
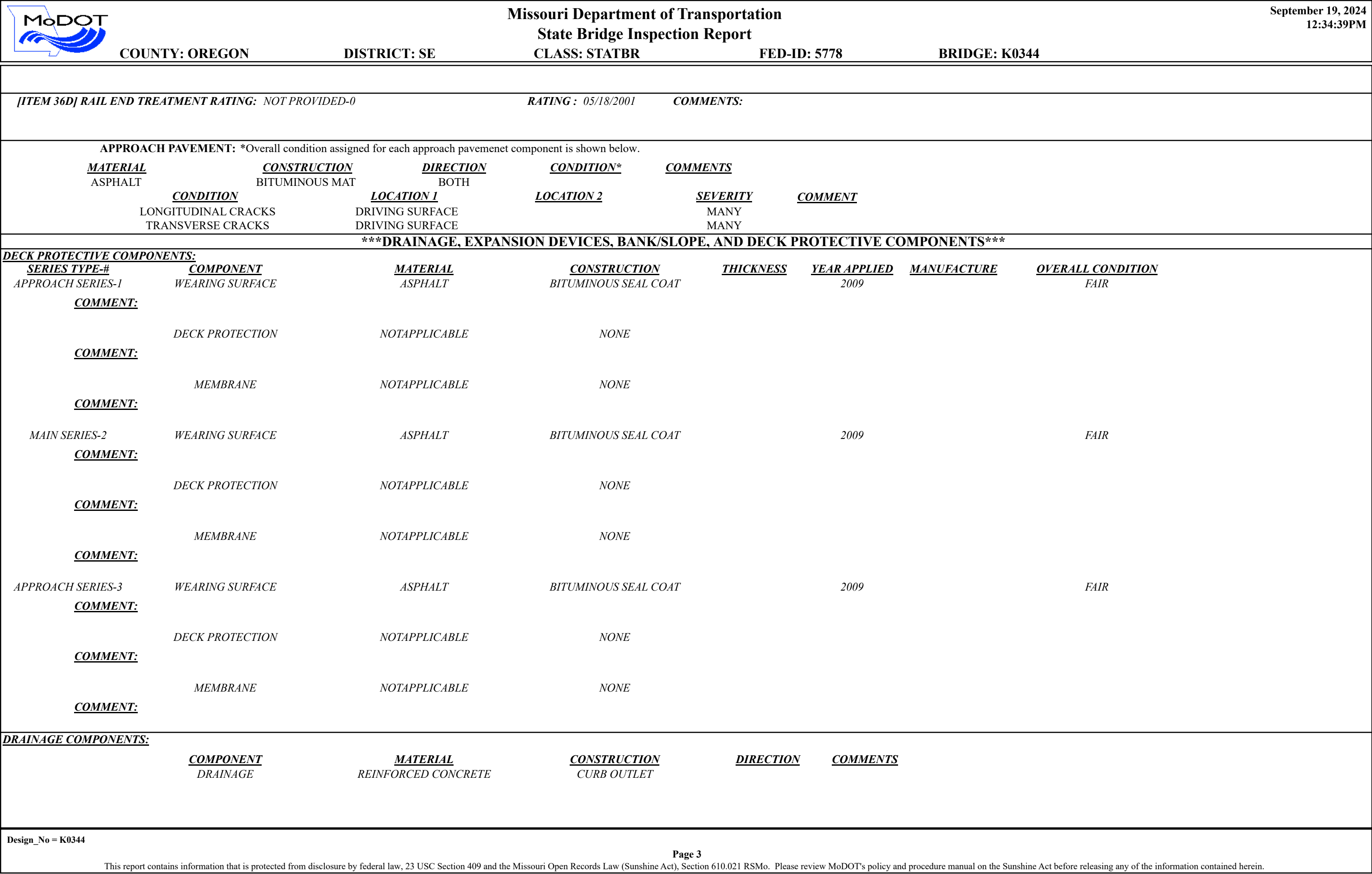
		Missouri Department of Transportation				September 19, 2024							
		State Bridge Inspection Report				12:34:39PM							
COUNTY: OREGON		DISTRICT: SE		CLASS: STATBR		FED-ID: 5778							
						BRIDGE: K0344							
***GENERAL STRUCTURE INFORMATION***						***BRIDGE INSPECTION INFORMATION***							
ROUTE: MO19S FEATURE: ELEVEN POINT RVR STATUS: P-POSTLOAD LOG MILE: 238.403 DETOUR: 80.00 MILES NHS: NO BUILT: 1934 REHAB: LOCATION: S 31 T 25 R 3 W LATITUDE: 36 47 39.20 (DMS) LONGITUDE: 91 20 .73 (DMS)		# SPANS: 6 LANES ON: 2 LANES UNDER: 0 COMPASS DIRECTION: NORTH to SOUTH DIRECTION OF TRAFFIC: 2-WAY TRAF FUNCTIONAL CLASS: RL-MINOR ARTERIAL NBI OWNER: MODOT NBI MAINTAINED: MODOT MAINTENANCE DISTRICT: SE MAINTENANCE COUNTY: OREGON SUB AREA: 7H02		PLACE CODE: 23608 FALLING SPRING LENGTH: 364 FT 0 IN MAXIMUM SPAN: 91 FT 1 IN APPROACH ROADWAY: 20 FT 0 IN CURB TO CURB: 22 FT 0 IN OUT TO OUT: 23 FT 4 IN AADT: 1426 AADT YEAR: 2023 AADT TRUCK: 7.1% FUTURE AADT: 2139 FUTURE AADT YEAR: 2043		DATE: 08/22/2023 RESPONSIBILITY: BRIDGEDIV							
						FREQUENCY: 24 CALCULATED INTERVAL**: 24							
						TEAM LEADER: CURT RICKERSON ELEMENT: NO							
						INSPECTOR 2: RANDY WEAVER INSPECTOR 4:							
						INSPECTOR 3:							
						** When calculated interval exceeds the frequency, a justification comment per BIRM is required.							
						GENERAL INSPECTION COMMENTS							
						(RICKEC, 08/23/2023)--CLOSED BRIDGE TO INSPECT W/ B-32							
