Missouri Department of Transportation
State Bridge Inspection Report

August 07, 2024
7:02:52AM

COUNTY: OZARK **DISTRICT: SE** **CLASS: STATBR** **FED-ID: 10065** **BRIDGE: K0817**

GENERAL STRUCTURE INFORMATION

ROUTE: US160E
FEATURE: BULL SHOALS LK
STATUS: P-POSTLOAD
LOG MILE: 179.894
DETOUR: 54.00 MILES
NHS: NO
BUILT: 1951
REHAB:
LOCATION: S 19 T 22 R 15 W
LATITUDE: 36 34 40.05 (DMS)
LONGITUDE: 92 38 50.35 (DMS)

 # SPANS: 10
LANES ON: 2
LANES UNDER: 0
COMPASS DIRECTION: WEST to EAST
DIRECTION OF TRAFFIC: 2-WAY TRAF
FUNCTIONAL CLASS: RL-MINOR ARTERIAL
NBI OWNER: MODOT
NBI MAINTAINED: MODOT
MAINTENANCE DISTRICT: SE
MAINTENANCE COUNTY: OZARK
SUB AREA: 7H19

PLACE CODE: 36548 JASPER
LENGTH: 1,817 FT 0 IN
MAXIMUM SPAN: 181 FT 8 IN
APPROACH ROADWAY: 24 FT 0 IN
CURB TO CURB: 22 FT 0 IN
OUT TO OUT: 24 FT 8 IN
AADT: 1453
AADT YEAR: 2023
AADT TRUCK: 7.4%
FUTURE AADT: 3051
FUTURE AADT YEAR: 2043

BRIDGE INSPECTION INFORMATION

DATE: 10/24/2023 **RESPONSIBILITY:** BRIDGEDIV
FREQUENCY: 24 **CALCULATED INTERVAL**:** 24
TEAM LEADER: TERRY L SHUNAMON **ELEMENT:** NO
INSPECTOR 2: BRANDON SMITH (NTLQ) **INSPECTOR 4:**
INSPECTOR 3:

** When calculated interval exceeds the frequency, a justification comment per BIRM is required.

GENERAL INSPECTION COMMENTS

FRACTURE CRITICAL INSPECTION INFORMATION

DATE: 10/24/2023 **RESPONSIBILITY:** BRIDGEDIV **CATEGORY:** THRU TRUSS
FREQUENCY: 24 **CALCULATED INTERVAL**:** 24 **NBI:** YES
TEAM LEADER: TERRY L SHUNAMON **INSPECTOR 3:** **METHOD:** A62, BUCKET TRK
INSPECTOR 2: BRANDON SMITH (NTLQ) **INSPECTOR 4:**

** When calculated interval exceeds the frequency, a justification comment per BIRM is required.

FRACTURE CRITICAL INSPECTION COMMENTS

INDEPTH INSPECTION INFORMATION

DATE: **RESPONSIBILITY:** **CATEGORY:**
FREQUENCY: **CALCULATED INTERVAL**:** **NBI:**
TEAM LEADER: **INSPECTOR 3:** **METHOD:**
INSPECTOR 2: **INSPECTOR 4:**

** When calculated interval exceeds the frequency, a justification comment per BIRM is required.

INDEPTH INSPECTION COMMENTS

SPECIAL INSPECTION INFORMATION

DATE: 08/09/2022 **RESPONSIBILITY:** DIVETEAM **CATEGORY:** CHANNEL CROSS SEC
FREQUENCY: 120 **CALCULATED INTERVAL**:** 109 **NBI:** NO
TEAM LEADER: JESSE ELSEMAN **INSPECTOR 3:** TERRY L SHUNAMON **METHOD:** EMD
INSPECTOR 2: ADAM ZENTZ **INSPECTOR 4:**

** When calculated interval exceeds the frequency, a justification comment per BIRM is required.

SPECIAL INSPECTION COMMENTS

(ELSEMJ, 08/11/2022)--SEE UNDERWATER WORKSHEET FOR CHANNEL CROSS SECTIONS

UNDERWATER INSPECTION INFORMATION

DATE: 08/09/2022 **RESPONSIBILITY:** DIVETEAM **CATEGORY:** DIVE
FREQUENCY: 60 **CALCULATED INTERVAL**:** 49 **NBI:** YES
TEAM LEADER: JESSE ELSEMAN **INSPECTOR 3:** TERRY L SHUNAMON **METHOD:** SCUBA
INSPECTOR 2: ADAM ZENTZ **INSPECTOR 4:**

** When calculated interval exceeds the frequency, a justification comment per BIRM is required.

UNDERWATER INSPECTION COMMENTS

OTHER SPECIAL INSPECTIONS

DATE	FREQUENCY	CATEGORY	NBI	CALCULATED INTERVAL	RESPONSIBILITY	METHOD
05/15/2013	999	DAMAGE POST INCIDENT	NO		DISTRICT	
12/20/2011	999	GUSSET PLATES	NO		BRIDGEDIV	CLIMBER, OTHER

OTHER UNDERWATER INSPECTIONS

DATE	FREQUENCY	CATEGORY	NBI	CALCULATED INTERVAL	RESPONSIBILITY	METHOD

COUNTY: OZARK **DISTRICT: SE** **CLASS: STATBR** **FED-ID: 10065** **BRIDGE: K0817**

STRUCTURE POSTING

APPROVED CATEGORY: S-9 6 AXLE TRUCKS OVER 33 TONS 15 MPH ON BRIDGE.
Ton 1: 33 **Ton 2:** **Ton 3:**
COMMENTS: (LYCZAG1, 02/08/2018)--EMAIL CORRESPONDENCE, 2/2/2018, MODOT

FIELD CATEGORY: S-9 6 AXLE TRUCKS OVER 33 TONS 15 MPH ON BRIDGE.
Ton 1: 33 **Ton 2:** **Ton 3:** **PROBLEM:** **PROBLEM DIRECTION:**
COMMENTS:

GENERAL COMMENTS/MAJOR RATED ITEMS

GENERAL COMMENTS: (MADSEJ, 11/15/2019)--10 @ (181') THRU TRUSS SMP SPANS

[ITEM 58] DECK: 4-POOR CONDITION
RATING : 10/21/2021
COMMENTS: (MADSEJ, 12/15/2017)--MINOR TO MODERATE DECK EDGE DETERIORATION AT THE CURB OUTLETS.
(LISTED1, 10/21/2021)--RATING CHANGE DUE TO MANY MAPS CRACKS THROUGHOUT SPANS 4-10 W/ HEAVY DECK EDGE AND CURB OUTLET DETERIORATION

[ITEM 59] SUPER: 4-POOR CONDITION
RATING : 12/15/2017
COMMENTS: (MADSEJ, 11/15/2019)--MODERATE TO ADVANCED SECTION LOSS AT THE BOTTOM OF THE WEB, BOTTOM FLANGE, AND TOP FLANGE THROUGHOUT MOST OF THE END FLOORBEAMS.

[ITEM 60] SUB: 6-SATISFACTORY CONDITION
RATING : 05/18/2001
COMMENTS: (STEGEC, 08/06/2018)--MINOR TO MODERATE CRACKING AND SPALLING THROUGHOUT A FEW OF THE PIER BEAMCAPS. TOP OF FOOTING EXPOSED (2 FT.) ON ROCK AT PIER 5 PER DIVETEAM 2018

[ITEM 61] BANK/CHANNEL: 8-PROTECTED DEVICES STBLE
RATING : 05/18/2001
COMMENTS: (STEGEC, 08/06/2018)--THE STRUCTURE IS OVER BULL SHOALS LAKE. WEST ABUTMENT FILL SLOPES ARE WELL PROTECTED WITH ROCK AND EAST ABUTMENT SETS ON ROCK BLUFF AND BOTH ARE IN GOOD CONDITION.

[ITEM 113] SCOUR: 8-STABLE FOR CALCULATED
RATING : 05/18/2001
EVALUATION TYPE :
COMMENTS: (ELSEMJ, 08/11/2022)--NO SCOUR OBSERVED

[ITEM 71] WATERWAY ADEQUACY: DECK ABOVE FLOOD ELEV
RATING : 05/18/2001
COMMENTS:

[ITEM 72] APPRRDWY ALIGNMENT: 6-SATISFACTORY
RATING : 05/18/2001
COMMENTS: (HULBES1, 11/01/2023)--MINOR SPEED REDUCTION REQUIRED ON EAST END

RAILING AND APPROACH PAVEMENT COMPONENTS AND RATINGS

[ITEM 36A] BRIDGE RAILING RATING: *NOT PROVIDED-0* ***RATING :*** *05/18/2001* ***COMMENTS:***

MATERIAL	CONSTRUCTION	DIRECTION	COMMENTS
REINFORCED CONCRETE	CURB	BOTH	
STEEL	CHANNEL-DOUBLE	BOTH	

[ITEM 36B] TRANSITION RAILING RATING: *MEETS CURRENT STANDARDS-1* ***RATING :*** *12/15/2017* ***COMMENTS:***

MATERIAL	CONSTRUCTION	DIRECTION	COMMENTS
GALVANIZED STEEL	THRIE BEAM TO W-BEAM	ALL	

[ITEM 36C] APPROACH RAILING RATING: *MEETS CURRENT STANDARDS-1* ***RATING :*** *12/15/2017* ***COMMENTS:***

MATERIAL	CONSTRUCTION	DIRECTION	COMMENTS
GALVANIZED STEEL	W-BEAM	ALL	

[ITEM 36D] RAIL END TREATMENT RATING: MEETS CURRENT STANDARDS-1 *RATING :* 12/15/2017 *COMMENTS:*

MATERIAL	CONSTRUCTION	DIRECTION	COMMENTS
GALVANIZED STEEL	ENERGY ABSORBING	ALL	

APPROACH PAVEMENT: *Overall condition assigned for each approach pavemenet component is shown below.

MATERIAL	CONSTRUCTION	DIRECTION	CONDITION*	COMMENTS
ASPHALT	BITUMINOUS MAT			

DRAINAGE, EXPANSION DEVICES, BANK/SLOPE, AND DECK PROTECTIVE COMPONENTS

DECK PROTECTIVE COMPONENTS:

SERIES TYPE-#	COMPONENT	MATERIAL	CONSTRUCTION	THICKNESS	YEAR APPLIED	MANUFACTURE	OVERALL CONDITION
MAIN SERIES-1	WEARING SURFACE	ASPHALT	BITUMINOUS MAT	1 IN	2017		GOOD
COMMENT:							
	DECK PROTECTION	NOTAPPLICABLE	NONE				
COMMENT:							
	MEMBRANE	NOTAPPLICABLE	NONE				
COMMENT:							

DRAINAGE COMPONENTS:

COMPONENT	MATERIAL	CONSTRUCTION	DIRECTION	COMMENTS
DRAINAGE	REINFORCED CONCRETE	CURB OUTLET		
DRAINAGE	PVC	MODOT PIPE DRAIN		

EXPANSION DEVICE COMPONENTS:

SUB UNIT-#	SUB LABEL	COMPONENT	MATERIAL	CONSTRUCTION	GAP	YEAR APPLIED	MANUFACTURE	OVERALL CONDITION
ABUTMENT-1		CLOSED EXPANSION JOINT	STEEL	FLAT PLATE				POOR

COMMENT:

CONDITION	LOCATION 1	LOCATION 2	SEVERITY	COMMENT
COVERED WITH MAT	THROUGHOUT		NOT APPLICABLE	

PIER-2		CLOSED EXPANSION JOINT	STEEL	FLAT PLATE				POOR

COMMENT:

CONDITION	LOCATION 1	LOCATION 2	SEVERITY	COMMENT
COVERED WITH MAT	THROUGHOUT		NOT APPLICABLE	

PIER-3		CLOSED EXPANSION JOINT	STEEL	FLAT PLATE				POOR

COMMENT:

COVERED WITH MAT	THROUGHOUT	NOT APPLICABLE	

PIER-4		CLOSED EXPANSION JOINT	STEEL	FLAT PLATE				POOR

COMMENT:

COVERED WITH MAT	THROUGHOUT	NOT APPLICABLE	

PIER-5		CLOSED EXPANSION JOINT	STEEL	FLAT PLATE				POOR

COMMENT:

COVERED WITH MAT	THROUGHOUT	NOT APPLICABLE	

PIER-6		CLOSED EXPANSION JOINT	STEEL	FLAT PLATE				POOR

COMMENT:

COVERED WITH MAT	THROUGHOUT	NOT APPLICABLE	

PIER-7		CLOSED EXPANSION JOINT	STEEL	FLAT PLATE				POOR

COMMENT:

COVERED WITH MAT	THROUGHOUT	NOT APPLICABLE	

PIER-8		CLOSED EXPANSION JOINT	STEEL	FLAT PLATE				POOR

COMMENT:

COVERED WITH MAT	THROUGHOUT	NOT APPLICABLE	

PIER-9		CLOSED EXPANSION JOINT	STEEL	FLAT PLATE				POOR

COMMENT:

COVERED WITH MAT	THROUGHOUT	NOT APPLICABLE	

PIER-10		CLOSED EXPANSION JOINT	STEEL	FLAT PLATE				POOR

COMMENT:

COVERED WITH MAT	THROUGHOUT	NOT APPLICABLE	

ABUTMENT-11		CLOSED EXPANSION JOINT	ASPHALT	FILLED JOINT				

COMMENT:

BANK/SLOPE PROTECTION COMPONENTS:

COMPONENT	MATERIAL	CONSTRUCTION	DIRECTION	COMMENTS
BANK PROTECTION	ROCK	DEFLECTOR	EAST	

DECK COMPONENTS

SPAN TYPE-#	COMPONENT	MATERIAL	CONSTRUCTION	COMMENTS
MAIN SPANS-1	DECK	REINFORCED CONCRETE	CAST-IN-PLACE	

CONDITION	LOCATION 1	LOCATION 2	SEVERITY	MEASUREMENT	COMMENT
DETERIORATION	AT OUTLETS		MINOR		
EFFLORESCENCE	THROUGHOUT		LIGHT		
TRANSVERSE CRACKS	THROUGHOUT		MANY		

SPAN TYPE-#	COMPONENT	MATERIAL	CONSTRUCTION	COMMENTS
MAIN SPANS-2	DECK	REINFORCED CONCRETE	CAST-IN-PLACE	

CONDITION	LOCATION 1	LOCATION 2	SEVERITY	MEASUREMENT	COMMENT
DETERIORATION	AT OUTLETS		MINOR		
EFFLORESCENCE	THROUGHOUT		LIGHT		
TRANSVERSE CRACKS	THROUGHOUT		MANY		

SPAN TYPE-#	COMPONENT	MATERIAL	CONSTRUCTION	COMMENTS
MAIN SPANS-3	DECK	REINFORCED CONCRETE	CAST-IN-PLACE	

CONDITION	LOCATION 1	LOCATION 2	SEVERITY	MEASUREMENT	COMMENT
DETERIORATION	AT OUTLETS		MINOR		
EFFLORESCENCE	THROUGHOUT		LIGHT		
SPALLS	BOTTOM	THROUGHOUT	FEW		
TRANSVERSE CRACKS	THROUGHOUT		MANY		

SPAN TYPE-#	COMPONENT	MATERIAL	CONSTRUCTION	COMMENTS
MAIN SPANS-4	DECK	REINFORCED CONCRETE	CAST-IN-PLACE	

CONDITION	LOCATION 1	LOCATION 2	SEVERITY	MEASUREMENT	COMMENT
DETERIORATION	AT OUTLETS		MINOR		
EFFLORESCENCE	THROUGHOUT		LIGHT		
TRANSVERSE CRACKS	THROUGHOUT		MANY		

SPAN TYPE-#	COMPONENT	MATERIAL	CONSTRUCTION	COMMENTS
MAIN SPANS-5	DECK	REINFORCED CONCRETE	CAST-IN-PLACE	

CONDITION	LOCATION 1	LOCATION 2	SEVERITY	MEASUREMENT	COMMENT
DELAMINATION	BOTTOM	THROUGHOUT	FEW		
DETERIORATION	AT OUTLETS		MINOR		
EFFLORESCENCE	THROUGHOUT		LIGHT		
TRANSVERSE CRACKS	THROUGHOUT		MANY		

SPAN TYPE-#	COMPONENT	MATERIAL	CONSTRUCTION	COMMENTS
MAIN SPANS-6	DECK	REINFORCED CONCRETE	CAST-IN-PLACE	

CONDITION	LOCATION 1	LOCATION 2	SEVERITY	MEASUREMENT	COMMENT
DETERIORATION	AT OUTLETS		MINOR		
EFFLORESCENCE	THROUGHOUT		LIGHT		
TRANSVERSE CRACKS	THROUGHOUT		MANY		

SPAN TYPE-#	COMPONENT	MATERIAL	CONSTRUCTION	COMMENTS
MAIN SPANS-7	DECK	REINFORCED CONCRETE	CAST-IN-PLACE	

CONDITION	LOCATION 1	LOCATION 2	SEVERITY	MEASUREMENT	COMMENT
DETERIORATION	AT OUTLETS		MINOR		

EFFLORESCENCE		THROUGHOUT			LIGHT	
TRANSVERSE CRACKS		THROUGHOUT			MANY	

MAIN SPANS-8 *DECK* *REINFORCED CONCRETE* *CAST-IN-PLACE*

CONDITION	***LOCATION 1***	***LOCATION 2***	***SEVERITY***	***MEASUREMENT***	***COMMENT***
DETERIORATION	AT OUTLETS		MINOR		
EFFLORESCENCE	THROUGHOUT		LIGHT		
TRANSVERSE CRACKS	THROUGHOUT		MANY		

MAIN SPANS-9 *DECK* *REINFORCED CONCRETE* *CAST-IN-PLACE*

CONDITION	***LOCATION 1***	***LOCATION 2***	***SEVERITY***	***MEASUREMENT***	***COMMENT***
DETERIORATION	AT OUTLETS		MINOR		
EFFLORESCENCE	THROUGHOUT		LIGHT		
SPALLS	BOTTOM	THROUGHOUT	FEW		
TRANSVERSE CRACKS	THROUGHOUT		MANY		

MAIN SPANS-10 *DECK* *REINFORCED CONCRETE* *CAST-IN-PLACE*

CONDITION	***LOCATION 1***	***LOCATION 2***	***SEVERITY***	***MEASUREMENT***	***COMMENT***
DETERIORATION	AT OUTLETS		MINOR		
EFFLORESCENCE	THROUGHOUT		LIGHT		
TRANSVERSE CRACKS	THROUGHOUT		MANY		

SUPERSTRUCTURE COMPONENTS

SERIES TYPE-#	***SPAN TYPE***	***MATERIAL***	***CONSTRUCTION***	***LABEL***	***COMMENTS***
MAIN SERIES-1	*SIMPLE SPAN*	*STEEL*	*THRU TRUSS*		*(MADSEJ, 11/15/2019)--SEE THE FRACTURE CRITICAL ELEMENT TABLE FOR DETAILED ACCOUNTING OF ALL TRUSS MEMBER CONDITIONS.*

SPAN	***COMPOSITE INDICATOR***	***LENGTH***	***WEATHERING STEEL***	***COMMENTS***
MAIN SPANS-1	NON-COMPOSITE	181 FT 8 IN	NO	
MAIN SPANS-2	NON-COMPOSITE	181 FT 6 IN	NO	
MAIN SPANS-3	NON-COMPOSITE	181 FT 6 IN	NO	
MAIN SPANS-4	NON-COMPOSITE	181 FT 6 IN	NO	
MAIN SPANS-5	NON-COMPOSITE	181 FT 6 IN	NO	
MAIN SPANS-6	NON-COMPOSITE	181 FT 6 IN	NO	
MAIN SPANS-7	NON-COMPOSITE	181 FT 6 IN	NO	

CONDITION	***LOCATION 1***	***LOCATION 2***	***SEVERITY***	***MEASUREMENT***	***COMMENT***

MAIN SPANS-8 NON-COMPOSITE 181 FT 6 IN NO

CONDITION	LOCATION 1	LOCATION 2	SEVERITY	MEASUREMENT	COMMENT

MAIN SPANS-9 NON-COMPOSITE 181 FT 6 IN NO

CONDITION	LOCATION 1	LOCATION 2	SEVERITY	MEASUREMENT	COMMENT

MAIN SPANS-10 NON-COMPOSITE 181 FT 8 IN NO

CONDITION	LOCATION 1	LOCATION 2	SEVERITY	MEASUREMENT	COMMENT

SUBSTRUCTURE COMPONENTS

SUBSTRUCTURE	SKEW	LENGTH	MATERIAL	CONSTRUCTION	LABEL	COMMENTS
ABUTMENT-1		*31 FT 8 IN*	*REINFORCED CONCRETE*	*OPEN CONCRETE*		

CONDITION	LOCATION 1	LOCATION 2	SEVERITY	MEASUREMENT	COMMENT

ASSOCIATED COMPONENT	MATERIAL	CONSTRUCTION
BEAM CAP	REINFORCED CONCRETE	CAST-IN-PLACE

CONDITION	LOCATION 1	LOCATION 2	SEVERITY	MEASUREMENT	COMMENT
SEALED	THROUGHOUT		EPOXY		
VERTICAL CRACKS	THROUGHOUT		FEW		

STRAIGHT WINGS REINFORCED CONCRETE CAST-IN-PLACE

CONDITION	LOCATION 1	LOCATION 2	SEVERITY	MEASUREMENT	COMMENT

FOOTING REINFORCED CONCRETE SPREAD

CONDITION	LOCATION 1	LOCATION 2	SEVERITY	MEASUREMENT	COMMENT

BACKWALL REINFORCED CONCRETE CAST-IN-PLACE

CONDITION	LOCATION 1	LOCATION 2	SEVERITY	MEASUREMENT	COMMENT
SEALED	THROUGHOUT		EPOXY		

EXPANSION BEARING STEEL ROCKER

CONDITION	LOCATION 1	LOCATION 2	SEVERITY	MEASUREMENT	COMMENT

PIER-2 *32 FT 0 IN* *REINFORCED CONCRETE* *MULTIPLE COLUMN*

CONDITION	LOCATION 1	LOCATION 2	SEVERITY	MEASUREMENT	COMMENT

ASSOCIATED COMPONENT	MATERIAL	CONSTRUCTION
BEAM CAP	REINFORCED CONCRETE	CAST-IN-PLACE

CONDITION	LOCATION 1	LOCATION 2	SEVERITY	MEASUREMENT	COMMENT
SEALED	THROUGHOUT		EPOXY		
VERTICAL CRACKS	THROUGHOUT		FEW		

COLUMN REINFORCED CONCRETE CAST-IN-PLACE

CONDITION	LOCATION 1	LOCATION 2	SEVERITY	MEASUREMENT	COMMENT
DELAMINATION	THROUGHOUT		FEW		
EFFLORESCENCE	THROUGHOUT		MEDIUM		
VERTICAL CRACKS	THROUGHOUT		LARGE		

FOOTING REINFORCED CONCRETE SPREAD

CONDITION	LOCATION 1	LOCATION 2	SEVERITY	MEASUREMENT	COMMENT

WEB BEAM REINFORCED CONCRETE CAST-IN-PLACE

CONDITION	LOCATION 1	LOCATION 2	SEVERITY	MEASUREMENT	COMMENT

EXPANSION BEARING STEEL ROCKER

CONDITION	LOCATION 1	LOCATION 2	SEVERITY	MEASUREMENT	COMMENT

FIXED BEARING STEEL PEDESTAL(ROTATING)

CONDITION	LOCATION 1	LOCATION 2	SEVERITY	MEASUREMENT	COMMENT

PIER-3 *32 FT 0 IN* *REINFORCED CONCRETE* *MULTIPLE COLUMN*

CONDITION	LOCATION 1	LOCATION 2	SEVERITY	MEASUREMENT	COMMENT
ASSOCIATED COMPONENT	**MATERIAL**	**CONSTRUCTION**			
BEAM CAP	REINFORCED CONCRETE	CAST-IN-PLACE			
CONDITION	**LOCATION 1**	**LOCATION 2**	**SEVERITY**	**MEASUREMENT**	**COMMENT**
SEALED	THROUGHOUT		EPOXY		
VERTICAL CRACKS	THROUGHOUT		FEW		
COLUMN	REINFORCED CONCRETE	CAST-IN-PLACE			
CONDITION	**LOCATION 1**	**LOCATION 2**	**SEVERITY**	**MEASUREMENT**	**COMMENT**
FOOTING	REINFORCED CONCRETE	SPREAD			
CONDITION	**LOCATION 1**	**LOCATION 2**	**SEVERITY**	**MEASUREMENT**	**COMMENT**
WEB BEAM	REINFORCED CONCRETE	CAST-IN-PLACE			
CONDITION	**LOCATION 1**	**LOCATION 2**	**SEVERITY**	**MEASUREMENT**	**COMMENT**
FIXED BEARING	STEEL	PEDESTAL(ROTATING)			
CONDITION	**LOCATION 1**	**LOCATION 2**	**SEVERITY**	**MEASUREMENT**	**COMMENT**
EXPANSION BEARING	STEEL	ROCKER			
CONDITION	**LOCATION 1**	**LOCATION 2**	**SEVERITY**	**MEASUREMENT**	**COMMENT**

PIER-4 *32 FT 0 IN* *REINFORCED CONCRETE* *MULTIPLE COLUMN*

CONDITION	LOCATION 1	LOCATION 2	SEVERITY	MEASUREMENT	COMMENT
ASSOCIATED COMPONENT	**MATERIAL**	**CONSTRUCTION**			
BEAM CAP	REINFORCED CONCRETE	CAST-IN-PLACE			
CONDITION	**LOCATION 1**	**LOCATION 2**	**SEVERITY**	**MEASUREMENT**	**COMMENT**
SEALED	THROUGHOUT		EPOXY		
VERTICAL CRACKS	THROUGHOUT		FEW		
COLUMN	REINFORCED CONCRETE	CAST-IN-PLACE			
CONDITION	**LOCATION 1**	**LOCATION 2**	**SEVERITY**	**MEASUREMENT**	**COMMENT**
FOOTING	REINFORCED CONCRETE	SPREAD			
CONDITION	**LOCATION 1**	**LOCATION 2**	**SEVERITY**	**MEASUREMENT**	**COMMENT**
WEB BEAM	REINFORCED CONCRETE	CAST-IN-PLACE			
CONDITION	**LOCATION 1**	**LOCATION 2**	**SEVERITY**	**MEASUREMENT**	**COMMENT**
SPALLS	COLLISION WALL		FEW		
VERTICAL CRACKS	COLLISION WALL		OPEN		
FIXED BEARING	STEEL	PEDESTAL(ROTATING)			
CONDITION	**LOCATION 1**	**LOCATION 2**	**SEVERITY**	**MEASUREMENT**	**COMMENT**
EXPANSION BEARING	STEEL	ROCKER			
CONDITION	**LOCATION 1**	**LOCATION 2**	**SEVERITY**	**MEASUREMENT**	**COMMENT**

PIER-5 *32 FT 0 IN* *REINFORCED CONCRETE* *MULTIPLE COLUMN*

CONDITION	LOCATION 1	LOCATION 2	SEVERITY	MEASUREMENT	COMMENT
ASSOCIATED COMPONENT	**MATERIAL**	**CONSTRUCTION**			
BEAM CAP	REINFORCED CONCRETE	CAST-IN-PLACE			
CONDITION	**LOCATION 1**	**LOCATION 2**	**SEVERITY**	**MEASUREMENT**	**COMMENT**
SEALED	THROUGHOUT		EPOXY		
VERTICAL CRACKS	THROUGHOUT		FEW		
COLUMN	REINFORCED CONCRETE	CAST-IN-PLACE			
CONDITION	**LOCATION 1**	**LOCATION 2**	**SEVERITY**	**MEASUREMENT**	**COMMENT**
FOOTING	REINFORCED CONCRETE	SPREAD			
CONDITION	**LOCATION 1**	**LOCATION 2**	**SEVERITY**	**MEASUREMENT**	**COMMENT**
EXPOSED	TOP		MODERATE		
WEB BEAM	REINFORCED CONCRETE	CAST-IN-PLACE			
CONDITION	**LOCATION 1**	**LOCATION 2**	**SEVERITY**	**MEASUREMENT**	**COMMENT**

DIAGONAL CRACKS	WALL		FEW		
VERTICAL CRACKS	AT WALL		FEW		
FIXED BEARING	STEEL	PEDESTAL(ROTATING)			
CONDITION	***LOCATION 1***	***LOCATION 2***	***SEVERITY***	***MEASUREMENT***	***COMMENT***
EXPANSION BEARING	STEEL	ROCKER			
CONDITION	***LOCATION 1***	***LOCATION 2***	***SEVERITY***	***MEASUREMENT***	***COMMENT***

PIER-6 *32 FT 0 IN* *REINFORCED CONCRETE* *MULTIPLE COLUMN*

CONDITION	***LOCATION 1***	***LOCATION 2***	***SEVERITY***	***MEASUREMENT***	***COMMENT***
ASSOCIATED COMPONENT	***MATERIAL***	***CONSTRUCTION***			
BEAM CAP	REINFORCED CONCRETE	CAST-IN-PLACE			
CONDITION	***LOCATION 1***	***LOCATION 2***	***SEVERITY***	***MEASUREMENT***	***COMMENT***
SEALED	THROUGHOUT		EPOXY		
VERTICAL CRACKS	THROUGHOUT		FEW		
COLUMN	REINFORCED CONCRETE	CAST-IN-PLACE			
CONDITION	***LOCATION 1***	***LOCATION 2***	***SEVERITY***	***MEASUREMENT***	***COMMENT***
FOOTING	REINFORCED CONCRETE	SPREAD			
CONDITION	***LOCATION 1***	***LOCATION 2***	***SEVERITY***	***MEASUREMENT***	***COMMENT***
WEB BEAM	REINFORCED CONCRETE	CAST-IN-PLACE			
CONDITION	***LOCATION 1***	***LOCATION 2***	***SEVERITY***	***MEASUREMENT***	***COMMENT***
FIXED BEARING	STEEL	PEDESTAL(ROTATING)			
CONDITION	***LOCATION 1***	***LOCATION 2***	***SEVERITY***	***MEASUREMENT***	***COMMENT***
EXPANSION BEARING	STEEL	ROCKER			
CONDITION	***LOCATION 1***	***LOCATION 2***	***SEVERITY***	***MEASUREMENT***	***COMMENT***

PIER-7 *32 FT 0 IN* *REINFORCED CONCRETE* *MULTIPLE COLUMN*

CONDITION	***LOCATION 1***	***LOCATION 2***	***SEVERITY***	***MEASUREMENT***	***COMMENT***
ASSOCIATED COMPONENT	***MATERIAL***	***CONSTRUCTION***			
BEAM CAP	REINFORCED CONCRETE	CAST-IN-PLACE			
CONDITION	***LOCATION 1***	***LOCATION 2***	***SEVERITY***	***MEASUREMENT***	***COMMENT***
SEALED	THROUGHOUT		EPOXY		
VERTICAL CRACKS	THROUGHOUT		LARGE		
COLUMN	REINFORCED CONCRETE	CAST-IN-PLACE			
CONDITION	***LOCATION 1***	***LOCATION 2***	***SEVERITY***	***MEASUREMENT***	***COMMENT***
FOOTING	REINFORCED CONCRETE	SPREAD			
CONDITION	***LOCATION 1***	***LOCATION 2***	***SEVERITY***	***MEASUREMENT***	***COMMENT***
WEB BEAM	REINFORCED CONCRETE	CAST-IN-PLACE			
CONDITION	***LOCATION 1***	***LOCATION 2***	***SEVERITY***	***MEASUREMENT***	***COMMENT***
FIXED BEARING	STEEL	PEDESTAL(ROTATING)			
CONDITION	***LOCATION 1***	***LOCATION 2***	***SEVERITY***	***MEASUREMENT***	***COMMENT***
EXPANSION BEARING	STEEL	ROCKER			
CONDITION	***LOCATION 1***	***LOCATION 2***	***SEVERITY***	***MEASUREMENT***	***COMMENT***

PIER-8 *32 FT 0 IN* *REINFORCED CONCRETE* *MULTIPLE COLUMN*

CONDITION	***LOCATION 1***	***LOCATION 2***	***SEVERITY***	***MEASUREMENT***	***COMMENT***
ASSOCIATED COMPONENT	***MATERIAL***	***CONSTRUCTION***			
BEAM CAP	REINFORCED CONCRETE	CAST-IN-PLACE			
CONDITION	***LOCATION 1***	***LOCATION 2***	***SEVERITY***	***MEASUREMENT***	***COMMENT***
SEALED	THROUGHOUT		EPOXY		
VERTICAL CRACKS	THROUGHOUT		LARGE		
COLUMN	REINFORCED CONCRETE	CAST-IN-PLACE			

CONDITION	***LOCATION 1***	***LOCATION 2***	***SEVERITY***	***MEASUREMENT***	***COMMENT***
FOOTING	REINFORCED CONCRETE	SPREAD			
CONDITION	***LOCATION 1***	***LOCATION 2***	***SEVERITY***	***MEASUREMENT***	***COMMENT***
WEB BEAM	REINFORCED CONCRETE	CAST-IN-PLACE			
CONDITION	***LOCATION 1***	***LOCATION 2***	***SEVERITY***	***MEASUREMENT***	***COMMENT***
FIXED BEARING	STEEL	PEDESTAL(ROTATING)			
CONDITION	***LOCATION 1***	***LOCATION 2***	***SEVERITY***	***MEASUREMENT***	***COMMENT***
EXPANSION BEARING	STEEL	ROCKER			
CONDITION	***LOCATION 1***	***LOCATION 2***	***SEVERITY***	***MEASUREMENT***	***COMMENT***

PIER-9 *32 FT 0 IN* *REINFORCED CONCRETE* *MULTIPLE COLUMN*

CONDITION	***LOCATION 1***	***LOCATION 2***	***SEVERITY***	***MEASUREMENT***	***COMMENT***
ASSOCIATED COMPONENT	***MATERIAL***	***CONSTRUCTION***			
BEAM CAP	REINFORCED CONCRETE	CAST-IN-PLACE			
CONDITION	***LOCATION 1***	***LOCATION 2***	***SEVERITY***	***MEASUREMENT***	***COMMENT***
SEALED	THROUGHOUT		EPOXY		
VERTICAL CRACKS	THROUGHOUT		LARGE		
COLUMN	REINFORCED CONCRETE	CAST-IN-PLACE			
CONDITION	***LOCATION 1***	***LOCATION 2***	***SEVERITY***	***MEASUREMENT***	***COMMENT***
FOOTING	REINFORCED CONCRETE	SPREAD			
CONDITION	***LOCATION 1***	***LOCATION 2***	***SEVERITY***	***MEASUREMENT***	***COMMENT***
WEB BEAM	REINFORCED CONCRETE	CAST-IN-PLACE			
CONDITION	***LOCATION 1***	***LOCATION 2***	***SEVERITY***	***MEASUREMENT***	***COMMENT***
FIXED BEARING	STEEL	PEDESTAL(ROTATING)			
CONDITION	***LOCATION 1***	***LOCATION 2***	***SEVERITY***	***MEASUREMENT***	***COMMENT***
EXPANSION BEARING	STEEL	ROCKER			
CONDITION	***LOCATION 1***	***LOCATION 2***	***SEVERITY***	***MEASUREMENT***	***COMMENT***

PIER-10 *32 FT 0 IN* *REINFORCED CONCRETE* *MULTIPLE COLUMN*

CONDITION	***LOCATION 1***	***LOCATION 2***	***SEVERITY***	***MEASUREMENT***	***COMMENT***
ASSOCIATED COMPONENT	***MATERIAL***	***CONSTRUCTION***			
BEAM CAP	REINFORCED CONCRETE	CAST-IN-PLACE			
CONDITION	***LOCATION 1***	***LOCATION 2***	***SEVERITY***	***MEASUREMENT***	***COMMENT***
SEALED	THROUGHOUT		EPOXY		
VERTICAL CRACKS	THROUGHOUT		LARGE		
COLUMN	REINFORCED CONCRETE	CAST-IN-PLACE			
CONDITION	***LOCATION 1***	***LOCATION 2***	***SEVERITY***	***MEASUREMENT***	***COMMENT***
FOOTING	REINFORCED CONCRETE	SPREAD			
CONDITION	***LOCATION 1***	***LOCATION 2***	***SEVERITY***	***MEASUREMENT***	***COMMENT***
WEB BEAM	REINFORCED CONCRETE	CAST-IN-PLACE			
CONDITION	***LOCATION 1***	***LOCATION 2***	***SEVERITY***	***MEASUREMENT***	***COMMENT***
EXPANSION BEARING	STEEL	ROCKER			
CONDITION	***LOCATION 1***	***LOCATION 2***	***SEVERITY***	***MEASUREMENT***	***COMMENT***
FIXED BEARING	STEEL	PEDESTAL(ROTATING)			
CONDITION	***LOCATION 1***	***LOCATION 2***	***SEVERITY***	***MEASUREMENT***	***COMMENT***

ABUTMENT-11 *29 FT 2 IN* *REINFORCED CONCRETE* *NON-INTEGRAL*

CONDITION	***LOCATION 1***	***LOCATION 2***	***SEVERITY***	***MEASUREMENT***	***COMMENT***
ASSOCIATED COMPONENT	***MATERIAL***	***CONSTRUCTION***			
BEAM CAP	REINFORCED CONCRETE	CAST-IN-PLACE			
CONDITION	***LOCATION 1***	***LOCATION 2***	***SEVERITY***	***MEASUREMENT***	***COMMENT***

VERTICAL CRACKS	THROUGHOUT		FEW		
STRAIGHT WINGS	REINFORCED CONCRETE	CAST-IN-PLACE			
CONDITION	***LOCATION 1***	***LOCATION 2***	***SEVERITY***	***MEASUREMENT***	***COMMENT***
BACKWALL	REINFORCED CONCRETE	CAST-IN-PLACE			
CONDITION	***LOCATION 1***	***LOCATION 2***	***SEVERITY***	***MEASUREMENT***	***COMMENT***
FIXED BEARING	STEEL	PEDESTAL(ROTATING)			
CONDITION	***LOCATION 1***	***LOCATION 2***	***SEVERITY***	***MEASUREMENT***	***COMMENT***

OVER/UNDER ROUTES CLEARANCE INFORMATION

CLEARANCES OVER DECK

**NOTE: Vertical clearances for permitting purposes are taken as 2 inches less than the actual field measured clearance.

VERTICAL CLEARANCE TYPE**	VALUE	DIRECTION	DATE	COMMENT
ACTUAL	15 FT 4 IN		06/27/2017	

CLEARANCES UNDER BRIDGE

**NOTE: Vertical clearances for permitting purposes are taken as 2 inches less than the actual field measured clearance.

RECORD #	ROUTE	# LANES	DIRECTION OF TRAFFIC	RIGHT LATERAL CLEARANCE	LEFT LATERAL CLEARANCE	UR-ID

VERTICAL CLEARANCE TYPE**	VALUE	DIRECTION	DATE	COMMENT

STRUCTURE PAINT INFORMATION

CONDITION: VERY GOOD **RUST AMOUNT :** 9=.03% OF SURFACE RUSTED **STEEL TONS :** 1,122

ORIGINAL PAINT		CONTRACT REPAINT		DEPARTMENT REPAINT	
PAINT TYPE :		**PAINT TYPE :**	G SYSTEM	**PAINT TYPE :**	**MANUFACTURE :**
NAME :		**NAME :**	ZINC/EPOXY/ACRYLIC	**NAME :**	**SURFACE PREP :**
PAINT COLOR :		**PAINT COLOR :**	BROWN	**PAINT COLOR :**	
PAINT YEAR :		**PAINT YEAR :**	2016	**PAINT YEAR :**	
MILS :		**MILS :**	12	**MILS :**	

REQUESTED WORK ITEMS

GENERAL WORK COMMENTS:

Missouri Department of Transportation
State Bridge Inspection Report

COUNTY: OZARK **DISTRICT: SE** **CLASS: STATBR** **FED-ID: 10065** **BRIDGE: K0817**

RESPONSIBILITY	*LOCATION*	*ITEM*	*CATEGORY*	*PRIORITY*	*DATE*	*WORK ITEM COMMENT*
DISTRICT SPECIAL	ROADWAY SURFACE	REPAIR CONCRETE > 50 SF	DECK	2	10/14/2015	
DISTRICT SPECIAL	SEE COMMENT	REPLACE JOINTS	DECK	2	12/15/2017	(HAGEMD1, 10/30/2015)--REPLACE JOINTS OVER ALL PIERS TO PROTECT FLOOR BEAMS AND PIER CAPS
REGIONAL	SUPER-TRUSS	REPAIR SECT LOSS IN MEMBR	SUPERSTRUCTURE	2	12/15/2017	(HAGEMD1, 10/30/2015)--REPAIR SECTION LOSS IN FLOOR BEAMS (WEBS AND/OR FLANGES) AT PIERS 2, 4, 6, 7, 8 & 9 UNDER JOINTS.

UTILITY ATTACHMENTS

UTILITY	*OWNER*	*METHOD*	*MEASUREMENT TYPE*	*VALUE*	*NUMBER*	*UTILITY ATTACHMENT COMMENT*
ELECTRIC		HANGER			4	(PRINCH, 09/25/2002)--ON SOUTH SIDE
TELEPHONE		HANGER			1	(BOWDEJ1, 10/15/2003)--PHONE LINE ATTACHED TO NORTH SIDE & POWER LINES ATTACHED TO SOUTH SIDE

PROGRAM NOTES INFORMATION

YEAR	PROJECT #	MONTH LET	YEAR LET	ITEMS	COMMENT
2025	9P3728	1	2025	OTHER	(BRAWLK1, 03/10/2022)--BRIDGE WASHING
2016	9P3024	0	0	REPAINT, SUPERSTRUCTURE REPAIR, WEARING SURFACE	

COMPUTER GENERATED RATINGS AND DEFICIENCY ITEMS

NOTE: The items listed in this section are updated whenever computer edits are ran on a structure after the inspection updates have been entered in to TMS.

Rated Item	Rating	Rating Date
[Item 67] Structure Evaluation Rating:	4-MEETS MINIMUM TOLERABLE	1/16/2018
[Item 68] Deck Geometry Rating:	2-BASICALLY INTOLRBLE REQ	3/6/2024
[Item 69] Underclearance:	N-NOT APPLICABLE	5/18/2001
Sufficiency Rating:	17.9%	10/25/2021
Deficiency:	STRUCTURAL	1/16/2018
Funding Eligibility:	FULL	----
Estimated New Structure Length:	49 FT.	----
Estimated Structure Cost:	$17,570,970	----
Estimated Total Project Cost:	$26,356,455	----
Year of Cost Estimate:	2024	----

NOTE: The above structure length and cost estimates are computer generated using algorithims in the TMS system. These algorthims are generalized to use NBI items to come up with a new structure length and width to calculate a new area which is taken times a representative cost per square foot. The actual structure size and cost may vary significantly from these numbers once site specific engineering is done.

