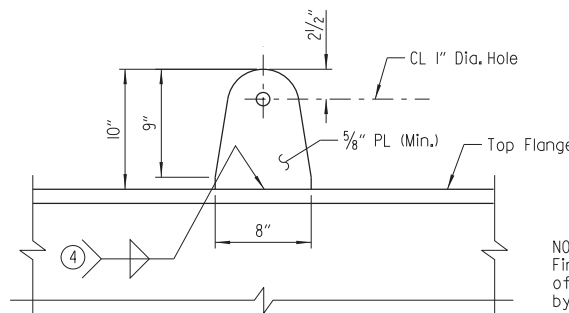
DETAIL A
No Scale



DETAIL B
No Scale



DETAIL C
No Scale



NOTE:
Final size, location and orientation of lifting lug shall be determined by contractor.

SCHEMATIC LIFTING LUG DETAIL
No Scale

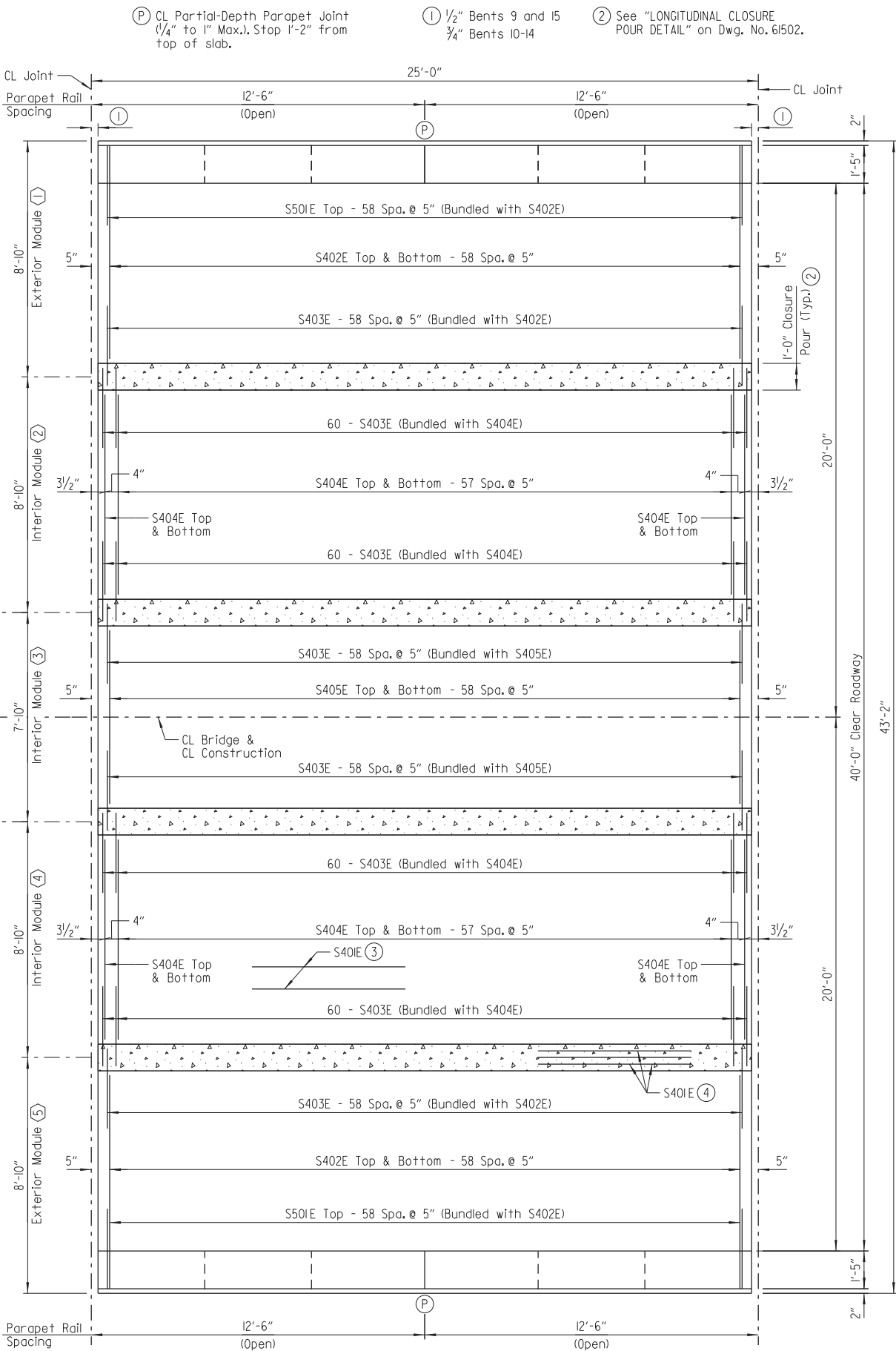


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BRIDGE ENGINEER

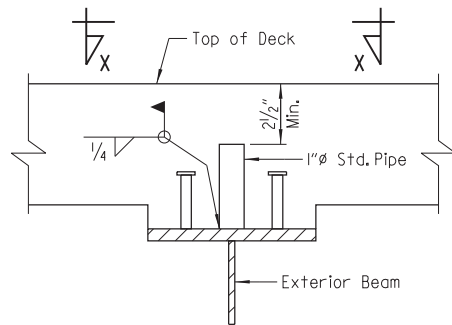
SHEET 4 OF 6
DETAILS OF 25'-0" PREFABRICATED
COMPOSITE W-BEAM SPANS
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: HEW DATE: DEC. 2019 FILENAME: b030458xl_s4.dgn
CHECKED BY: ABH DATE: JAN. 2020 SCALE: As Shown
DESIGNED BY: WWM DATE: DEC. 2019
BRIDGE NO. 06347 DRAWING NO. 61504