***FRACTURE CRITICAL INSPECTION INFORMATION***				***INDEPTH INSPECTION INFORMATION***									
DATE: 08/22/2023 RESPONSIBILITY: BRIDGEDIV CATEGORY: PONY TRUSS				DATE: RESPONSIBILITY: CATEGORY:									
FREQUENCY: 24 CALCULATED INTERVAL**: 24 NBI: YES				FREQUENCY: CALCULATED INTERVAL**: NBI:									
TEAM LEADER: CURT RICKERSON INSPECTOR 3: METHOD: SNOOPER				TEAM LEADER: INSPECTOR 3: METHOD:									
INSPECTOR 2: RANDY WEAVER INSPECTOR 4:				INSPECTOR 2: INSPECTOR 4:									
** When calculated interval exceeds the frequency, a justification comment per BIRM is required.				** When calculated interval exceeds the frequency, a justification comment per BIRM is required.									
FRACTURE CRITICAL INSPECTION COMMENTS				INDEPTH INSPECTION COMMENTS									
***SPECIAL INSPECTION INFORMATION***				***UNDERWATER INSPECTION INFORMATION***									
DATE: 04/18/2023 RESPONSIBILITY: BRIDGEDIV CATEGORY: QUALITY ASSURANCE				DATE: 08/24/2021 RESPONSIBILITY: DIVETEAM CATEGORY: SHALLOW-WADE									
FREQUENCY: 999 CALCULATED INTERVAL**: NBI: NO				FREQUENCY: 60 CALCULATED INTERVAL**: NBI: NO									
TEAM LEADER: TERRY L SHUNAMON INSPECTOR 3: METHOD:				TEAM LEADER: JEFF MADSEN INSPECTOR 3: METHOD: PROBE									
INSPECTOR 2: JESSE ELSEMAN INSPECTOR 4:				INSPECTOR 2: STEVE HULBERT INSPECTOR 4:									
** When calculated interval exceeds the frequency, a justification comment per BIRM is required.				** When calculated interval exceeds the frequency, a justification comment per BIRM is required.									