ADVANCED SIGN INFORMATION

SIGN #	SIGN TYPE	PROBLEM	PROBLEM DIRECTION
1			

OUTFALL INSPECTION INFORMATION

 # OUTFALLS: **INSPECTOR:**
STATUS: **DATE:**
NOTES:

Missouri Department of Transportation
Bridge Inventory and Inspection System
Structural Inventory & Appraisal Sheet

August 7, 2024
7:04:26am

COUNTY : OZARK **BRIDGE :** K0817 2 **REVIEW STATUS :** APPROVED **NBI STATUS :** T
RECORD TYPE : ROUTE CARRIED 'ON' STRUCT **RUN DATE :** 3/15/2024 **SUBMITTAL YEAR :** 2024

GENERAL STRUCTURE INFORMATION

1	State	MISSOURI
2	District	SE
3	County	OZARK
8	Federal ID No.	10065
27	Year Built	1951
106	Year Reconstructed	0
42A	Type of Service On	HIGHWAY
21	Structure Maintenance	STATE HIGHWAY AGENCY
22	Structure Owner	STATE HIGHWAY AGENCY
33	Br. Median Code	NO MEDIAN
37	Historical Significance	ELIGIBLE FOR NR OF HP
101	Parallel Struc Desg	NONE EXISTS
103	Temporary Structure	NOT TEMPORARY
112	NBIS Bridge Length	YES

ROUTE DESIGNATION INFORMATION

5A	Record Type	ROUTE CARRIED 'ON' STRUCT
5B	Route Signing Prefix	US
5C	Designated Level of Service	MAINLINE
5D	Route Number	00160
5E	Directional Suffix	NOT APPLICABLE
7	Facility Carried	US 160 E
12	Base Hwy. Network	YES
13A	LRS Inventory Route No.	0000007806
13B	Subroute No.	00
20	Toll Status	ON FREE ROAD
26	Functional Classification	06-RURAL MINOR ARTERIAL
28A	Lanes on Structure	02
100	STRAHNET Designation	RTE NOT A DEFENSE HWY
104	National Highway System	NOT ON NHS
105	Federal Lands Highway	NOT APPLICABLE
110	Designated Nat. Network	NO

STRUCTURE LOCATION INFORMATION

4	Place	JASPER
	Code	36548
9	Location	S 19 T 22 N R 15 W
11	Milepoint	180.95 miles
16	Latitude	36 D 34 M 40 S
17	Longitude	92 D 38 M 50 S

STRUCTURE TRAFFIC INFORMATION

29	AADT	1453
30	AADT Year	2023
102	Direction of Traffic	2-WAY TRAFFIC
109	AADT Truck Percent	7%
114	Future AADT	3051
115	Future AADT Year	2043

UNDERRECORD INFORMATION

6	Features Intersected	BULL SHOALS LK
42B	Type of Service Under	WATERWAY
28B	Lanes Under Structure	00
54A	Vert. Clearance Ref.	N/A
54B	Vert. Clearance	0 Ft. 0 In.
55A	Rt. Lat Clear Ref.	N/A
55B	Rt. Lat Clearance	0 Ft. 0 In.
56	Left Lat Clearance	0 Ft. 0 In.
38	Navigation Control	PERMIT NOT REQ
39	Nav Vertical Clear	0 Ft. 0 In.
40	Nav Horizontal Clear	0 Ft. 0 In.
111	Nav. Pier Protection	
116	Nav. Cl. Vert. Clear	

STRUCTURE GEOMETRIC INFORMATION

10	Inventory Rte. Vert. Clear	13 Ft. 6 In.
19	By pass Detour Length	54.38 miles
32	Approach Roadway Width	23 Ft. 11 In.
34	Skew	0.00 Degrees
35	Struct. Flared	NO
47	Total Horiz. Clear	21 Ft. 12 In.
48	Maximum Span Length	181 Ft. 9 In.
49	Structure Length	1,816 Ft. 11 In.
50A	Left Curb/Sidewalk Width	0 Ft. 0 In.
50B	Right Curb/Sidewalk Width	0 Ft. 0 In.
51	Curb to Curb Br. Width	21 Ft. 12 In.
52	Deck Width (Out-Out)	24 Ft. 7 In.
53	Vert.Clearance Over Deck	13 Ft. 6 In.

Design_No = K0817 and Inventory_Appraisal_Submittal_Year = 2024

Missouri Department of Transportation
Bridge Inventory and Inspection System
Structural Inventory & Appraisal Sheet

August 7, 2024
7:04:26am

COUNTY : OZARK **BRIDGE :** K0817 2 **REVIEW STATUS :** APPROVED **NBI STATUS :** T
RECORD TYPE : ROUTE CARRIED 'ON' STRUCT **RUN DATE :** 3/15/2024 **SUBMITTAL YEAR :** 2024

LOAD RATING AND POSTING INFORMATION

31	Design Load	H 15
41	Structure Status	POSTED FOR LOAD
63	Oper. Rating Meth.	LOAD FACTOR
64	Operating Rating	35 Tons.
65	Inventory Rating Meth	LOAD FACTOR
66	Inventory Rating	21 Tons.
70	Bridge Posting Code	0.1-9.9% BELOW

PROPOSED IMPROVEMENT INFORMATION

	Sufficiency Rating	17.9 Percent
	Deficiency Rating	STRUCTURAL
	Funding Eligibility	FULL
75A	Proposed Work	REPLACEMENT SUBSTND LOAD
75B	Work Done By	Contract
76	New Struc Length	1,817 Ft. 7 In.
94	Struc Improve Cost	$ 17,571,000
95	Roadway Improve Cost	$ 1,757,000
96	Total Project Cost	$ 26,356,000
97	Year of Cost Estimates	2024

APPRAISAL RATING INFORMATION

36A	Br. Rail App. Rating	DOES NOT MEET ACCEPT STND
36B	Transition Rail App. Rating	MEETS ACCEPTBLE STND
36C	Approach Rail App. Rating	MEETS ACCEPTBLE STND
36D	Rail End Treat. App. Rating	MEETS ACCEPTBLE STND
67	Struc Eval App. Rating	4
68	Deck Geometry App. Rating	2
69	Underclearance App. Rating	N
71	Waterway Adeq. App. Rating	8
72	Approach Road App. Rating	6
113	Scour Assess App. Rating	8

MATERIAL/CONSTRUCTION INFORMATION

43A	Main Struc. Mat type	STEEL
43B	Main struc Constr. Type	TRUSS - THRU
45	# of Main Spans	10
44A	Appr Struc. Mat type	000
44B	Appr Struc. Cnstr. type	000
46	# of Approach Span	0
107	Deck Mat/Constr.	1 CONCRETE CIP
108A	Wear Surf Mat/Constr.	6 BITUMINOUS
108B	Membrane Mat/Constr.	0 NONE
108C	Deck Protect Mat/Constr.	0 NONE

CONDITION RATING INFORMATION

58	Deck Cond. Rating	4
59	Superstructure Cond. Rating	4
60	Substructure Cond. Rating	6
61	Channel /Channel Protection Cond. Rating	8
62	Culvert Cond. Rating	N

INSPECTION INFORMATION

90	Gen. Insp Date	10 / 23		
91	Gen. Insp. Frequency	24	Months	
92A	Frac. Critical Inspection	Y	Months	24
93A	Frac. Critical Insp. Date	10 / 23		
92B	Underwater Inspection	Y	Months	60
93B	Underwater Insp. Date	8 / 22		
92C	Special Inspection	N	Months	
93C	Special Inspection Date			

BORDER BRIDGE INFORMATION

98	Neighboring State Code
98B	Neighboring State % Respon
99	Neighboring State Struc. No.

APPROVED POSTING INFORMATION

Approved Posting Category S-9

	Ton1	Ton2	Ton3
Tonnage Values for Posting Sign	33		

General Text for Posting Sign

6 AXLE TRUCKS OVER 33 TONS 15 MPH ON BRIDGE.

FIELD POSTING INFORMATION

Field Posting Category S-9

	Ton1	Ton2	Ton3
Tonnage Values for Posting Sign	33		

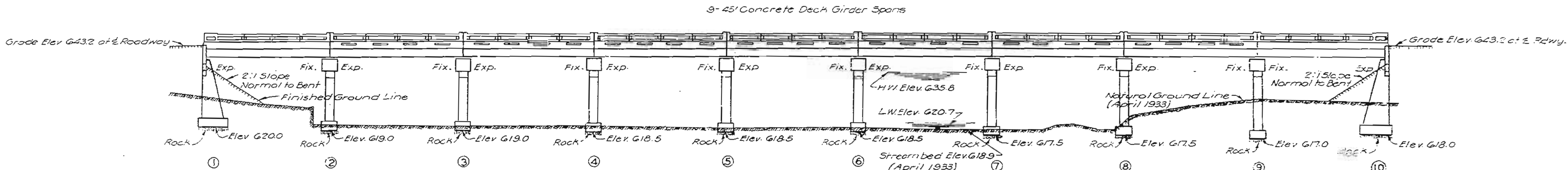
General Text for Posting Sign

6 AXLE TRUCKS OVER 33 TONS 15 MPH ON BRIDGE.

Design_No = K0817 and Inventory_Appraisal_Submittal_Year = 2024

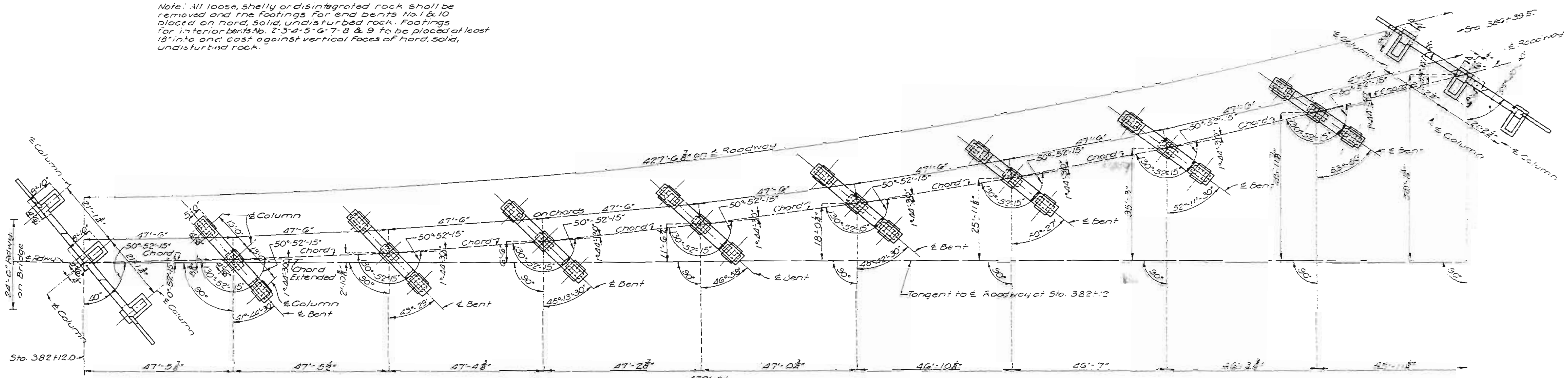
MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	[illegible]	13		



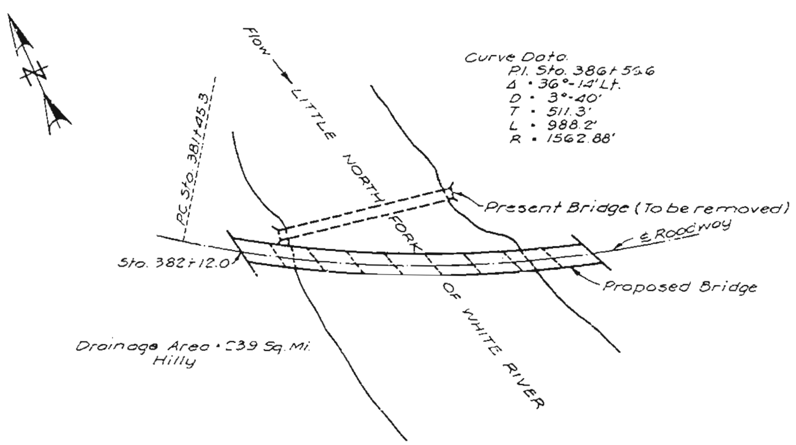
GENERAL ELEVATION

Note: All loose, shelly or disintegrated rock shall be removed and the footings for end bents No. 1 & 10 placed on hard, solid, undisturbed rock. Footings for interior bents No. 2-3-4-5-6-7-8 & 9 to be placed at least 18" into and cast against vertical faces of hard, solid, undisturbed rock.



PLAN

Note: Bents cannot be accurately located from reference point on the tangent by the conventional survey methods based on 100' chords.



Curve Data
P.I. Sta. 386+56.6
Δ - 36°-14' Lt.
D - 3°-40'
T - 511.3'
L - 988.2'
R - 1562.88'

LOCATION SKETCH

NOTE "A" - THIS BRIDGE TO BE REMOVED UNDER PROJECT RT-SC(80) SEC. 3-A.

GENERAL NOTES:-

Design Specifications A.A.S.H.O.
Loading H-15 A.A.S.H.O.
Reinforcing Steel Stress 18000 psi
Class "B" Concrete 900 psi
All Concrete shall be Class B.

Replaced with K-817R

B.M. #39 Elev. 662.35 Nail in Root 10' Elm 66' Lt. Sta. 381+75, U.S.G.S. Datum.

ESTIMATED QUANTITIES				
Item		Superstructure	Substructure	Total
Class 1 Excavation for Struct.	Cu. Yds.		200	200
Class 2 Excavation for Struct.	Cu. Yds.		127	127
Class "B" Concrete (Handrail)	Cu. Yds.	49.0		49.0
Class "B" Concrete	Cu. Yds.	623.3	403.9	1027.2
Reinforcing Steel	Lbs.	203,140	32,680	235,820
Gray Iron Alloy Castings	Lbs.	7810		7810

Note: Excavation for bridge made above Elev. 621.0 will be paid for as Class 1 Excavation for Structures.
Excavation for bridge made below Elev. 621.0 will be paid for as Class 2 Excavation for Structures.

BRIDGE OVER LITTLE N. FORK OF WHITE RIVER

STATE ROAD FROM THEODOSIA TO GAINSVILLE
ABOUT 57 MILES WEST OF WEST PLAINS
PROJECT NO. FAS 425-C(1) (S.C) STA. 382+12.0

OZARK COUNTY

SUBMITTED BY N. R. Sack BRIDGE ENGINEER DATE 8/29/41
APPROVED BY C. W. Brown CHIEF ENGINEER DATE 8/29/41

STD C-110 R2

K-817

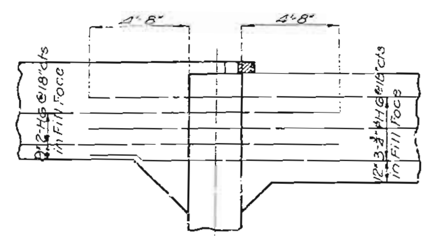
180

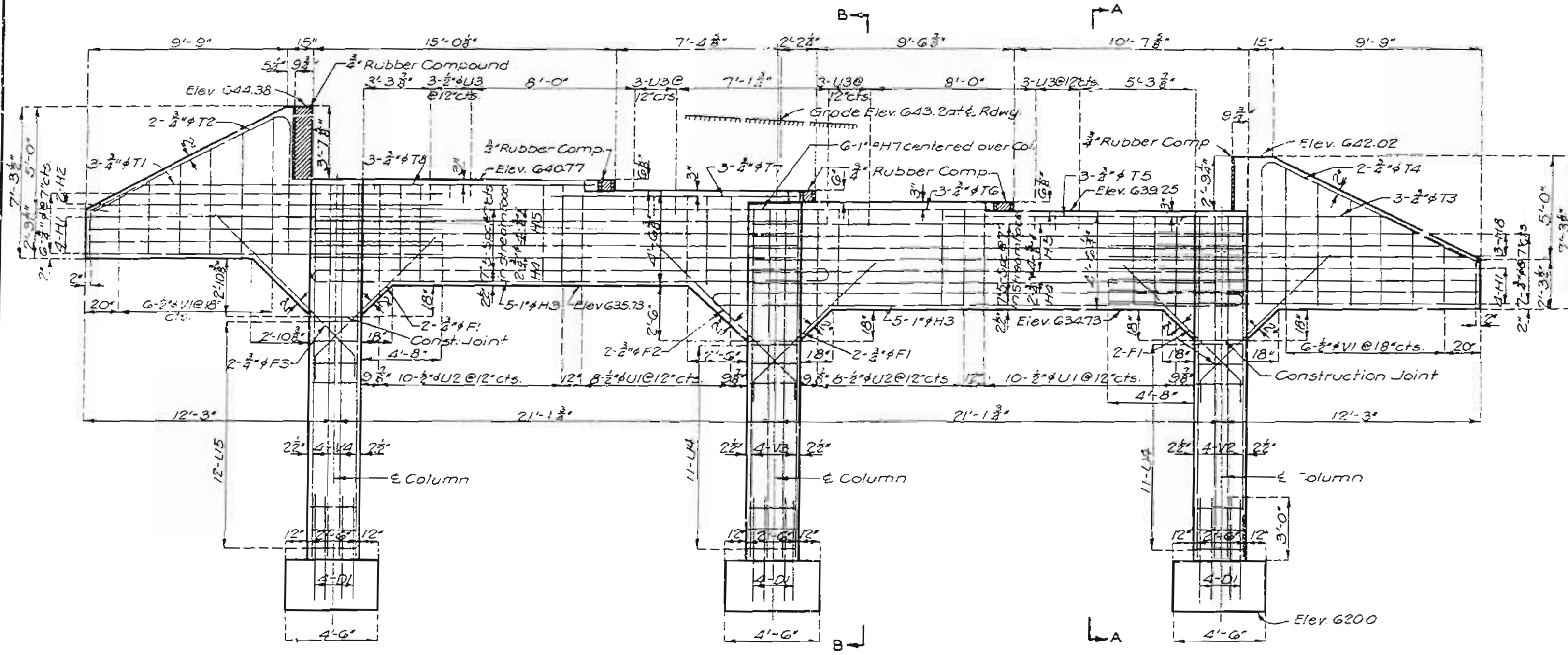
Drawn June 1941 by J.G.
Traced June 1941 by C.S.
Checked Aug. 1941 by R.A.B.

Note: This drawing is not to scale. Follow dimensions.

MISSOURI STATE HIGHWAY DEPARTMENT

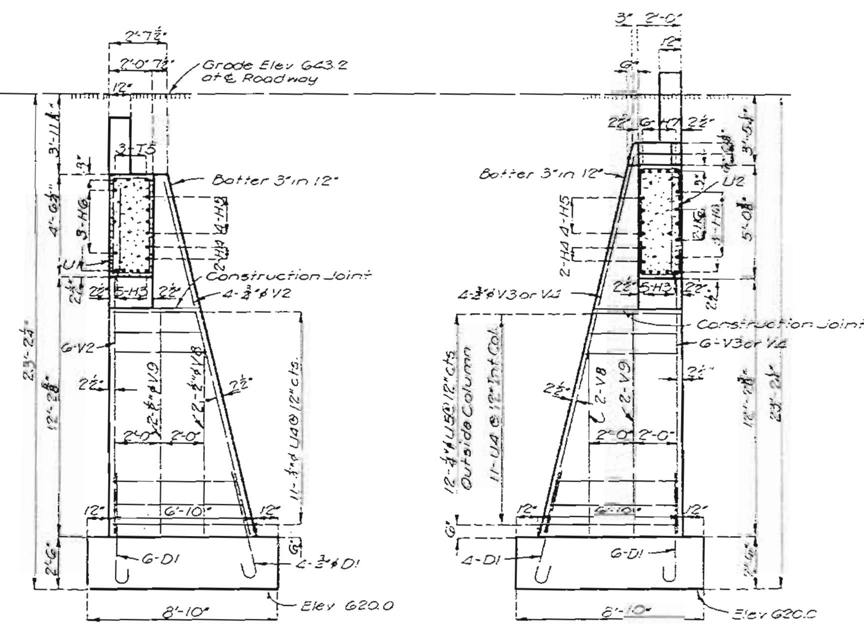
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	FAS 425-C(1)(S.C)	19		



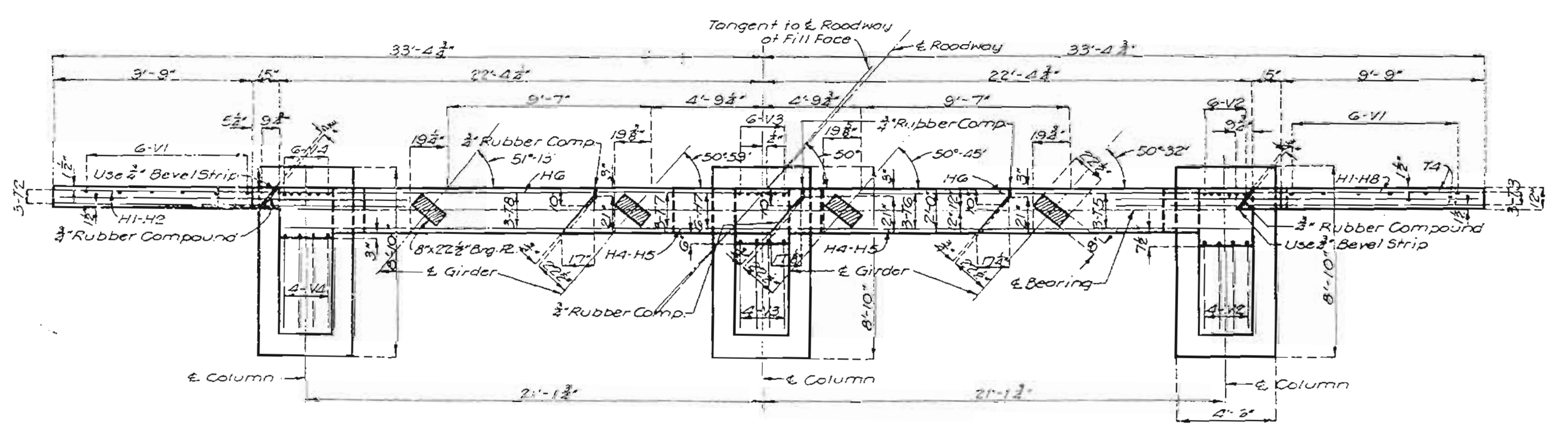


Note: Fill at End Bent No.1 shall not be carried above bottom of beam and wings until superstructure Span (1-2) is in place

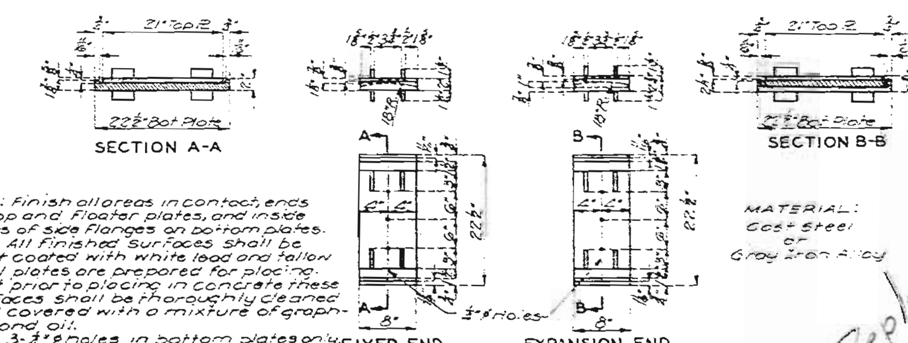
ELEVATION



SECTION A-A SECTION B-B



PLAN



Note: Finish all areas in contact, ends of top and Floater plates, and inside faces of side flanges on bottom plates. All finished surfaces shall be kept coated with white lead and tallow until plates are prepared for placing. Just prior to placing in concrete these surfaces shall be thoroughly cleaned and covered with a mixture of graphite and oil.
3-3/4" holes in bottom plates only

MATERIAL: Cast Steel or Gray Iron Alloy

DETAILS OF BEARING PLATES

Note: 36 sets of 3 plates each required. Each set consisting of 1 top plate, and 1 bottom plate for fixed end and 1 top plate, 1 floater plate, and 1 bottom plate for expansion end.

Replaced With K-817R

DETAILS OF END BENT NO. 1

SEE NOTE "A" ON SHEET NO. 1.

BRIDGE OVER LITTLE N. FORK OF WHITE RIVER
STATE ROAD FROM THEODOSIA TO GAINSVILLE
ABOUT 57 MILES WEST OF WEST PLAINS
PROJECT NO. FAS 425-C(1)(S.C) STA. 382+12.0
OZARK COUNTY

VOID

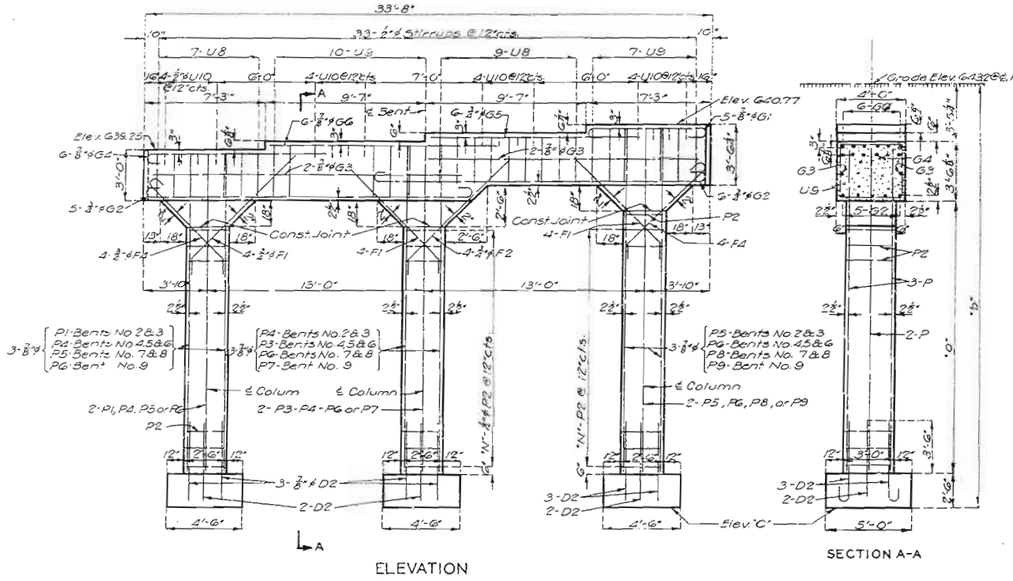
K-817

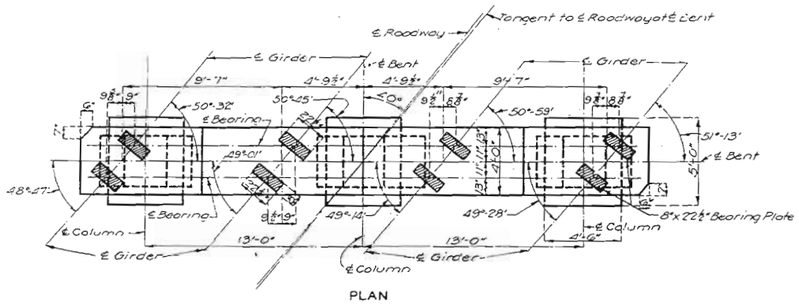
Drawn June 1941 by J.G.
Traced June 1941 by C.S.
Checked Aug. 1941 by KAB.

Note: This drawing is not to scale. Follow dimensions.

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
8	MO	BRZ-425(1)	1942		





PLAN

DETAILS OF INTERIOR BENTS NO. 2, 3, 4, 5, 6, 7, 8 & 9

COMPLETE BILL OF REINFORCING STEEL.

No.	Size	Length	Mark	Location
SUPERSTRUCTURE				
4	½"ϕ	12'-6"	R1	Rail
416	½"ϕ	9"	R2	Rail
252	⅝"ϕ	7'-3"	R3	Sub Post
184	¾"ϕ	3'-3"	R4	Post
3200	½"ϕ	18"	R5	Balusters
4	⅞"ϕ	11'-3"	R6	Rail
8	⅞"ϕ	10'-3"	R7	Rail
8	⅞"ϕ	8'-9"	R8	Rail
4	1"ϕ	11'-6"	R9	Rail
2	½"ϕ	9'-3"	R10	Rail
52	½"ϕ	12'-0"	R11	Rail
56	⅝"ϕ	12'-3"	R12	Rail
56	⅝"ϕ	10'-9"	R13	Rail
56	⅝"ϕ	11'-0"	R14	Rail
4	⅝"ϕ	9'-6"	R15	Rail
4	⅝"ϕ	11'-6"	R16	Rail
8	⅞"ϕ	8'-6"	R17	Rail
8	⅝"ϕ	10'-6"	R18	Rail
4	⅝"ϕ	10'-9"	R19	Rail
4	⅝"ϕ	12'-9"	R20	Rail
12	⅝"ϕ	6'-9"	R21	End Post
12	⅝"ϕ	6'-0"	R22	End Post
6	⅞"ϕ	26'-3"	C1	Curb
594	⅝"ϕ	3'-9"	C2	Curb
28	⅝"ϕ	4'-0"	C3	Curb
6	⅞"ϕ	23'-3"	C4	Curb
84	⅞"ϕ	25'-3"	C5	Curb
6	⅞"ϕ	22'-6"	C6	Curb
6	⅞"ϕ	26'-3"	C7	Curb
496	⅝"ϕ	27'-6"	S1	Slab
846	⅝"ϕ	25'-0"	S2	Slab
221	⅝"ϕ	29'-9"	S3	Slab
39	⅝"ϕ	32'-9"	S4&S5	Slab
288	⅝"ϕ	32'-6"	S6&S7	Slab
304	⅝"ϕ	32'-0"	S8&S9	Slab
20	⅝"ϕ	34'-3"	S10&S11	Slab
52	⅝"ϕ	7'-6"	S12	Slab
96	⅝"ϕ	6'-6"	S13	Slab
96	½"ϕ	13'-6"	W1	Web
36	½"ϕ	18'-0"	W2	Web
4	⅜"ϕ	11'-6"	W3	Web
2	⅝"ϕ	20'-3"	W4	Web
9	⅝"ϕ	5'-0"	W7	Web
9	⅜"ϕ	5'-9"	W8	Web

No.	Size	Length	Mark	Location
SUPERSTR. (Cont'd)				
28	⅝"ϕ	9'-6"	W5	Web
8	⅝"ϕ	15'-0"	W6	Web
9	⅝"ϕ	2'-6"	W9	Web
9	⅝"ϕ	3'-0"	W10	Web
1152	¾"ϕ	7'-6"	U1	Girder
90	1⅜"ϕ	49'-3"	B2	Girder
106	1⅜"ϕ	50'-0"	B5	Girder
72	1⅜"ϕ	45'-6"	B4	Girder
108	1⅜"ϕ	40'-0"	B5	Girder
90	1⅜"ϕ	49'-9"	S6	Girder
END BENTS NO. 1 & 10				
16	¾"ϕ	13'-0"	H1	Wing
2	¾"ϕ	33'-9"	H2	Wing
20	1"ϕ	25'-3"	H3	Beam
8	¾"ϕ	23'-9"	H4	Beam
16	¾"ϕ	23'-6"	H5	Beam
10	¾"ϕ	28'-3"	H6	Beam
12	1"ϕ	12'-0"	H7	Beam
3	¾"ϕ	33'-0"	H8	Wing
12	½"ϕ	9'-6"	V1	Wing
10	¾"ϕ	16'-6"	V2	Col. Bt.#1
10	¾"ϕ	17'-6"	V3	Col. Bt.#1
10	¾"ϕ	18'-0"	V4	Col. Bt.#1
10	¾"ϕ	18'-6"	V5	Col. Bt.#10
10	¾"ϕ	19'-6"	V6	Col. Bt.#10
10	¾"ϕ	20'-0"	V7	Col. B-#10
10	¾"ϕ	9'-3"	F1	Haunch
4	¾"ϕ	10'-6"	F2	Haunch
4	¾"ϕ	11'-0"	F3	Haunch
6	¾"ϕ	16'-6"	T1	Wing
4	¾"ϕ	17'-6"	T2	Wing
6	¾"ϕ	16'-6"	T3	Wing
2	¾"ϕ	15'-9"	T4	Wing
6	¾"ϕ	15'-0"	T5	Beam
6	¾"ϕ	10'-0"	T6	Beam
6	¾"ϕ	12'-6"	T7	Beam
3	¾"ϕ	13'-0"	T8	Beam
3	¾"ϕ	14'-9"	T9	Beam
32	½"ϕ	12'-5"	U1	Beam
42	½"ϕ	13'-9"	U2	Beam
22	½"ϕ	2'-9"	U3	Beam

No.	Size	Length	Mark	Location
END BENTS NO. 1 & 10 (cont'd)				
11	⅝"ϕ	31'-0"	U4	Column
6	⅝"ϕ	30'-6"	U5	Column
13	⅝"ϕ	32'-0"	U6	Column
7	⅝"ϕ	31'-6"	U7	Column
6	⅝"ϕ	8'-6"	V8	Column
6	⅝"ϕ	10'-6"	V9	Column
6	⅝"ϕ	11'-0"	V10	Column
6	¾"ϕ	12'-6"	V11	Column
60	¾"ϕ	6'-3"	D1	Footing
INTERIOR BENTS NO 2,3,4,5,6,7,8&9				
40	⅝"ϕ	8'-9"	G1	Beam
88	¾"ϕ	21'-6"	G2	Beam
32	¾"ϕ	18'-0"	G3	Beam
48	⅝"ϕ	10'-9"	G4	Beam
48	¾"ϕ	12'-6"	G5	Beam
48	⅝"ϕ	13'-6"	G6	Beam
36	¾"ϕ	9'-3"	F1	Haunch
32	¾"ϕ	10'-6"	F2	Haunch
64	⅝"ϕ	8'-6"	F4	Haunch
16	⅝"ϕ	17'-6"	P1	Column
347	⅝"ϕ	10'-9"	P2	Column
24	⅝"ϕ	18'-6"	P3	Column
40	⅝"ϕ	18'-0"	P4	Column
32	⅝"ϕ	19'-0"	P5	Column
48	⅝"ϕ	19'-6"	P6	Column
8	⅝"ϕ	20'-0"	P7	Column
16	⅝"ϕ	20'-6"	P8	Column
8	⅝"ϕ	21'-0"	P9	Column
128	½"ϕ	13'-5"	U8	Beam
136	½"ϕ	14'-9"	U9	Beam
128	½"ϕ	2'-9"	U10	Beam
192	⅝"ϕ	6'-9"	D2	Footing

F1-F2-F3

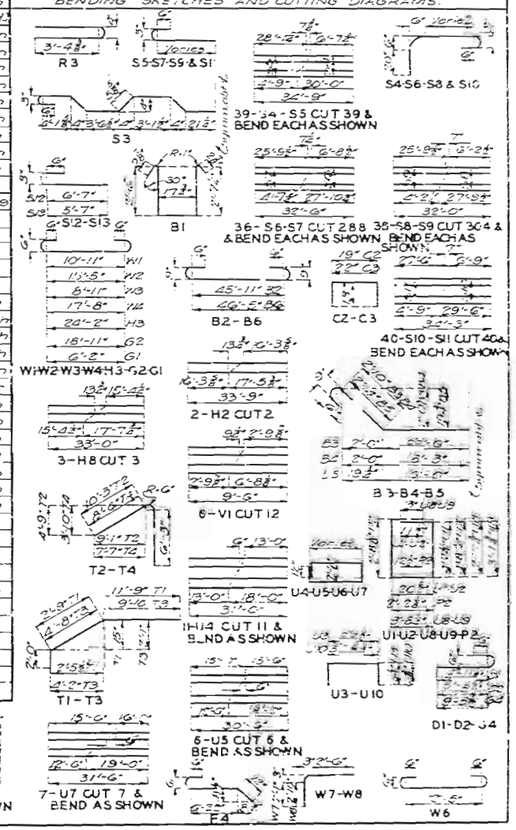
13-U6 CUT 13 & BEND AS SHOWN

7-U7 CUT 7 & BEND AS SHOWN

W7-W8

W6

BENDING SKETCHES AND CUTTING DIAGRAMS.



DATA FOR INTERIOR BENTS

Bent No.	Dimension "O"	Dimension "D"	No. P2 Bars "N"	Elevation "C"
2	14'-9⅜"	24'-2⅜"	13	G19.0
3	14'-9⅜"	24'-2⅜"	13	G19.0
4	15'-3⅜"	24'-8½"	14	G18.5
5	15'-3⅜"	24'-8½"	14	G18.5
6	15'-3⅜"	24'-8½"	14	G18.5
7	16'-3⅜"	25'-8½"	15	G17.5
8	16'-3⅜"	25'-8½"	15	G17.5
9	16'-9⅜"	26'-2½"	15	G17.0

SEE NOTE "A" ON SHEET NO. 1.

Replaced With K-817R

BRIDGE OVER LITTLE N. FORK OF WHITE RIVER

STATE ROAD FROM THEODOSIA TO GAINSVILLE
ABOUT 57 MILES WEST OF WEST PLAINS
PROJECT NO. FAS 425-C(1)(S.C.) STA. 382+12.0

OZARK COUNTY

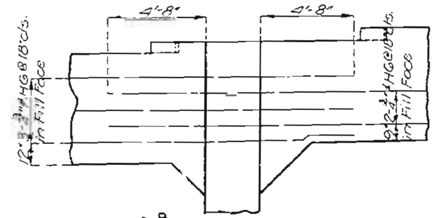
K-817

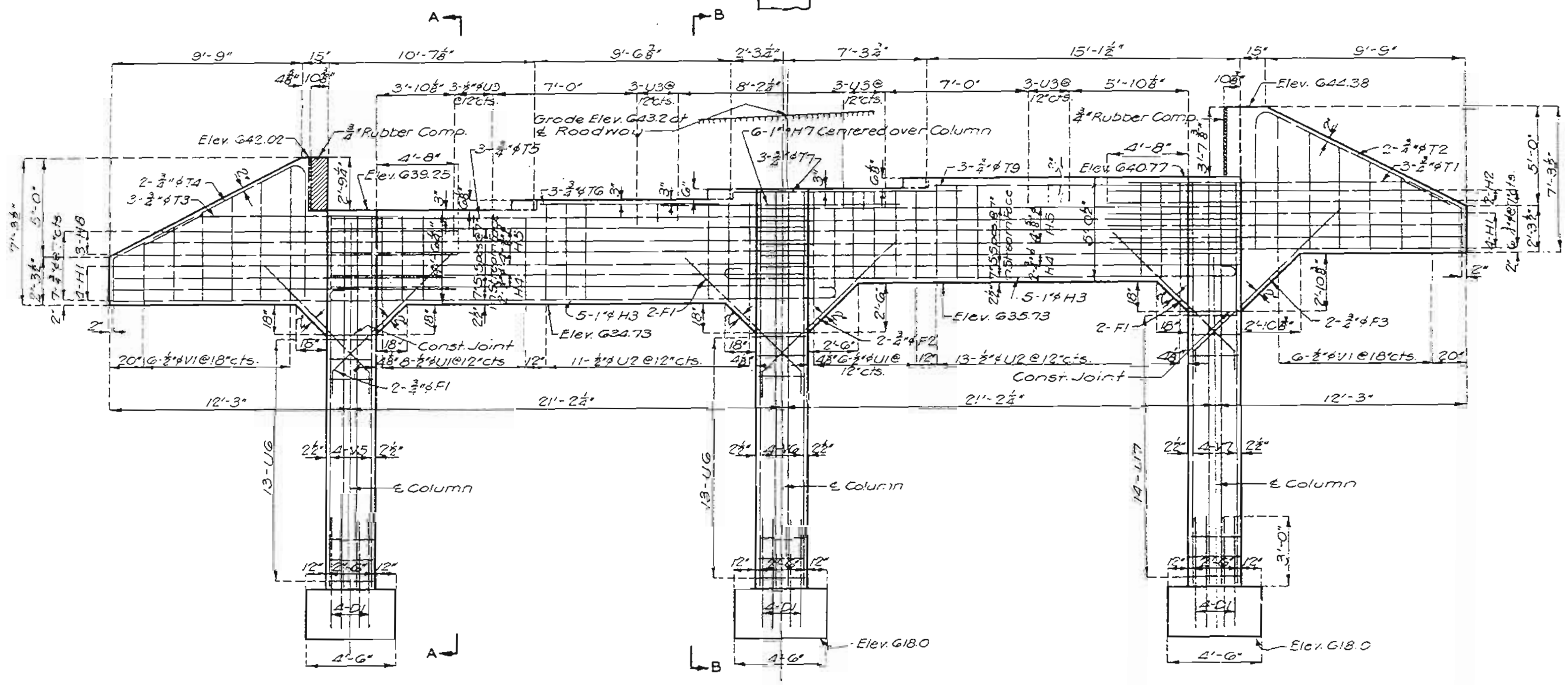
Drawn June 1941 by J.G.
Traced June 1941 by C.S.
Checked Aug. 1941 by R.A.B.

Note: This drawing is not to scale. Follow dimensions.

MISSOURI STATE HIGHWAY DEPARTMENT

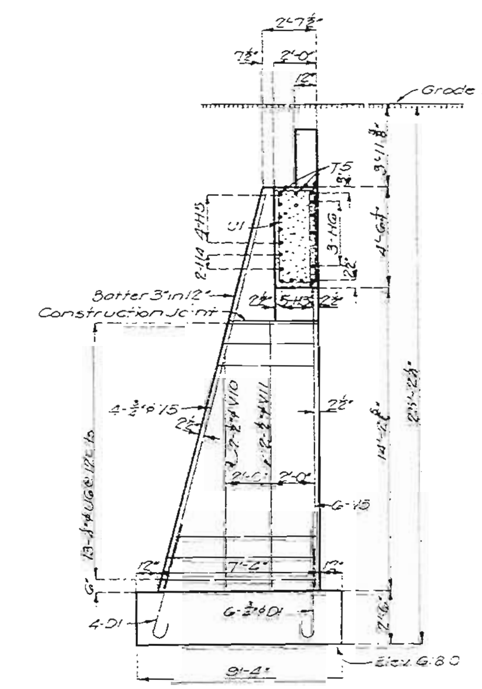
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	Mo.	[illegible]	19		



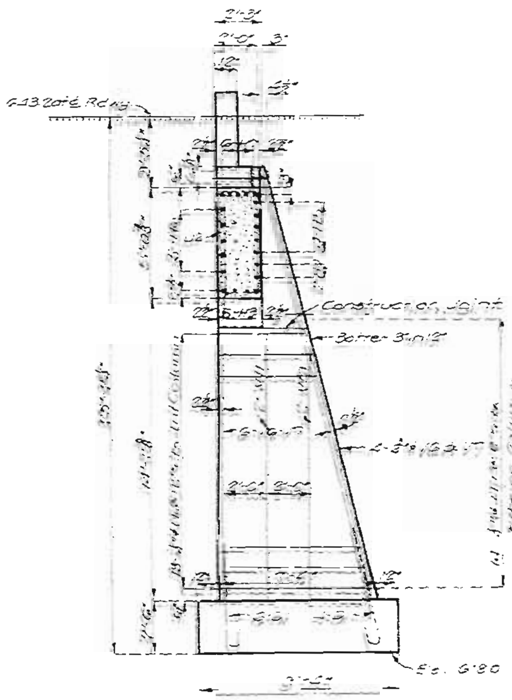


ELEVATION

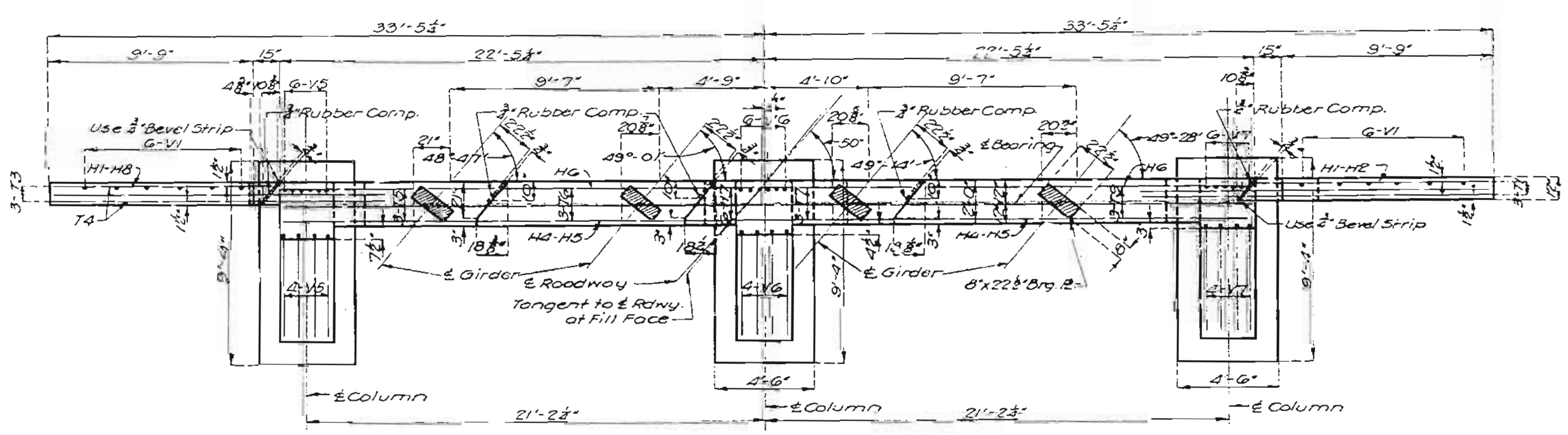
Note: Fill at End Bent No. 10 shall not be carried above bottom of beam and wings until superstructure span (9-10) is in place.