3/18/2020 14:23:30 AM
WORKSPACE: ARDOT Bridge
L:\2017\01550 - Little Missouri River and Relief Drawings\B030458\1.S405.SB (Relief Bridge).dgn
REVISED DATE:

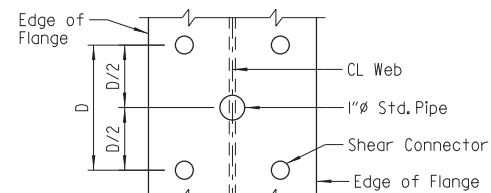


3 S401E bars placed as shown in "EXTERIOR MODULE (1) & (5) REINFORCING DETAIL", "INTERIOR MODULE (2) & (4) REINFORCING DETAIL", AND "INTERIOR MODULE (3) REINFORCING DETAIL", Dwg. No. 61502.



TRANSVERSE SCREED RAIL SUPPORT DETAIL

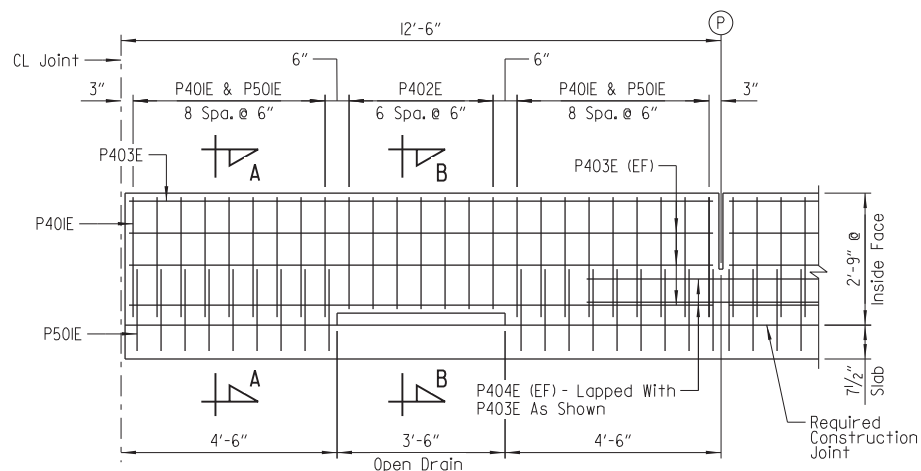
No Scale



VIEW X-X

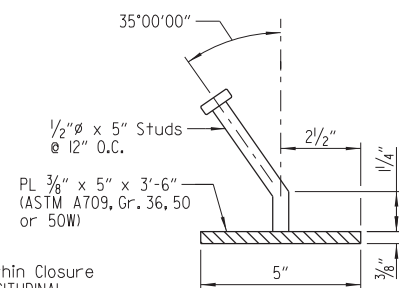
No Scale

NOTE:
If a transverse screed is utilized, the contractor shall support screed rail on exterior beam.