SPECIAL INSPECTION COMMENTS				UNDERWATER INSPECTION COMMENTS									
(SHUNAT1, 04/20/2023)--USING THE FIELD VERIFICATION MODEL (FVM) - AS A THIRD PARTY INSPECTOR, I TOOK THE PREVIOUS INSP REPORT INTO THE FIELD AND VERIFIED THOROUGHNESS OF REPORT WITH ASSIGNED CONDITION AND APPRAISAL RATINGS													
OTHER SPECIAL INSPECTIONS				OTHER UNDERWATER INSPECTIONS									
DATE	FREQUENCY	CATEGORY	NBI	CALCULATED INTERVAL	RESPONSIBILITY	METHOD	DATE	FREQUENCY	CATEGORY	NBI	CALCULATED INTERVAL	RESPONSIBILITY	METHOD
06/06/2019	72	CHANNEL CROSS	NO	71	DISTRICT	WT TAPE							
		SECTIONS											
09/02/2009	999	GUSSET PLATES	NO		BRIDGEDIV	CLIMBER							

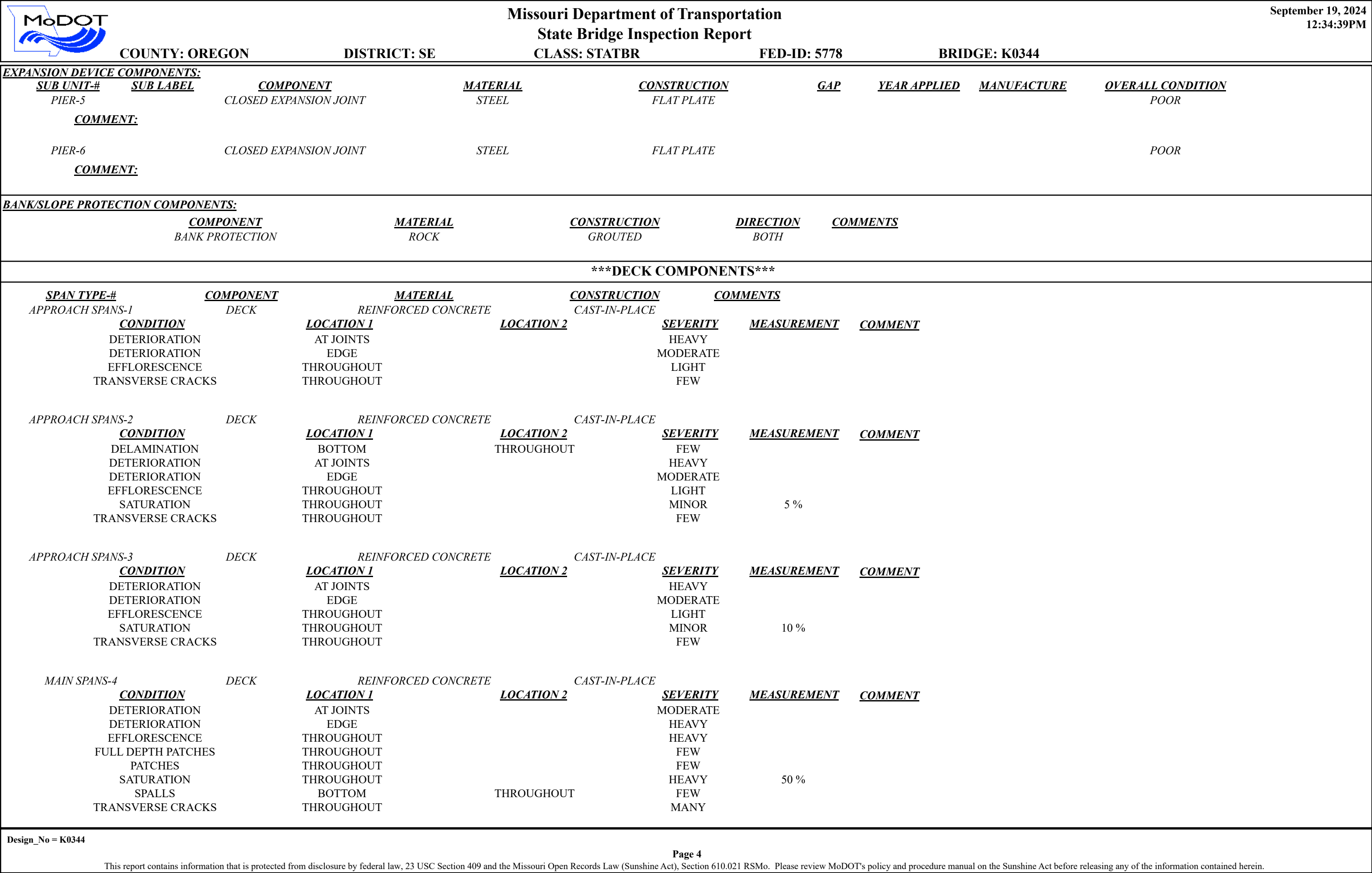
Design\_No = K0344

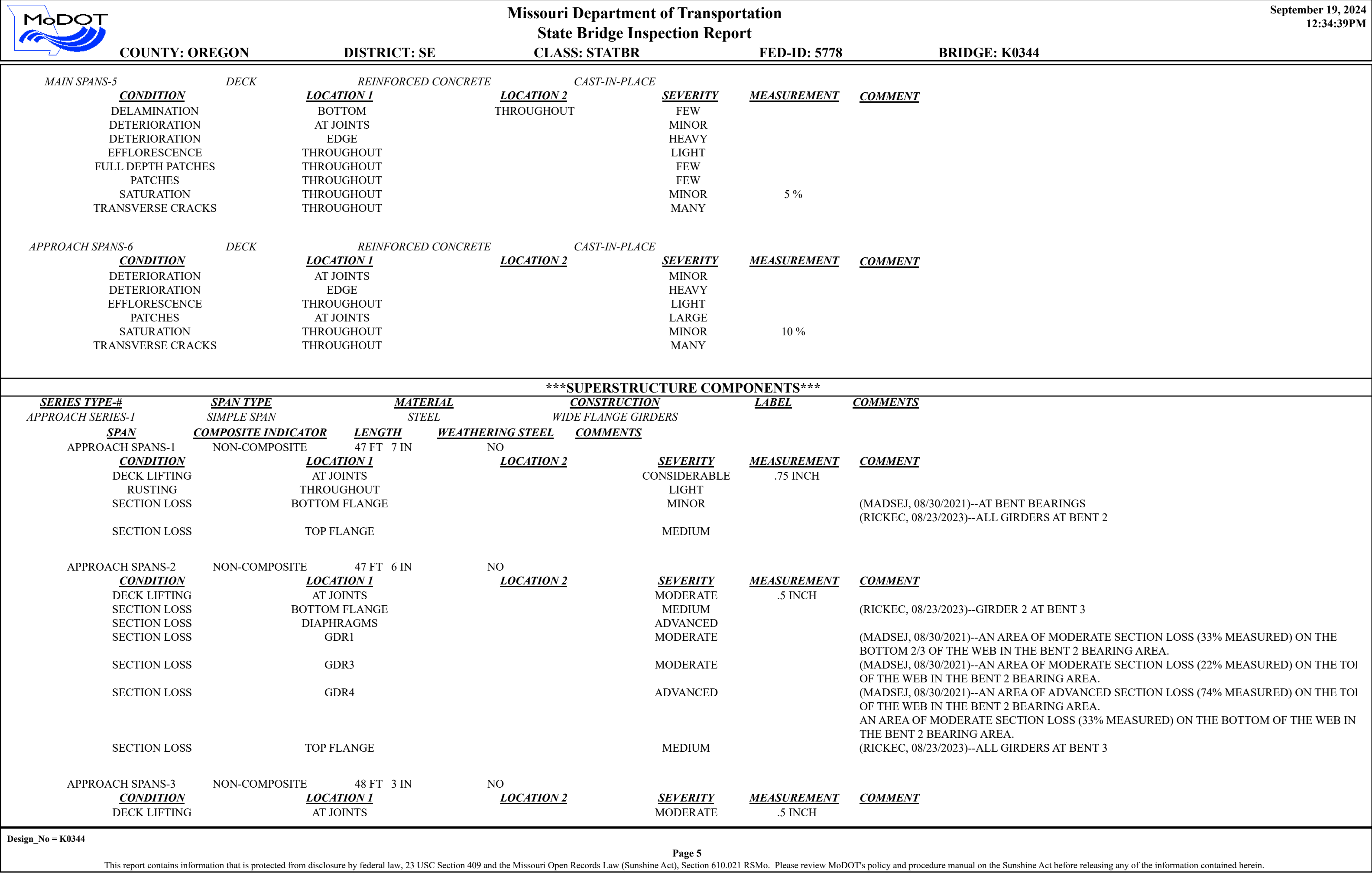
Page 1

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		Missouri Department of Transportation			September 19, 2024				
COUNTY: OREGON		DISTRICT: SE		CLASS: STATBR		FED-ID: 5778		BRIDGE: K0344	
***STRUCTURE POSTING***									
APPROVED CATEGORY: S-7		TRUCKS OVER 38 TONS 15 MPH ON BRIDGE.							