SECTION A-A



SECTION B-B



PLAN

DETAILS OF ABUTMENT NO. 10

SEE NOTE "A" ON SHEET NO. 1.

Replaced With K-817R

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BRIDGE OVER LITTLE N. FORK OF WHITE RIVER

STATE ROAD FROM THEODOSIA TO GAINSVILLE

ABOUT 57 MILES WEST OF WEST PLAINS

PROJECT NO. FAS 425-C(1) (S.C.) STA. 382+12.0

OZARK COUNTY

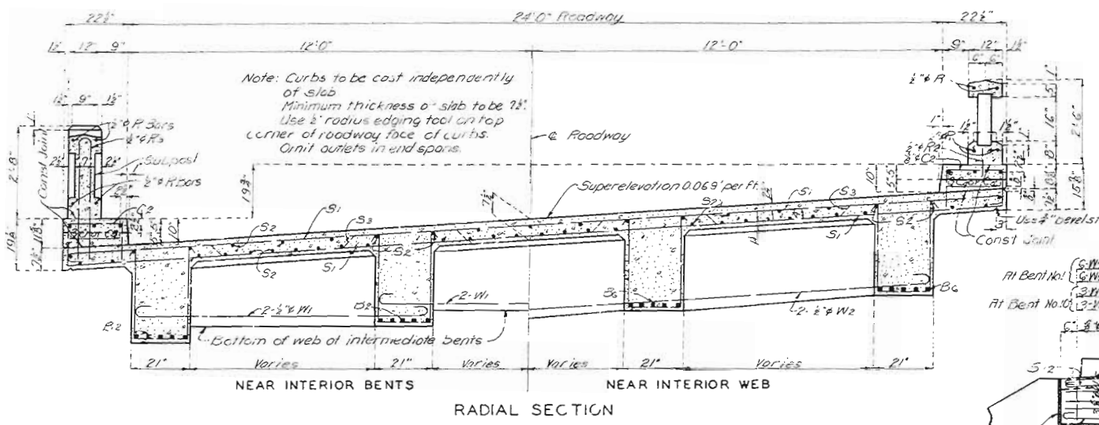
K-817

Drawn June 1941 by J.G.
Traced June 1941 by C.S.
Checked Aug. 1941 by RAB

Note: This drawing is not to scale. Follow dimensions.

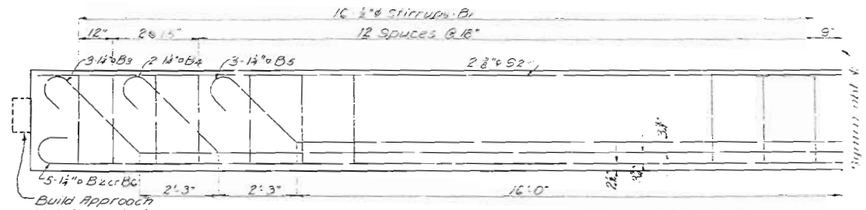
MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	[illegible]	19		

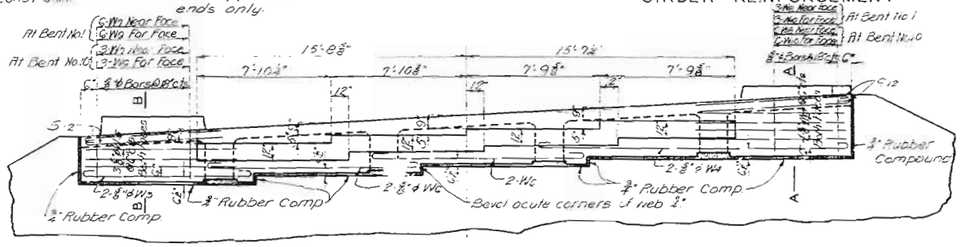


RADIAL SECTION

Note: Space between bottom of girders and the top of intermediate bents to be left open to depth of plates.



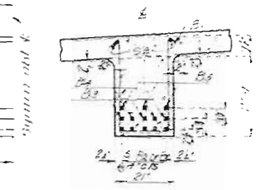
GIRDER REINFORCEMENT



ELEVATION AT END BENT NO. 1

Elevation at End Bent No 10 is similar.

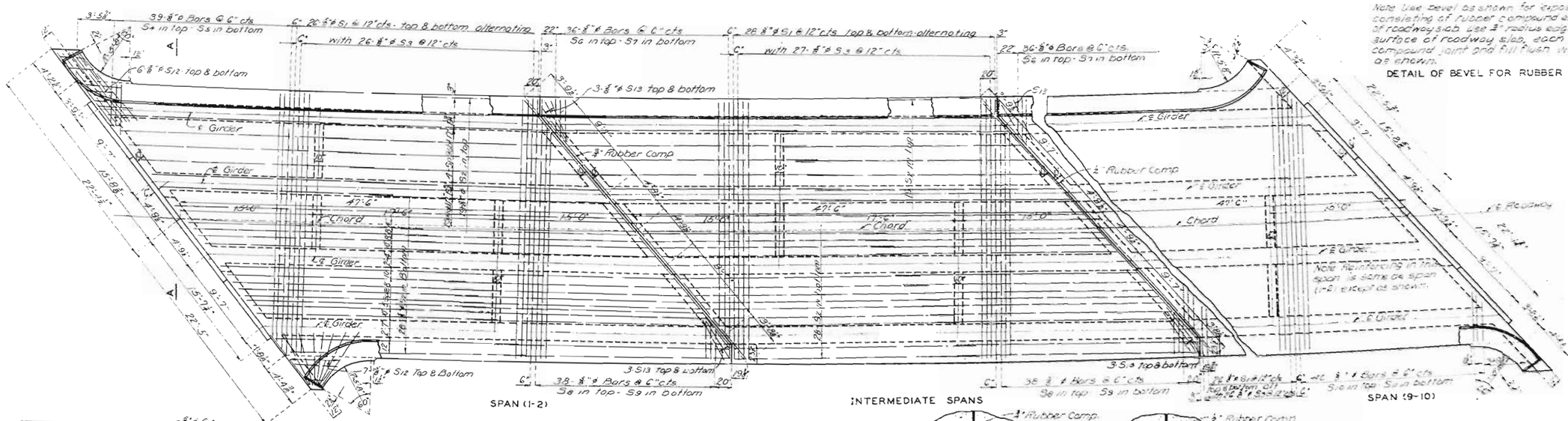
Note: Space between the top of end bents and bottom of end webs of girders shall be filled with rubber compound except space in front of bearing plates which may be left open to depth of plates.



SECTIONS A-A & B-B THRU END WEB

Note Use bevel as shown for exposed faces of all joints consisting of rubber compound except at top surface of roadway slab. Use ¾" radius edging tool at top surface of roadway slab, each side of rubber compound joint and fill flush with joint filler as shown.

DETAIL OF BEVEL FOR RUBBER COMPOUND JOINTS



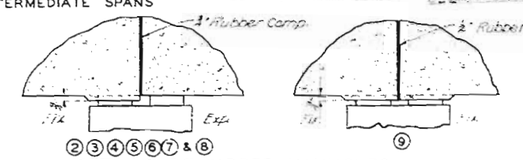
SECTION A-A

SPAN (1-2)

INTERMEDIATE SPANS

SPAN (9-10)

PART PLAN SHOWING REINFORCEMENT



②③④⑤⑥⑦ & ⑧ ⑨

DETAILS OF GIRDER HAUNCHES

SEE NOTE "A" ON SHEET NO. 1

DETAILS OF SUPERSTRUCTURE

Note: This drawing is not to scale. Follow dimensions.

Drawn May 1941 by J.G.
Traced May 1941 by H.M.S.
Checked Aug 1941 by RAB

Replaced with K-817A

BRIDGE OVER L.N. FORK WHITE RIVER

STATE ROAD FROM THEODOSIA TO GAINSVILLE

ABOUT 57 MILES WEST OF WEST PLAINS

PROJECT NO. FAS 425-C(1)(S.C.) STA. 382+12.0

OZARK COUNTY

K-817

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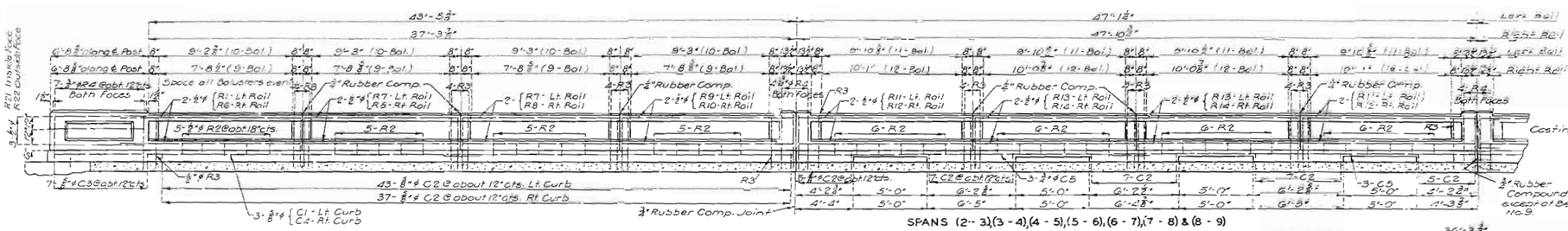
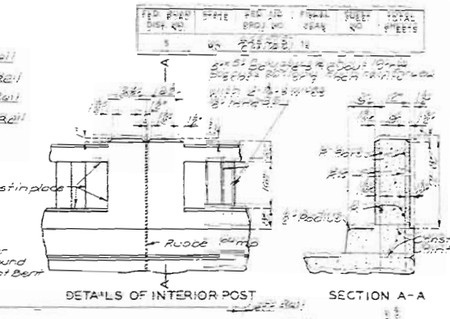
MISSOURI STATE HIGHWAY DEPARTMENT

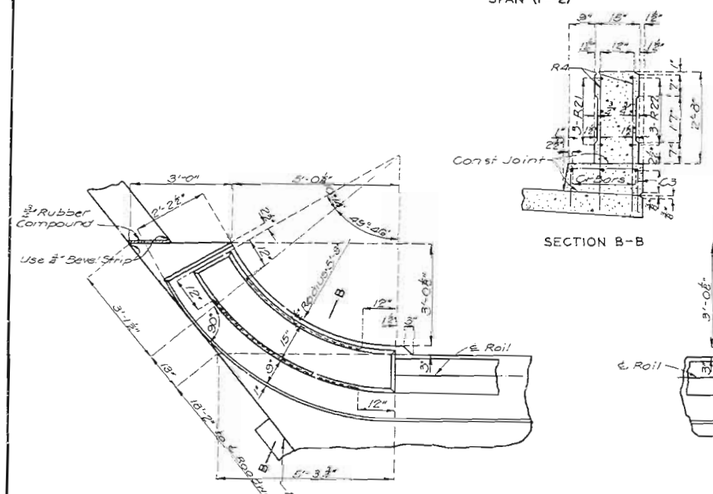


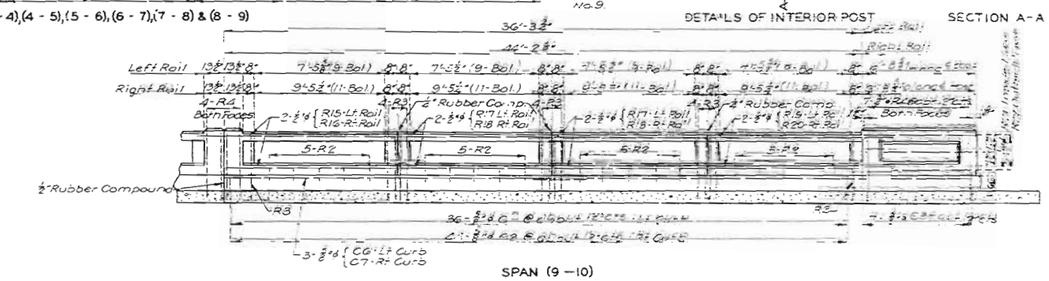
SPAN (1—2)

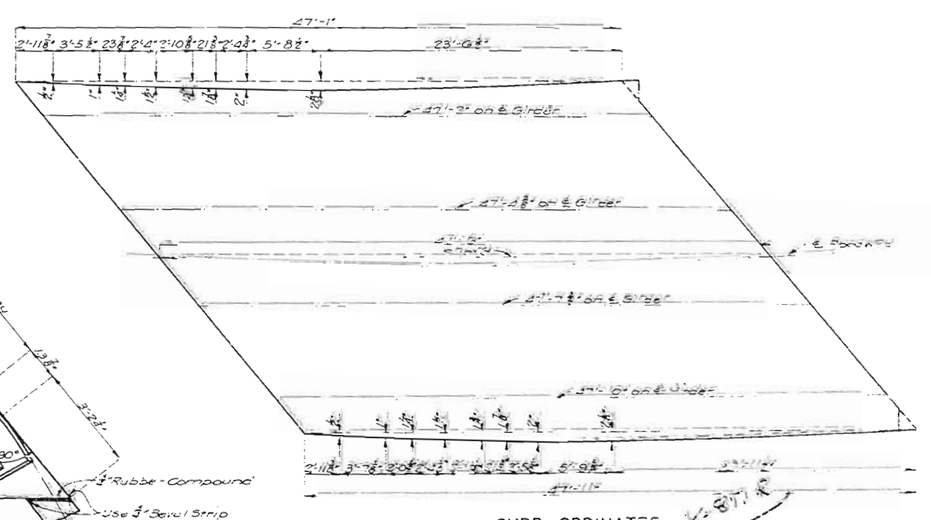


Note: Bevel balusters ½" and bevel corners of rail, subposts and posts ⅜".

DETAILS OF HANDRAIL







DETAILS OF FLARED END POSTS

SEE NOTE "A" ON SHEET NO. 1.

BRIDGE OVER LITTLE N. FORK OF WHITE RIVER

STATE ROAD FROM THEODOSIA TO GAINSVILLE

ABOUT 57 MILES WEST OF WEST PLAINS

PROJECT NO. FAS 425-C ; (S.C.) STA. 382+120

OZARK COUNTY

K-817

Drawn June 1941 By J.G.
Traced June 1941 By C.S.
Checked Aug. 1941 By R.R.B.

Note: This drawing is not to scale. Follow dimensions.

Sheet No 3 of 6

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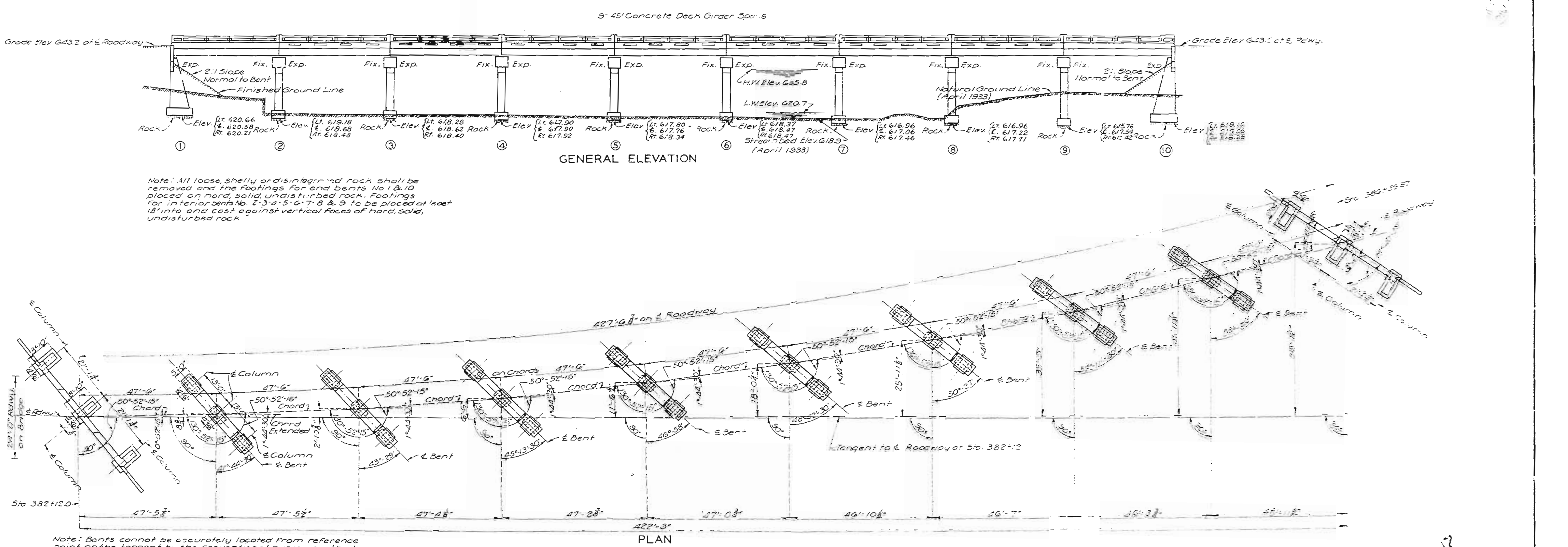
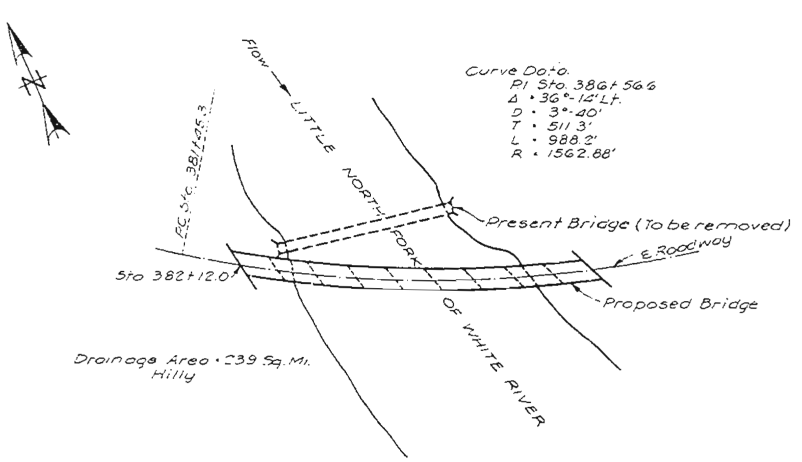
MISSOURI STATE HIGHWAY DEPARTMENT



Note: All loose, shelly or disintegrated rock shall be removed and the footings for end bents No. 1 & 10 placed on hard, solid, undisturbed rock. Footings for interior bents No. 2-3-4-5-6-7-8 & 9 to be placed at least 18" into and cast against vertical faces of hard, solid, undisturbed rock.

Note: Bents cannot be accurately located from reference point on the tangent by the conventional survey methods based on 100' chords.



LOCATION SKETCH

GENERAL NOTES:-
Design Specifications A.A.S.H.O.
Loading H-15 A.A.S.H.O.
Reinforcing Steel Stress [illegible]
Class "B" Concrete [illegible]
All Concrete shall be Class B.

Replaced with K-8177

ESTIMATED QUANTITIES				
Item		Superstructure	Substructure	Total
Class 1 Excavation for Struct.	Cu. Yds.		182.5 ✓	182.5 ✓
Class 2 Excavation for Struct.	Cu. Yds.		92.5 ✓	92.5 ✓
Class "B" Concrete (Handrail)	Cu. Yds.	49.0 ✓		49.0 ✓
Class "B" Concrete	Cu. Yds.	623.3 ✓	407.4 ✓	1030.7 ✓
Reinforcing Steel	Lbs.	203,140 ✓	32,680 ✓	235,820 ✓
Gray Iron Alloy Castings	Lbs.	8,130 ✓		8,130 ✓
Class 2 Special Exc.	Cu. Yds.		10.5 ✓	10.5 ✓

Note: Excavation for bridge made above Elev. 621.0 will be paid for as Class 1 Excavation for Structures.
Excavation for bridge made below Elev. 621.0 will be paid for as Class 2 Excavation for Structures.

B.M. [illegible] Elev. 652.30 [illegible] Sta. 381+75 [illegible] Datum

BRIDGE OVER LITTLE N. FORK OF WHITE RIVER

STATE ROAD FROM THEODOSIA TO GAINESVILLE
ABOUT 57 MILES WEST OF WEST PLAINS
PROJECT NO. FAS 425-C(1) (S.C) STA. 382+12.0

OZARK COUNTY

Submitted by N.R. [illegible] Bridge Engineer 8/25/41
Approved by C.W. Brown Chief Engineer 8/27/41

FINAL PLANS K-817

Drawn June 1941 by J.G.
Traced June 1941 by C.S.
Checked Aug. 1941 by R.A.B.

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 1 of 4.

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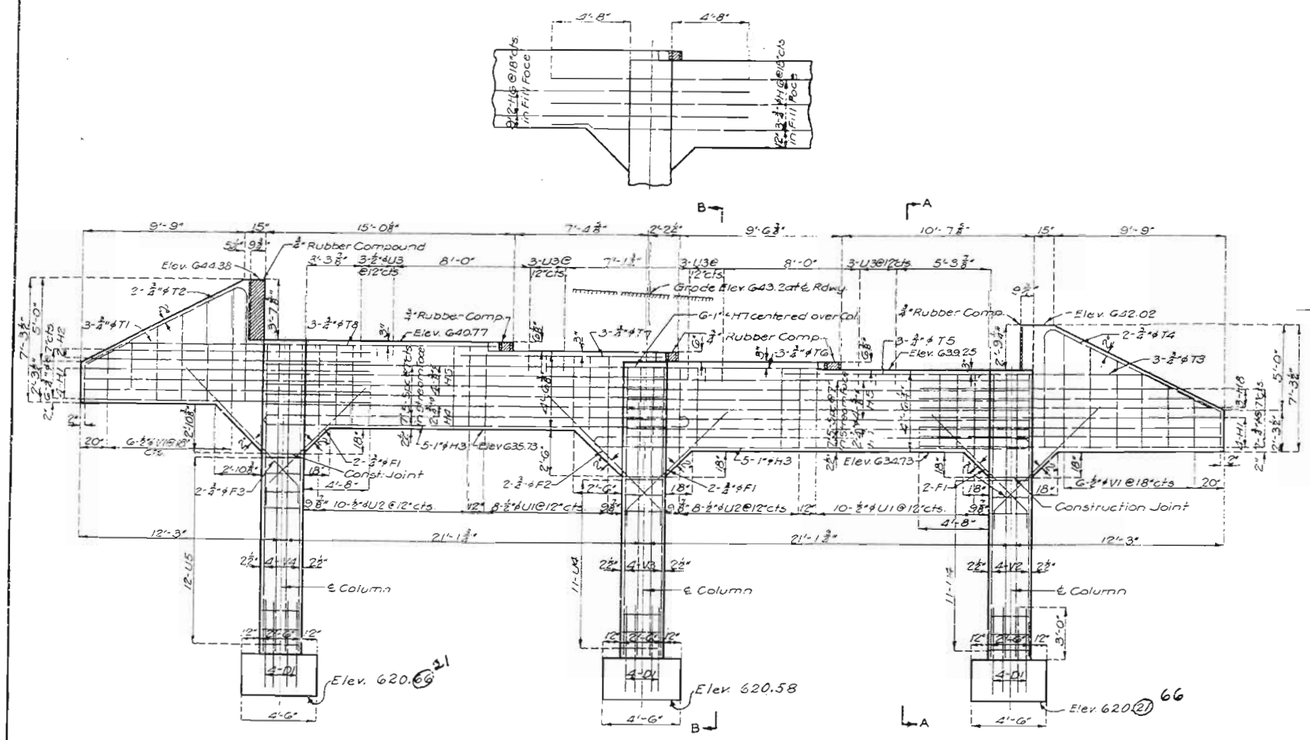
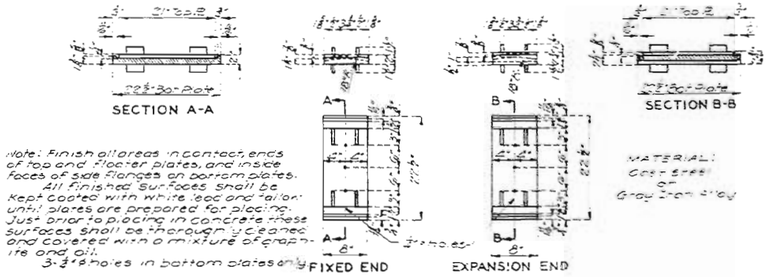
MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO	FAS 425-C(1)SC	19		



Note: Fill at end Bent No.1 shall not be carried above bottom of beam end wings until superstructure Span (1-2) is in place.

DETAILS OF END BENT NO. 1



Note: Finish all areas in contact ends of top and floater plates, and inside faces of side flanges on bottom plates. All finished surfaces shall be kept coated with white lead and tallow until plates are prepared for placing. Just prior to placing in concrete these surfaces shall be thoroughly cleaned and covered with a mixture of graphite and oil.
3-¾" ø holes in bottom plates only

Note: 36 sets of 3 plates each required. Each set consisting of top plate, one bottom plate for fixed end and one bottom plate for expansion end.

DETAILS OF BEARING PLATES

Replaced with K-817R

BRIDGE OVER LITTLE N. FORK OF WHITE RIVER

STATE ROAD FROM THEODOSIA TO GAINSVILLE

ABOUT 57 MILES WEST OF WEST PLAINS

PROJECT NO. FAS 425-C(1)(S.C) STA. 382+12.0

OZARK COUNTY

FINAL PLANS K-817

Drawn Jun: 1941 by J.C.
Traced June 1941 by C.S.
Checked Aug. 1941 by RAD

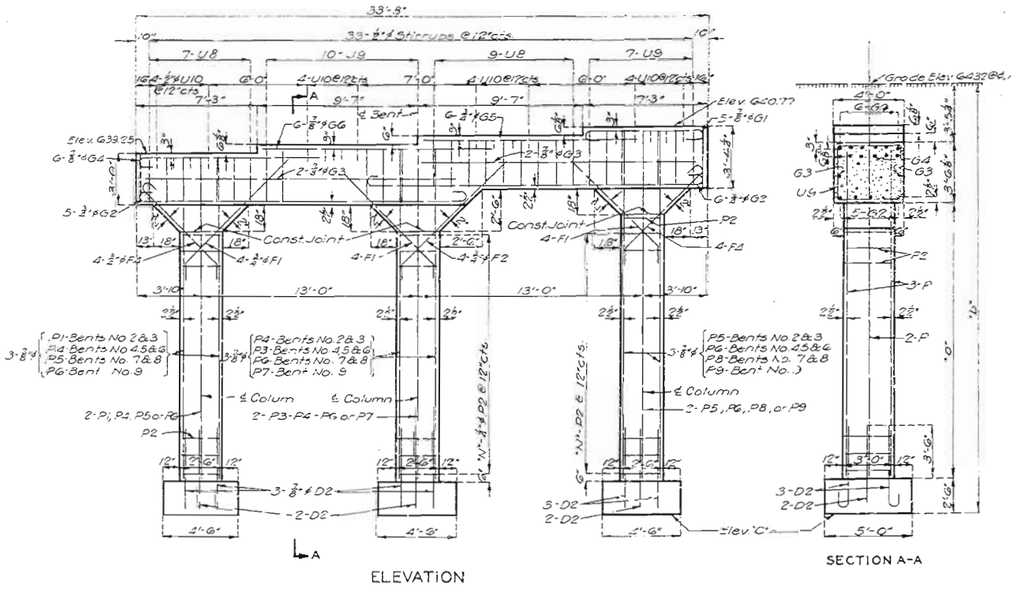
Note: This drawing is not to scale. Follow dimensions.

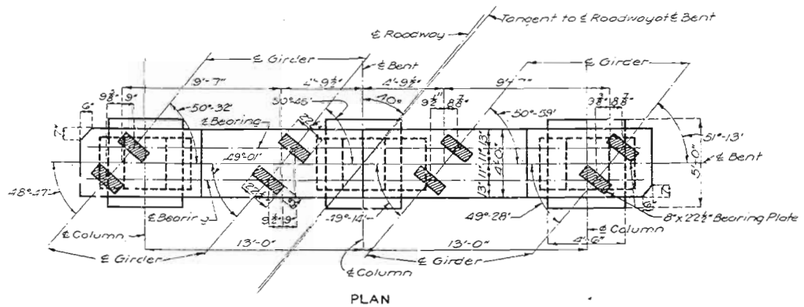
Sheet No 2 of 3

187

DEC 29 1941 DIV No 5

MISSOURI STATE HIGHWAY DEPARTMENT





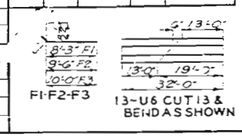
DETAILS OF INTERIOR BENTS NO. 2, 3, 4, 5, 6, 7, 8 & 9

COMPLETE BILL OF REINFORCING STEEL

No.	Size	Length	Mark	Location
SUPERSTRUCTURE				
4	⅜"ϕ	12'-6"	R1	Rail
416	½"ϕ	5"	R2	Rail
252	½"ϕ	7'-9"	R3	Sub Post
184	⅜"ϕ	3'-9"	R4	Post
3200	½"ϕ	18"	R5	Balusters
4	⅜"ϕ	11'-3"	R6	Rail
8	⅜"ϕ	10'-3"	R7	Rail
8	½"ϕ	8'-5"	R8	Rail
4	⅜"ϕ	11'-6	R9	Rail
2	⅜"ϕ	9'-9"	R10	Rail
56	½"ϕ	12'-0"	R11	Rail
56	⅜"ϕ	12'-3"	R12	Rail
56	½"ϕ	10'-9"	R13	Rail
56	⅜"ϕ	11'-0"	R14	Rail
4	⅜"ϕ	9'-6"	R15	Rail
4	⅜"ϕ	11'-6"	R16	Rail
8	⅜"ϕ	8'-6"	R17	Rail
8	⅜"ϕ	10'-6"	R18	Rail
4	⅜"ϕ	10'-9"	R19	Rail
4	⅜"ϕ	12'-3"	R20	Rail
12	½"ϕ	6'-9"	R21	End Post
12	⅜"ϕ	6'-0"	R22	End Post
G	⅞"ϕ	26'-3"	C1	Curb
594	⅞"ϕ	3'-9"	C2	Curb
28	⅞"ϕ	4'-0"	C3	Curb
6	⅞"ϕ	23'-3"	C4	Curb
84	⅞"ϕ	25'-3"	C5	Curb
6	⅞"ϕ	22'-6"	C6	Curb
6	⅞"ϕ	26'-3"	C7	Curb
456	½"ϕ	27'-6"	S1	Slab
846	½"ϕ	25'-0"	S2	Slab
241	⅜"ϕ	29'-9"	S3	Slab
39	½"ϕ	34'-9"	S4&S5	Slab
288	⅝"ϕ	32'-6"	S6-S7	Slab
304	⅝"ϕ	32'-0"	S8-S9	Slab
20	⅝"ϕ	34'-3"	S10-S11	Slab
52	⅜"ϕ	7'-6"	S12	Slab
96	⅝"ϕ	6'-6"	S13	Slab
96	½"ϕ	13'-6"	W1	Web
36	½"ϕ	18'-0"	W2	Web
4	⅜"ϕ	11'-6"	W3	Web
2	⅝"ϕ	20'-3"	W4	Web
9	⅜"ϕ	5'-0"	W7	Web
9	⅜"ϕ	5'-9"	W8	Web

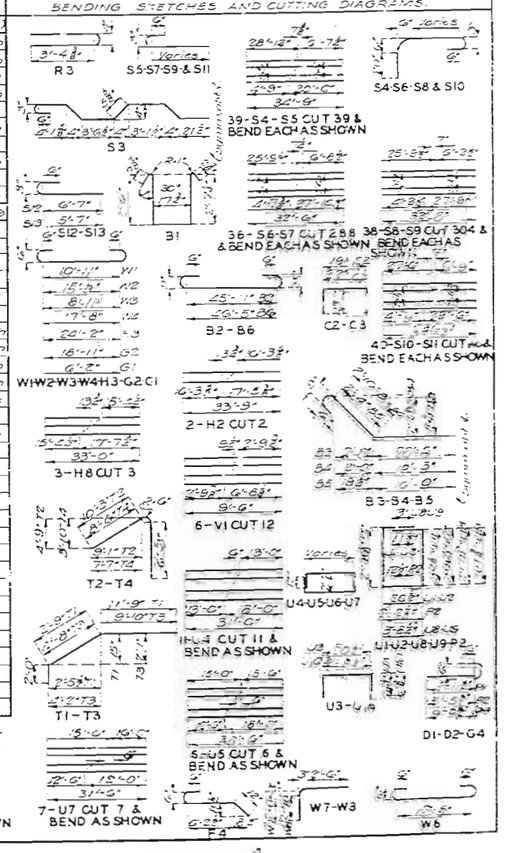
No.	Size	Length	Mark	Location
SUPERSTR. (Cont'd)				
28	⅝"ϕ	9'-6"	W5	Web
8	⅝"ϕ	15'-0"	W6	Web
9	⅝"ϕ	2'-6"	W9	Web
9	⅝"ϕ	3'-0"	W10	Web
1152	⅝"ϕ	7'-6"	B1	Girder
90	1⅛"ϕ	49'-3"	B2	Girder
108	1⅛"ϕ	50'-0"	B3	Girder
72	1⅜"ϕ	45'-6"	B4	Girder
108	1⅜"ϕ	40'-0"	B5	Girder
90	1¾"ϕ	49'-9"	B6	Girder
END BENTS NO. 1 & 10				
16	⅝"ϕ	18'-0"	H1	Wing
2	¾"ϕ	33'-9"	H2	Wing
20	1"ϕ	26'-9"	H3	Beam
8	¾"ϕ	23'-9"	H4	Beam
16	⅞"ϕ	23'-6"	H5	Beam
16	¾"ϕ	28'-3"	H6	Beam
12	1"ϕ	12'-0"	H7	Beam
3	⅞"ϕ	33'-0"	H8	Wing
12	⅜"ϕ	9'-6"	V1	Wing
10	⅞"ϕ	16'-6"	V2	Col. B1-#1
10	¾"ϕ	17'-0"	V3	Col. B1-#1
10	¾"ϕ	18'-0"	V4	Col. B1-#1
10	¾"ϕ	18'-6"	V5	Col. B1-#10
10	¾"ϕ	19'-6"	V6	Col. B1-#10
10	¾"ϕ	30'-0"	V7	Col. B1-#10
16	¾"ϕ	9'-3"	F1	Haunch
4	¾"ϕ	10'-6"	F2	Haunch
4	¾"ϕ	11'-0"	F3	Haunch
16	¾"ϕ	16'-6"	T1	Wing
4	¾"ϕ	17'-6"	T2	Wing
6	¾"ϕ	16'-6"	T3	Wing
2	¾"ϕ	15'-9"	T4	Wing
6	¾"ϕ	15'-0"	T5	Beam
6	¾"ϕ	10'-0"	T6	Beam
6	¾"ϕ	12'-6"	T7	Beam
3	¾"ϕ	13'-0"	T8	Beam
3	¾"ϕ	14'-9"	T9	Beam
52	⅝"ϕ	12'-9"	U1	Beam
42	¾"ϕ	13'-9"	U2	Beam
22	⅝"ϕ	2'-9"	U3	Beam

No.	Size	Length	Mark	Location
END BENTS NO. 1 & 10 (cont'd)				
11	⅝"ϕ	31'-0"	U4	Column
6	⅝"ϕ	30'-6"	U5	Column
13	⅝"ϕ	32'-0"	U6	Column
7	⅝"ϕ	31'-6"	U7	Column
6	⅝"ϕ	8'-6"	V8	Column
6	⅝"ϕ	10'-6"	V9	Column
6	⅝"ϕ	11'-0"	V10	Column
6	⅝"ϕ	12'-6"	V11	Column
60	¾"ϕ	6'-3"	D1	Footing
INTERIOR BENTS NO. 2, 3, 4, 5, 6, 7, 8 & 9				
40	⅜"ϕ	8'-9"	G1	Beam
82	⅜"ϕ	2'-6"	G2	Beam
32	⅜"ϕ	18'-0"	G3	Beam
48	⅜"ϕ	10'-9"	G4	Beam
48	⅜"ϕ	12'-6"	G5	Beam
48	⅜"ϕ	13'-6"	G6	Beam
96	¾"ϕ	9'-3"	F1	Haunch
32	¾"ϕ	12'-6"	F2	Haunch
64	¾"ϕ	8'-6"	F3	Haunch
16	⅝"ϕ	17'-6"	P1	Column
347	⅝"ϕ	10'-9"	P2	Column
24	⅝"ϕ	18'-6"	P3	Column
40	⅝"ϕ	18'-0"	P4	Column
32	⅝"ϕ	18'-0"	P5	Column
48	⅝"ϕ	19'-6"	P6	Column
8	⅝"ϕ	20'-0"	P7	Column
16	⅝"ϕ	20'-6"	P8	Column
6	⅝"ϕ	21'-0"	P9	Column
128	⅝"ϕ	13'-9"	U8	Beam
136	⅝"ϕ	14'-9"	U9	Beam
128	⅝"ϕ	2'-9"	U10	Beam
192	⅝"ϕ	6'-9"	D2	Footing



13-U6 CUT 13 & BEND AS SHOWN

BENDING SKETCHES AND CUTTING DIAGRAMS



Replaced With K-517R

BRIDGE OVER LITTLE N. FORK OF WHITE RIVER

STATE ROAD FROM THEODOSIA TO GAINSVILLE

ABOUT 57 MILES WEST OF WEST PLAINS

PROJECT NO. FAS 425-C(1)(S.C.) STA. 382+12.0

OZARK COUNTY

FINAL PLANS K-817

DATA FOR INTERIOR BENTS				
Bent No.	Dimension "a"	Dimension "b"	No. P2 Bars "N"	Elevation "C"
2			13	
3			13	
4			14	
5			14	
6			14	
7			13	
8			13	
9			15	

Drawn June 1941 by JG
Traced June 1941 by CS
Checked Aug. 1941 by RAG

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 1 of 2

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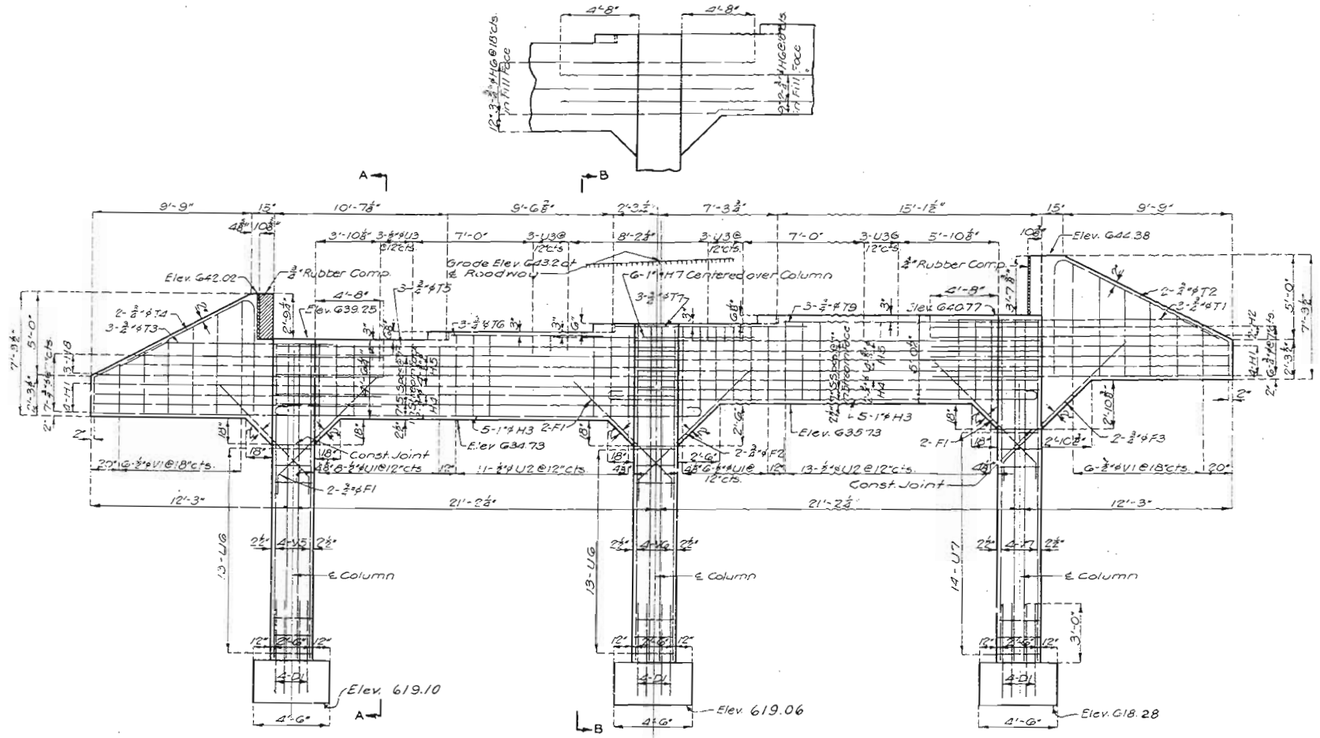
MISSOURI STATE HIGHWAY DEPARTMENT

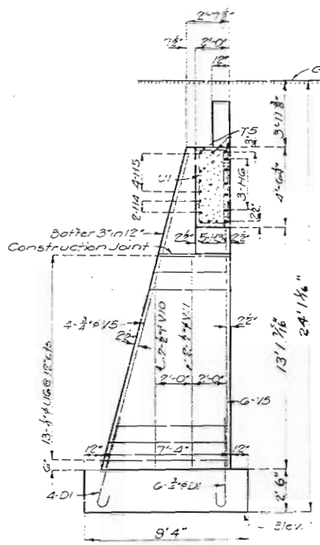
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	FAS (SEC) (1)		10	

FINAL PLANS

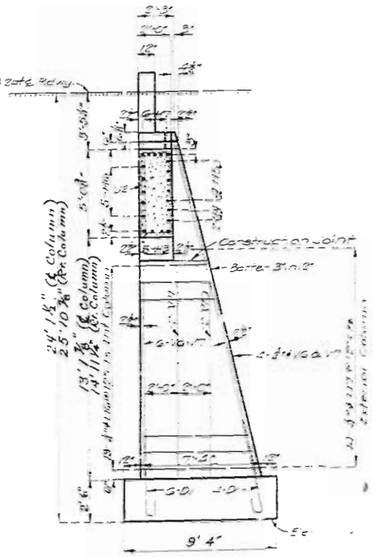


ELEVATION

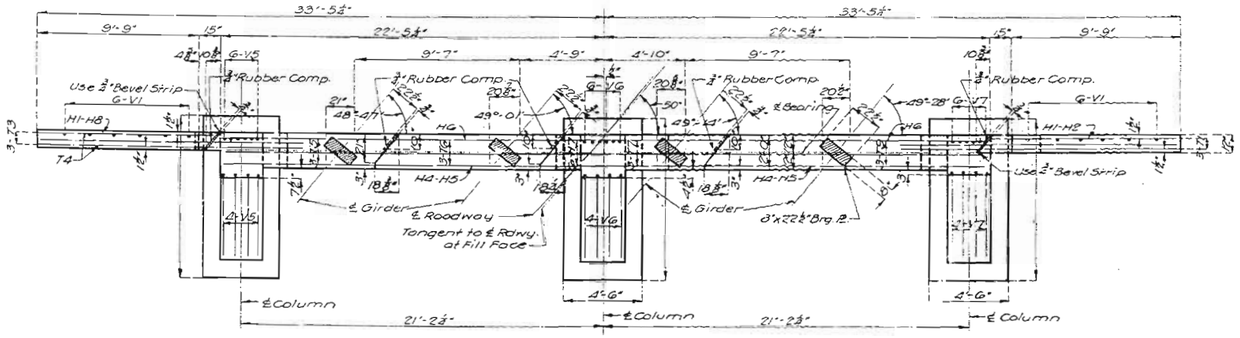
Note: Fill at End Bent No.10 shall not be carried above bottom of beam and wings until superstructure span (9-10) is in place.