TYPICAL OPEN PARAPET RAIL ELEVATION

Scale: 1/2" = 1'-0"



4 S401E Placed within Closure Pour. See "LONGITUDINAL CLOSURE POUR DETAIL" on Dwg. No. 61502.

NOTES:
Parapet studs shall be 5" long, granular flux filled, solid fluxed, or equal, and automatically end welded to the plate. Studs and plate shall meet the requirements of Section 807.

The surfaces of the 3/8" plates which will not be in contact with concrete shall be painted in accordance with Section 638, or as approved by the Engineer. Only one coat is required and shall be applied in the Fabricator's shop.

Payment for studs, plate and painting will not be made directly but will be considered subsidiary to other pay items.

NOTES:
Concrete in bridge superstructure shall be placed, consolidated and screeded off before any concrete has taken its initial set.

A minimum of 72 hours shall elapse between completion of the slab and pouring of the bridge railing. Any railing pours made before the entire slab unit has been placed must be approved by the Engineer.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		030458	59	98
				06347		25' PREFAB. SPANS		61505

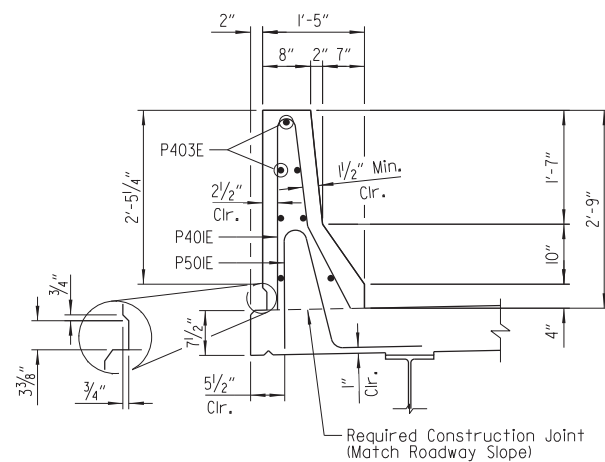
NOTES:
The transverse screed rail supports shall be centered over the beam web and centered longitudinally between adjacent rows of shear connectors.

The pipe shall not interfere with the proper vertical position of the deck reinforcing steel.

The pipe shall be free of dirt, grease, rust, or other foreign substance before the deck is poured.

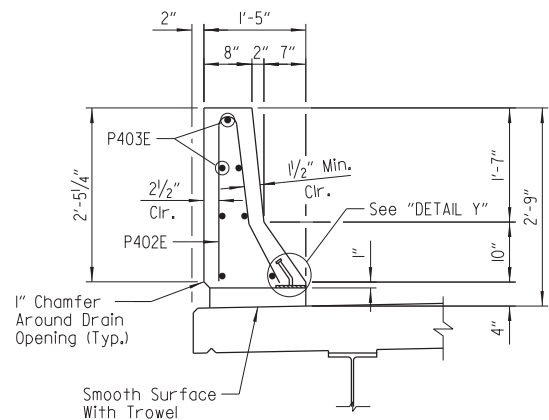
Care shall be exercised so as air voids do not exist in the pipe after placement of the deck concrete.

All welding shall be performed by a certified welder and in accordance with Subsections 802.13 and 807.26.



SECTION A-A

Scale: 3/4" = 1'-0"



LEGEND

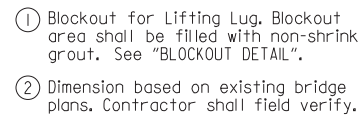
EF = Each Face



SHEET 5 OF 6
DETAILS OF 25'-0" PREFABRICATED
COMPOSITE W-BEAM SPANS
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: HEW DATE: DEC. 2019 FILENAME: b030458xl.s5.dgn
CHECKED BY: ABH DATE: JAN. 2020 SCALE: As Shown
DESIGNED BY: CSW DATE: DEC. 2019
BRIDGE NO. 06347 DRAWING NO. 61505

BEAM LINE	"A" (3)
1 & 10	6 $\frac{1}{2}$ "
2 & 9	7 $\frac{9}{16}$ "
3 & 8	8 $\frac{5}{8}$ "
4 & 7	9 $\frac{11}{16}$ "
5 & 6	10 $\frac{11}{16}$ "

[illegible]

PL $\frac{1}{2}$ " x 6" x 9"
(A709, Gr. 50W)

HSS5x5x0.500
(A500, Gr. B)

PL $\frac{1}{2}$ " x 6" x 6"
(A709, Gr. 50W)