Ton 1: 38		Ton 2:		Ton 3:					
COMMENTS:									
FIELD CATEGORY: S-7		TRUCKS OVER 38 TONS 15 MPH ON BRIDGE.							
Ton 1: 38		Ton 2:		Ton 3:		PROBLEM:		PROBLEM DIRECTION:	
COMMENTS:									
***GENERAL COMMENTS/MAJOR RATED ITEMS***									
GENERAL COMMENTS: (BOWDEJ1, 08/28/2008)--(47'-47'-48') SMP WF - (91'-91') SMP PONY TRUSS - (38') SMP WF GDR SPANS									
[ITEM 58] DECK: 4-POOR CONDITION				COMMENTS: (MADSEJ, 08/30/2021)--APPROXIMATELY 50% SATURATION, DELAMINATIONS. AND PATCHES THROUGHOUT SPAN 4					
RATING : 08/30/2021									
[ITEM 59] SUPER: 3-SERIOUS CONDITION				COMMENTS: (MADSEJ, 08/30/2021)--HEAVY SECTION LOSS ON THE APPROACH GIRDER WEBS IN SPAN 3 AT THE BENT 3 BEARING AREAS.					
RATING : 08/23/2023				MODERATE TO HEAVY SECTION LOSS (UP TO 57% MEASURED) ON THE END LOWER GUSSET PLATES ALONG THE LOWER CHORD CONNECTIONS IN BOTH MAIN SPANS.					
				(RICKEC, 08/23/2023)--SPAN 6 GIRDERS 3 & 4 WITH 50% TO 70% SECTION LOSS IN WEB AT PIER 6 BEARINGS					
[ITEM 60] SUB: 5-FAIR CONDITION				COMMENTS: (MADSEJ, 09/25/2017)--MINOR TO MODERATE SPALLING AND DELAMINATIONS THROUGHOUT THE BENT COLUMNS AND BEAMCAPS THROUGHOUT THE STRUCTURE.					
RATING : 08/23/2023				(RICKEC, 08/23/2023)--PIER 6 WEST SIDE BEAM CAP AND COLUMN WITH 3/8" OPEN VERTICAL CRACK AND HEAVY EFFLORESCENCE					
				ABUTMENT 1 WITH MINOR UNDERMINING NO PILINGS EXPOSED					
[ITEM 61] BANK/CHANNEL: 5-MAJOR DAMAGE				COMMENTS: (MADSEJ, 08/30/2021)--VERY POOR UPSTREAM CHANNEL ALIGNMENT THE STREAM IS FLOWING PARALLEL WITH THE STRUCTURE UNDER THE STRUCTURE. DRIFT AND DEBRIS ON THE BRIDGE PIERS IS SLIGHTLY RESTRICTING FLOW.					