SECTION A-A



SECTION B-B



PLAN

DETAILS OF ABUTMENT NO. 10

Replaced with K-817R

VOID

BRIDGE OVER LITTLE N. FORK OF WHITE RIVER

STATE ROAD FROM THEODOSIA TO GAINSVILLE
ABOUT 57 MILES WEST OF WEST PLAINS
PROJECT NO. FAS 425-C(1) (S.C.) STA. 382+120

OZARK COUNTY

FINAL PLANS K-817

Drawn June 1941 by J.B.
Traced June 1941 by C.S.
Checked Aug. 1941 by RAB.

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 2 of 2.

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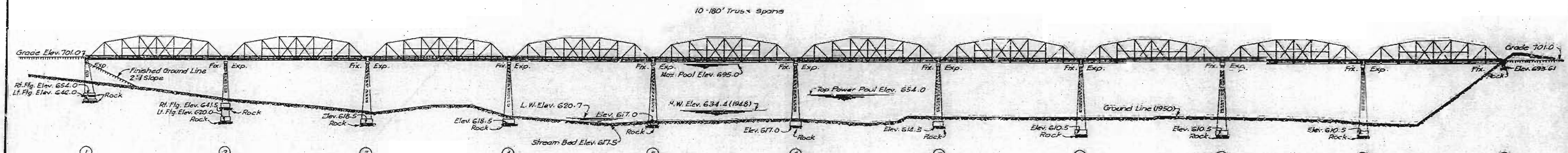
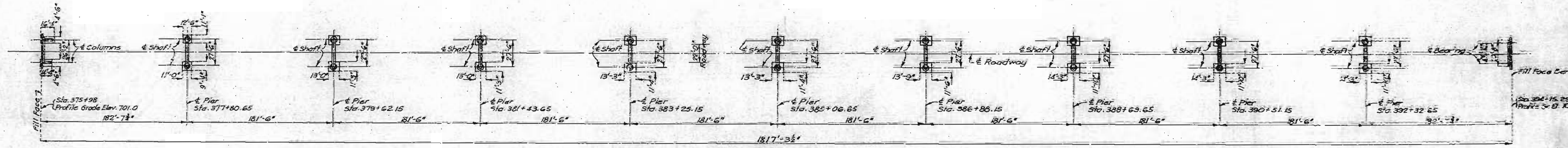
MISSOURI STATE HIGHWAY DEPARTMENT

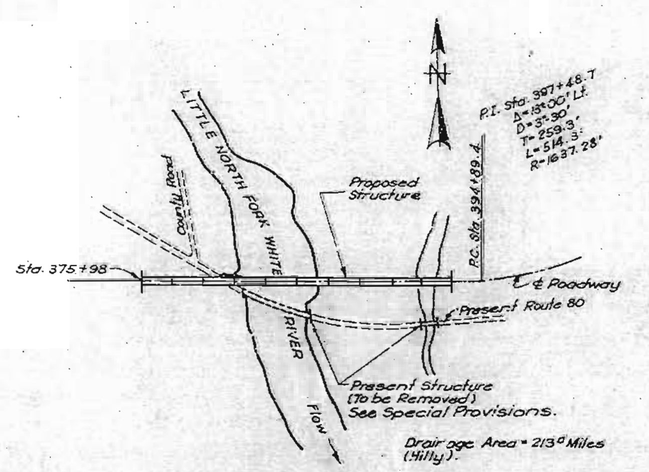


GENERAL ELEVATION

Note: All loose, shelly or disintegrated rock shall be removed and footings placed on hard, solid, undisturbed rock. If soft rock or shale is encountered, the footings shall be carried at least 18" into and cast against vertical faces of same.
In no case shall footings of Piers No. 4, 5 and 6 and Bent No. 11 be placed higher than elevations shown.



PLAN



LOCATION SKETCH

GENERAL NOTES:

Design Specifications A.A.S.H.O. 1949.
Loading H15-44.
Structural Steel Stress 18,000#/□"
Reinforcing Steel Stress 18,000#/□"
Class "B" Concrete Stress 1,000#/□"
All Concrete shall be Class "B" (Air Entrained).
Rivets ⅞" except where otherwise noted.
Paint: Shop and Field, contact surfaces of bolted field connections one coat of red lead and surfaces inaccessable after erection three coats of red lead. All other exposed surfaces one coat red lead, second coat of brown, and final coat Aluminum. Payment for cleaning and painting such surfaces shall be included in the price bid for Fabricated Structural Steel.
Where joint filler is specified it shall conform with the requirements for Premoulded Material for Filler as given in Section 38-19 A(1)h of the Standard Specifications.

ESTIMATED QUANTITIES

Item		Substr.	Superstr.	Total
Class 1 Excavation for Structures	Cu. Yds.	1040		1040
Class 2 Excavation for Structures	Cu. Yds.	1212		1212
Class "B" Concrete	Cu. Yds.	3,089.4	1018.8	4,108.2
Fabricated Structural Steel	Lbs.		2,228,310	2,228,310
Steel Castings	Lbs.		15,960	15,960
Reinforcing Steel	Lbs.	~~101,210~~ 109,720	257,550	~~358,760~~ 367,270

Excavation for bridge made above Elev. 623.0 will be paid for as Class 1 Excavation for Structures.
Excavation for bridge made below Elev. 623.0 will be paid for as Class 2 Excavation for Structures.

B.M. #4 - Elev. 640.10 "□" on top of North Wing - West End of Bridge 23' Rt. of Sta. 351+93 (Sea Level Datum).

BRIDGE OVER LITTLE NORTH FORK WHITE RIVER

STATE ROAD FROM THEODOSIA TO GAINSVILLE
ABOUT 57 MILES W. OF WEST PLAINS
PROJECT NO. RT. SC (80) SEC. 3-A STA. 375+98

OZARK COUNTY

Submitted by V. W. Enslow, Bridge Engineer, Date 2/17/1951
Approved by C. W. Brown, Chief Engineer, Date 2/17/1951

STD. C-110R3
K-817R

Drawn Aug. 1950 By C.R.P.
Traced Aug. 1950 By J.T.F.
Checked Aug. 1950 By R.H.I.

Note: This drawing is not to scale. Follow dimensions.

Rev. 3-27-51

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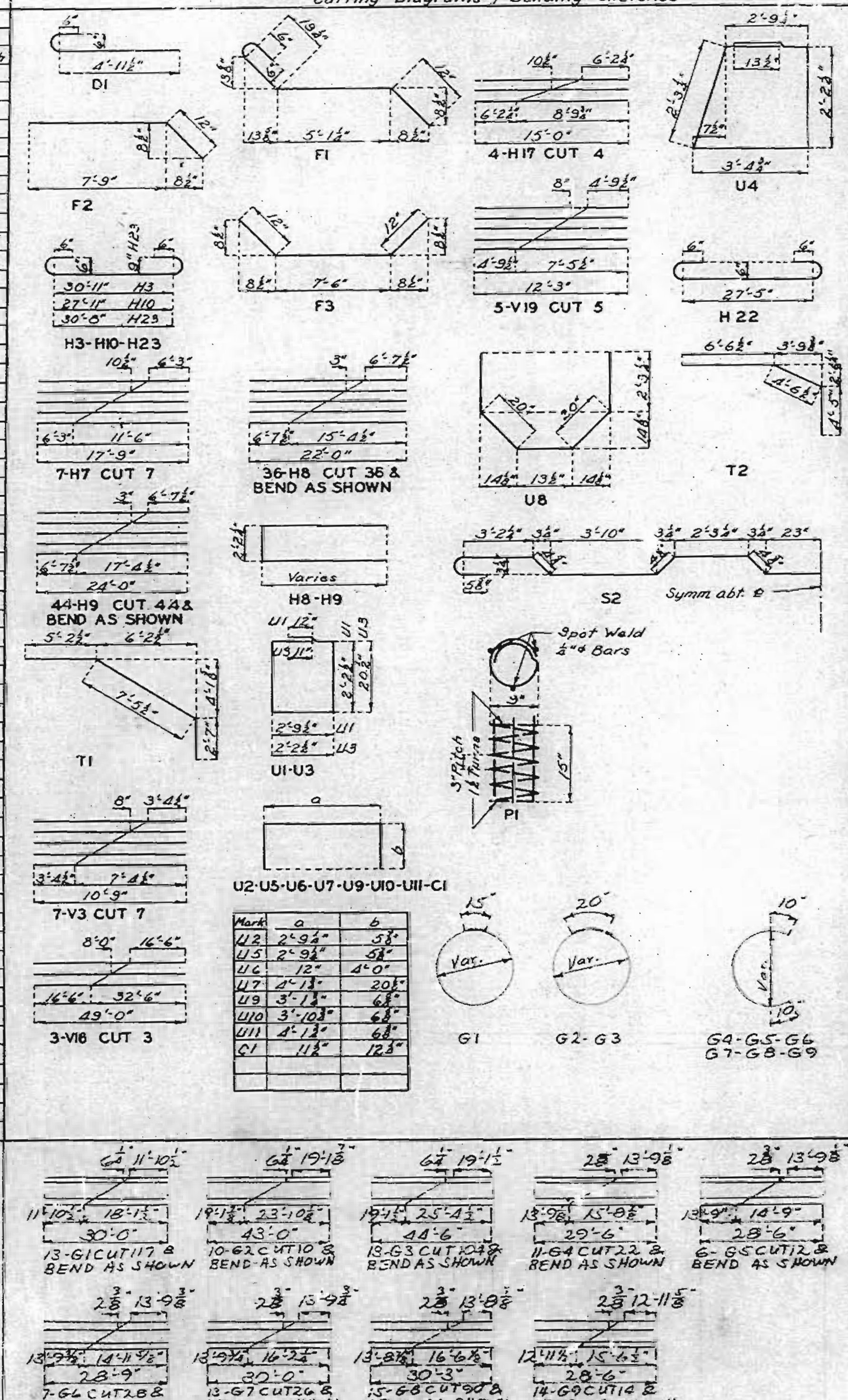
MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	Rt. SC(80) Sec. 3A	19		

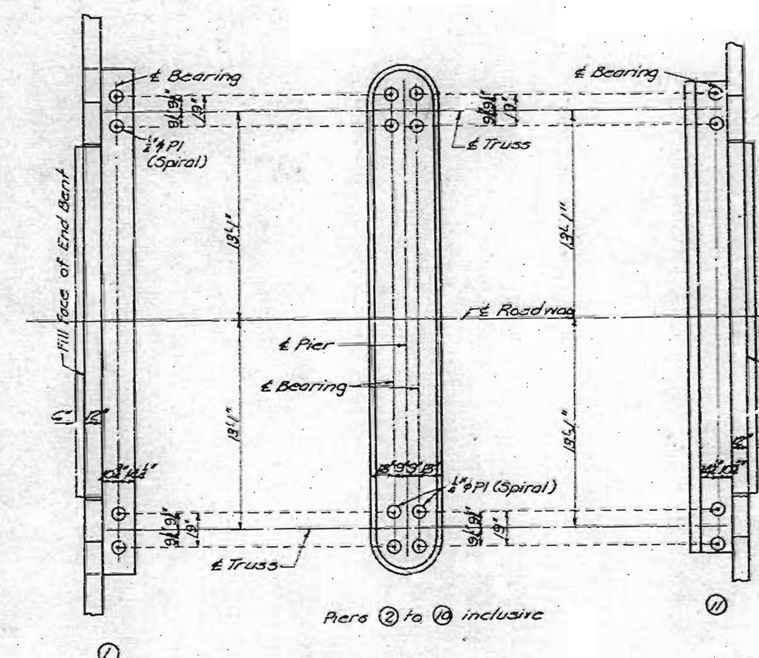
COMPLETE BILL OF REINFORCING STEEL

No.	Size	Length	Mark	Location
End Bent No. 1				
20	7/8"φ	6'-3"	D1	Footing
8	3/4"φ	9'-0"	F1	Beam Haunch
8	3/4"φ	8'-9"	F2	" "
16	1"φ	9'-6"	F3	Tie " "
2	3/4"φ	24'-3"	H1	Backwall
6	1/2"φ	24'-3"	H2	"
4	3/4"φ	33'-6"	H3	Beam
2	3/4"φ	31'-3"	H4	"
4	3/4"φ	5'-6"	H5	"
10	3/4"φ	11'-6"	H6	Wing
7	3/4"φ	17'-9"	H7	"
36	3/8"φ	22'-0"	H8	Column
44	3/8"φ	24'-0"	H9	"
14	1"φ	30'-6"	H10	Tie Beam
9	1"φ	34'-0"	H23	Beam
4	1/2"φ	15'-3"	T1	Wing
32	1/2"φ	11'-0"	U1	Beam
6	1/2"φ	3'-9"	U2	"
21	1/2"φ	8'-9"	U3	Tie "
44	1/2"φ	7'-0"	V1	Backwall
6	1/2"φ	7'-9"	V2	"
7	1/2"φ	10'-9"	V3	Wing
8	7/8"φ	16'-0"	V4	Column
12	7/8"φ	15'-9"	V5	"
4	7/8"φ	27'-6"	V6	"
6	7/8"φ	26'-9"	V7	"
4	7/8"φ	35'-6"	V8	"
6	7/8"φ	34'-9"	V9	"
4	1/2"φ	25'-3"	V10	"
2	1/2"φ	23'-6"	V11	"
2	1/2"φ	15'-9"	V12	"
4	1/2"φ	12'-0"	V13	"
4	1/2"φ	8'-3"	V14	"
4	1/2"φ	33'-3"	V15	"
3	1/2"φ	49'-0"	V16	"
4	1/4"φ	23'-0"	P1	Beam
End Bent No. 11				
2	3/4"φ	24'-3"	H1	Backwall
6	1/2"φ	24'-3"	H2	"
8	3/4"φ	29'-3"	H13	Beam
2	1/2"φ	29'-3"	H14	"
4	3/4"φ	5'-0"	H15	"
16	3/8"φ	9'-3"	H16	Wing
4	5/8"φ	15'-0"	H17	"
30	1/2"φ	11'-9"	U4	Beam
6	1/2"φ	3'-9"	U5	"
44	1/2"φ	7'-0"	V1	Backwall
6	1/2"φ	7'-9"	V2	Wing
5	1/2"φ	12'-3"	V19	"
4	3/4"φ	15'-6"	T2	Wing
4	1/4"φ	23'-0"	P1	Beam

Cutting Diagrams & Bending Sketches

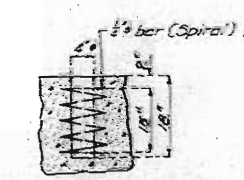


No.	Size	Length	Mark	Location
Piers No. 2, 3, 4, 5, 6, 7, 8, 9 & 10				
267	1"φ	7'-6"	D2	Footing
108	3/4"φ	4'-6"	H18	Beam
18	3/4"φ	31'-3"	H19	"
72	3/4"φ	18'-0"	H20	"
524	1/2"φ	28'-6"	H21	Web Wall
36	1"φ	30'-0"	H22	" "
72	1/4"φ	23'-0"	P1	Beam
15	1"φ	29'-3"	P2	Col. Pier #2
24	1"φ	43'-6"	P3	" " "
12	1"φ	8'-6"	P4	" " "
24	1/2"φ	23'-6"	P5	Web Wall Pier #2
24	1/2"φ	21'-6"	P6	" " " "
24	1"φ	29'-6"	P7	Col. Pier #3
24	1"φ	33'-6"	P8	" " #4
30	1"φ	44'-9"	P9	" " #3
30	1"φ	40'-9"	P10	" " #4
24	1/2"φ	29'-6"	P11	Web Wall Pier #3
24	1/2"φ	27'-9"	P12	" " " "
24	1/2"φ	33'-6"	P13	" " " #4
24	1/2"φ	31'-9"	P14	" " " "
144	1/2"φ	34'-0"	P15	" " "
144	1/2"φ	32'-9"	P16	" " "
60	1"φ	40'-3"	P17	Col. Piers # 5 & 6
144	1"φ	34'-6"	P18	Col. Piers # 5, 6, 7, 8, 9 & 10
30	1"φ	43'-3"	P19	Col. Pier # 7
180	1"φ	25'-6"	P20	Col. Piers # 8, 9 & 10
234	5/8"φ	9'-0"	U6	Web Wall
252	3/8"φ	7'-6"	U7	Beam
252	5/8"φ	9'-0"	U8	"
18	1/4"φ	4'-3"	U9	"
54	3/4"φ	5'-3"	U11	"
18	3/4"φ	5'-0"	U10	"
Superstructure				
2,424	5/8"φ	3'-0"	C1	Curb
114	3/4"φ	22'-9"	C2	"
360	3/4"φ	22'-3"	C3	"
6	3/4"φ	24'-0"	C4	"
3,622	5/8"φ	24'-3"	S1	Slab
1,810	5/8"φ	26'-6"	S2	"
2,646	5/8"φ	27'-9"	S3	"
1,120	5/8"φ	6'-0"	S4	"
294	5/8"φ	28'-0"	S5	"
Piers No. 2, 3, 4, 5, 6, 7, 8, 9 & 10				
117	#3	30'-0"	G1	Shaft
10	#4	43'-0"	G2	"
104	#4	44'-6"	G3	"
22	#4	29'-6"	G4	"
12	#4	28'-6"	G5	"
28	#4	28'-9"	G6	"
26	#4	30'-0"	G7	"
90	#4	30'-3"	G8	"
14	#4	28'-6"	G9	"



ANCHOR BOLT PLAN

Note: 4"φ Anchor bolt wells shall be provided for truss anchor bolts.



Note: Holes for all anchor bolts shall be formed in substructure by placing and setting with template 4"φ wells of depth shown. Grout for anchor bolt wells shall be Iron Oxide Cement ("Embeco" or an approved equivalent.)

DETAIL OF ANCHOR BOLT WELLS

Drawn Aug. 1950 by R.P.P.
Traced Aug. 1950 by R.J.K.
Checked Aug. 1950 by C.S.A.

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 2 of 10.

BRIDGE OVER LITTLE NORTH FORK WHITE RIVER

STATE ROAD FROM THEODOSIA TO GAINSVILLE
ABOUT 37 MILES W. OF WEST PLAINS
PROJECT NO. RT. SC (80) SEC. 3A STA. 375+98

OZARK COUNTY

K-817 R

Rev. 9-27-51

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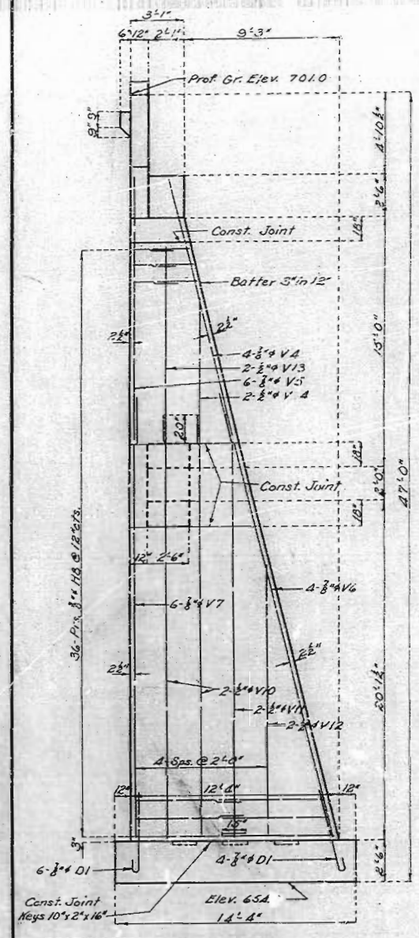
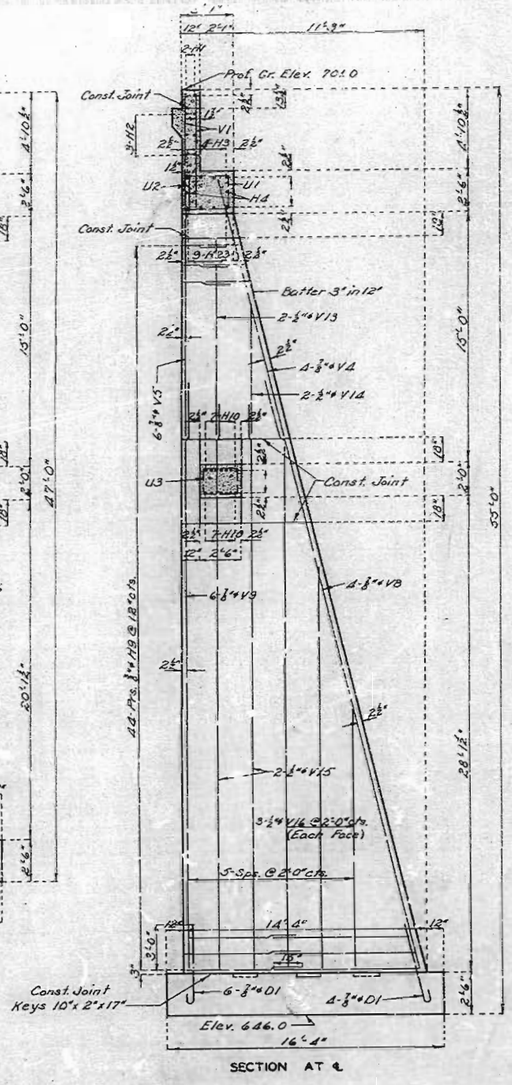
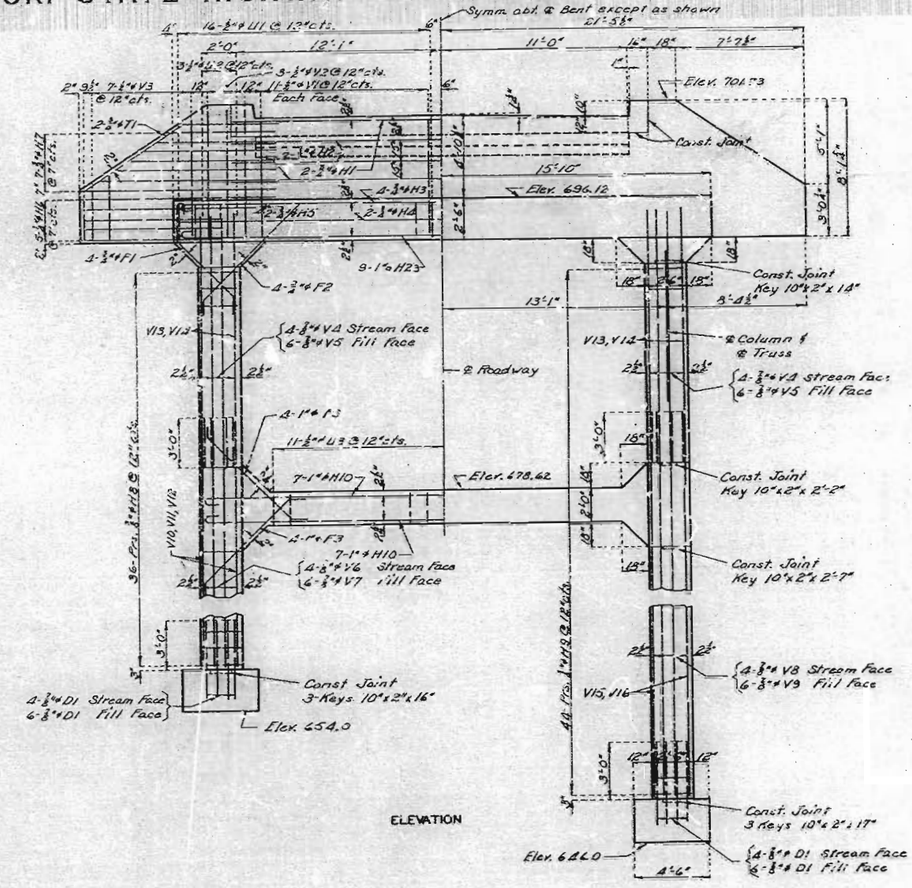
MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO	RT. SC(80) Sec. 3-A	19		

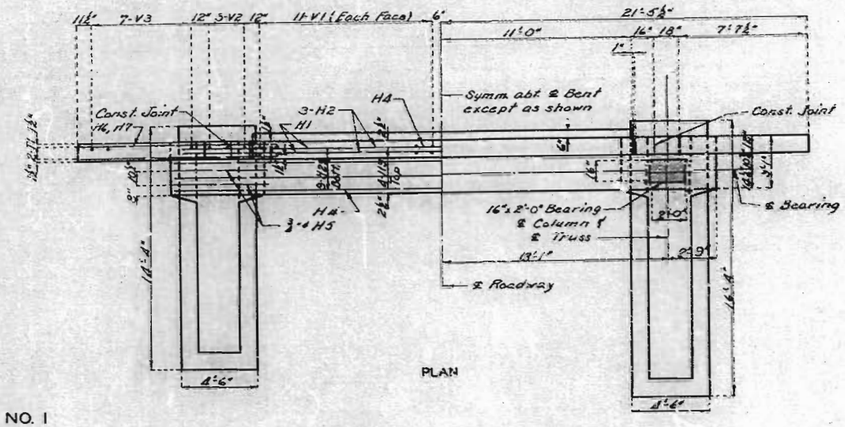






Note: Backwall above construction joint is not to be poured until the structural steel expansion device on superstructure has been installed and floor slab has been poured.

Backfill shall not be carried above bottom of beam and wings until superstructure Span (1-2) is in place.



DETAILS OF END BENT NO. 1

BRIDGE OVER LITTLE NORTH FORK WHITE RIVER

STATE ROAD FROM THEODOSIA TO GAINSVILLE

ABOUT 57 MILES W. OF WEST PLAINS

PROJECT NO. RT. SC (80) SEC. 3-A STA. 375 + 98

OZARK COUNTY

K-817 R

Drawn July 1950 by H.J.K.
Traced July 1950 by A.J.K.
Checked Aug. 1950 by C.S.A.

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 3 of 10.

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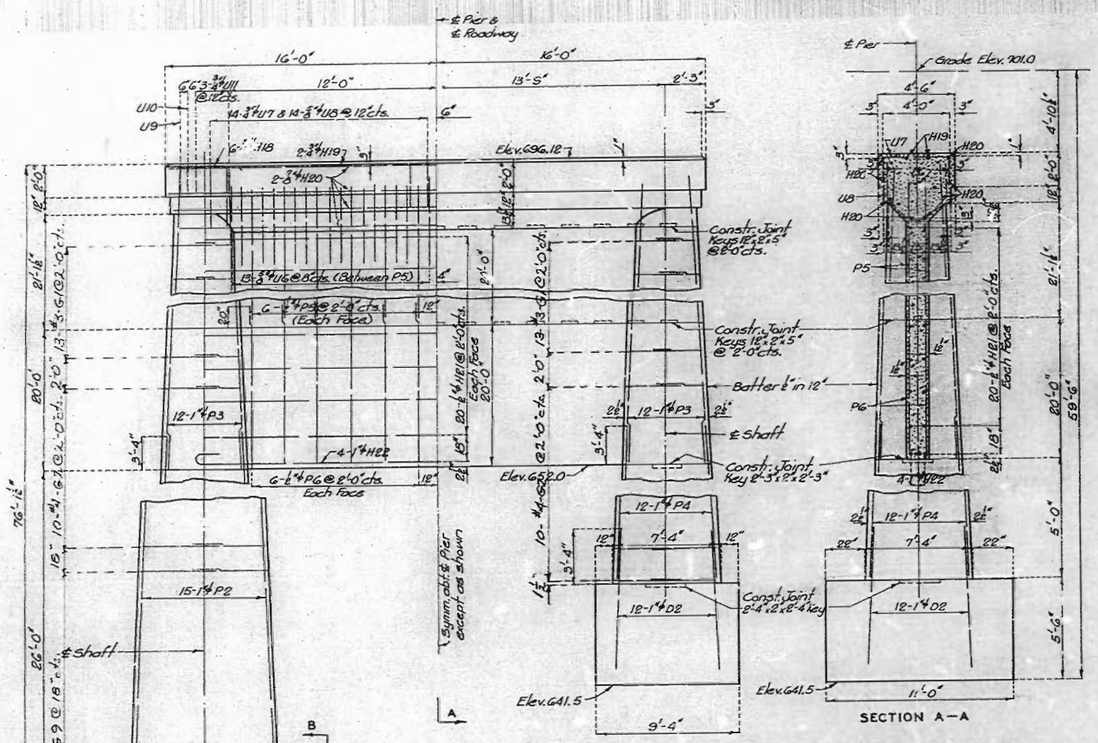
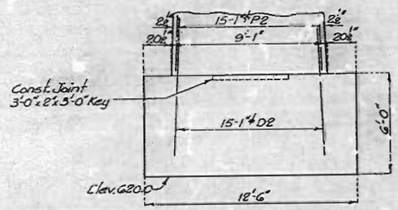
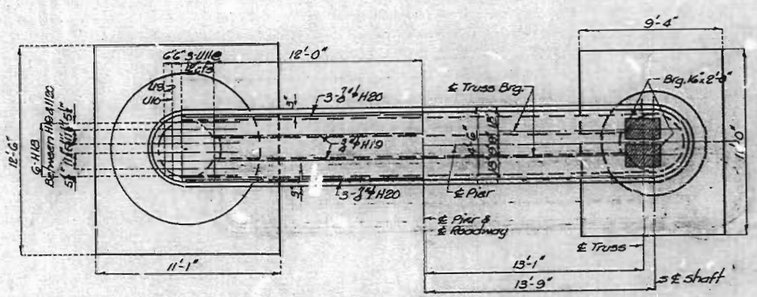
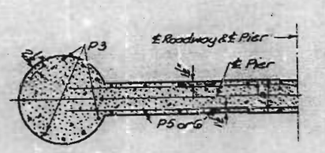
MISSOURI STATE HIGHWAY DEPARTMENT

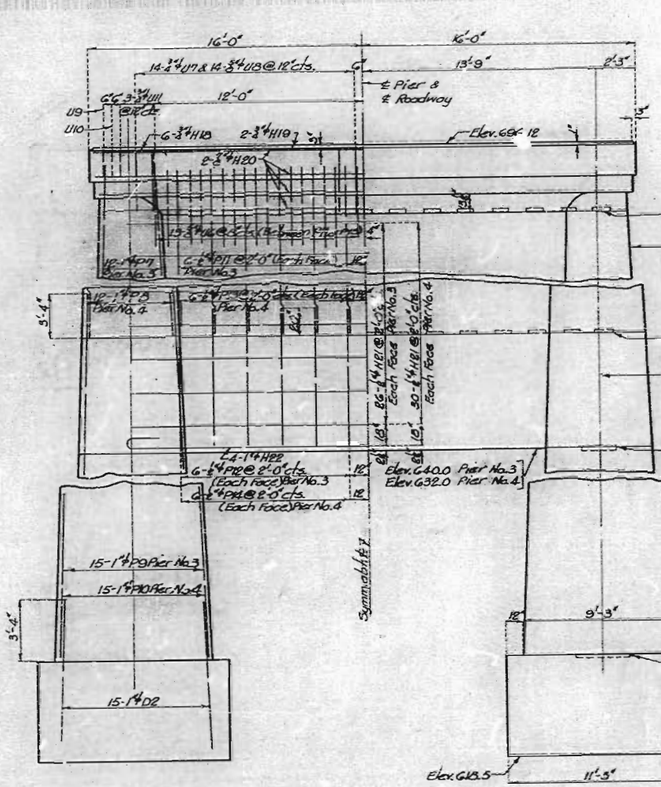
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	RT. SC(80) Sec. 3-A	19		

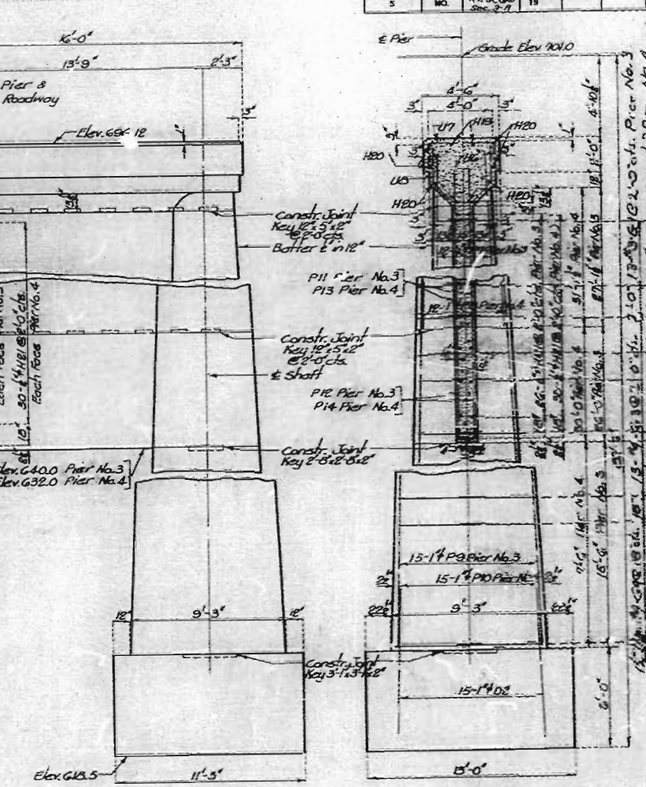


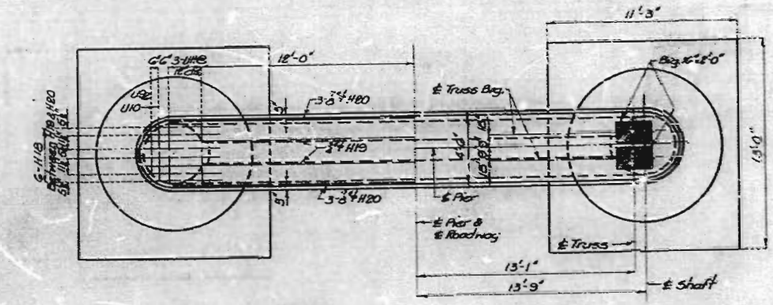


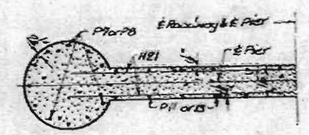












BRIDGE OVER LITTLE N. FORK OF WHITE RIVER

STATE ROAD FROM THEODOSIA TO GAINSVILLE
ABOUT 57 MILES W. OF WEST PLAINS
PROJECT NO. R.T. SC(80) SEC. 3-A STA. 375+98

OZARK COUNTY

K-817 R

Drawn Aug. 1950 by R.P.P.
Traced Aug. 1950 by B.R.G.
Checked Aug. 1950 by C.J.L.

Note: This drawing is not to scale, Follow dimensions.

Sheet No. 4 of 10

Rev. 4-27-51

SEE FINAL PLANS FOR FINISHED LINES

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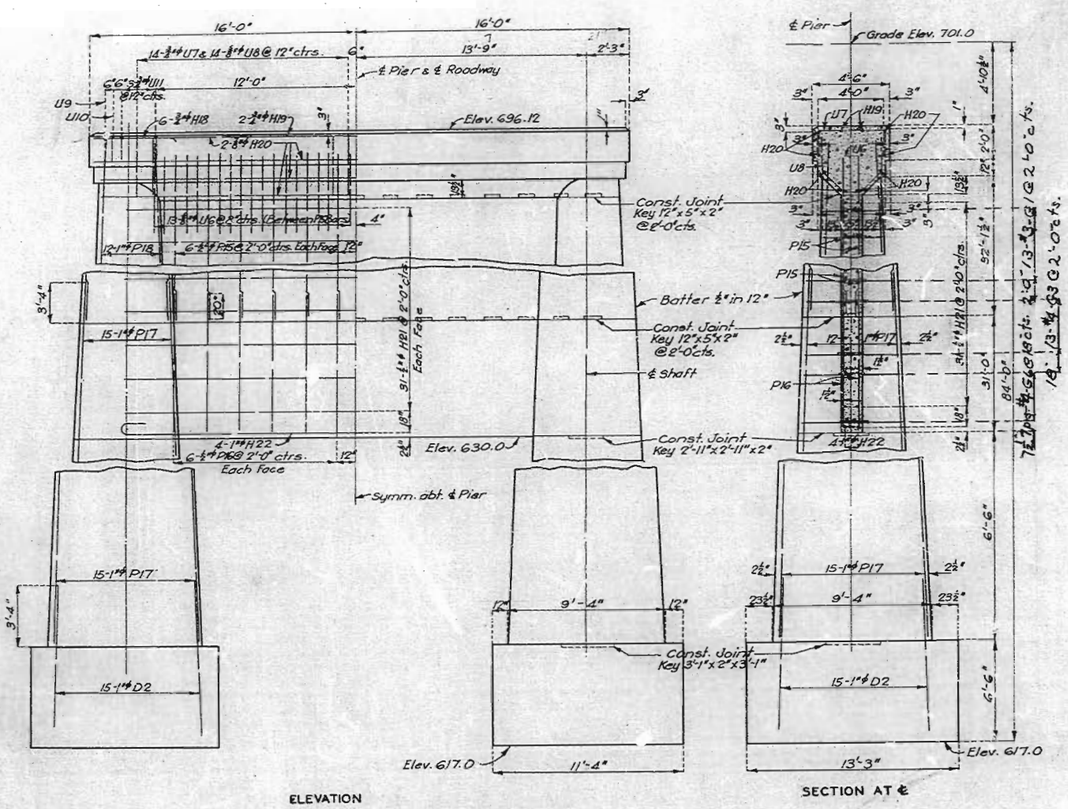
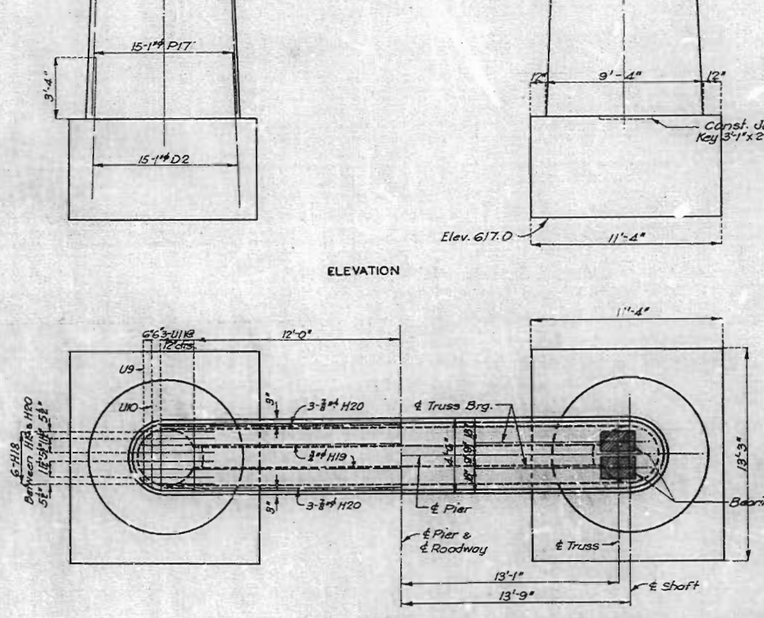
MISSOURI STATE HIGHWAY DEPARTMENT

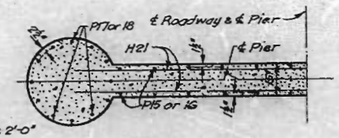
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	RT. SC (80) Sec. 3-A	19		



ELEVATION

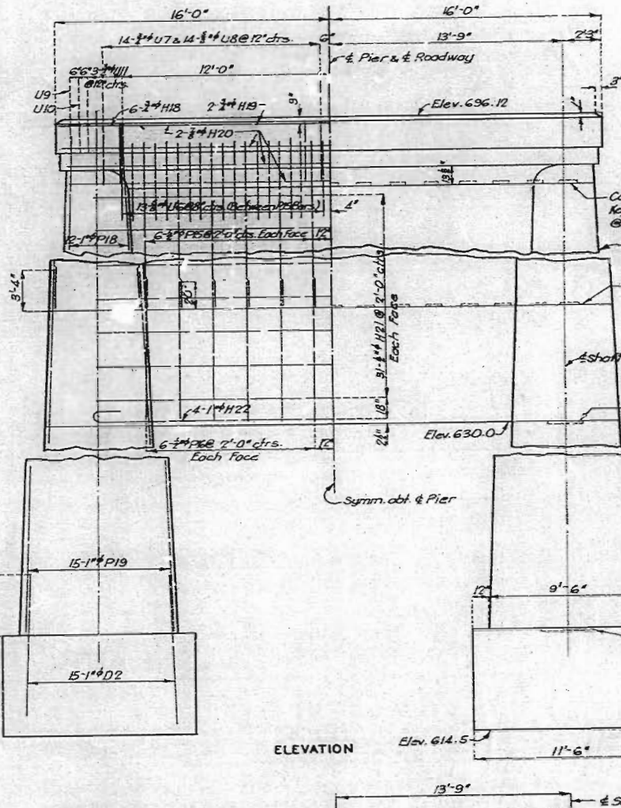


PLAN



HALF SECTION THRU WEB

DETAILS OF PIERS NO. 5 & 6



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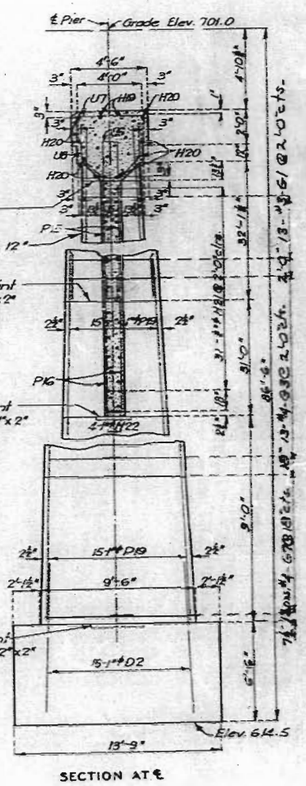
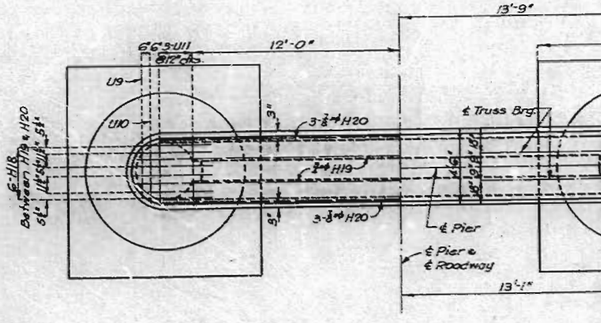
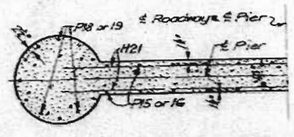




PLAN



HALF SECTION THRU WEB

DETAILS OF PIER NO. 7

BRIDGE OVER LITTLE NORTH FORK WHITE RIVER

STATE ROAD FROM THEODOSIA TO GAINSVILLE
ABOUT 57 MILES W. OF WEST PLAINS
PROJECT NO. RT. SC (80) SEC. 3A STA. 375+98

OZARK COUNTY

K-817 R

Drawn Aug. 1950 By R. P. P.
Traced Aug. 1950 By B.G & J.T.F.
Checked Aug. 1950 by C.S.A.

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 5 of 10.