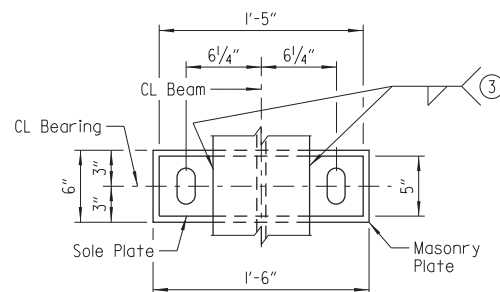
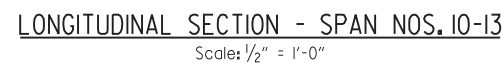
"A"

6"

STEEL RISER DETAILS

NOTE:
Cost of the steel riser shall be included in the cost of the prefabricated module.

③ See "WELD TABLE" on Std. Dwg. No. 55007 for min. weld size.



Scale: $1\frac{1}{2}'' = 1'-0''$



Scale: 3" = 1'-0"

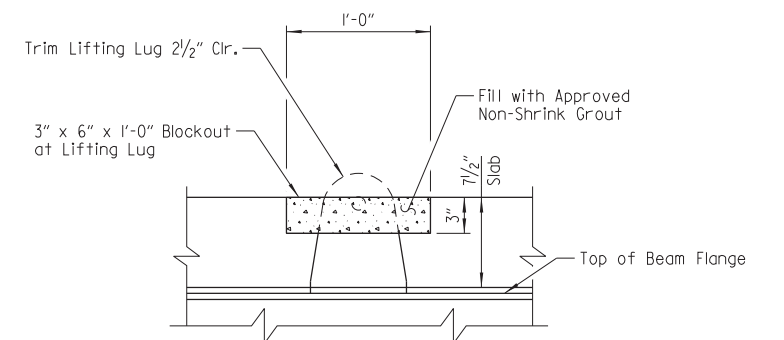


No Scale

NOTES:
Anchor Bolt, Nut, and Washer to be according to Subsection 807.07.
Indentations shall be circular with rounded bottoms and staggered
as shown above. Rubber washer shall be closed cell expanded rubber,
meeting the requirements of ASTM D1056 - 85 2B2 E2, and shall be
considered subsidiary to the item of Structural Steel.

Anchor Bolts shall be Grade 55.

Type "B" Bearings and anchor bolts shall be included in the item "STRUCTURAL STEEL IN BEAM SPANS (A709, Gr. 50W).



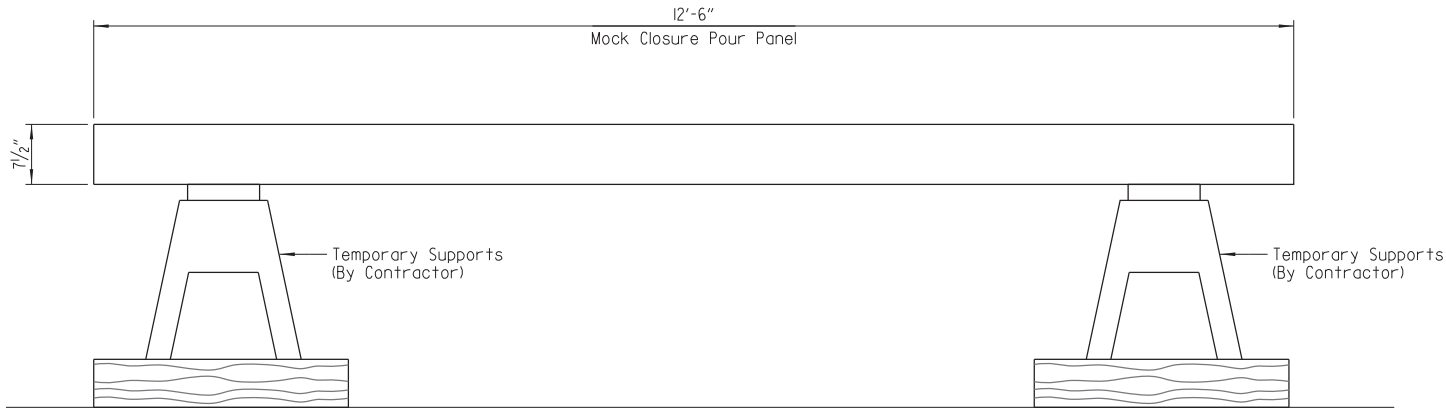
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SHEET 6 OF 6
DETAILS OF 25'-0" PREFABRICATED
COMPOSITE W-BEAM SPANS
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: HEW DATE: DEC. 2019 FILENAME: b030458xl.s6.dgn
 CHECKED BY: ABH DATE: JAN. 2020 SCALE: As Shown
 DESIGNED BY: CSW DATE: DEC. 2019
 BRIDGE NO. 06347 DRAWING NO. 61506