RATING : 05/18/2001									
[ITEM 113] SCOUR: 8-STABLE FOR CALCULATED				COMMENTS:					
RATING : 05/18/2001									
EVALUATION TYPE :									
[ITEM 71] WATERWAY ADEQUACY: DECK ABOVE FLOOD ELEV				COMMENTS:					
RATING : 05/18/2001									
[ITEM 72] APPRRDWY ALIGNMENT: 6-SATISFACTORY				COMMENTS:					
RATING : 05/18/2001									
***RAILING AND APPROACH PAVEMENT COMPONENTS AND RATINGS***									
[ITEM 36A] BRIDGE RAILING RATING: DOESNT MEET CURRNT STND-0				RATING : 01/14/2008		COMMENTS:			
<u>MATERIAL</u>		<u>CONSTRUCTION</u>		<u>DIRECTION</u>		<u>COMMENTS</u>			
REINFORCED CONCRETE		CURB		BOTH					
<u>CONDITION</u>		<u>LOCATION 1</u>		<u>LOCATION 2</u>		<u>SEVERITY</u>		<u>COMMENT</u>	
LONGITUDINAL CRACKS		THROUGHOUT				FEW			
SCALING		THROUGHOUT				HEAVY			
VERTICAL CRACKS		RANDOM				MINOR			