Rev. 9-27-51

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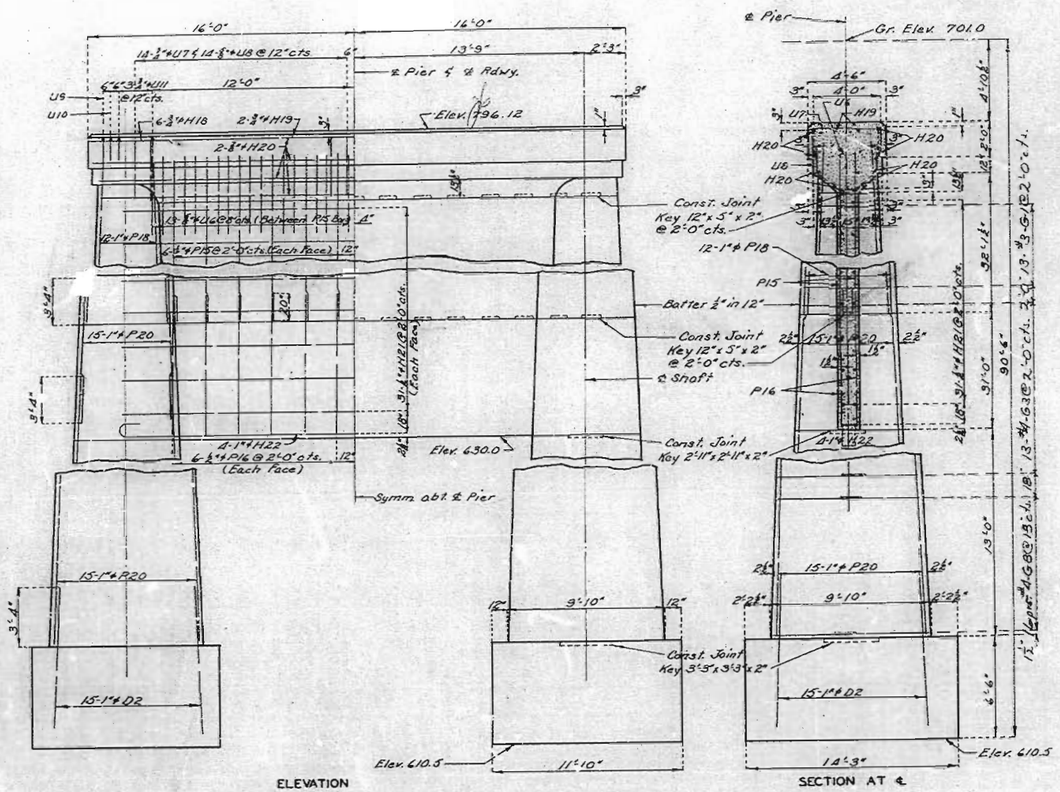
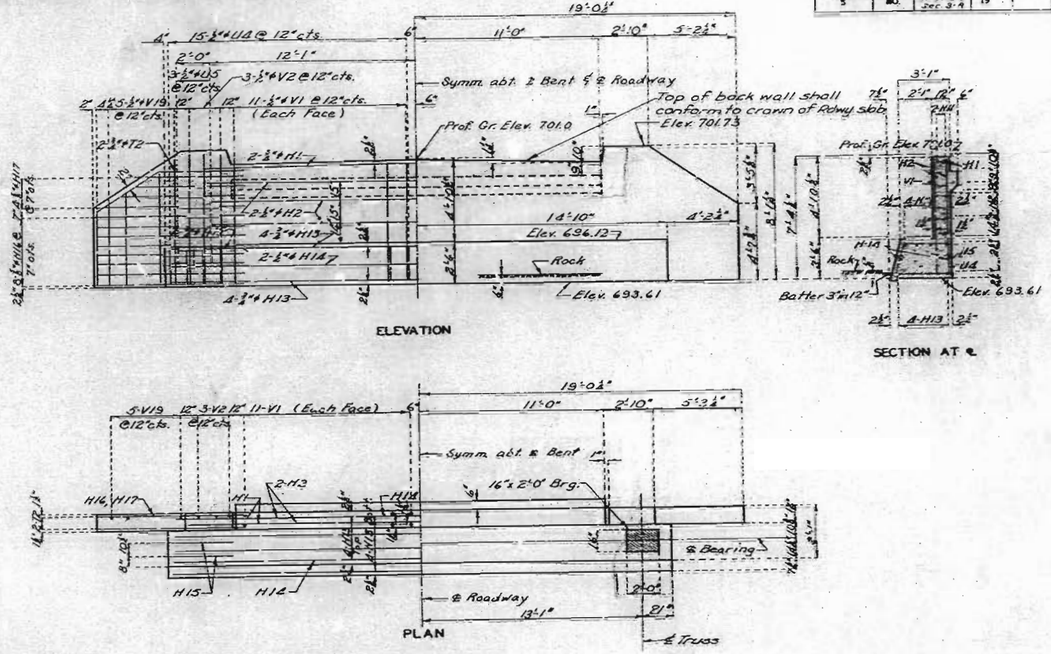
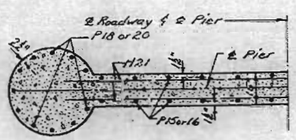
MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	RT SC(80) Sec 3-A	19		







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BRIDGE OVER LITTLE N. FORK WHITE RIVER

STATE ROAD FROM THEODOSIA TO GAINSVILLE

ABOUT 57 MILES W. OF WEST PLAINS

PROJECT NO. RT. SC(80) SEC. 3-A STA. 375+98

OZARK COUNTY

K-817 R

Drawn Aug. 1950 by H.J.K. & R.P.P.
Traced Aug. 1950 by A.J.K.
Checked Aug. 1950 by C.J.A.

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 6 of 10.

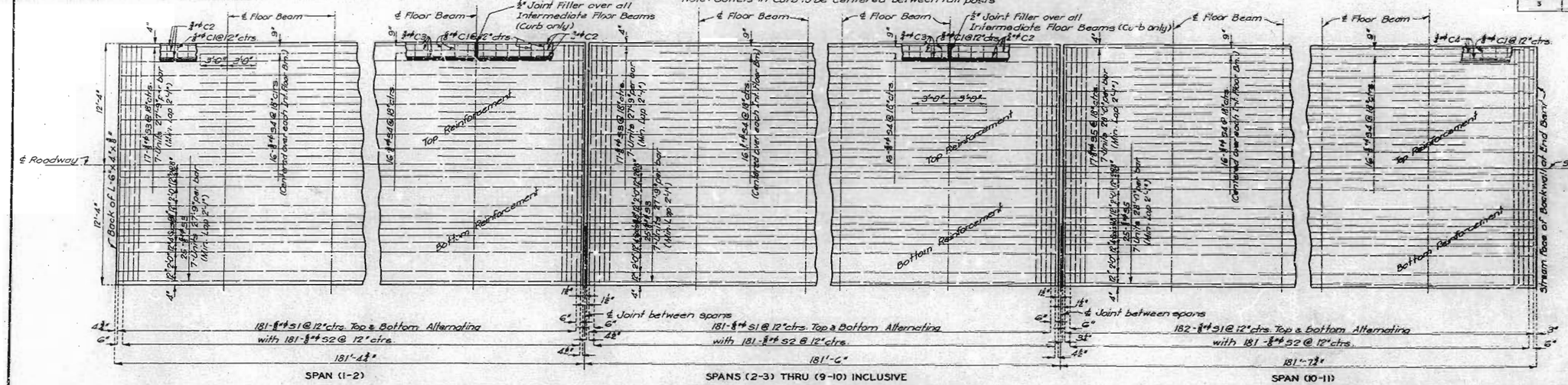
FINISHED

R.S. 4-27-51

MISSOURI STATE HIGHWAY DEPARTMENT

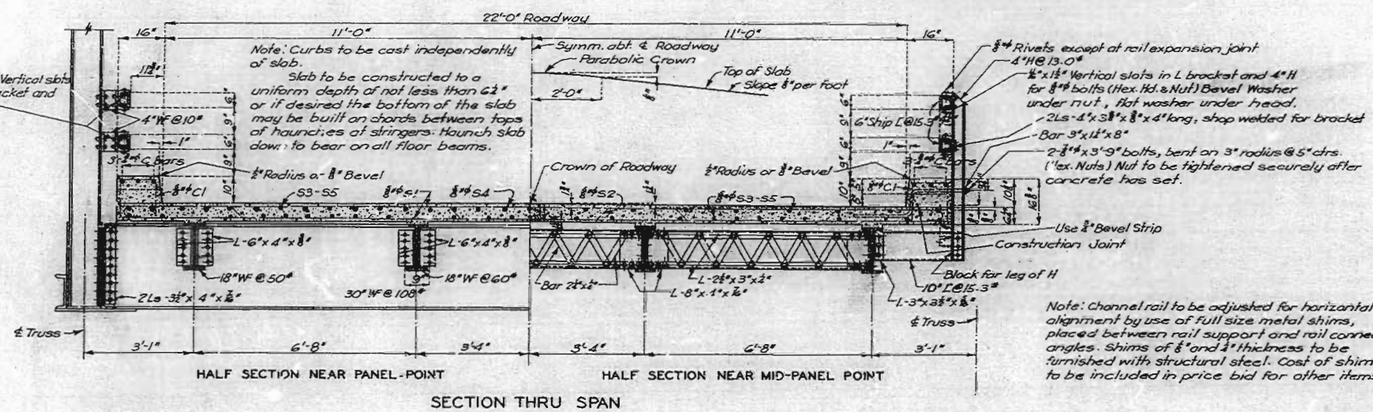
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	MO.	RT. SC(80) Sec. 3-A	19		

Note: Outlets in curb to be centered between rail posts



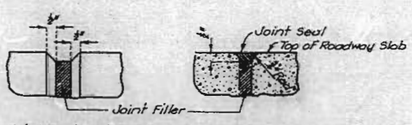
SPAN (1-2) — SPANS (2-3) THRU (9-10) INCLUSIVE — SPAN (10-11)

PART PLAN OF SLAB SHOWING REINFORCING



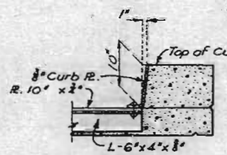
HALF SECTION NEAR PANEL-POINT — HALF SECTION NEAR MID-PANEL POINT

SECTION THRU SPAN

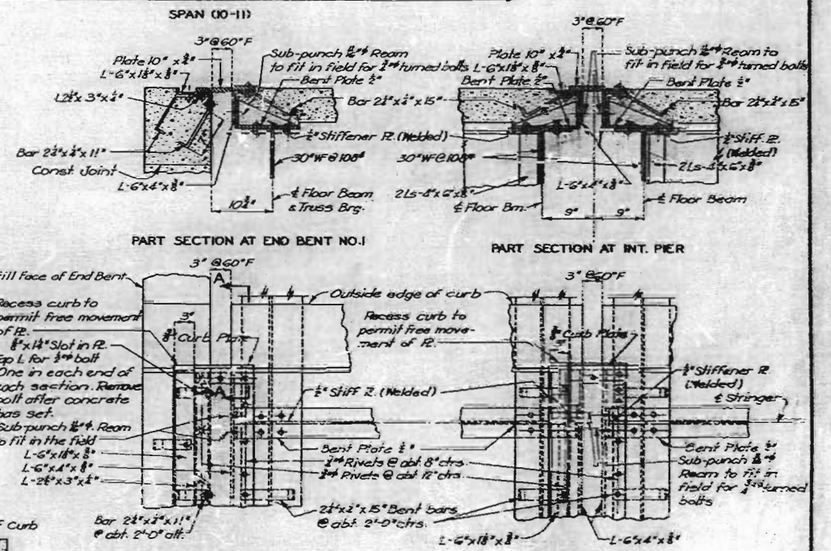


Note: Use bevel as shown for exposed faces of all filled joints except at top surface of roadway slab. Use edging tool with ⅜" radius at top surface of roadway slab each side of joint and fill flush with joint seal as shown.

DETAILS OF BEVEL FOR FILLED JOINTS



SECTION A-A



PART SECTION AT END BENT NO.1 — PART SECTION AT INT. PIER

END BENT NO. 1 — PIERS NO. 2 THRU 10

PART PLAN OF EXPANSION DEVICE

Note: Expansion device shall be fabricated in three sections to splice at ½" Bent Plate at intermediate stringers, and shall be bent to conform to crown of roadway.
Joints in material making up expansion device shall be staggered at least 6".

BRIDGE OVER LITTLE NORTH FORK WHITE RIVER

STATE ROAD FROM THEODOSIA TO GAINSVILLE
ABOUT 57 MILES W. OF WEST PLAINS
PROJECT NO. RT. SC (80) SEC. 3-A STA. 375 + 98

OZARK COUNTY

FINISHED

K-817R

Designed July 1950 by C.R.P.
Drawn July 1950 By A.A.B.
Traced July 1950 By J.T.F.
Checked AUG 1950 By R.H.L.

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 7 of 10.

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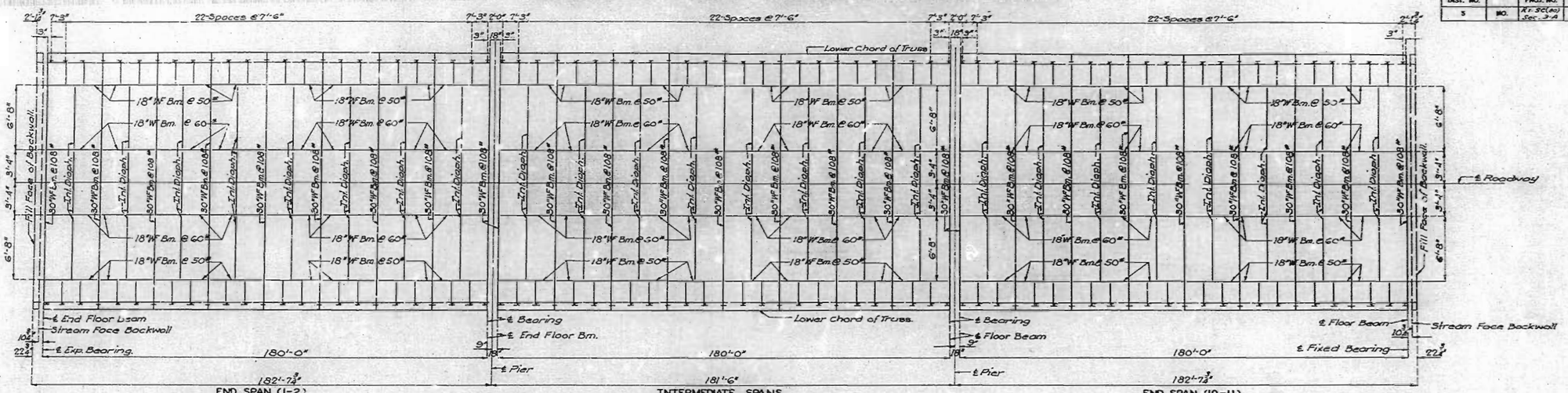
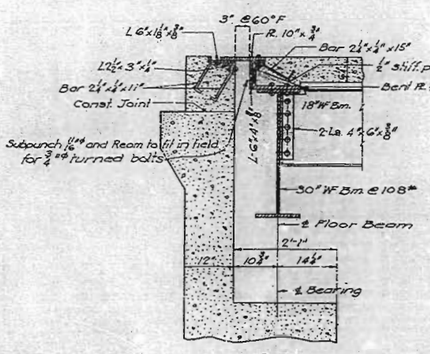
MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	RT-SC(80) Sec. 3-A	19		



END SPAN (1-2) — INTERMEDIATE SPANS — END SPAN (10-11)

PLAN OF STRUCTURAL STEEL



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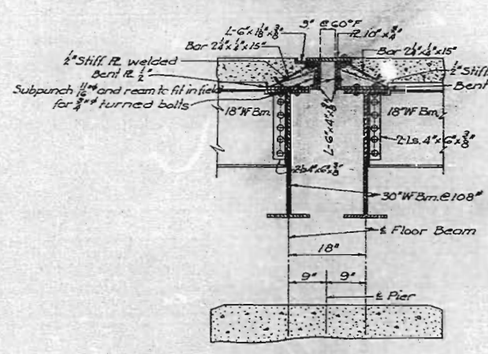
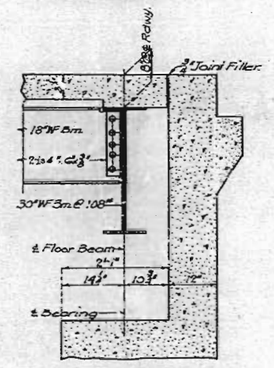
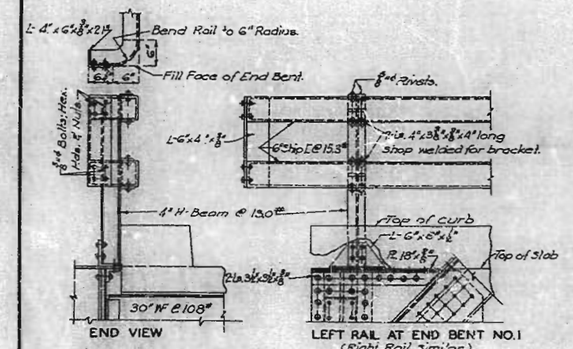


② THRU ⑨

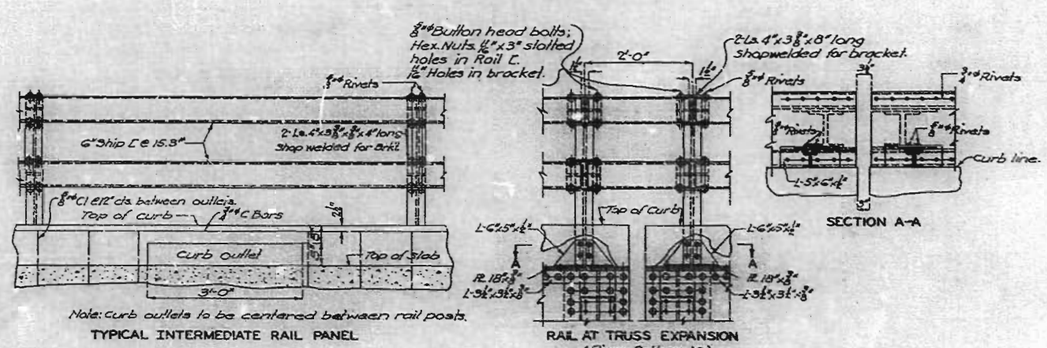


⑩

PART LONGITUDINAL SECTION

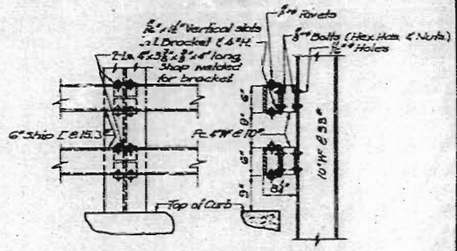


END VIEW — LEFT RAIL AT END BENT NO.1 (Right Rail Similar)



Note: Curb outlets to be centered between rail posts.

TYPICAL INTERMEDIATE RAIL PANEL — RAIL AT TRUSS EXPANSION (Piers 2 thru 10) — SECTION A-A



RAIL CONNECTION TO TRUSS VERTICALS

DETAILS OF HANDRAIL

Designed July 1950 by C.R.P.
Drawn July 1950 by C.R.P.
Traced Aug. 1950 by K.R.W.
Checked Aug. 1950 by R.H.L.

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 8 of 10

BRIDGE OVER LITTLE NORTH FORK WHITE RIVER

STATE ROAD FROM THEODOSIA TO GAINSVILLE
ABOUT 57 MILES W. OF WEST PLAINS
PROJECT NO. RT. SC(80) SEC. 3-A STA. 375 + 98

OZARK COUNTY

K-817 R

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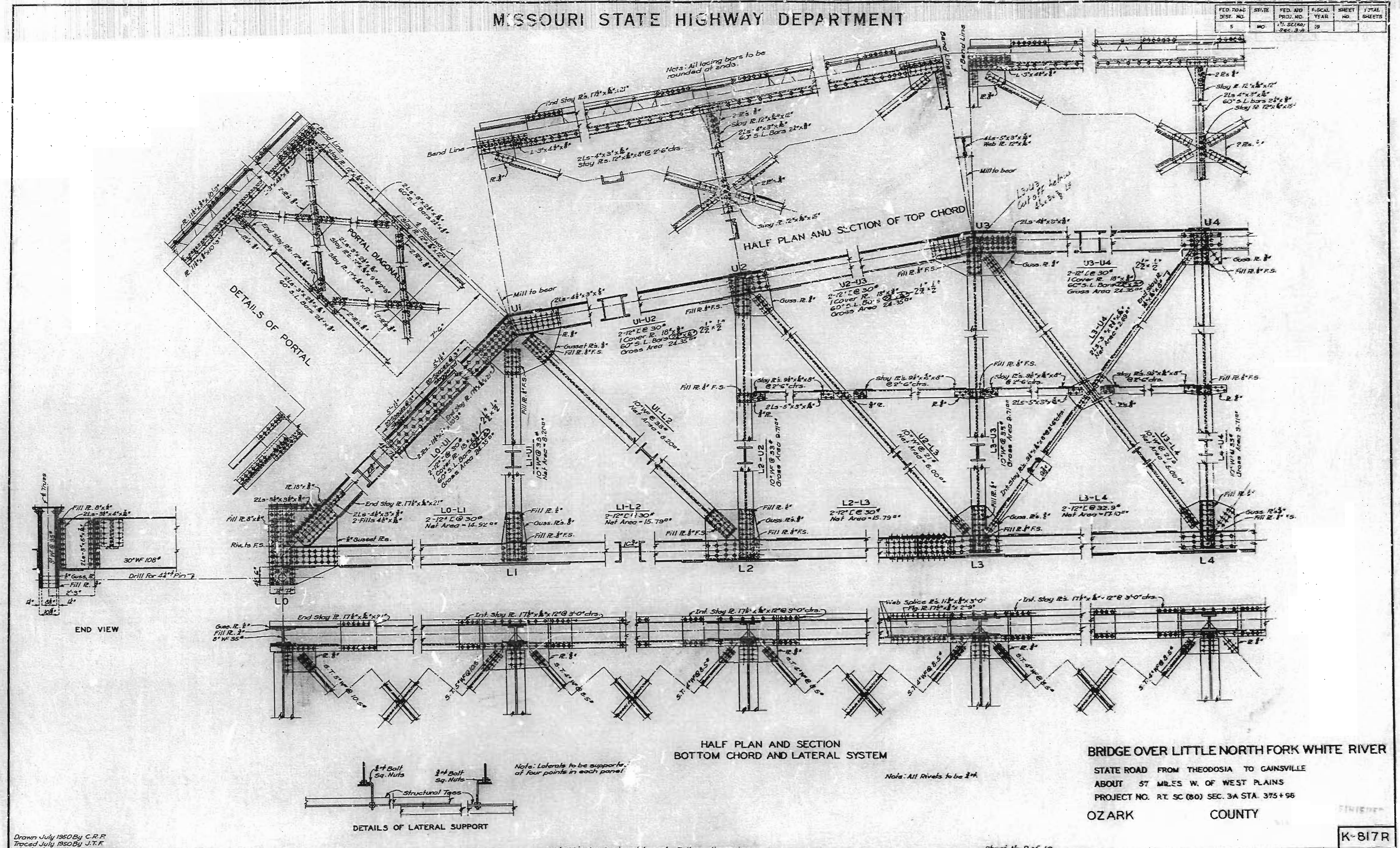
MISSOURI STATE HIGHWAY DEPARTMENT
HALF PLAN AND SECTION OF TOP CHORD
DETAILS OF PORTAL
PORTAL DIAGONAL
Note: All lacing bars to be rounded at ends.
Band Line
Mill to bear
U1 U2 U3 U4
L0 L1 L2 L3 L4
U1-U2
U2-U3
U3-U4
L0-U1
L1-U1
U1-L2
L2-U2
U2-L3
L3-U3
L3-U4
U3-L4
L4-U4
L0-L1
L1-L2
L2-L3
L3-L4
END VIEW
30" WF 108#
HALF PLAN AND SECTION
BOTTOM CHORD AND LATERAL SYSTEM
DETAILS OF LATERAL SUPPORT
Structural Tees
Note: Laterals to be supported at four points in each panel
Note: All Rivets to be 7/8"
BRIDGE OVER LITTLE NORTH FORK WHITE RIVER
STATE ROAD FROM THEODOSIA TO GAINSVILLE
ABOUT 57 MILES W. OF WEST PLAINS
PROJECT NO. RT. SC (80) SEC. 3A STA. 375+56
OZARK COUNTY
K-817R
Drawn July 1950 By C.R.P.
Traced July 1950 By J.T.F.
Checked Aug. 1950 By R.H.L.
Note: This drawing is not to scale. Follow dimensions.
Sheet No. 9 of 10
Rev. 12-5-51

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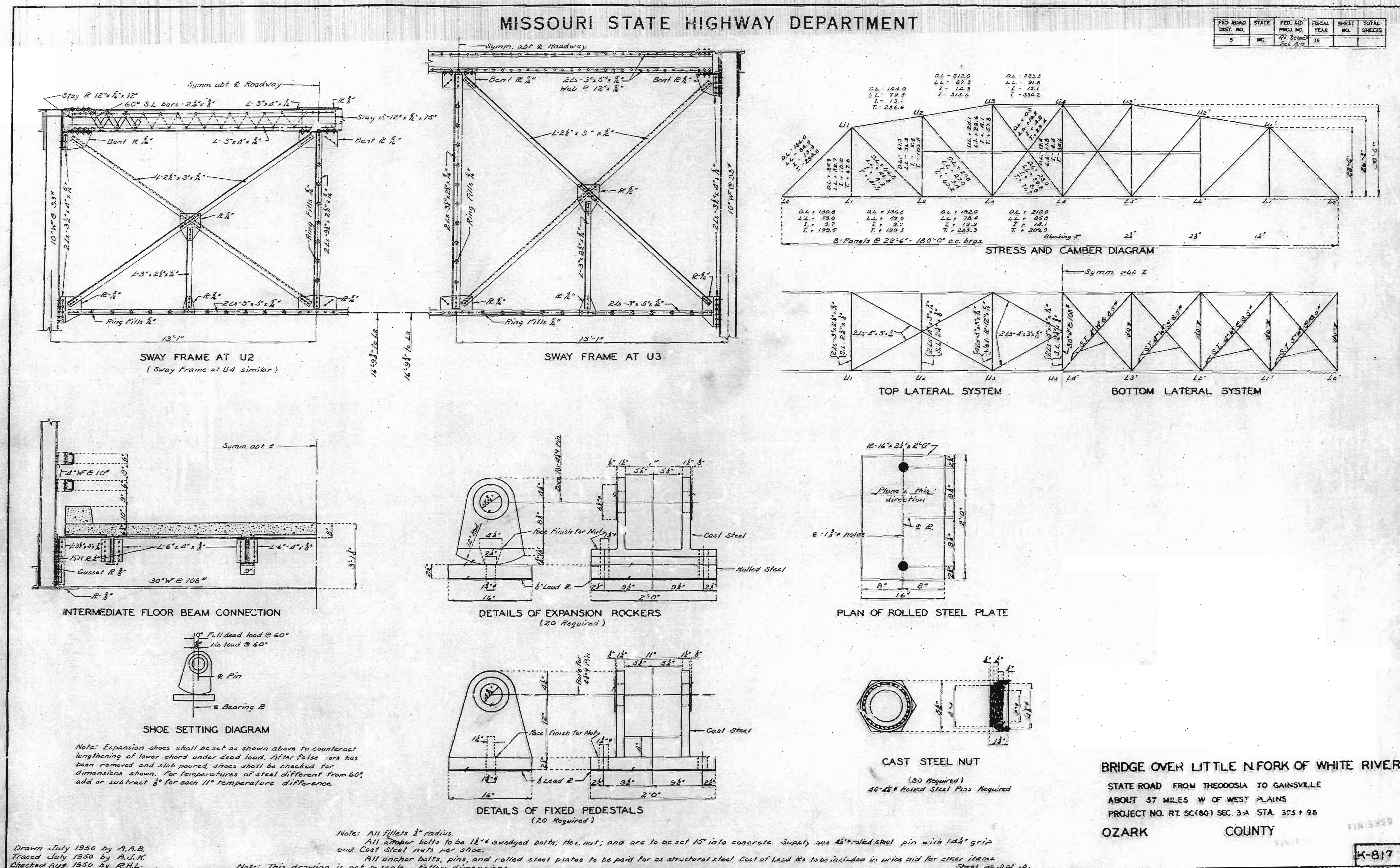

MISSOURI STATE HIGHWAY DEPARTMENT
FED. ROAD DIST. NO. 5
STATE MO.
SWAY FRAME AT U2
(Sway Frame at U4 similar)
SWAY FRAME AT U3
Symm. abt. ℄ Roadway
Bent ℞ 5/16"
Ring Fills 5/16"
STRESS AND CAMBER DIAGRAM
8-Panels @ 22'-6" = 180'-0" c.c. brgs.
TOP LATERAL SYSTEM
BOTTOM LATERAL SYSTEM
INTERMEDIATE FLOOR BEAM CONNECTION
DETAILS OF EXPANSION ROCKERS
(20 Required)
Face Finish for Nut
Cast Steel
Rolled Steel
PLAN OF ROLLED STEEL PLATE
SHOE SETTING DIAGRAM
Full dead load @ 60°
No load @ 60°
℄ Pin
℄ Bearing ℞
Note: Expansion shoes shall be set as shown above to counteract lengthening of lower chord under dead load. After false work has been removed and slab poured, shoes shall be checked for dimensions shown. For temperatures of steel different from 60°, add or subtract 1/8" for each 11° temperature difference.
DETAILS OF FIXED PEDESTALS
(20 Required)
CAST STEEL NUT
(80 Required)
40-4½"⌀ Rolled Steel Pins Required
Note: All fillets 1/2" radius.
All anchor bolts to be 1½"⌀ swedged bolts; Hex. nut; and are to be set 15" into concrete. Supply one 4½"⌀ rolled steel pin with 14¼" grip and Cast Steel nuts per shoe.
All anchor bolts, pins, and rolled steel plates to be paid for as structural steel. Cost of Lead ℞s to be included in price bid for other items.
Note: This drawing is not to scale. Follow dimensions.
Sheet No. 8 of 10.
Drawn July 1950 by A.A.B.
Traced July 1950 by A.J.K.
Checked Aug. 1950 by R.H.L.
BRIDGE OVER LITTLE N. FORK OF WHITE RIVER
STATE ROAD FROM THEODOSIA TO GAINSVILLE
ABOUT 57 MILES W OF WEST PLAINS
PROJECT NO. RT. SC(80) SEC. 3-A STA. 375 + 98
OZARK COUNTY
K-817
FINISHED
NO CONSTRUCTION CHANGES

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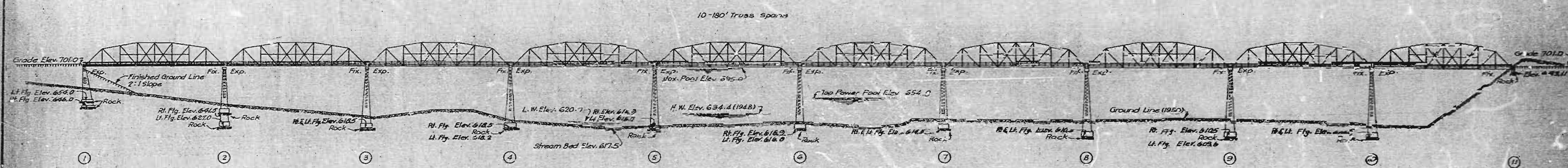
MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. No.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
5	MO.	Rt. SC(80) Sec. 3-A	19		

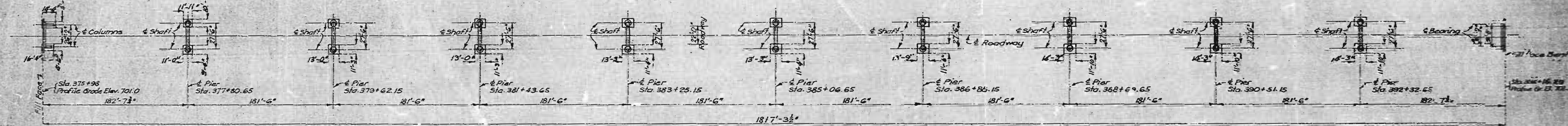
FINAL PLANS



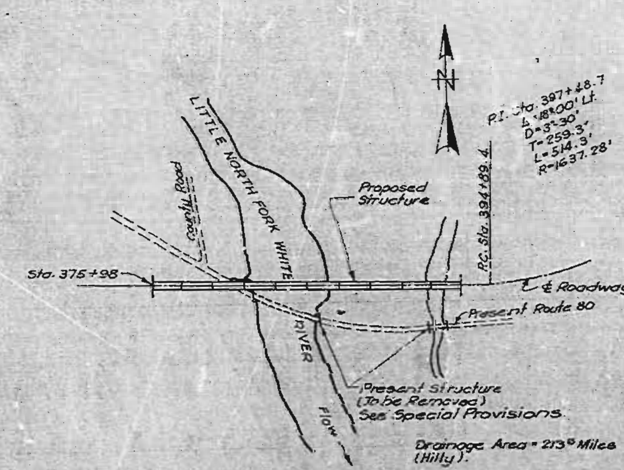
GENERAL ELEVATION

Note: All loose, shelly or disintegrated rock shall be removed and footings placed on hard, solid, undisturbed rock. If soft rock or shale is encountered, the footings shall be carried at least 18" into and cast against vertical faces of same.

In no case shall footings of Piers No. 4, 5 and 6 and Bent No. 11 be placed higher than elevations shown.



PLAN



LOCATION SKETCH

GENERAL NOTES:

Design Specifications A.A.S.H.O. 1949.
Loading H15-44.
Structural Steel Stress 18,000#/□".
Reinforcing Steel Stress 18,000#/□".
Class "B" Concrete Stress 1,000#/□".
All Concrete shall be Class "B". (Air Entrained).
Rivets ⅞" except where otherwise noted.

Paint: Shop, none; Field, contact surfaces of bolted field connections one coat of red lead and surfaces inaccessable after erection three coats of red lead. All other exposed surfaces one coat red lead, second coat of brown, and final coat Aluminum. Payment for cleaning and painting such surfaces shall be included in the price bid for Fabricated Structural Steel.

Where joint filler is specified it shall conform with the requirements for Premoulded Material for Filler as given in Section 38-19A11h of the Standard Specifications.

FINAL QUANTITIES

Item		Substr.	Superstr.	Total
Class 1 Excavation for Structures	Cu. Yds.	1053		1053
Class 2 Excavation for Structures	Cu. Yds.	1135		1135
Class "B" Concrete	Cu. Yds.	3088.8	1021.2	4106.0
Fabricated Structural Steel	Lbs.		[illegible]	[illegible]
Steel Castings	Lbs.		15300	[illegible]
Reinforcing Steel	Lbs.	103160	257530	360690
Cl. 1 Exc. Below Elev.	Cu. Yds.	23		23
Cl. 2 Exc. Below Elev.	Cu. Yds.	183		183
Test Holes	Lin. Ft.	134		134

Excavation for bridge made above Elev. 625.0 will be paid for as Class 1 Excavation for Structures.

Excavation for bridge made below Elev. 625.0 will be paid for as Class 2 Excavation for Structures.

B.M. #4 - Elev. 640.10 "□" on top of North wing wall End of Bridge 50' Rt. of Sta. 381+93 (Sea Level Datum).

BRIDGE OVER LITTLE NORTH FORK WHITE RIVER

STATE ROAD FROM THEODOSIA TO GAINSVILLE

ABOUT 57 MILES W. OF WEST PLAINS

PROJECT NO. RT. SC (80) SEC. 3-A STA. 375+98

OZARK COUNTY

SUBMITTED BY V. W. Enslow 2/17/1951

APPROVED BY C.W. Brown 2/17/1951

STD. C-110R3

K-817R

Drawn Aug. 1950 By C.R.P.
Traced Aug. 1950 By J.T.F.
Checked Aug. 1950 By R.H.L.

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 1A of 5

FINAL PLANS

Rev. 9-27-51

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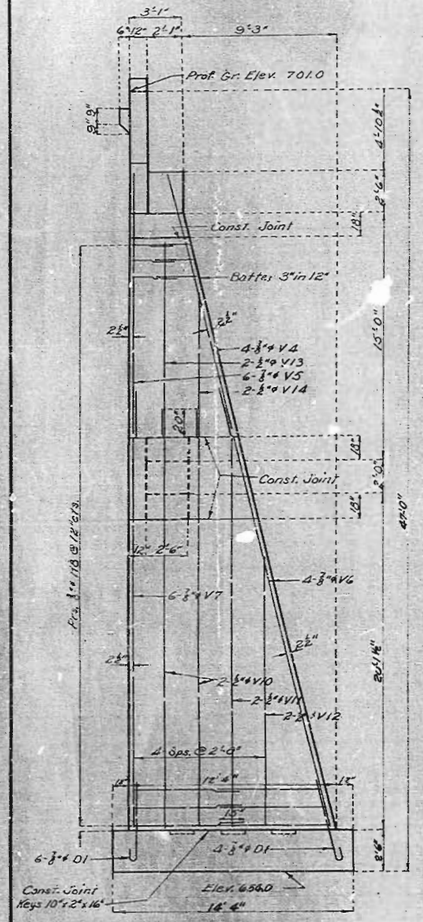
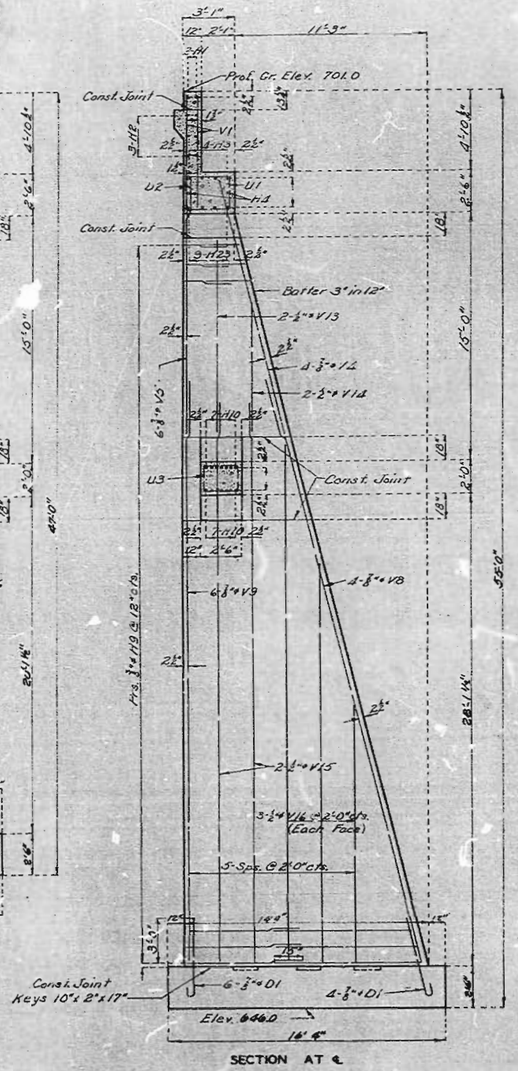
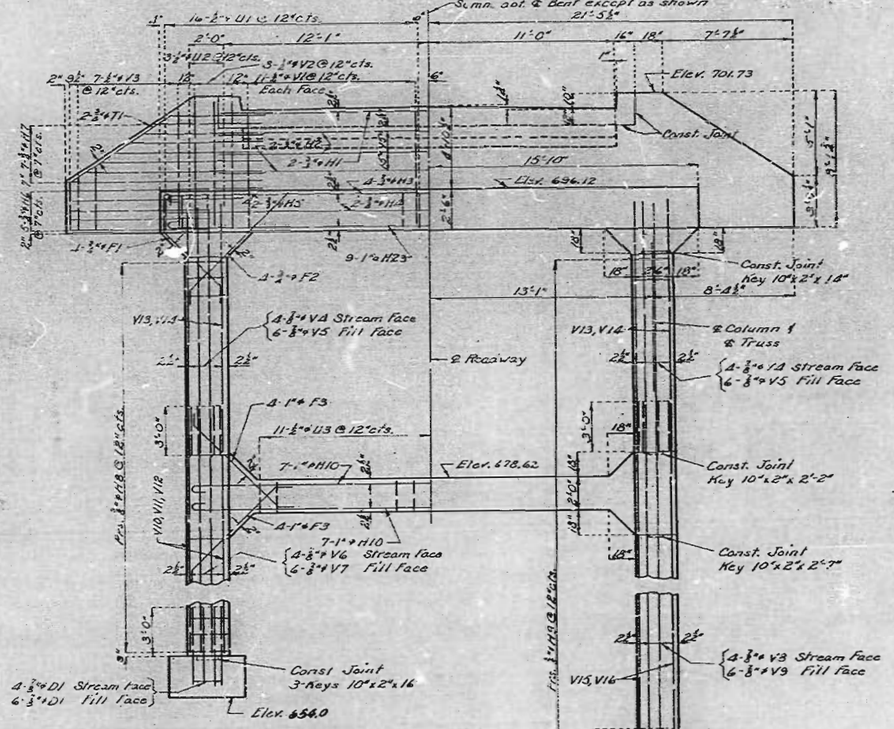
MISSOURI STATE HIGHWAY DEPARTMENT

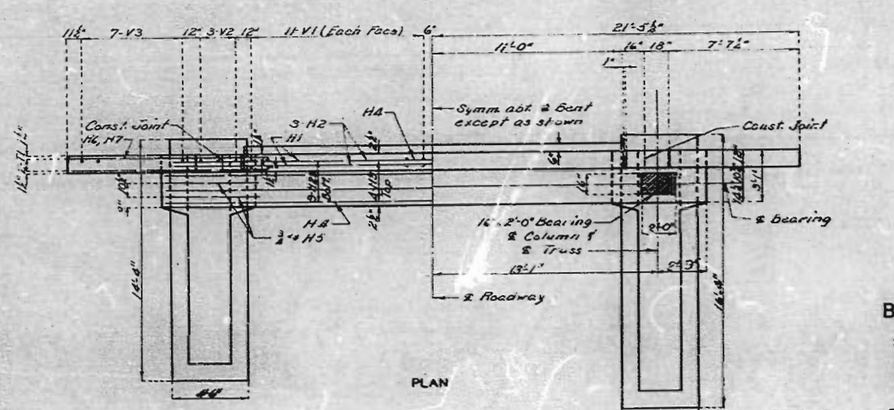
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	RT. SC(80) SEC. 3-A	19		

FINAL PLANS









Note: Backfill above construction joint is not to be placed until the Structural Steel expansion device on superstructure has been installed and floor slab has been poured.

Backfill shall not be carried above bottom of beam and wings until superstructure span (1-2) is in place.

DETAILS OF END BENT NO. 1

Drawn July 1950 by H.S.K.
Traced July 1950 by A.J.K.
Ch. and Proj. 1950 by C.S.A.