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		030458	61	98
				06347	MOCK CLOSURE POUR			61507



MOCK CLOSURE POUR PANEL - ELEVATION
Scale: 1" = 1'-0"

MOCK CLOSURE POUR NOTES:

The Contractor shall be required to construct a concrete mock closure pour panel, as detailed in these plans, to demonstrate joint surface preparation and closure pour forming and placement operations. The mock closure pour panel shall be available for review and approval by the Engineer no less than 28 calendar days prior to scheduled date of closure pour placement for the bridge superstructure modules. Final prepared (roughened) joint surfaces must be reviewed and approved by the Engineer prior to placement of concrete within the mock closure pour. Representatives of the Engineer and Manufacturer shall be present during placement of the closure pour.

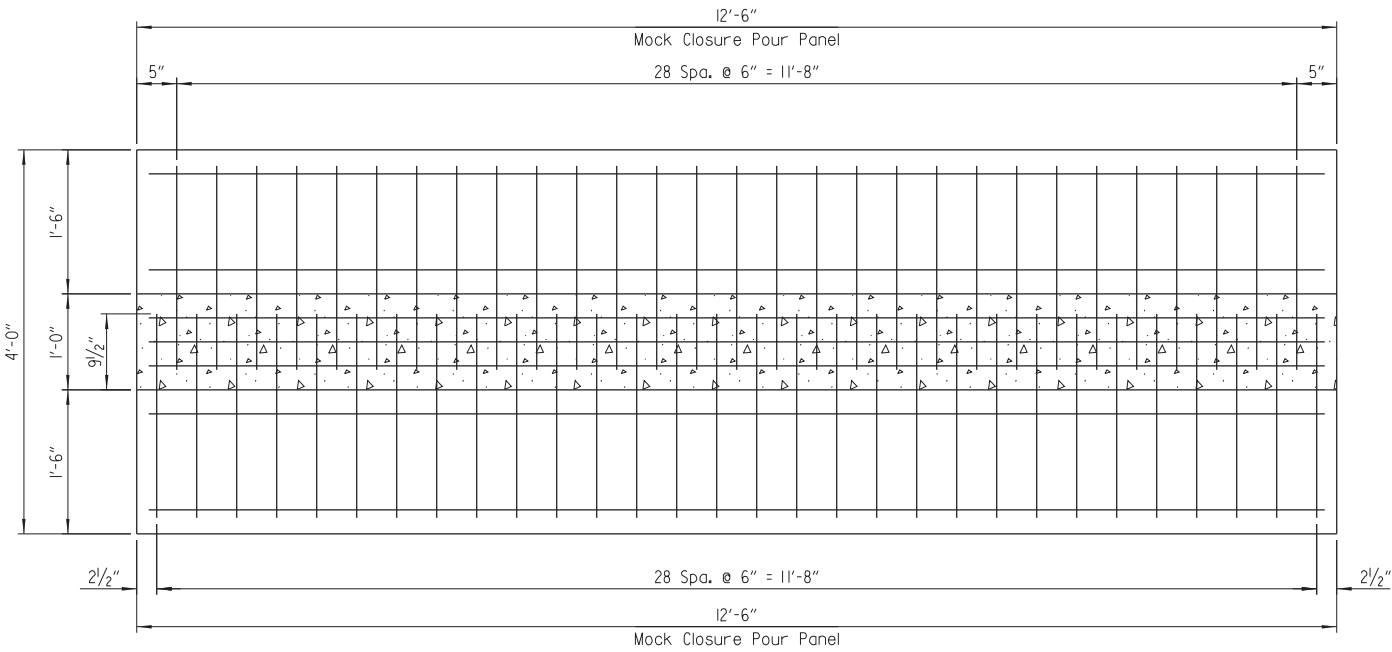
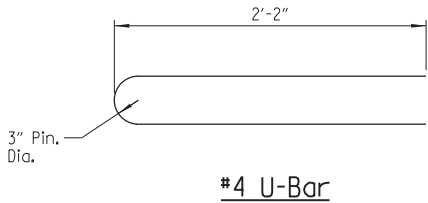
Precast concrete joint surfaces shall be roughened to a minimum 1/4" amplitude or rougher. Methods to achieve joint surface texture shall match the methods intended for use on the superstructure modules.