STEEL		CHANNEL-DOUBLE		BOTH					
[ITEM 36B] TRANSITION RAILING RATING: NOT PROVIDED-0				RATING : 05/18/2001		COMMENTS:			
[ITEM 36C] APPROACH RAILING RATING: NOT PROVIDED-0				RATING : 05/18/2001		COMMENTS:			
Design_No = K0344									
Page 2									
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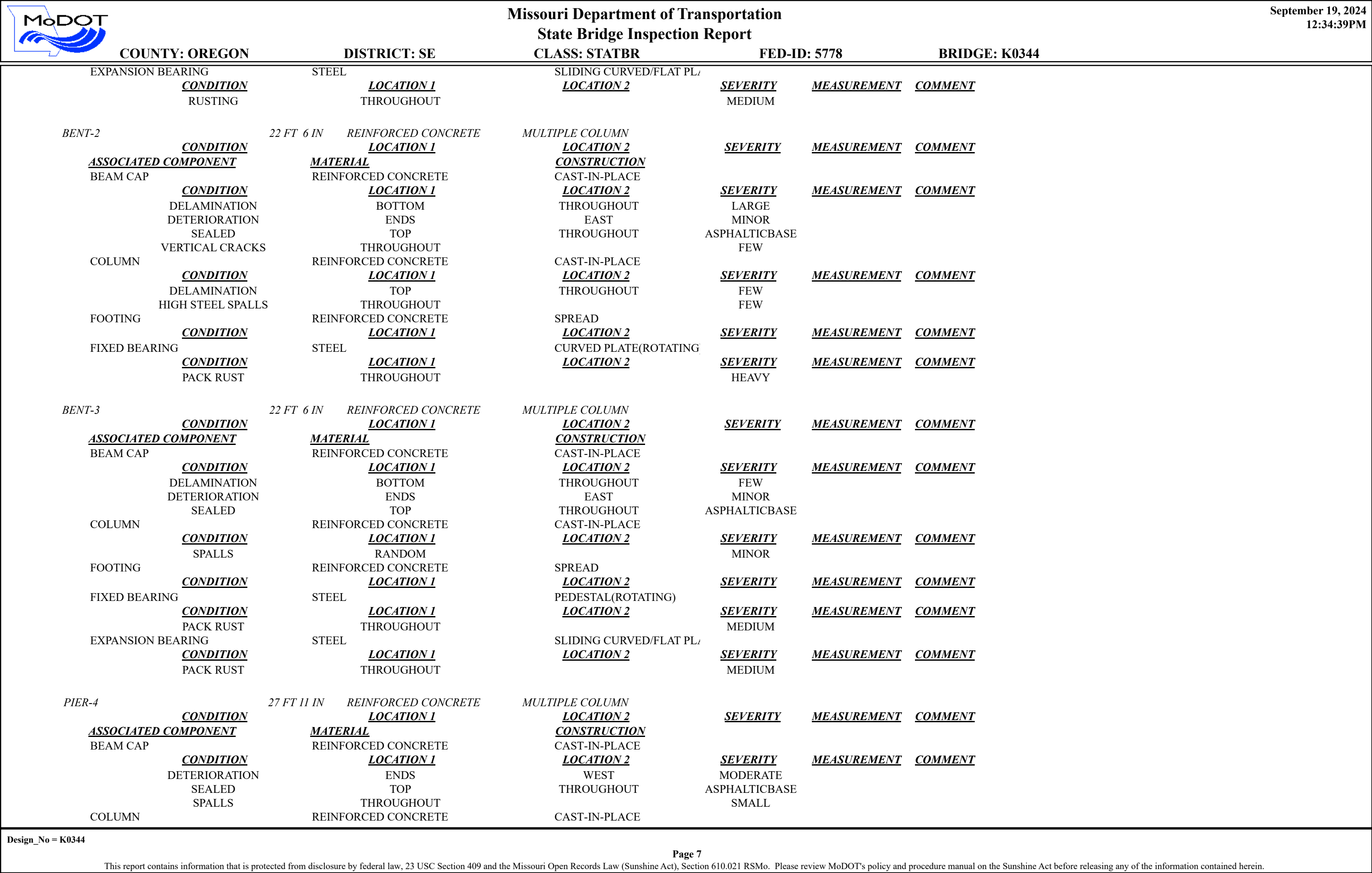


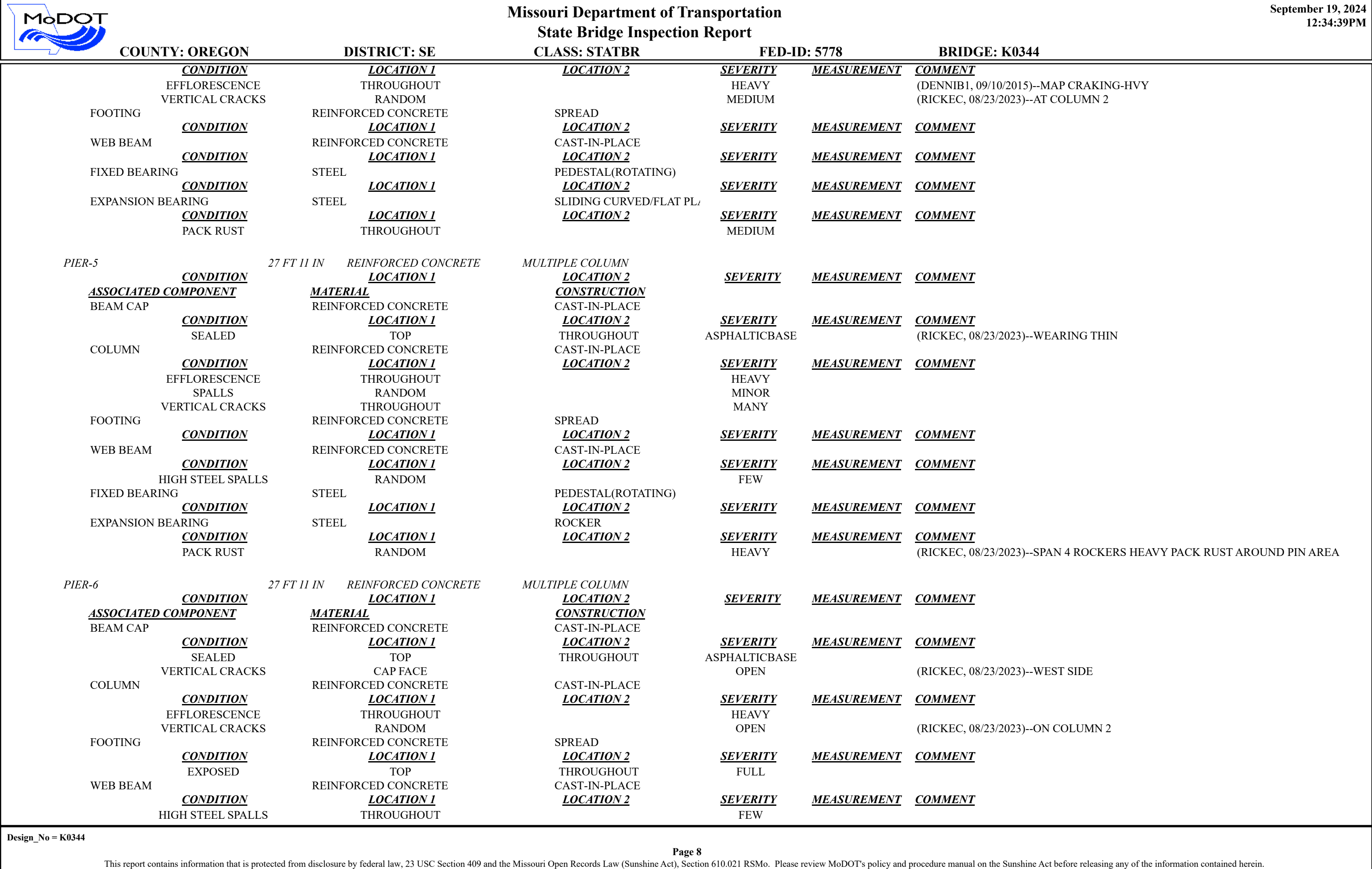
		Missouri Department of Transportation					September 19, 2024		
		State Bridge Inspection Report					12:34:39PM		
COUNTY: OREGON		DISTRICT: SE		CLASS: STATBR		FED-ID: 5778		BRIDGE: K0344	
SECTION LOSS		AT BEARING		MODERATE		(MADSEJ, 08/30/2021)--AN AREA OF MODERATE SECTION LOSS (16% TO 25% MEASURED) ON THE BOTTOM 1/4 TO 1/3 OF THE GIRDER 1, GIRDER 2, AND GIRDER 4 WEB AT THE PIER 4 BEARING AREA.			