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 3A of 5

BRIDGE OVER LITTLE NORTH FORK WHITE RIVER

STATE ROAD FROM THEODOSIA TO GAINSVILLE

ABOUT 37 MILES ℄ OF WEST PLAINS

PROJECT NO. RT. SC (80) SEC. 3-A STA. 375+98

OZARK COUNTY

FINISHED

K-817 R

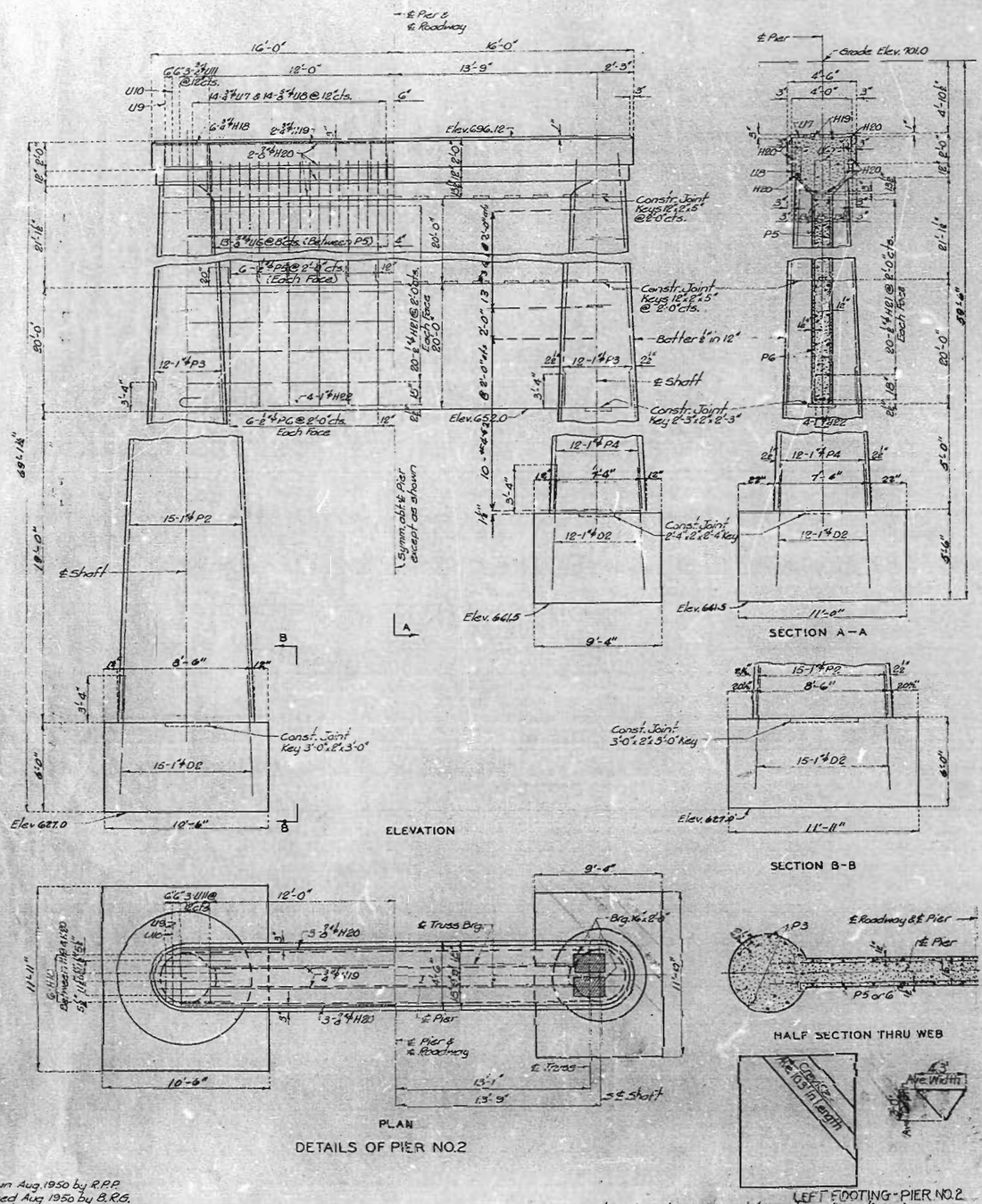
286

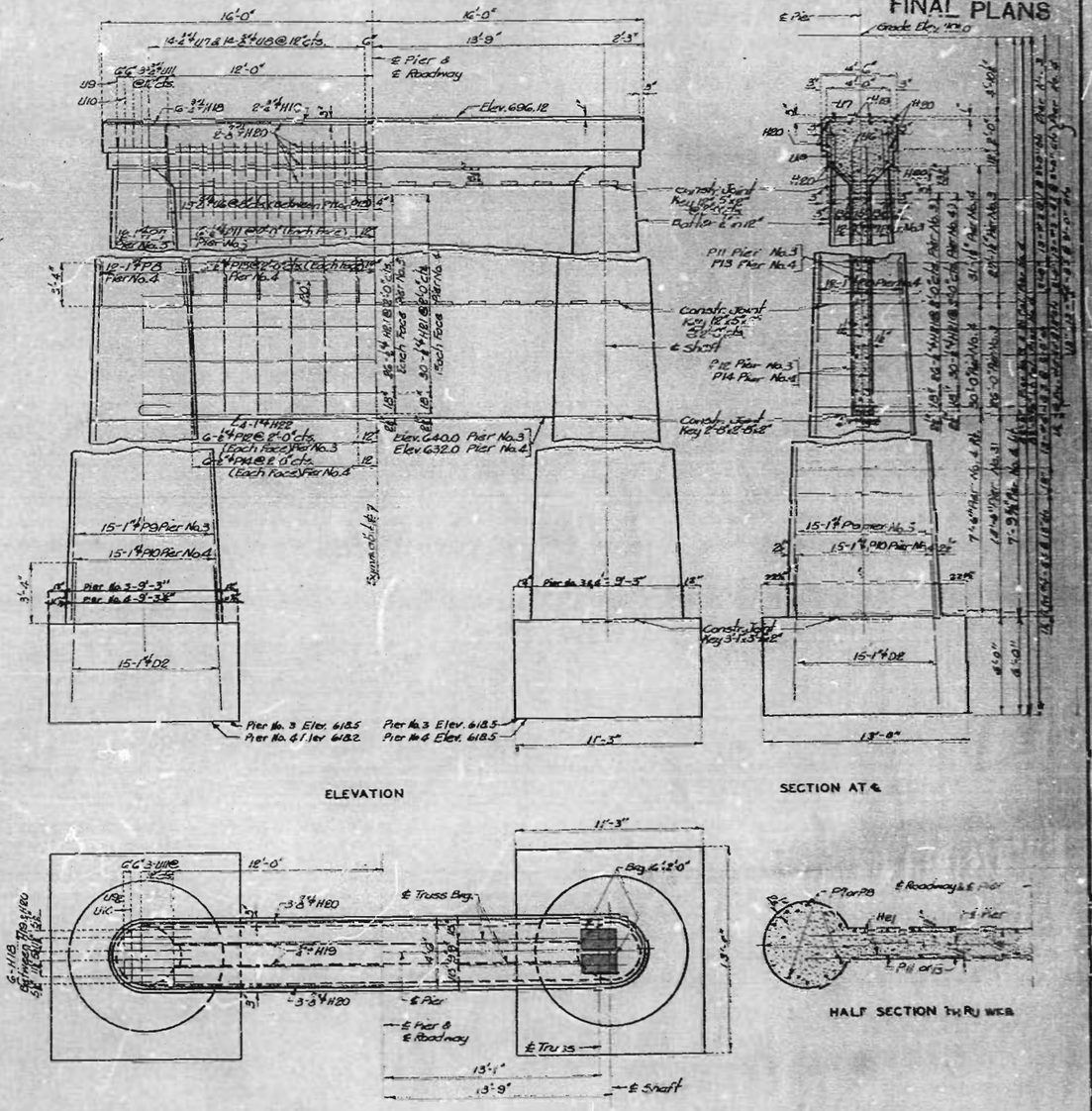
FINAL PLANS

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	RT. SC(80) Sec. 3-A	19		

FINAL PLANS





BRIDGE OVER LITTLE N. FORK OF WHITE RIVER

STATE ROAD FROM THEODOSIA TO GAINSVILLE

ABOUT 57 MILES W. OF WEST PLAINS

PROJECT NO. RT. SC(80) SEC. 3-A STA. 375+98

OZARK COUNTY

FINISHED

K-817R

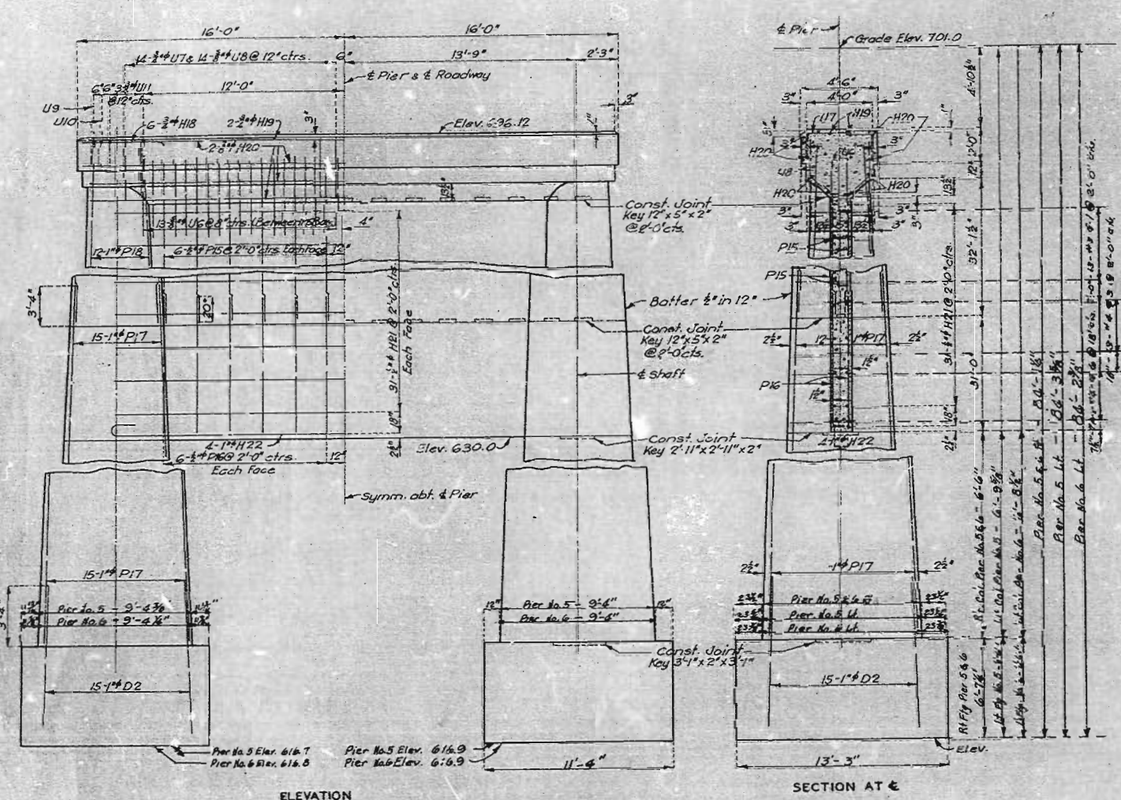
Drawn Aug. 1950 by R.P.P.
Traced Aug 1950 by B.R.G.
Checked Aug 1950 by C.S.A.

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 4 of 5.

FINAL PLANS

2287



288

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	Rt. SC (80) Sec. 3-A	19		

FINAL PLANS

DETAILS OF PIERS NO. 5 & 6

DETAILS OF PIER NO. 7

BRIDGE OVER LITTLE NORTH FORK WHITE RIVER

STATE ROAD FROM THEODOSIA TO GAINSVILLE
ABOUT 57 MILES W. OF WEST PLAINS
PROJECT NO. RT. SC (80) SEC. 3A STA. 375+98

OZARK COUNTY

K-817R

Drawn Aug. 1950 By R. P. P.
Traced Aug. 1950 By B. G. & J. T. F.
Checked Aug. 1950 by C. S. A.

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 5A of 5

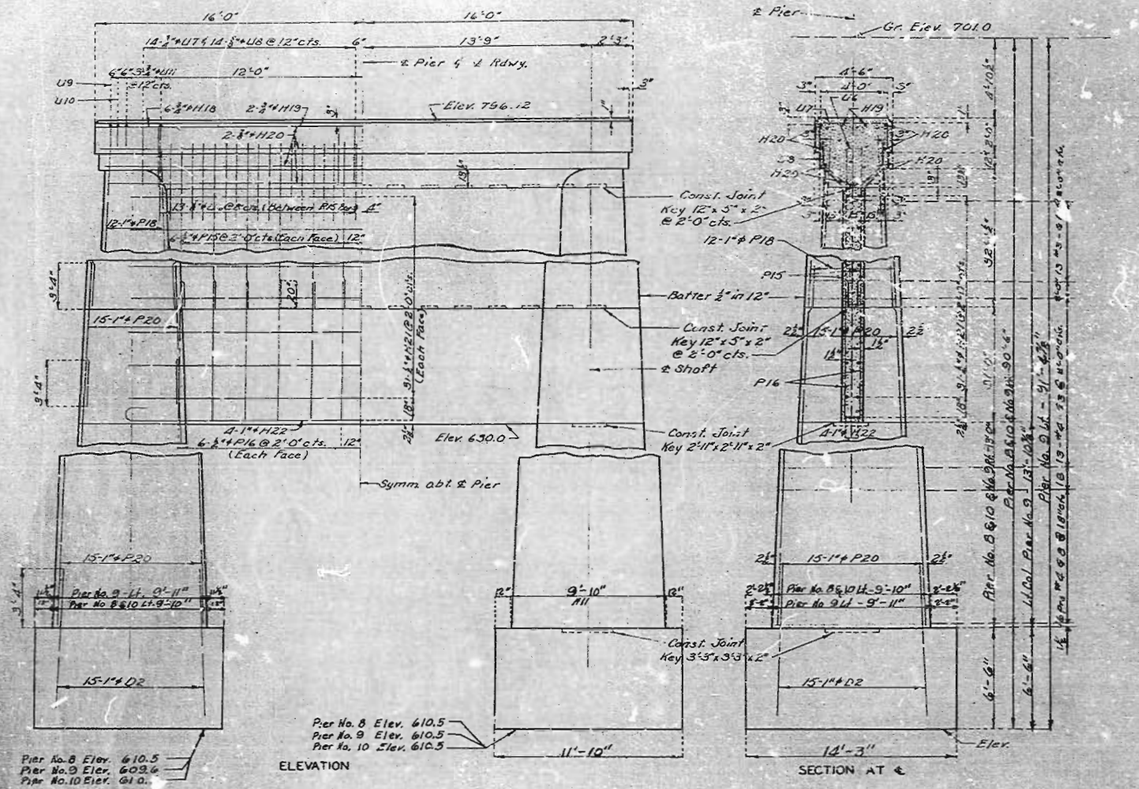
Rev. 9-27-51

FINAL PLANS

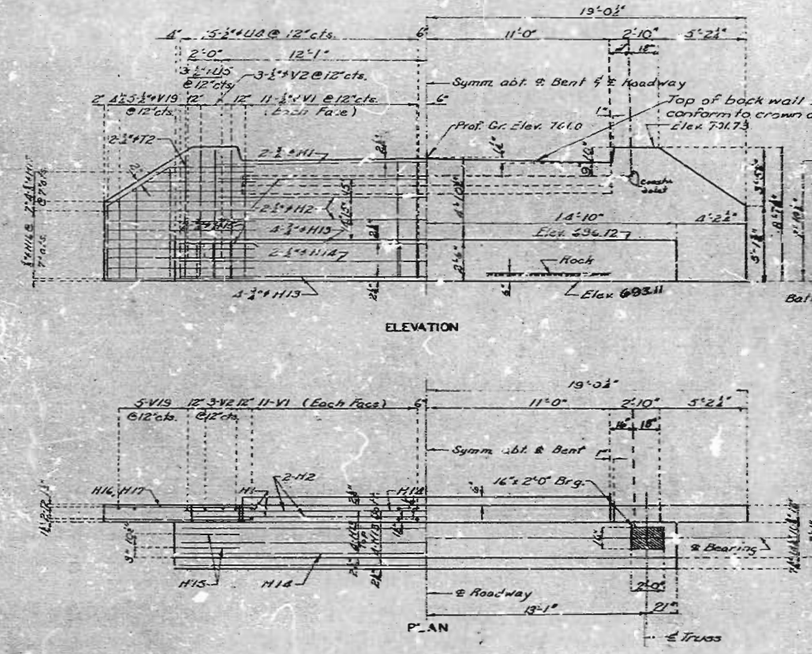
MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	F.A. NO. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	ST-C(60) Proj. 3-A	19		

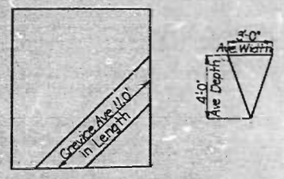
FINAL PLANS



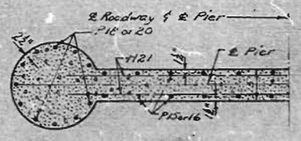
DETAILS OF PIERS NO. 8, 9, & 10



DETAILS OF END BENT NO. 11



LEFT FOOTING - PIER NO. 10



HALF SECTION THRU WEB

BRIDGE OVER LITTLE N. FORK WHITE RIVER

STATE ROAD FROM THEODOSIA TO GAINSVILLE

ABOUT 57 MILES W. OF WEST PLAINS

PROJECT NO. RT. SC(60) Sec. 3-A STA. 372 + 98

OZARK COUNTY

K-817 R

Drawn Aug. 1950 by H.J.K. & R.P.P.
Traced Aug. 1950 by A.J.K.
Checked Aug. 1950 by C.J.A.

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 6A of 5.

FINAL PLANS

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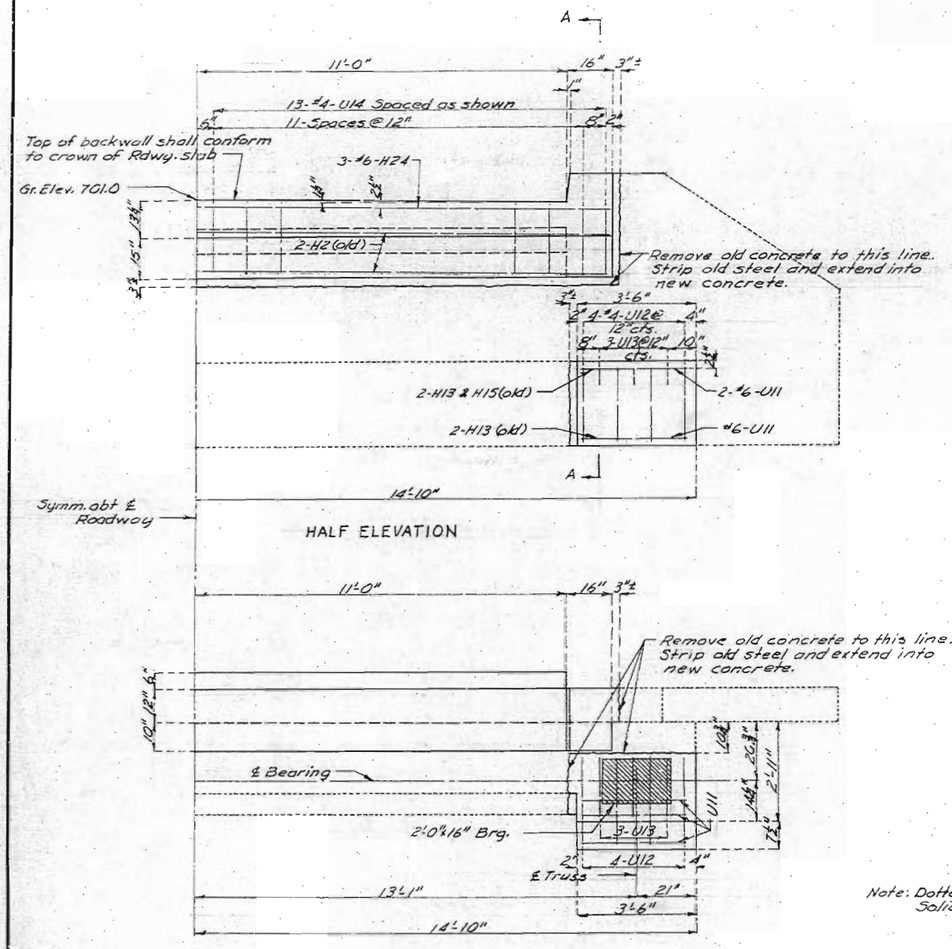
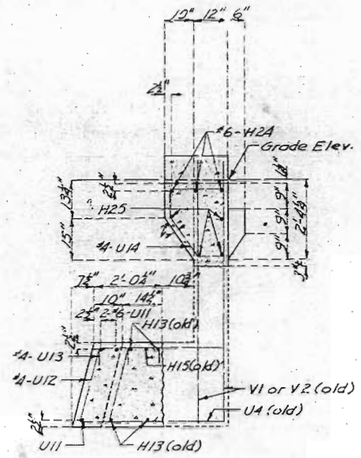
MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	STR 52(B39) SEC 2-A	19		





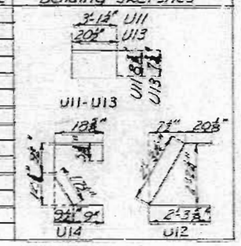
SECTION A-A

DETAILS OF REVISED END BENT NO. 11

BILL OF REINFORCING STEEL FOR REVISIONS

No.	Size	Length	Mark	Location	Source
3	#6	24'-3"	H24	Backwall	New
6	#6	4'-6"	U11	Beam	"
8	#4	6'-3"	U12	"	"
6	#4	3'-0"	U13	"	"
26	#4	5'-0"	U14	Backwall	"
4	#4	24'-3"	H25	"	"

Bending Sketches



BRIDGE OVER LITTLE NORTH FORK WHITE RIVER

STATE ROAD

ABOUT

PROJECT NO. STA.

OZARK COUNTY

SUBMITTED BY _____ DATE _____ DISTRICT ENGINEER

APPROVED BY _____ DATE _____ CHIEF ENGINEER

FINISHED

FINISHED

K-617A

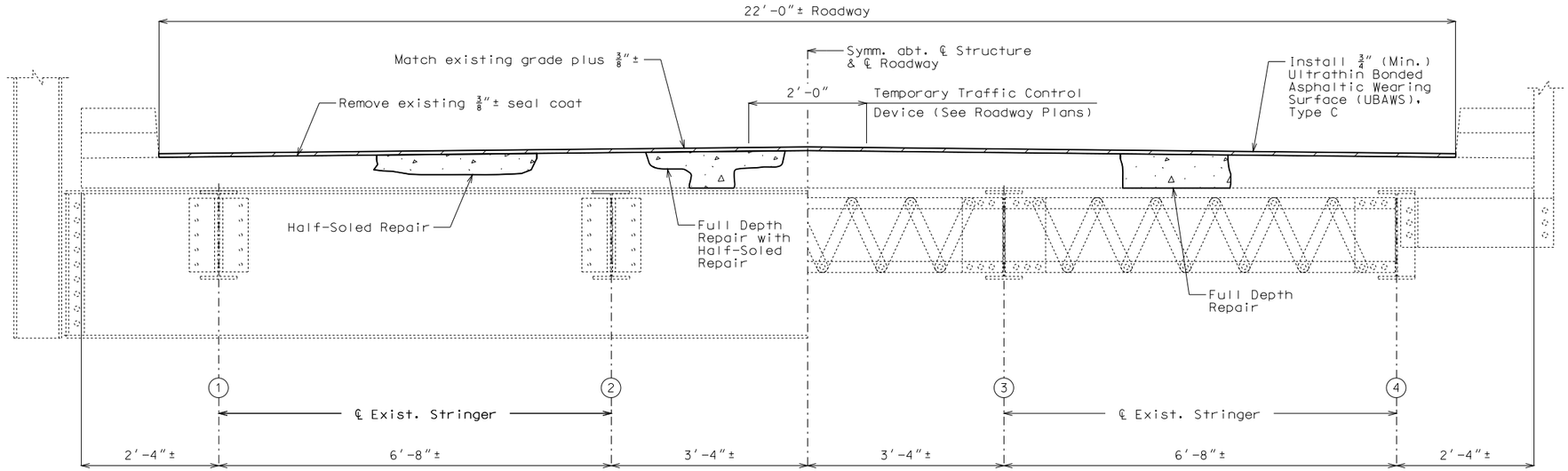
Drawn Nov. 1952 by H.R.B.
Checked Nov 1952 by J.E.L.

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 6A of 10

U.I.P. AND REHABILITATE EXISTING 10 @ (180′) SIMPLE THRU TRUSS SPANS

SEC/SUR 19 TWP 22N RGE 15W



HALF SECTION NEAR PANEL POINT

HALF SECTION NEAR MID-PANEL POINT

TYPICAL SECTION THRU EXISTING DECK

GENERAL NOTES:

Design Specifications:

2002 AASHTO LFD (17th Ed.) Standard Specifications
Bridge Deck Rating = 6

Design Unit Stresses:

Structural Low Alloy Steel (ASTM A709 Grade 50) fy = 50,000 psi

Concrete Protective Coatings:

Protective coating for concrete bents and piers (Epoxy) shall be applied as shown on the bridge plans and in accordance with Sec 711.

Miscellaneous:

Outline of old work is indicated by light dashed lines. Heavy lines indicate new work.

Contractor shall verify all dimensions in field before ordering new material.

High strength bolts, nuts and washers will be sampled for quality assurance as specified in Sec 106.

Fabricated structural steel shall be ASTM A709 Grade 50, except as noted.

Field connections shall be made with ¾″ diameter high strength bolts and $\frac{13}{16}$″ diameter holes, except as noted.

Shop-drilled holes in new steel and existing holes in existing steel may be used as a template for field drilling new holes at connection joints with the installation of replacement end portals and sway frames.

Removal and replacement of the end portals and sway frames, as shown in the plans, and any incidental work, complete in place, will be considered completely covered by the contract lump sum price for "Remove and Replace Portals and Sway Frames".

All removed rivets in rehab structure shall be replaced with high strength bolts with flat washer under bolt head and nut (See Special Provisions).

Roadway surfacing adjacent to the bridge ends shall match new bridge wearing surface (Roadway Item).

Traffic Handling:

Traffic to be maintained on structure during construction except structure to be closed during heat straightening and removal and replacement of portals and sway frames. See roadway plans for traffic control.

Estimated Quantities

Item		Total
Removal of Seal Coat	sq. foot	39,981
Ultrathin Bonded Wearing Surface, Type C	sq. yard	4,442
Substructure Repair (Unformed)	sq. foot	70
Repairing Concrete Deck (Half-Soling)	sq. foot	6,000
Full Depth Repair	sq. foot	400
Clean and Epoxy Seal	sq. foot	8,954
Protective Coating-Concrete Bents and Piers (Epoxy)	lump sum	1
Surface Preparation for Recoating Structural Steel	lump sum	1
Field Application of Inorganic Zinc Primer	lump sum	1
Intermediate Field Coat (System G)	lump sum	1
Finish Field Coat (System G)	lump sum	1
Remove and Replace Portals and Sway Frames	lump sum	1
Heat Straightening	lump sum	1

The State estimates there is approximately 98,000 pounds of new steel in the pay item "Remove and Replace Portals and Sway Frames" and that weight is used in preparing the cost estimate for the pay item. Variation may be encountered in the estimated weight but the variation cannot be used for an adjustment in the contract lump sum price.

Structural Steel Protective Coatings:

Protective Coating: System G in accordance with Sec 1081.

Coating Limits: All existing structural steel of the truss bridge, including curb rails.

Surface Preparation: Surface preparation of the existing steel shall be in accordance with Sec 1081 for "Recoating of Structural Steel (System G, H or I)". The cost of surface preparation will be considered completely covered by the contract lump sum price for "Surface Preparation for Recoating Structural Steel".

Prime Coat (Exist. Steel): The cost of the prime coat for existing steel will be considered completely covered by the contract lump sum price for "Field Application of Inorganic Zinc Primer". Tint of the prime coat for System G shall be similar to the color of the field coat to be used.

Prime Coat (New Steel): The cost of the prime coat for new steel will be considered completely covered by the contract lump sum price for "Remove and Replace Portals and Sway Frames". Tint of the prime coat for System G shall be similar to the color of the field coat to be used.

At the option of the contractor, the intermediate field coat and finish field coat may be applied in the shop. The contractor shall exercise extreme care during all phases of loading, hauling, handling and erection to minimize damage and shall be fully responsible for all repairs and cleaning of the coating systems as required by the engineer.

Field Coats: The color of the field coats shall be Brown (Federal Standard #30045). The cost of the intermediate field coat will be considered completely covered by the contract lump sum price for "Intermediate Field Coat (System G)". The cost of the finish field coat will be considered completely covered by the contract lump sum price for "Finish Field Coat (System G)".

The surfaces of existing steel that will become faying surfaces for new connections of replacement end portals and sway frames shall be cleaned according to the manufacturer's recommendation and with a minimum of SSPC-SP-3 surface preparation and coated with one prime coat of Gray Epoxy-Mastic Primer (non-aluminum) in accordance with Sec 1081.

For the duration of cleaning and recoating the truss spans, the truss span superstructure in any span shall not be draped with an impermeable surface subject to wind loads for a length any longer than 1/4 the span length at any one time regardless of height of coverage. Simultaneous work in adjacent spans is permissible using the specified limits in each span.

REPAIRS TO BRIDGE: ROUTE 160 OVER BULL SHOALS LAKE

ROUTE 160 FROM ROUTE 5 TO ROUTE 95
ABOUT 2.9 MILES EAST OF ROUTE 95
BEGINNING STATION 375+98.00± (Match Existing)

STD. 616.10

Detailed Apr. 2015
Checked June 2015

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
DANIEL M. SMITH
NUMBER PE-28985
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 9/3/2015

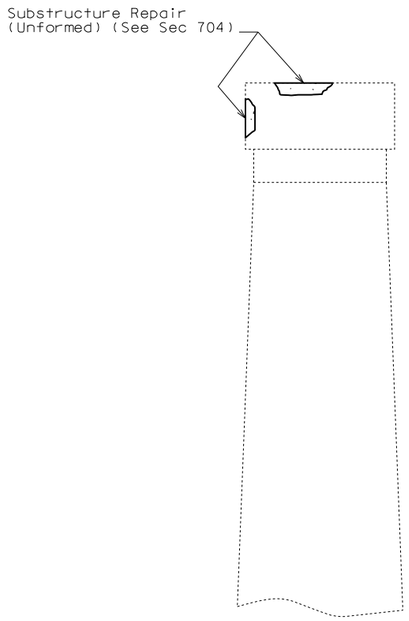
ROUTE	STATE
160	MO
DISTRICT	SHEET NO.
BR	1

COUNTY OZARK
JOB NO. J9P3024
CONTRACT ID.
PROJECT NO.
BRIDGE NO. K08172

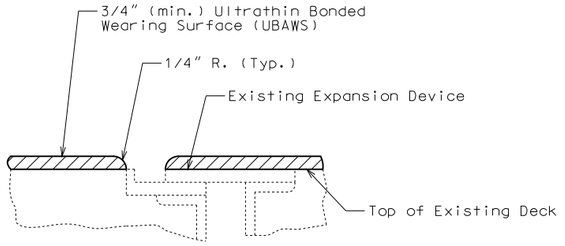
DESCRIPTION | DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

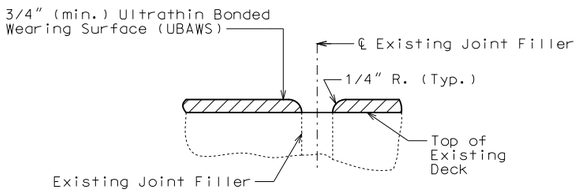
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)



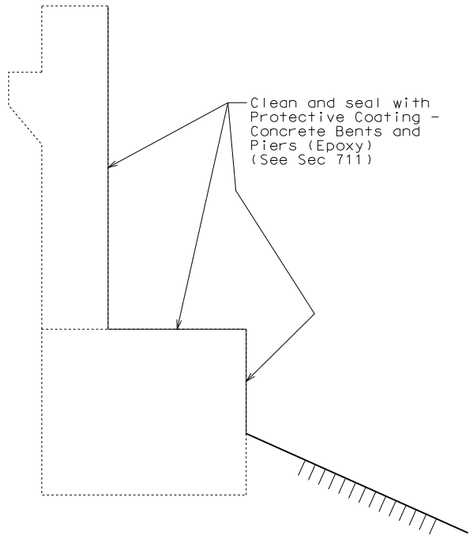
PART ELEVATION OF PIERS NO. 2 & 5
SHOWING SUBSTRUCTURE REPAIR (UNFORMED)



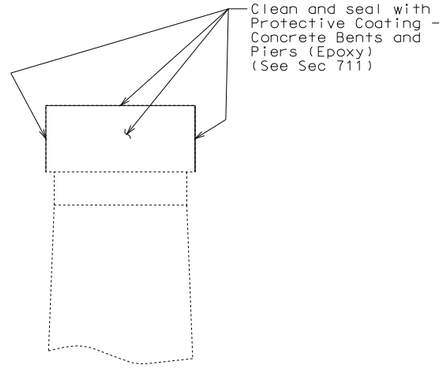
SECTION THRU JOINT
AT END BENT NO. 1 AND
PIERS NO. 2 THRU 10



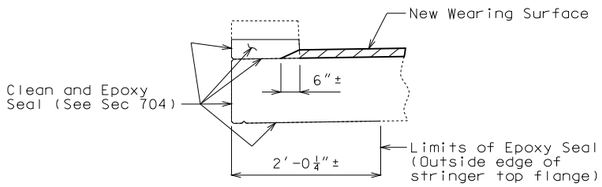
SECTION THRU JOINT
AT END BENT NO. 11



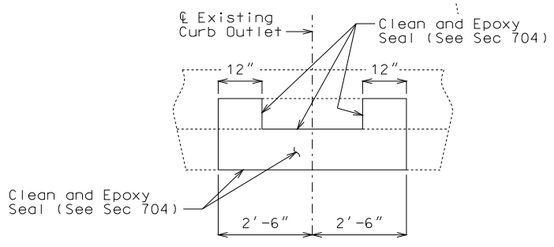
TYPICAL SECTION THRU
END BENTS NO. 1 & 11 SHOWING
PROTECTIVE COATING



PART ELEVATION OF
PIERS NO. 2 THRU 10
SHOWING PROTECTIVE COATING



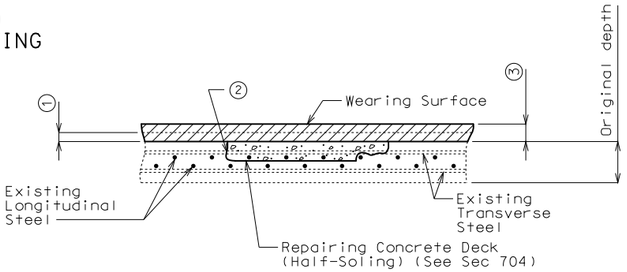
TYPICAL SECTION OF EXISTING CURB
OUTLET SHOWING LIMITS OF EPOXY SEAL



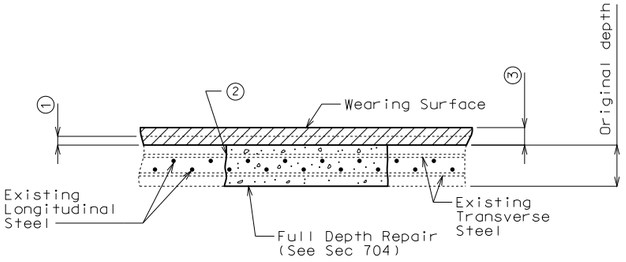
TYPICAL ELEVATION OF EXISTING CURB
OUTLET SHOWING LIMITS OF EPOXY SEAL

(Wearing surface not shown for clarity)

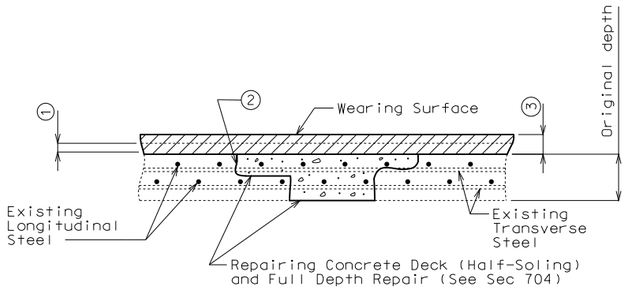
Note:
All reinforcing steel in slab that is loose and exposed shall be removed as directed by the engineer. Removal of reinforcing steel and loose concrete will be considered completely covered by the contract unit price for Clean and Epoxy Seal.



HALF-SOLED REPAIR



FULL DEPTH REPAIR



FULL DEPTH REPAIR
WITH HALF-SOLED REPAIR

① Remove existing seal coat.

② One inch vertical side shall be established outside the deteriorated area. See Sec 704.

③ 3/4" (min.) Ultrathin Bonded Asphaltic Wearing Surface (UBAWS), Type C.

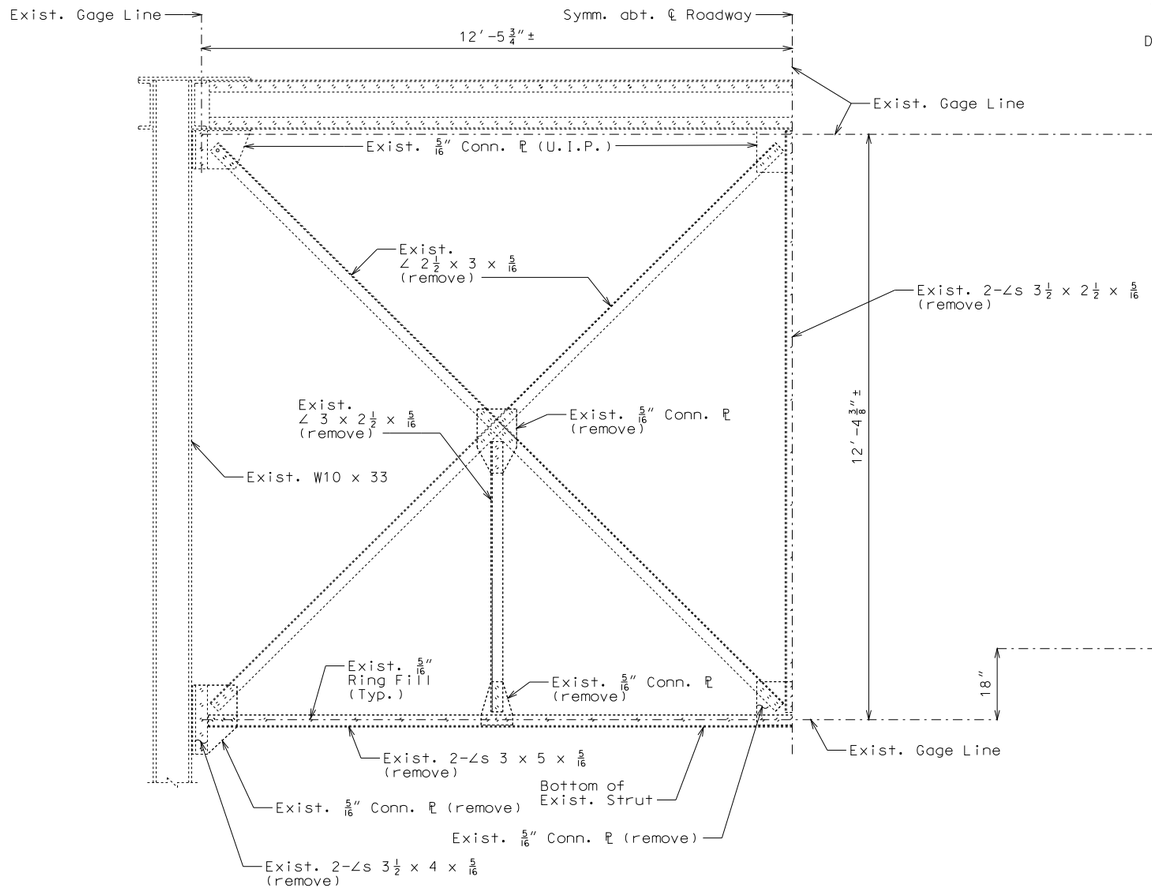
STATE OF MISSOURI
DANIEL M. SMITH
NUMBER PE-28985
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 9/3/2015
ROUTE 160 | STATE MO
DISTRICT BR | SHEET NO. 2
COUNTY OZARK
JOB NO. J9P3024
CONTRACT ID.
PROJECT NO.
BRIDGE NO. K08172

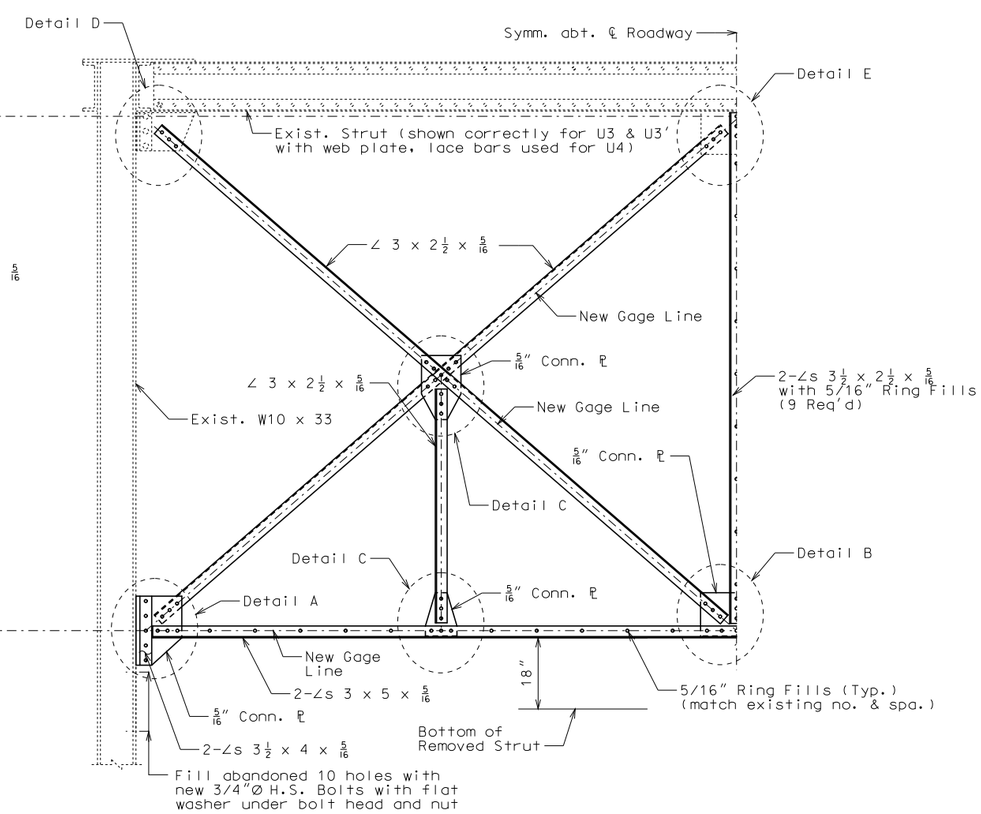
DATE	DESCRIPTION

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

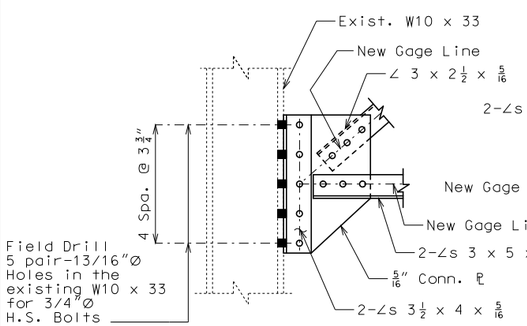
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)



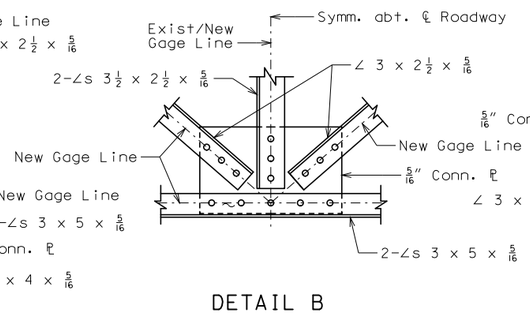
PART ELEVATION SHOWING REMOVAL OF EXIST. SWAY FRAME



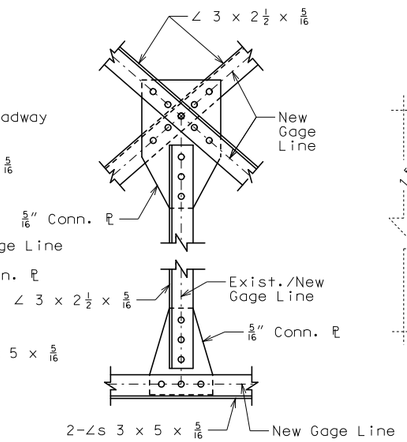
PART ELEVATION SHOWING NEW SWAY FRAME



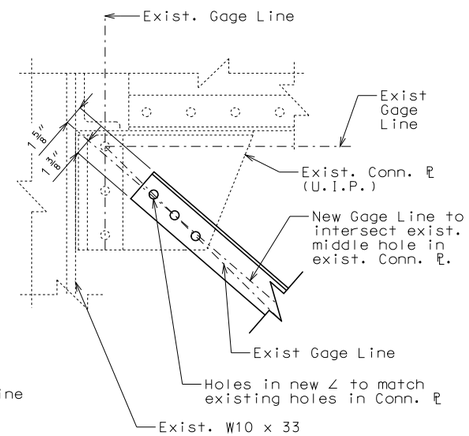
DETAIL A



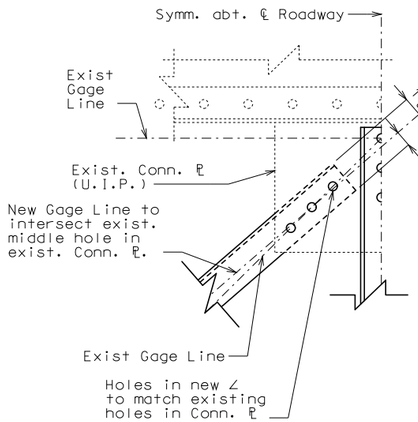
DETAIL B



DETAIL C



DETAIL D



DETAIL E

DETAILS OF SWAY FRAME @ U3, U3′ & U4

(30 Removals and Replacements Required)

Detailed Apr. 2015
Checked June 2015

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
DANIEL M. SMITH
NUMBER PE-28985
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 9/3/2015

ROUTE	STATE
160	MO
DISTRICT	SHEET NO.
BR	3

COUNTY OZARK

JOB NO. J9P3024

CONTRACT ID.