Methods and materials for forming and placing the mock closure pour joint shall match those intended for use on the superstructure modules.

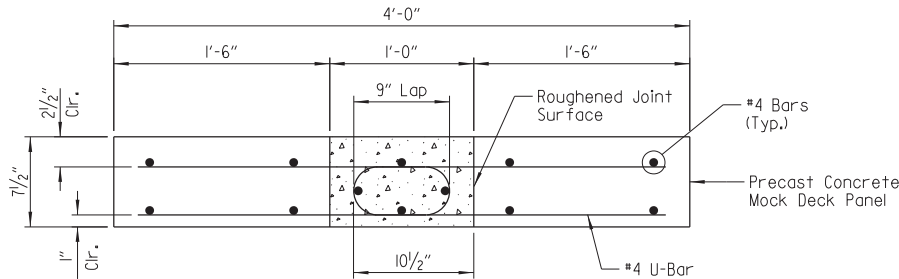
The mock closure pour panel shall be supported above grade. The Contractor shall be responsible for providing an appropriate means to support the mock panel during demonstration closure pour placement.

Following set of the closure pour concrete and development of sufficient strength, the completed mock closure pour panel shall be cut transversely by the Contractor at two locations, to be determined by the Engineer, to allow for visual inspection by the Engineer of the joint interface and material bond.

All costs associated with construction of the mock closure pour panel shall be subsidiary to the prefabricated superstructure modules.



MOCK CLOSURE POUR PANEL - PLAN
Scale: 1" = 1'-0"



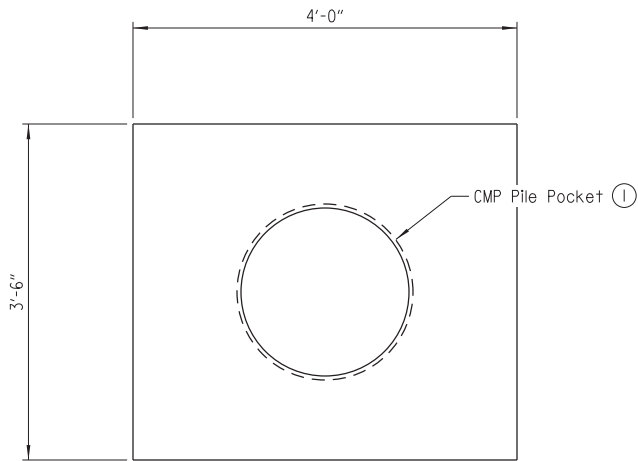
SECTION THROUGH MOCK CLOSURE POUR PANEL
Scale: 1 1/2" = 1'-0"



DETAILS OF
MOCK CLOSURE POUR PANEL
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

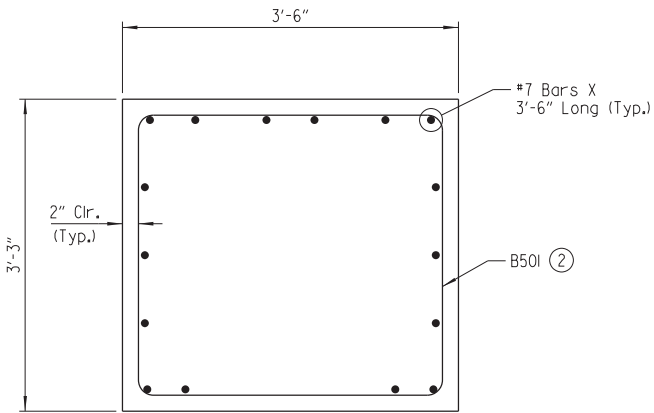
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CHECKED BY: ABH DATE: FEB. 2020 SCALE: As Shown
DESIGNED BY: JHR DATE: FEB. 2020
BRIDGE NO. 06347 DRAWING NO. 61507

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		030458	62	98
				① 06347	PRECAST CAP MOCKUP			6/508