PROJECT NO.

BRIDGE NO. K08172

DATE	DESCRIPTION

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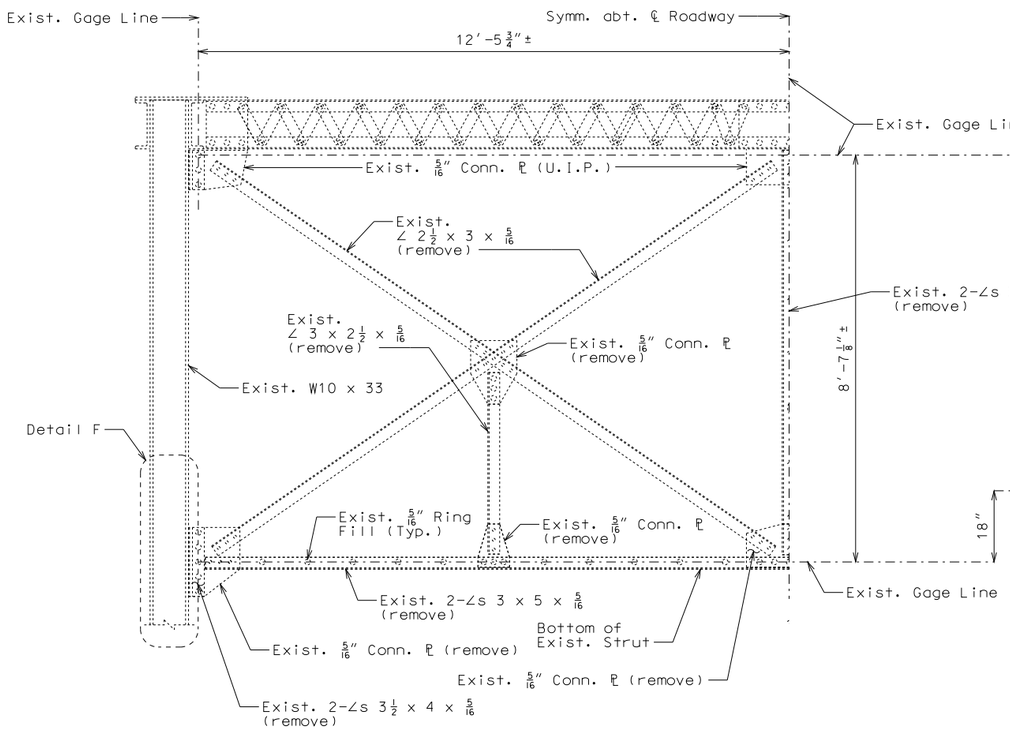
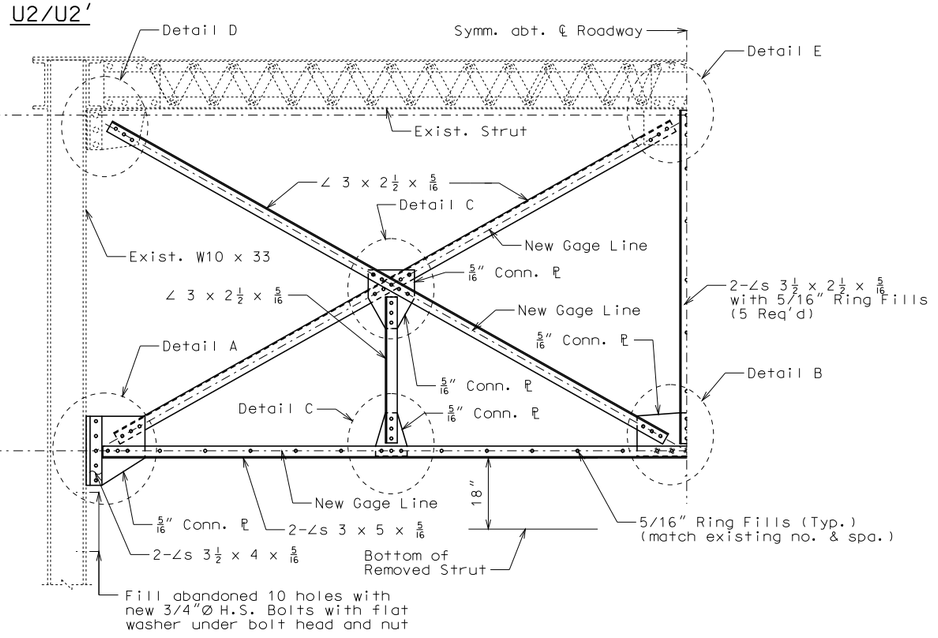
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

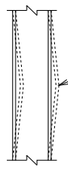
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)



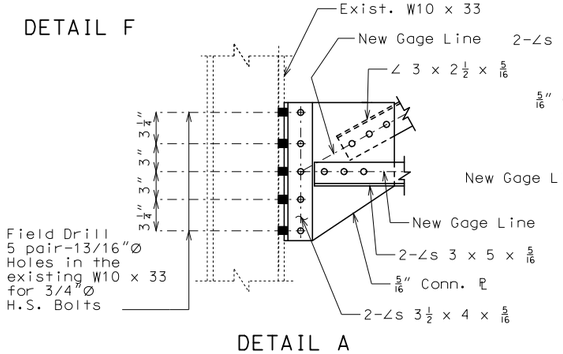
PART ELEVATION SHOWING REMOVAL OF EXISTING SWAY FRAME



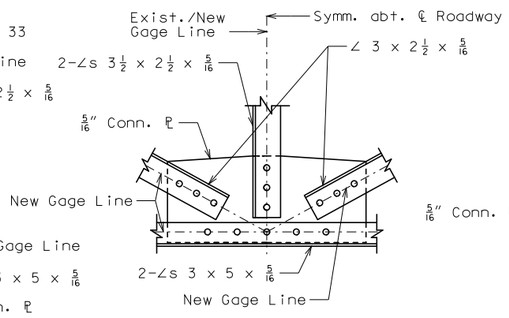
PART ELEVATION SHOWING NEW SWAY FRAME



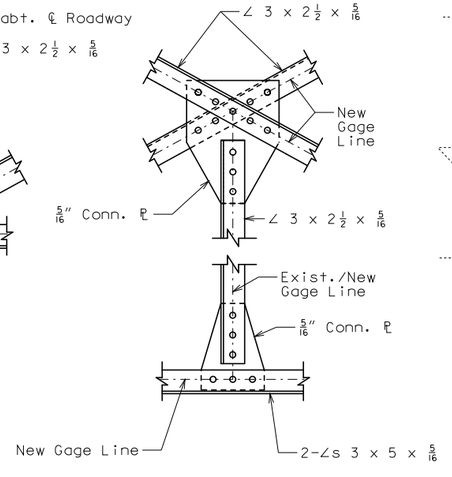
DETAIL F



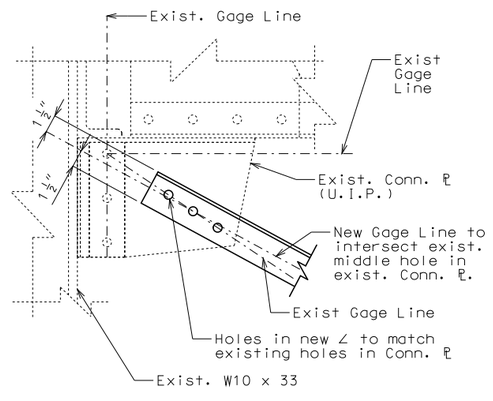
DETAIL A



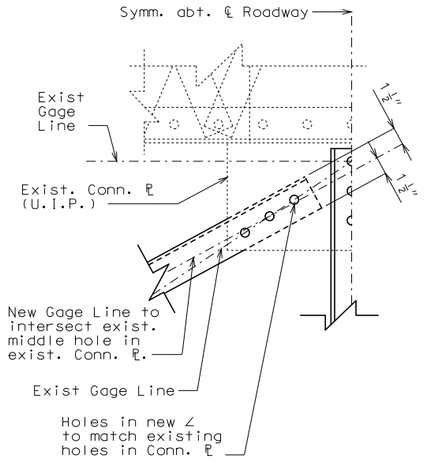
DETAIL B



DETAIL C



DETAIL D



DETAIL E

DETAILS OF SWAY FRAME @ U2 & U2′

(20 Removals and Replacements Required)

Detailed Apr. 2015
Checked June 2015

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
DANIEL M. SMITH
NUMBER PE-28985
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 9/3/2015

ROUTE	STATE
160	MO
DISTRICT	SHEET NO.
BR	4

COUNTY OZARK

JOB NO. J9P3024

CONTRACT ID.

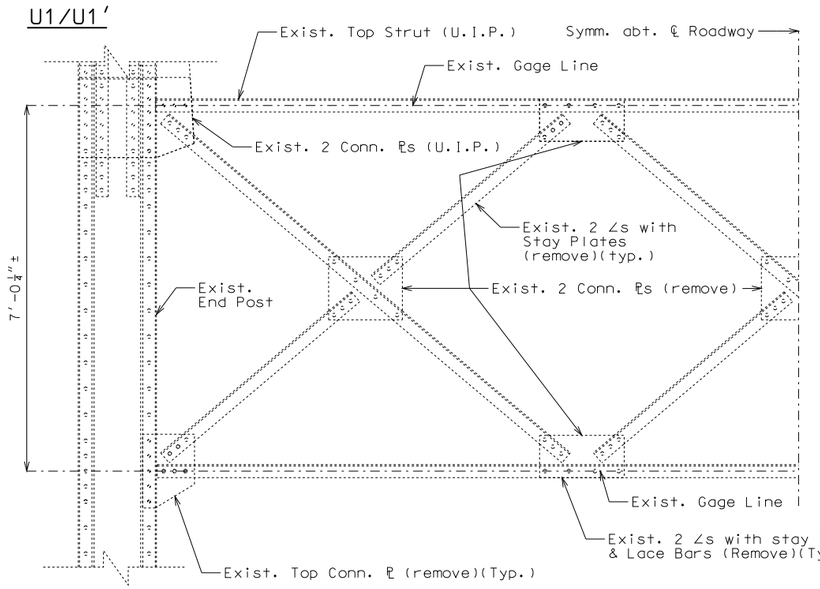
PROJECT NO.

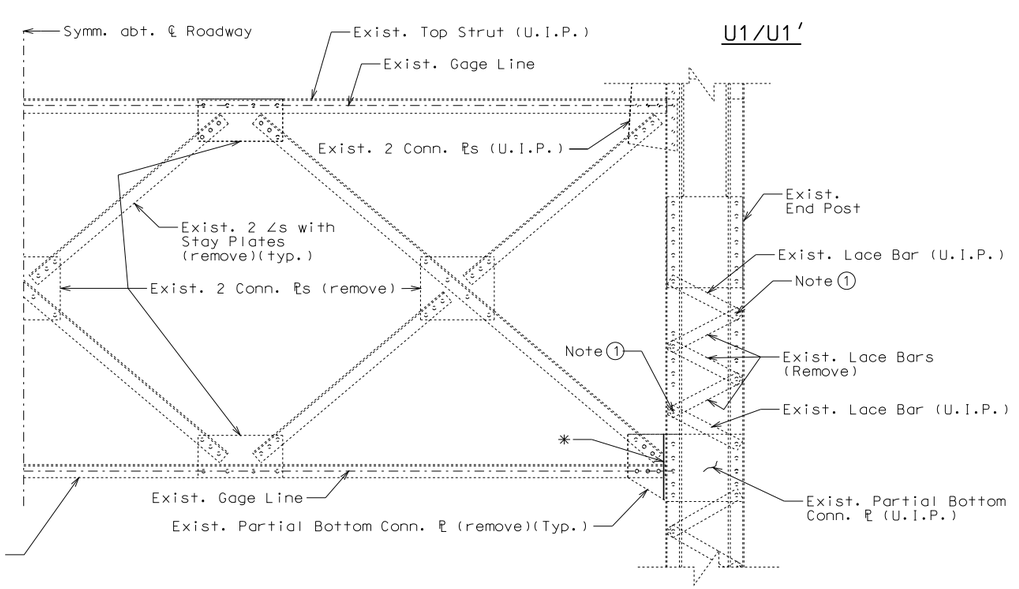
BRIDGE NO. K08172

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

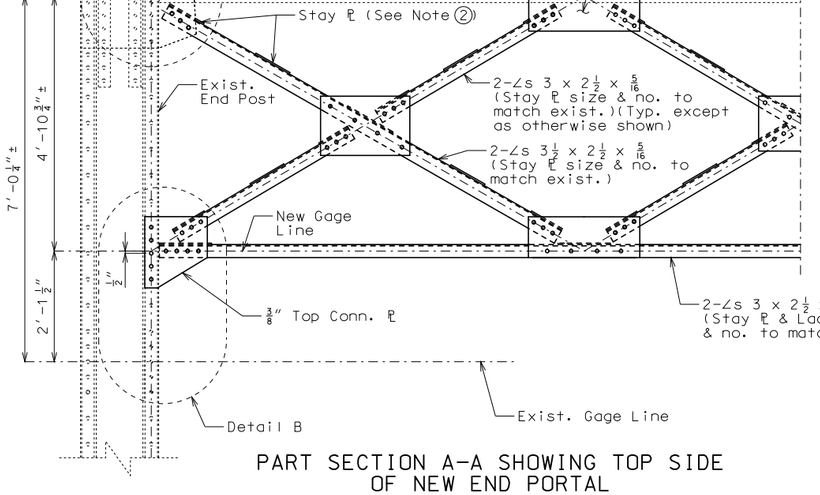
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

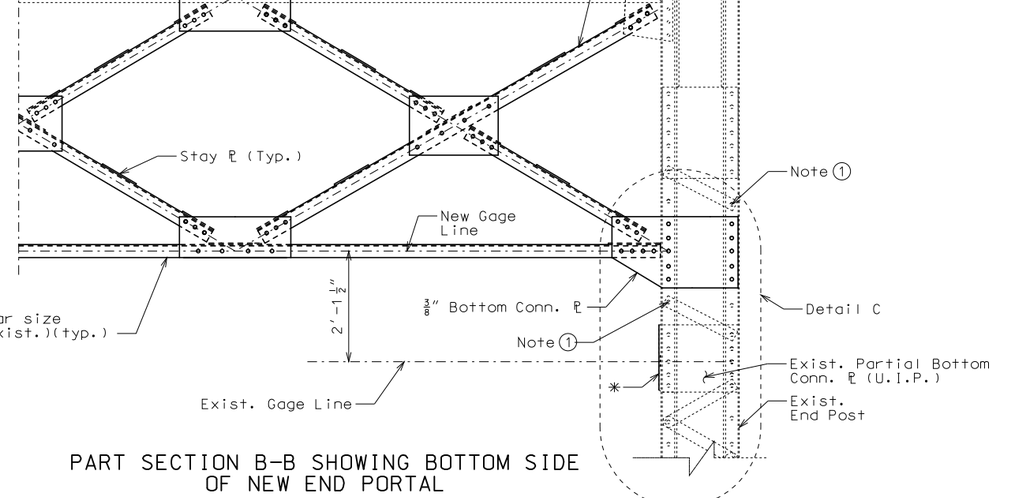




PART SECTION A-A SHOWING REMOVAL OF EXISTING END PORTAL

PART SECTION B-B SHOWING REMOVAL OF EXISTING END PORTAL





PART SECTION A-A SHOWING TOP SIDE OF NEW END PORTAL

PART SECTION B-B SHOWING BOTTOM SIDE OF NEW END PORTAL

Notes:

(1) Remove rivet & replace with new ¾"Ø H.S. bolt.

(2) Stay ℄ @ Jt. U1/U1' may be installed after installation of end portal between existing connection plates.

For Details A, B & C, see Sheet No. 6.

For location of Part Sections A-A & B-B, see Sheet No. 6.

✳ Cut Line for bottom Conn. ℄ (½" from inside edge of end post) (grind cut edge smooth).

DETAILS OF END PORTAL @ U1 & U1'

(20 Removals & Replacements Required)

Detailed Apr. 2015
Checked June 2015

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
DANIEL M. SMITH
NUMBER PE-28985
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 9/3/2015

ROUTE	STATE
160	MO
DISTRICT	SHEET NO.
BR	5

COUNTY OZARK

JOB NO. J9P3024

CONTRACT ID.

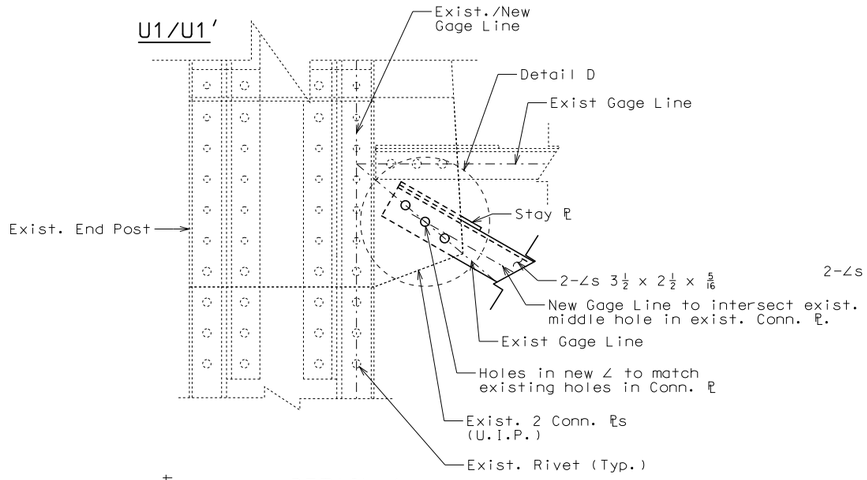
PROJECT NO.

BRIDGE NO. K08172

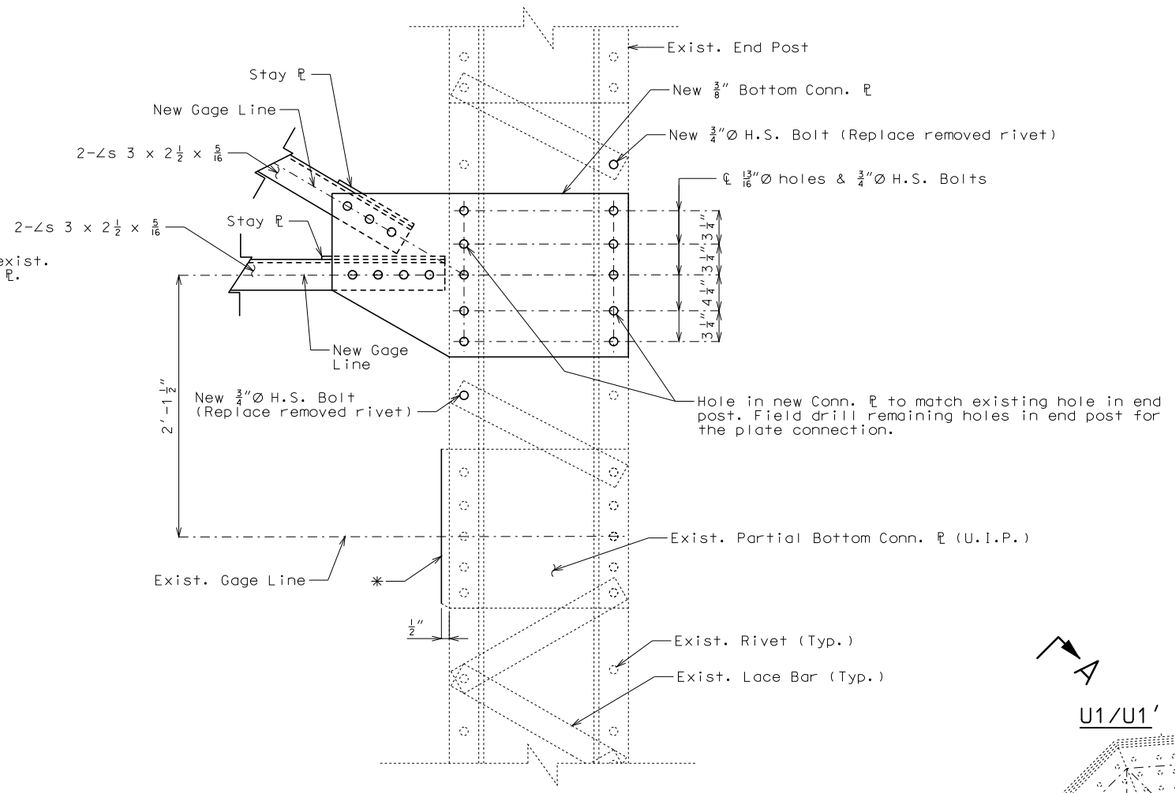
DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

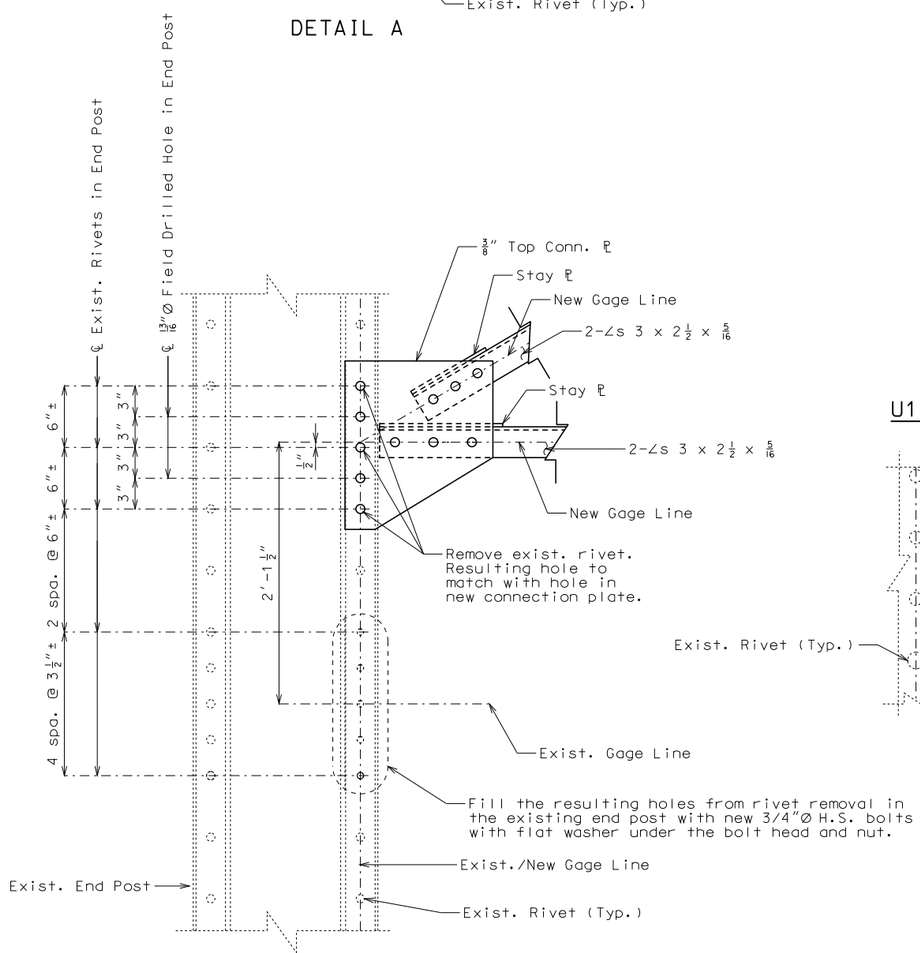
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)



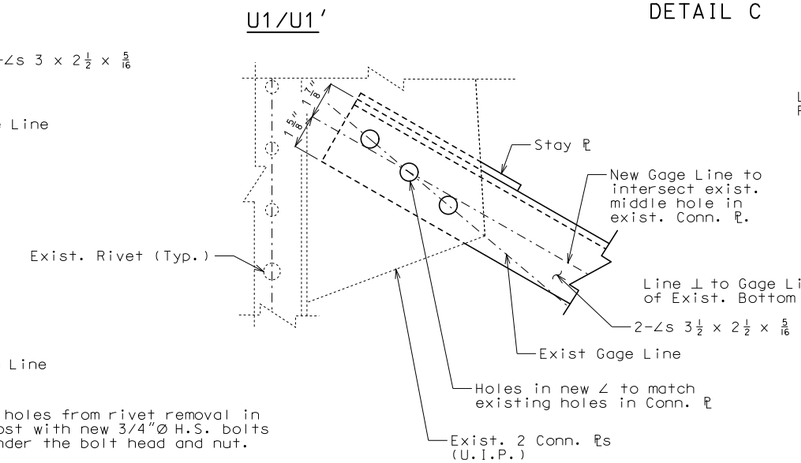
DETAIL A



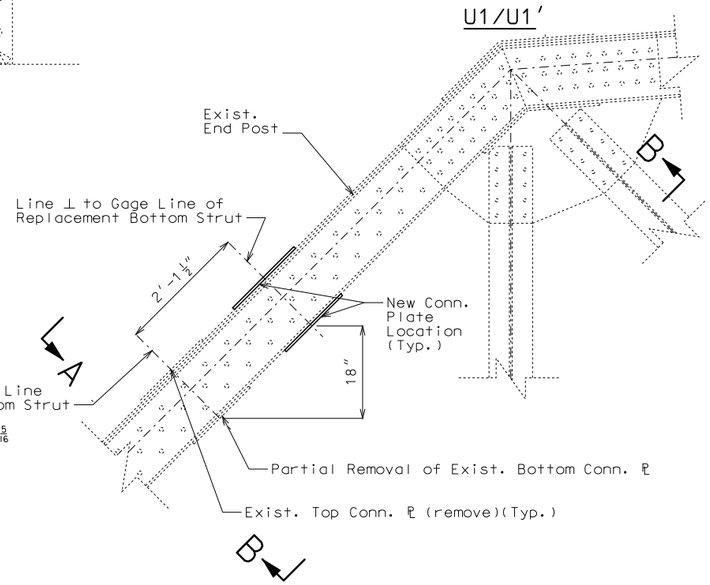
DETAIL C



DETAIL B



DETAIL D



PART ELEVATION OF END POST AT PORTAL LOCATION

Notes:

For location of Details A, B & C, see Sheet No. 5.

For Part Sections A-A & B-B, see Sheet No. 5.

* Cut line for bottom Conn. ℄ (½" from inside edge of end post) (grind cut edge smooth).

DETAILS OF END PORTAL @ U1 & U1'

Detailed Apr. 2015
Checked June 2015

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
DANIEL M. SMITH
NUMBER PE-28985
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED 9/3/2015

ROUTE	STATE
160	MO
DISTRICT	SHEET NO.
BR	6

COUNTY: OZARK

JOB NO.: J9P3024

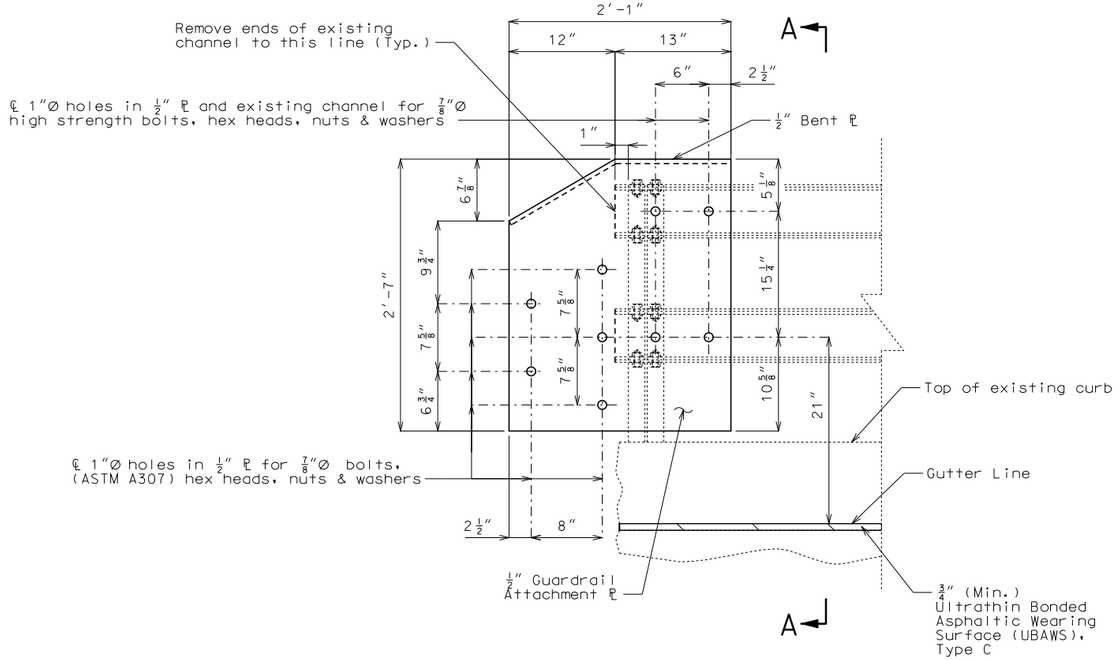
CONTRACT ID.:

PROJECT NO.:

BRIDGE NO.: K08172

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)



PART ELEVATION OF GUARDRAIL ATTACHMENT

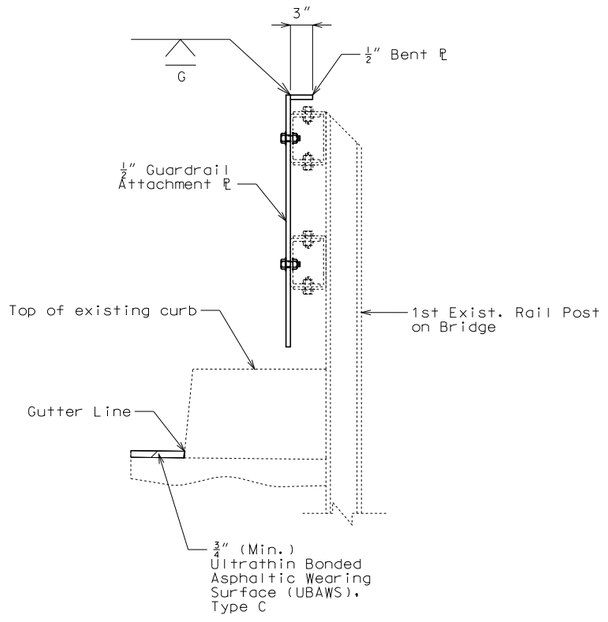
End of left rail near End Bent No. 1 shown. left rail near End Bent No. 11 opposite. End of right rail at End Bent No. 1 similar. No guardrail attachment required for right rail near End Bent No. 11.

Notes:

No direct payment will be made for furnishing and installing guardrail attachment plate.

All plates shall be ASTM A709 Grade 50 and galvanized.

All bolts, nuts and washers shall be galvanized.



SECTION A-A

GUARDRAIL ATTACHMENT DETAILS AT END BENTS

(No. Req'd = 3)

Detailed Sep. 2015
Checked Sep. 2015

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
DANIEL M. SMITH
NUMBER PE-28985
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 9/3/2015

ROUTE	STATE
160	MO
DISTRICT	SHEET NO.
BR	7

COUNTY OZARK

JOB NO. J9P3024

CONTRACT ID.

PROJECT NO.

BRIDGE NO. K08172

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

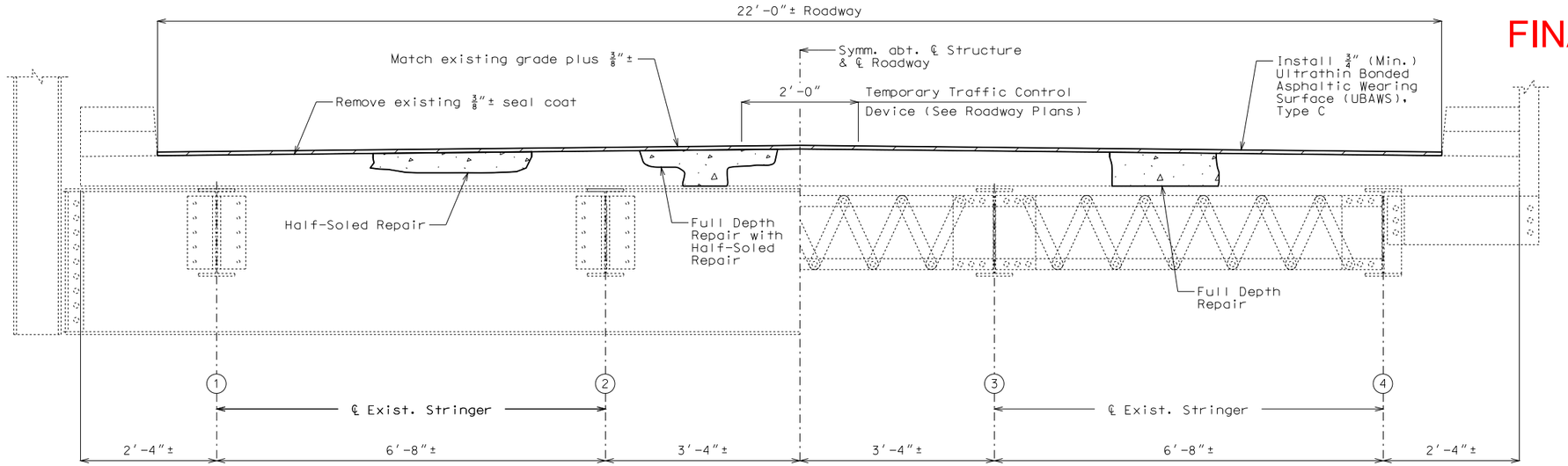
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

SEC/SUR 19 TWP 22N RGE 15W

U.I.P. AND REHABILITATE EXISTING 10 @ (180′) SIMPLE THRU TRUSS SPANS

FINAL PLANS



HALF SECTION NEAR PANEL POINT

HALF SECTION NEAR MID-PANEL POINT

TYPICAL SECTION THRU EXISTING DECK

GENERAL NOTES:

Design Specifications:

2002 AASHTO LFD (17th Ed.) Standard Specifications
Bridge Deck Rating = 6

Design Unit Stresses:

Structural Low Alloy Steel (ASTM A709 Grade 50) fy = 50,000 psi

Concrete Protective Coatings:

Protective coating for concrete bents and piers (Epoxy) shall be applied as shown on the bridge plans and in accordance with Sec 711.

Miscellaneous:

Outline of old work is indicated by light dashed lines. Heavy lines indicate new work.

Contractor shall verify all dimensions in field before ordering new material.

High strength bolts, nuts and washers will be sampled for quality assurance as specified in Sec 106.

Fabricated structural steel shall be ASTM A709 Grade 50, except as noted.

Field connections shall be made with ¾″ diameter high strength bolts and $\frac{13}{16}$″ diameter holes, except as noted.

Shop-drilled holes in new steel and existing holes in existing steel may be used as a template for field drilling new holes at connection joints with the installation of replacement end portals and sway frames.

Removal and replacement of the end portals and sway frames, as shown in the plans, and any incidental work, complete in place, will be considered completely covered by the contract lump sum price for "Remove and Replace Portals and Sway Frames".

All removed rivets in rehab structure shall be replaced with high strength bolts with flat washer under bolt head and nut (See Special Provisions).

Roadway surfacing adjacent to the bridge ends shall match new bridge wearing surface (Roadway Item).

Traffic Handling:

Traffic to be maintained on structure during construction except structure to be closed during heat straightening and removal and replacement of portals and sway frames. See roadway plans for traffic control.

Final ~~Estimated~~ Quantities

Item		Total
Removal of Seal Coat	sq. foot	39,981
Ultrathin Bonded Wearing Surface, Type C	sq. yard	4,686
Substructure Repair (Unformed)	sq. foot	23
Repairing Concrete Deck (Half-Soling)	sq. foot	10,083
Full Depth Repair	sq. foot	29
Clean and Epoxy Seal	sq. foot	8,954
Protective Coating-Concrete Bents and Piers (Epoxy)	lump sum	1
Surface Preparation for Recoating Structural Steel	lump sum	1
Field Application of Inorganic Zinc Primer	lump sum	1
Intermediate Field Coat (System G)	lump sum	1
Finish Field Coat (System G)	lump sum	1
Remove and Replace Portals and Sway Frames	lump sum	1
Heat Straightening	lump sum	1
Misc. Structural Steel Construction	lump sum	1

The State estimates there is approximately 98,000 pounds of new steel in the pay item "Remove and Replace Portals and Sway Frames" and that weight is used in preparing the cost estimate for the pay item. Variation may be encountered in the estimated weight but the variation cannot be used for an adjustment in the contract lump sum price.

Structural Steel Protective Coatings:

Protective Coating: System G in accordance with Sec 1081.

Coating Limits: All existing structural steel of the truss bridge, including curb rails.

Surface Preparation: Surface preparation of the existing steel shall be in accordance with Sec 1081 for "Recoating of Structural Steel (System G, H or I)". The cost of surface preparation will be considered completely covered by the contract lump sum price for "Surface Preparation for Recoating Structural Steel".

Prime Coat (Exist. Steel): The cost of the prime coat for existing steel will be considered completely covered by the contract lump sum price for "Field Application of Inorganic Zinc Primer". Tint of the prime coat for System G shall be similar to the color of the field coat to be used.

Prime Coat (New Steel): The cost of the prime coat for new steel will be considered completely covered by the contract lump sum price for "Remove and Replace Portals and Sway Frames". Tint of the prime coat for System G shall be similar to the color of the field coat to be used.

At the option of the contractor, the intermediate field coat and finish field coat may be applied in the shop. The contractor shall exercise extreme care during all phases of loading, hauling, handling and erection to minimize damage and shall be fully responsible for all repairs and cleaning of the coating systems as required by the engineer.

Field Coats: The color of the field coats shall be Brown (Federal Standard #30045). The cost of the intermediate field coat will be considered completely covered by the contract lump sum price for "Intermediate Field Coat (System G)". The cost of the finish field coat will be considered completely covered by the contract lump sum price for "Finish Field Coat (System G)".

The surfaces of existing steel that will become faying surfaces for new connections of replacement end portals and sway frames shall be cleaned according to the manufacturer's recommendation and with a minimum of SSPC-SP-3 surface preparation and coated with one prime coat of Gray Epoxy-Mastic Primer (non-aluminum) in accordance with Sec 1081.

For the duration of cleaning and recoating the truss spans, the truss span superstructure in any span shall not be draped with an impermeable surface subject to wind loads for a length any longer than 1/4 the span length at any one time regardless of height of coverage. Simultaneous work in adjacent spans is permissible using the specified limits in each span.

REPAIRS TO BRIDGE: ROUTE 160 OVER BULL SHOALS LAKE

ROUTE 160 FROM ROUTE 5 TO ROUTE 95
ABOUT 2.9 MILES EAST OF ROUTE 95
BEGINNING STATION 375+98.00± (Match Existing)

STD. 616.10

Detailed Apr. 2015
Checked June 2015

Note: This drawing is not to scale. Follow dimensions.

"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."

DATE PREPARED 9/3/2015
ROUTE 160 | STATE MO
DISTRICT BR | SHEET NO. 1
COUNTY OZARK
JOB NO. J9P3024
CONTRACT ID. 151120-H01
PROJECT NO. FAF-160-3(16)
BRIDGE NO. K08172

DESCRIPTION	DATE

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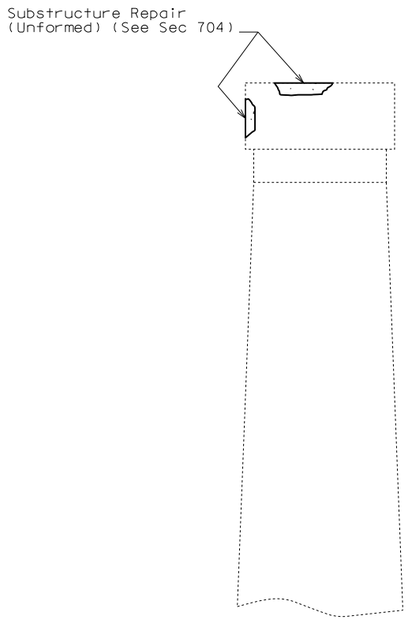
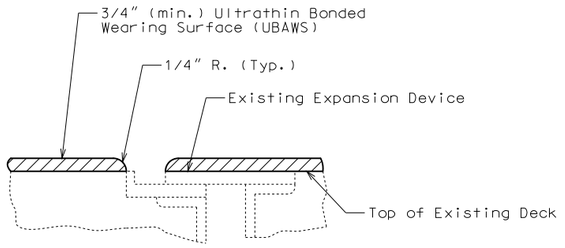
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

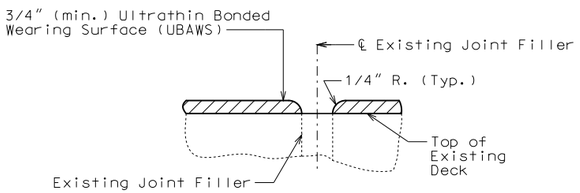
FINAL PLANS



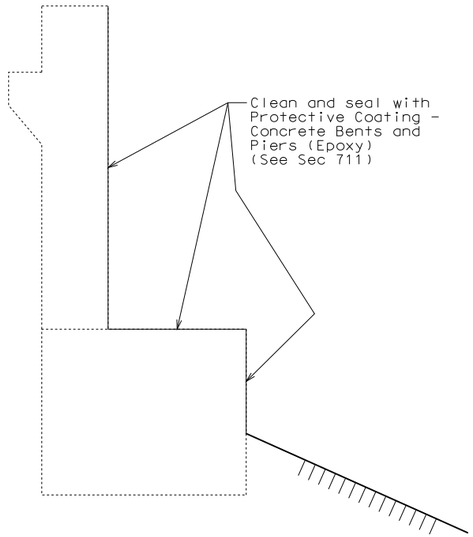
PART ELEVATION OF PIERS NO. 2 & 5
SHOWING SUBSTRUCTURE REPAIR (UNFORMED)



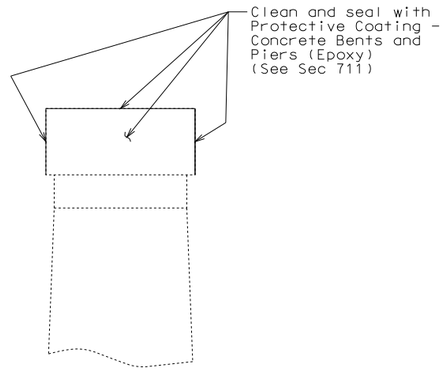
SECTION THRU JOINT
AT END BENT NO. 1 AND
PIERS NO. 2 THRU 10



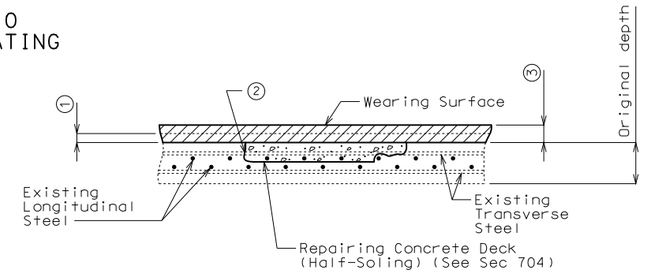
SECTION THRU JOINT
AT END BENT NO. 11



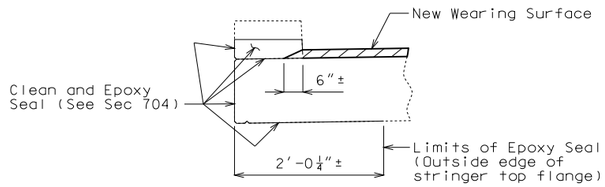
TYPICAL SECTION THRU
END BENTS NO. 1 & 11 SHOWING
PROTECTIVE COATING



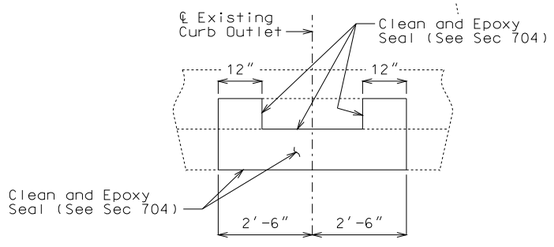
PART ELEVATION OF
PIERS NO. 2 THRU 10
SHOWING PROTECTIVE COATING



HALF-SOLED REPAIR



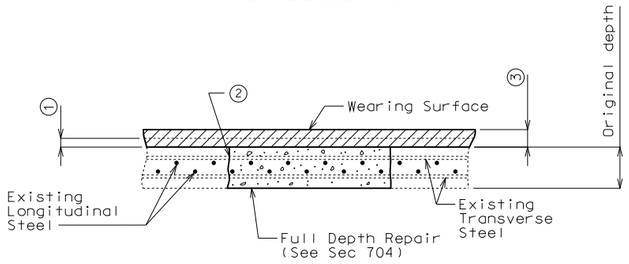
TYPICAL SECTION OF EXISTING CURB
OUTLET SHOWING LIMITS OF EPOXY SEAL



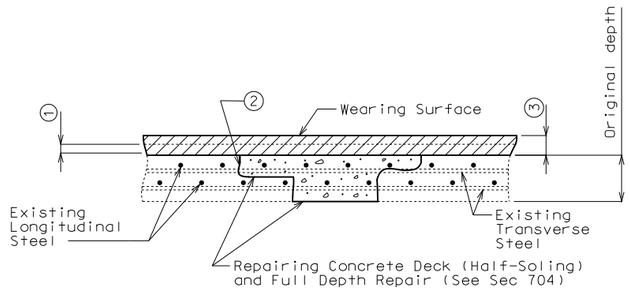
TYPICAL ELEVATION OF EXISTING CURB
OUTLET SHOWING LIMITS OF EPOXY SEAL

(Wearing surface not shown for clarity)

Note:
All reinforcing steel in slab that is loose and exposed shall be removed as directed by the engineer. Removal of reinforcing steel and loose concrete will be considered completely covered by the contract unit price for Clean and Epoxy Seal.



FULL DEPTH REPAIR



FULL DEPTH REPAIR
WITH HALF-SOLED REPAIR

① Remove existing seal coat.

② One inch vertical side shall be established outside the deteriorated area. See Sec 704.

③ 3/4" (min.) Ultrathin Bonded Asphaltic Wearing Surface (UBAWS), Type C.

"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."

DATE PREPARED 9/3/2015
ROUTE 160 | STATE MO
DISTRICT BR | SHEET NO. 2
COUNTY OZARK
JOB NO. J9P3024
CONTRACT ID. 151120-H01
PROJECT NO. FAF-160-3(16)
BRIDGE NO. K08172

DESCRIPTION | DATE

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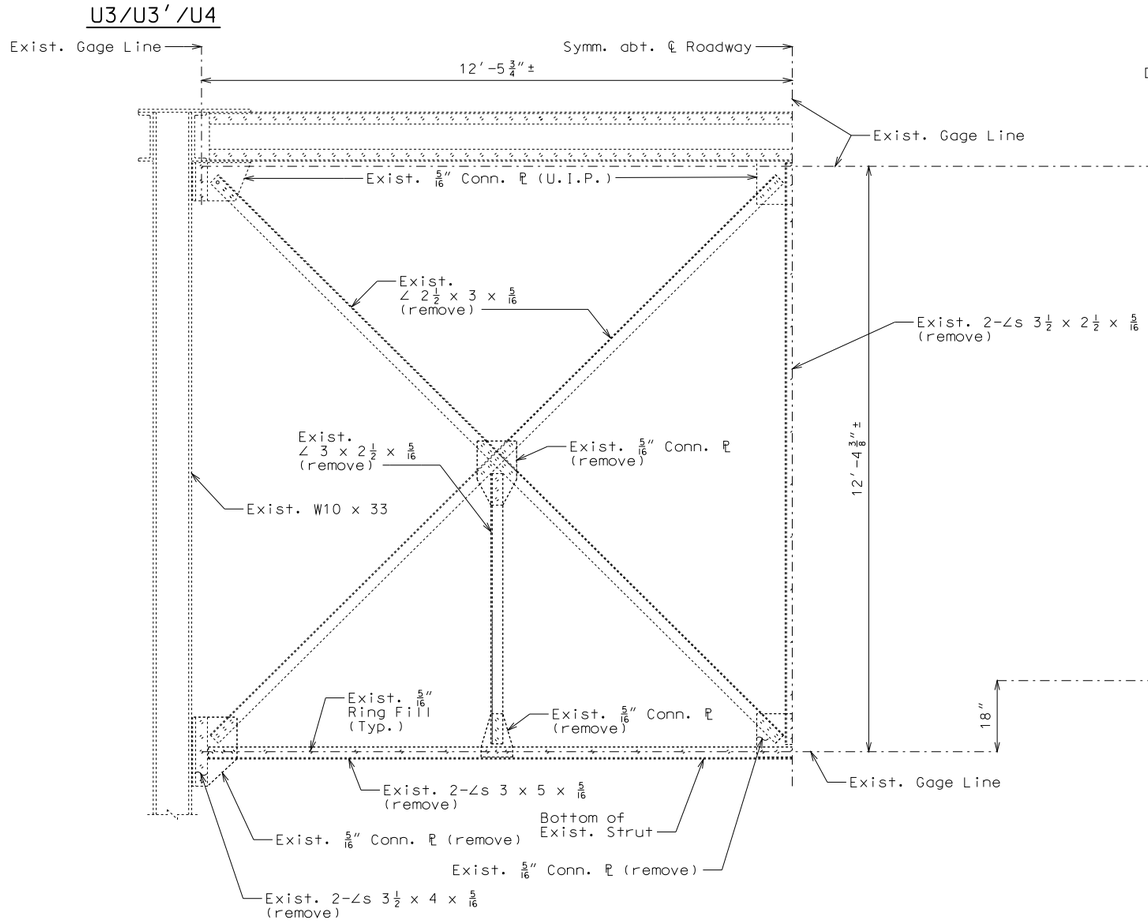
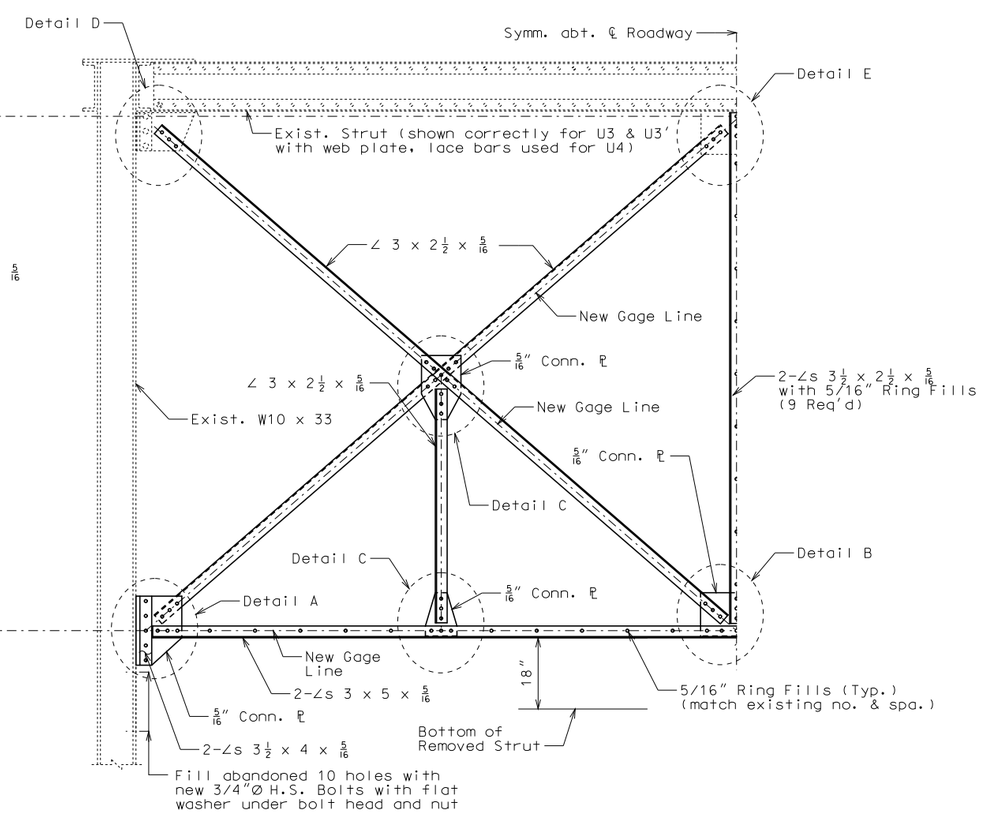
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

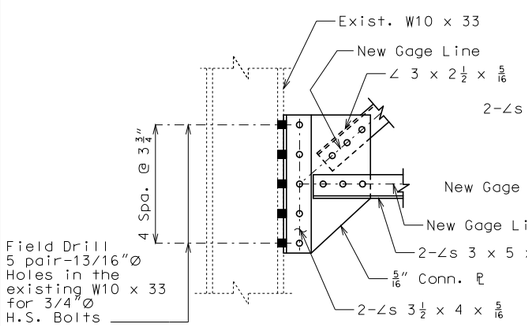
FINAL PLANS



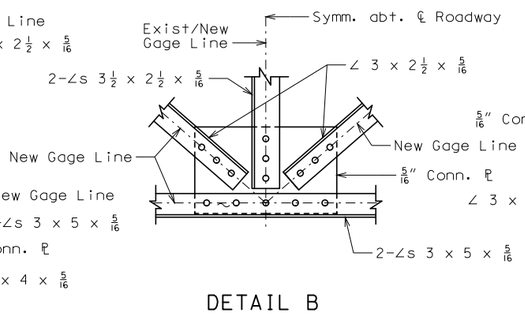
PART ELEVATION SHOWING REMOVAL OF EXIST. SWAY FRAME



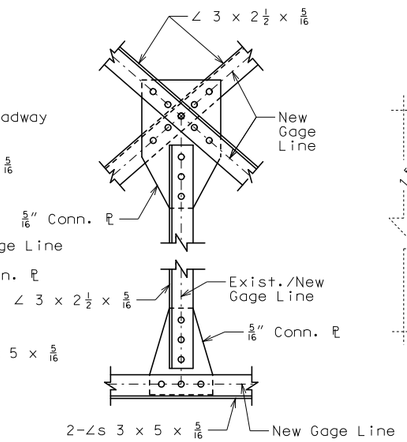
PART ELEVATION SHOWING NEW SWAY FRAME



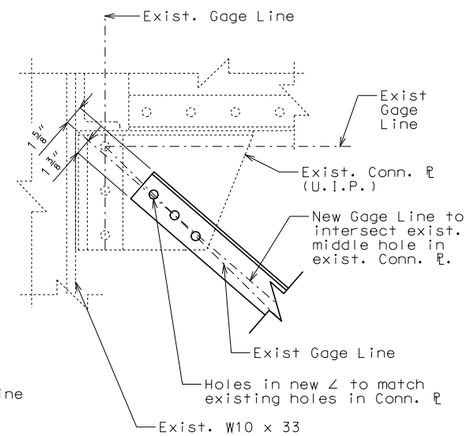
DETAIL A



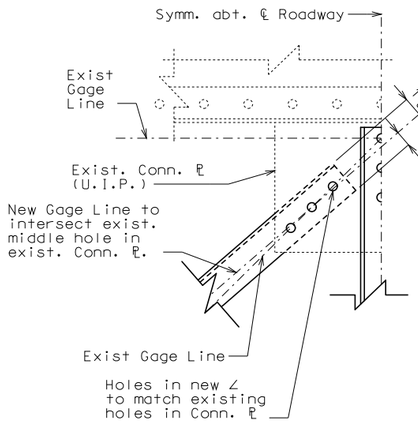
DETAIL B



DETAIL C



DETAIL D



DETAIL E

DETAILS OF SWAY FRAME @ U3, U3′ & U4

(30 Removals and Replacements Required)

Detailed Apr. 2015
Checked June 2015

Note: This drawing is not to scale. Follow dimensions.

"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."

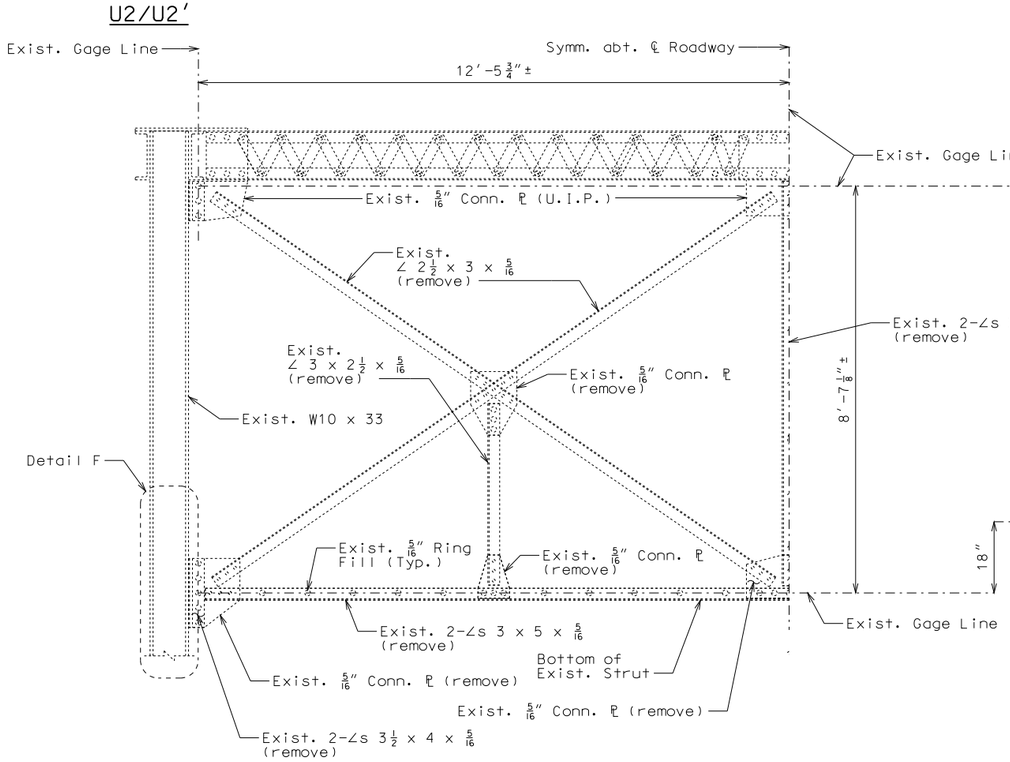
DATE PREPARED 9/3/2015
ROUTE 160 | STATE MO
DISTRICT BR | SHEET NO. 3
COUNTY OZARK
JOB NO. J9P3024
CONTRACT ID. 151120-H01
PROJECT NO. FAF-160-3(16)
BRIDGE NO. K08172

DESCRIPTION | DATE

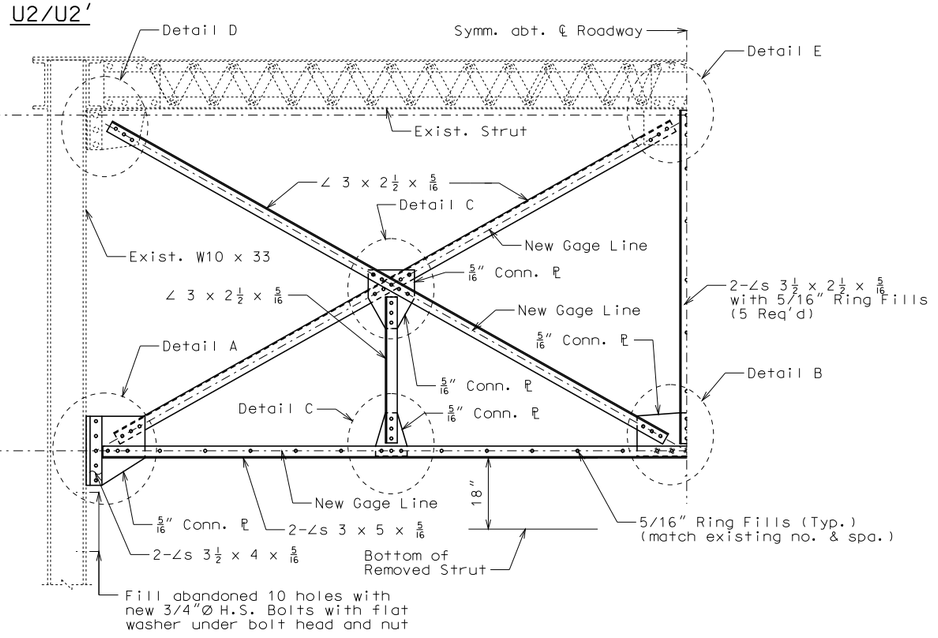
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

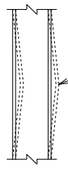
FINAL PLANS



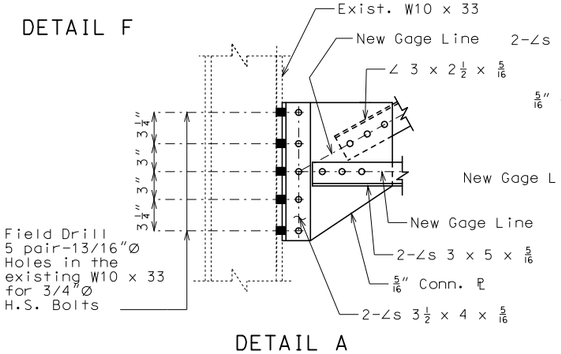
PART ELEVATION SHOWING REMOVAL OF EXISTING SWAY FRAME



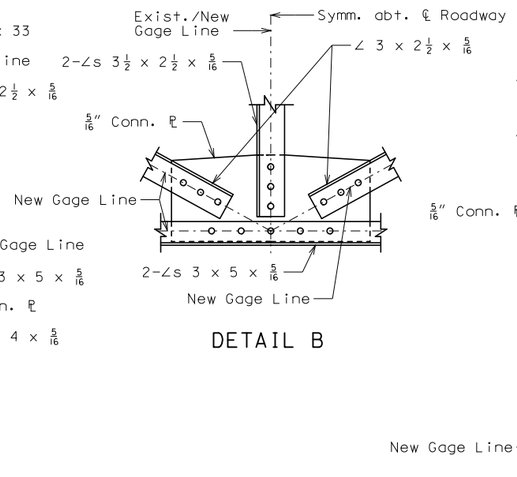
PART ELEVATION SHOWING NEW SWAY FRAME



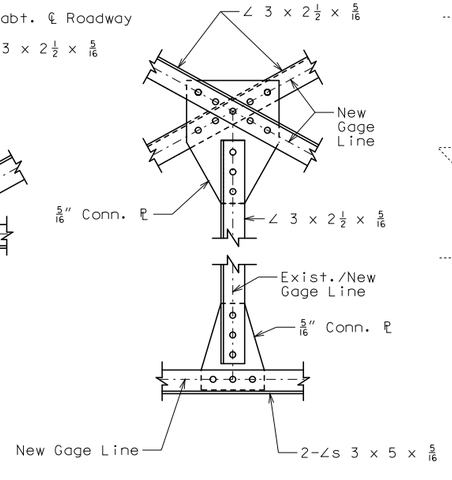
DETAIL F



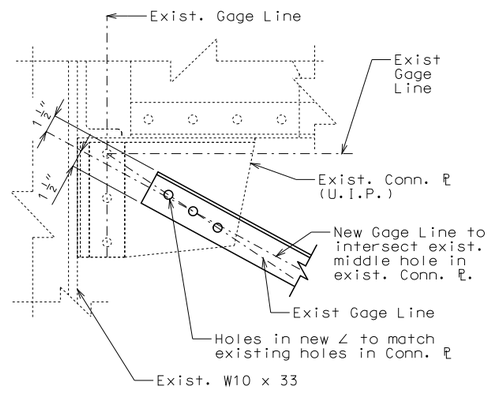
DETAIL A



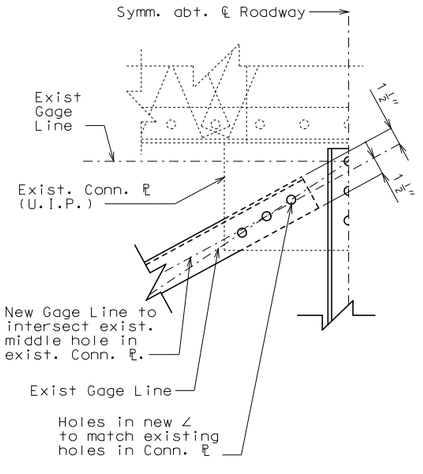
DETAIL B



DETAIL C



DETAIL D



DETAIL E

DETAILS OF SWAY FRAME @ U2 & U2′

(20 Removals and Replacements Required)

Detailed Apr. 2015
Checked June 2015

Note: This drawing is not to scale. Follow dimensions.

"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."

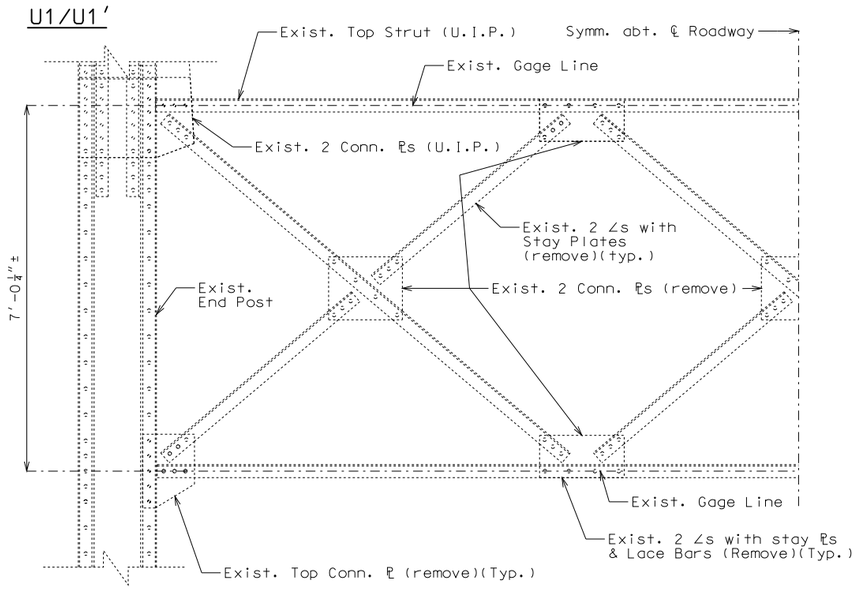
DATE PREPARED 9/3/2015
ROUTE 160 | STATE MO
DISTRICT BR | SHEET NO. 4
COUNTY OZARK
JOB NO. J9P3024
CONTRACT ID. 151120-H01
PROJECT NO. FAF-160-3(16)
BRIDGE NO. K08172

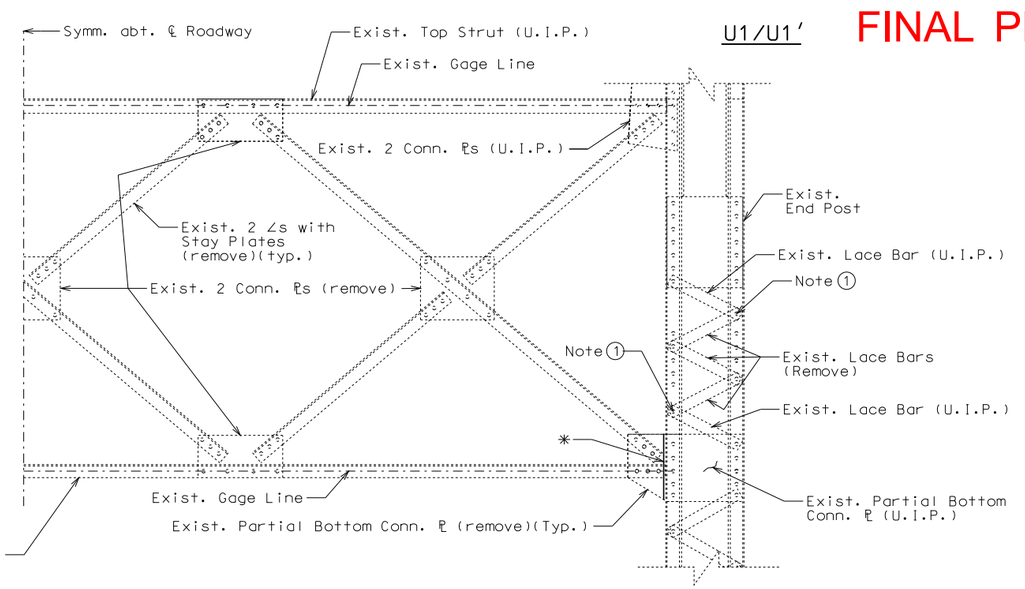
DESCRIPTION | DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

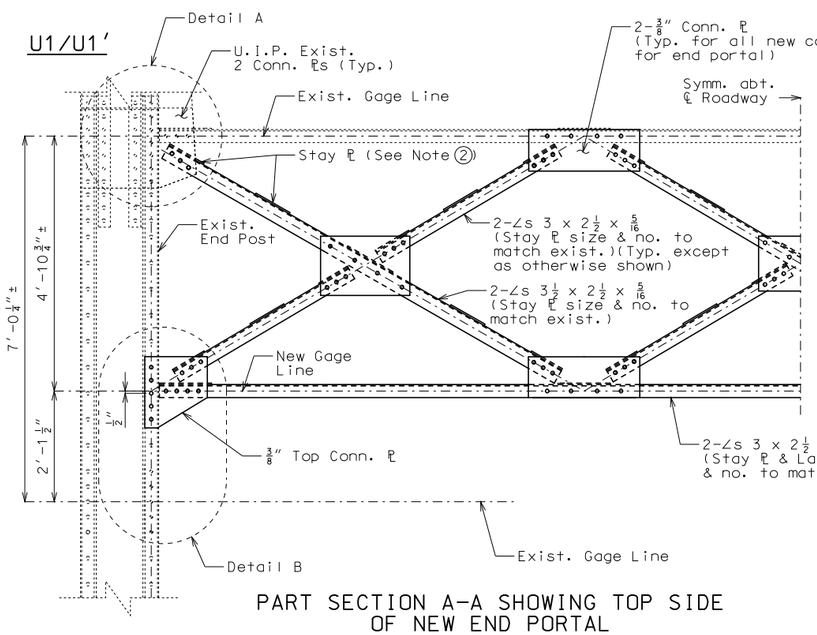
FINAL PLANS

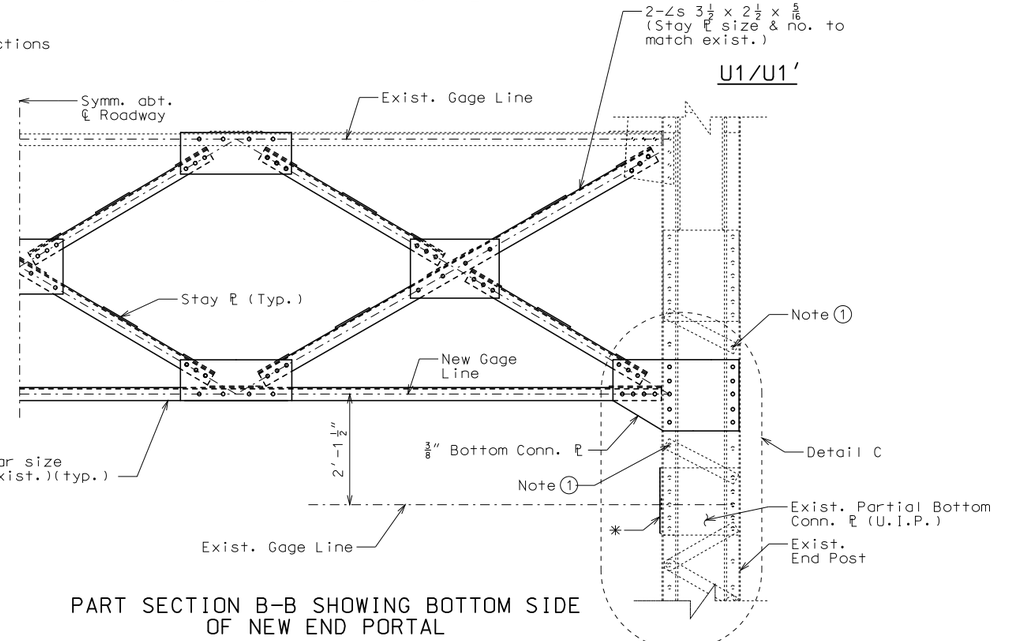




PART SECTION A-A SHOWING REMOVAL OF EXISTING END PORTAL

PART SECTION B-B SHOWING REMOVAL OF EXISTING END PORTAL





PART SECTION A-A SHOWING TOP SIDE OF NEW END PORTAL

PART SECTION B-B SHOWING BOTTOM SIDE OF NEW END PORTAL

Notes:

(1) Remove rivet & replace with new ¾"Ø H.S. bolt.

(2) Stay ℞ @ Jt. U1/U1' may be installed after installation of end portal between existing connection plates.

For Details A, B & C, see Sheet No. 6.

For location of Part Sections A-A & B-B, see Sheet No. 6.

✳ Cut Line for bottom Conn. ℞ (½" from inside edge of end post) (grind cut edge smooth).

DETAILS OF END PORTAL @ U1 & U1'

(20 Removals & Replacements Required)

Detailed Apr. 2015
Checked June 2015

Note: This drawing is not to scale. Follow dimensions.

"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."

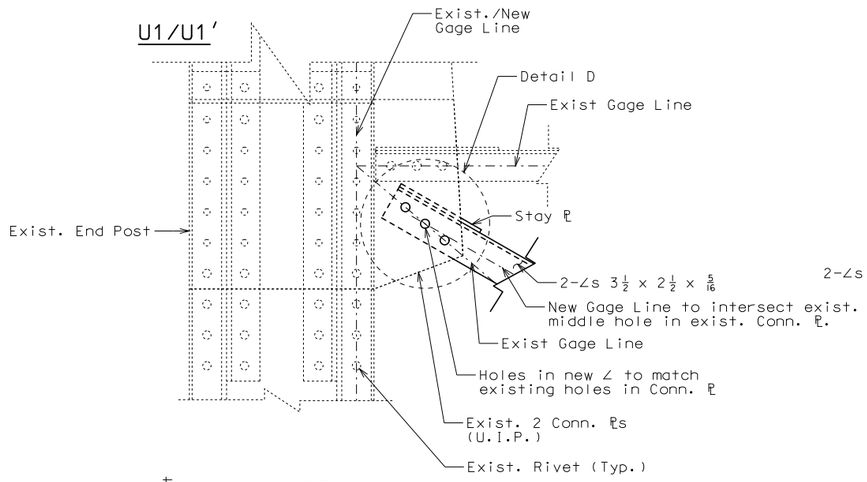
DATE PREPARED 9/3/2015
ROUTE 160 | STATE MO
DISTRICT BR | SHEET NO. 5
COUNTY OZARK
JOB NO. J9P3024
CONTRACT ID. 151120-H01
PROJECT NO. FAF-160-3(16)
BRIDGE NO. K08172

DESCRIPTION | DATE

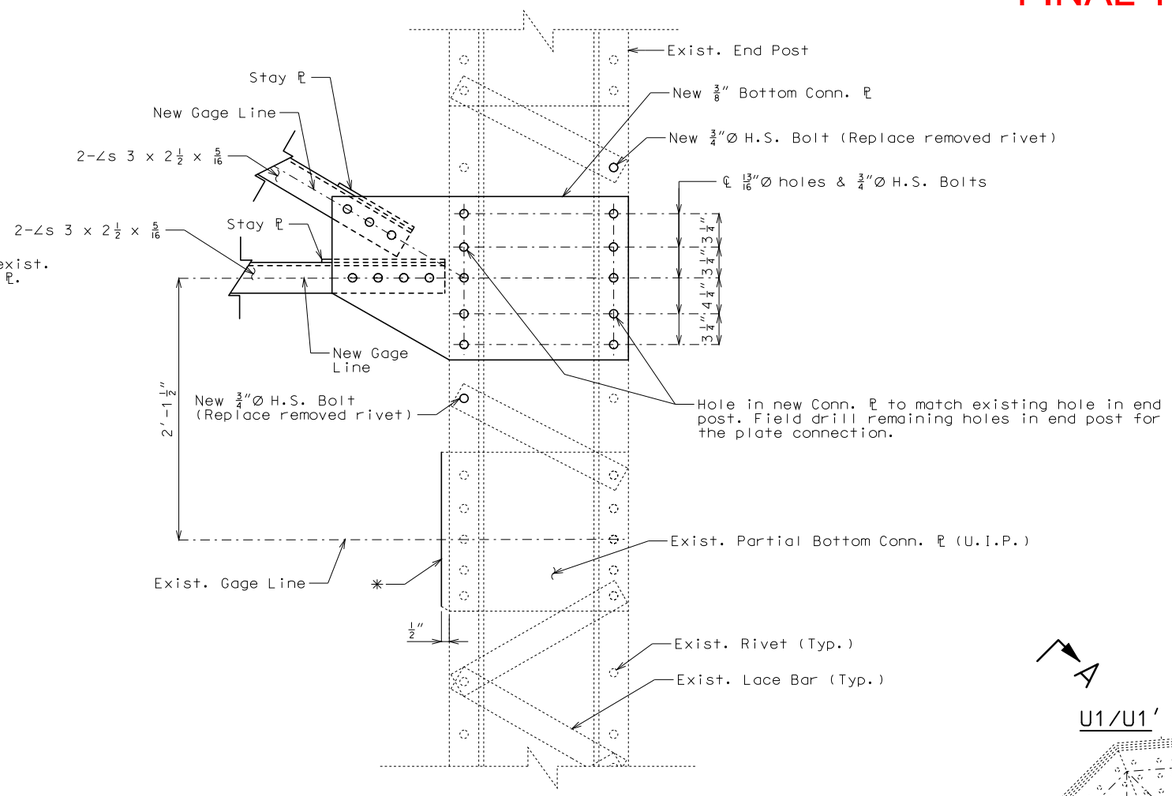
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

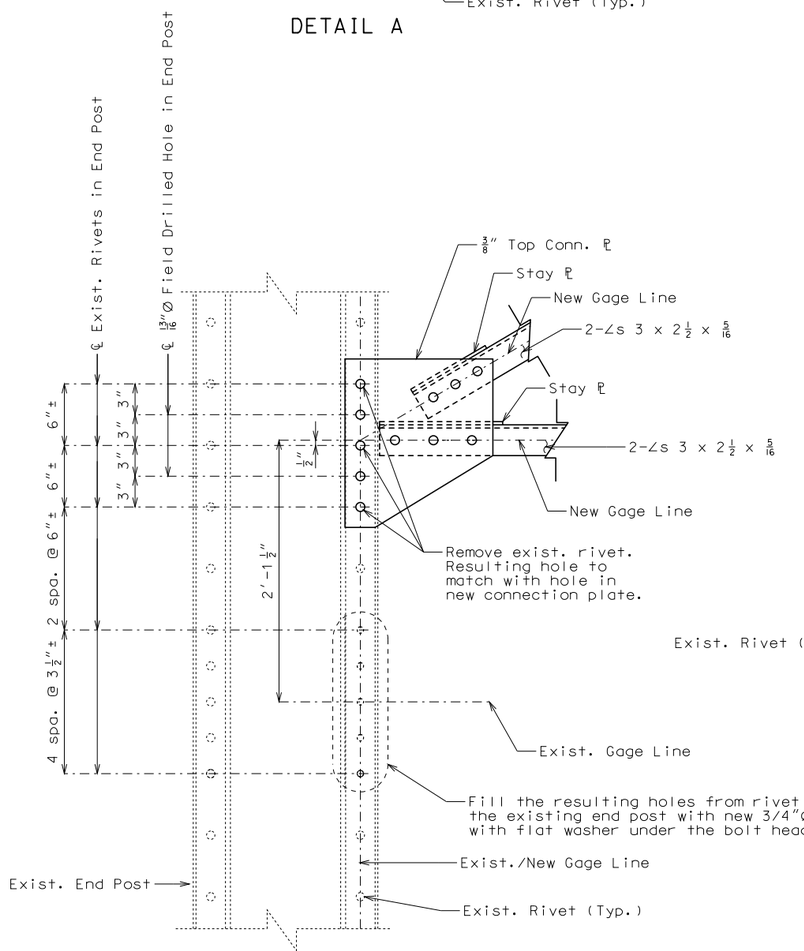
FINAL PLANS



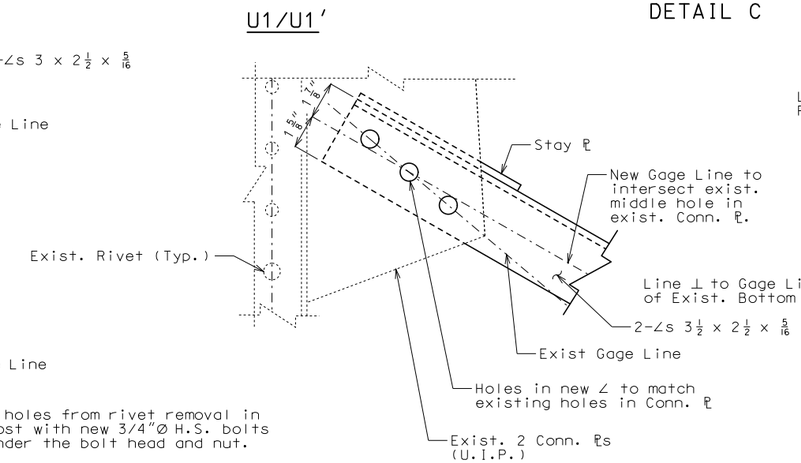
DETAIL A



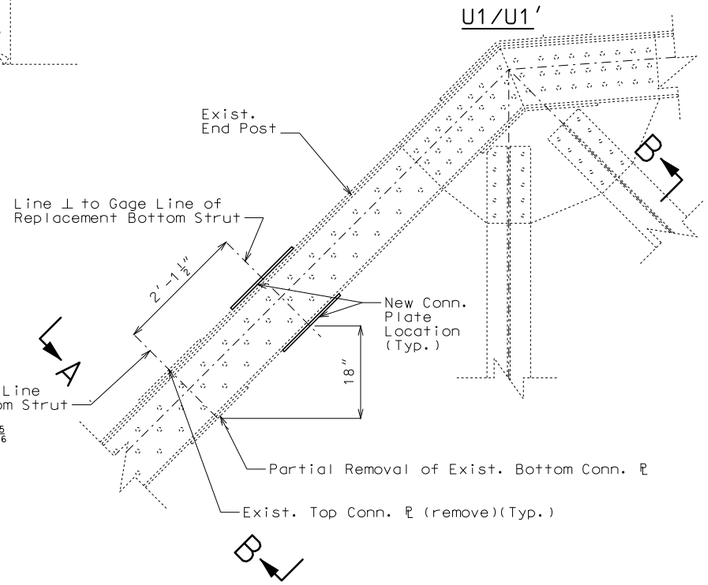
DETAIL C



DETAIL B



DETAIL D



PART ELEVATION OF END POST AT PORTAL LOCATION

Notes:

For location of Details A, B & C, see Sheet No. 5.

For Part Sections A-A & B-B, see Sheet No. 5.

* Cut line for bottom Conn. ℄ (½" from inside edge of end post) (grind cut edge smooth).

DETAILS OF END PORTAL @ U1 & U1'

Detailed Apr. 2015
Checked June 2015

Note: This drawing is not to scale. Follow dimensions.

"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."

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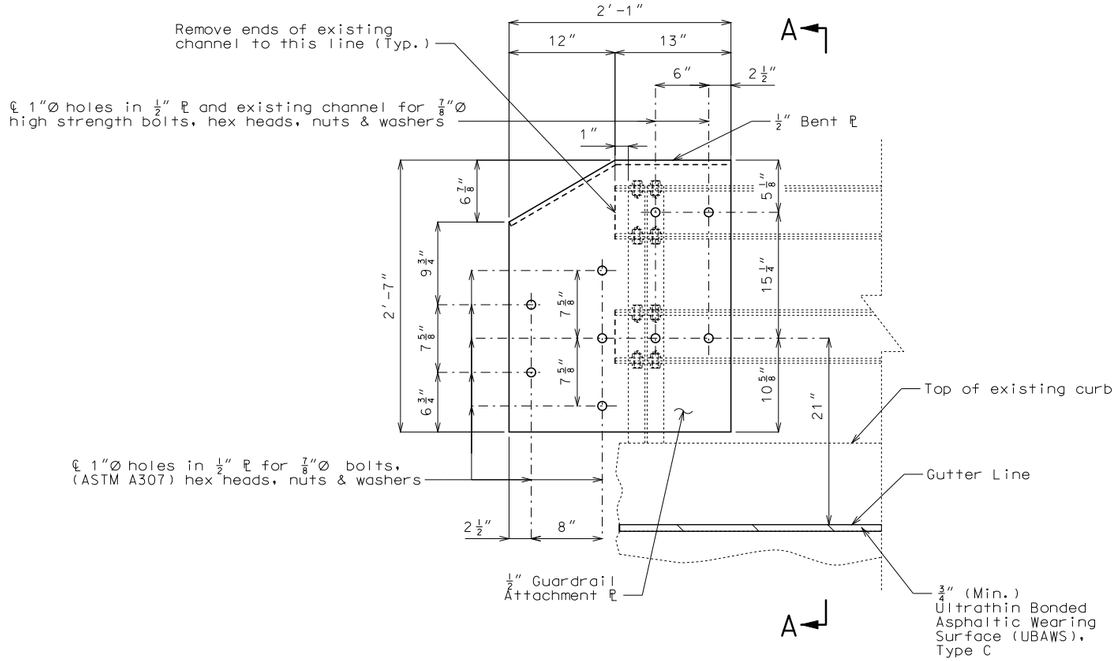
DATE PREPARED 9/3/2015
ROUTE 160 | STATE MO
DISTRICT BR | SHEET NO. 6
COUNTY OZARK
JOB NO. J9P3024
CONTRACT ID. 151120-H01
PROJECT NO. FAF-160-3(16)
BRIDGE NO. K08172

DESCRIPTION | DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

FINAL PLANS



PART ELEVATION
OF GUARDRAIL ATTACHMENT

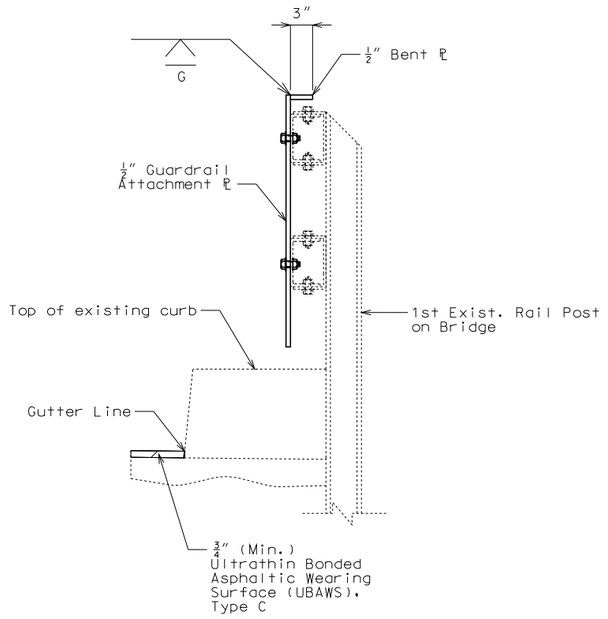
End of left rail near End Bent No. 1 shown. left rail near End Bent No. 11 opposite. End of right rail at End Bent No. 1 similar. No guardrail attachment required for right rail near End Bent No. 11.

Notes:

No direct payment will be made for furnishing and installing guardrail attachment plate.

All plates shall be ASTM A709 Grade 50 and galvanized.

All bolts, nuts and washers shall be galvanized.



SECTION A-A

GUARDRAIL ATTACHMENT DETAILS AT END BENTS

(No. Req'd = 3)

Detailed Sep. 2015
Checked Sep. 2015

Note: This drawing is not to scale. Follow dimensions.

"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."

DATE PREPARED 9/3/2015
ROUTE 160 | STATE MO
DISTRICT BR | SHEET NO. 7
COUNTY OZARK
JOB NO. J9P3024
CONTRACT ID. 151120-H01
PROJECT NO. FAF-160-3(16)
BRIDGE NO. K08172

DESCRIPTION | DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)