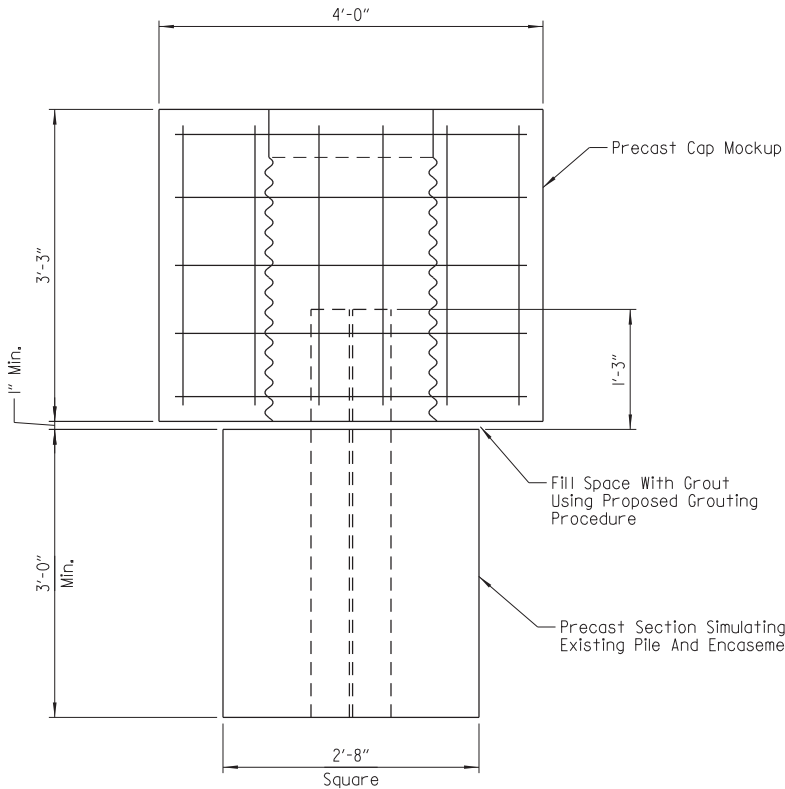
PLAN
Scale: 1" = 1'-0"

① CMP Pile Pocket size shall match details proposed for final production of precast bent caps.

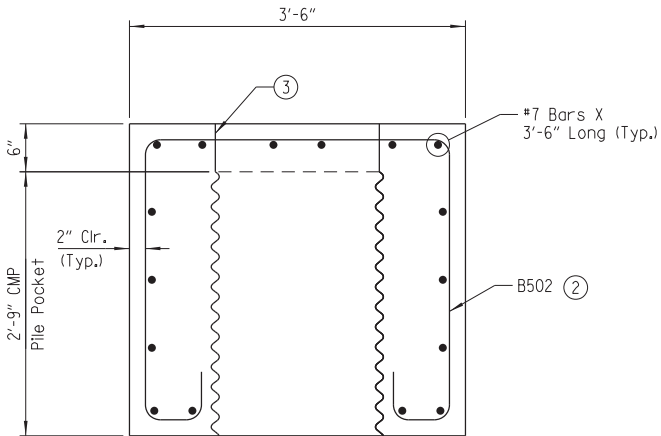


SECTION THRU PRECAST MOCKUP
Scale: 1" = 1'-0"

② See "BAR BENDING DIAGRAMS" on Dwg. No. 6/499.



ELEVATION
Scale: 1" = 1'-0"



SECTION THRU CMP PILE POCKET
Scale: 1" = 1'-0"

③ Form blockout above CMP Pile Pocket using forming procedures proposed for final production of precast bent caps.

PRECAST CAP MOCKUP NOTES:

The Contractor shall be required to construct a precast cap mockup, as detailed in these plans, to demonstrate CMP pile pocket forming and self-consolidating concrete placement operations. The precast cap mockup shall be available for review and approval by the Engineer no less than 28 calendar days prior to scheduled date of placement for the precast bent caps.

Representatives of the Engineer and Manufacturer shall be present during placement of the self-consolidating concrete.

Methods and materials for forming and supporting the mockup shall match those intended for use on the precast bent cap.

All costs associated with construction of the precast cap mockup panel shall be subsidiary to the precast bent caps.



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DETAILS OF PRECAST CAP MOCKUP
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: HEW DATE: FEB. 2020 FILENAME: b030458xl_s8.dgn
CHECKED BY: ABH DATE: FEB. 2020 SCALE: As Shown
DESIGNED BY: JHR DATE: FEB. 2020
BRIDGE NO. 06347 DRAWING NO. 6/508