SECTION LOSS		GDR1		MODERATE		(MADSEJ, 08/30/2021)--AN AREA OF MODERATE SECTION LOSS (33% MEASURED) ON THE 100% OF THE WEB IN THE BENT 3 BEARING AREA.			
SECTION LOSS		GDR2		MODERATE		(RICKEC, 08/23/2023)--GIRDER 1 HAS 50% SECTION LOSS IN WEB AT BENT 3 BEARING AREA (MADSEJ, 08/30/2021)--AN AREA OF MODERATE SECTION LOSS (22% MEASURED) ON THE TOP OF THE WEB IN THE BENT 3 BEARING AREA.			
SECTION LOSS		GDR4		MODERATE		AN AREA OF MODERATE SECTION LOSS (29% MEASURED) ON THE BOTTOM OF THE WEB IN THE BENT 3 BEARING AREA.			
SECTION LOSS		TOP FLANGE		ADVANCED		(MADSEJ, 08/30/2021)--AN AREA OF MODERATE SECTION LOSS (33% MEASURED) ON THE 100% OF THE WEB IN THE BENT 3 BEARING AREA.			
SECTION LOSS						(RICKEC, 08/23/2023)--ALL GIRDERS AT BENT 3 AND PIER 4			
MAIN SERIES-2		SIMPLE SPAN		STEEL		PONY TRUSS			
<u>SPAN</u>		<u>COMPOSITE INDICATOR</u>		<u>LENGTH</u>		<u>WEATHERING STEEL</u>		<u>COMMENTS</u>	
MAIN SPANS-4		NON-COMPOSITE		91 FT 1 IN		NO		(MADSEJ, 11/25/2019)--SEE THE FRACTURE CRITICAL ELEMENT TABLE FOR COMPONENT CONDITIONS.	
<u>CONDITION</u>		<u>LOCATION 1</u>		<u>LOCATION 2</u>		<u>SEVERITY</u>		<u>MEASUREMENT</u>	
<u>COMMENT</u>									
MAIN SPANS-5		NON-COMPOSITE		91 FT 1 IN		NO		(MADSEJ, 11/25/2019)--SEE THE FRACTURE CRITICAL ELEMENT TABLE FOR COMPONENT CONDITIONS.	
<u>CONDITION</u>		<u>LOCATION 1</u>		<u>LOCATION 2</u>		<u>SEVERITY</u>		<u>MEASUREMENT</u>	
<u>COMMENT</u>									
APPROACH SERIES-3		SIMPLE SPAN		STEEL		WIDE FLANGE GIRDERS			
<u>SPAN</u>		<u>COMPOSITE INDICATOR</u>		<u>LENGTH</u>		<u>WEATHERING STEEL</u>		<u>COMMENTS</u>	
APPROACH SPANS-6		NON-COMPOSITE		38 FT 2 IN		NO			
<u>CONDITION</u>		<u>LOCATION 1</u>		<u>LOCATION 2</u>		<u>SEVERITY</u>		<u>MEASUREMENT</u>	
<u>COMMENT</u>									
PACK RUST		TOP FLANGE				HEAVY			
SECTION LOSS		BOTTOM FLANGE				MODERATE			
SECTION LOSS		GDR3				HEAVY			
SECTION LOSS		GDR4				ADVANCED			
								(MADSEJ, 08/30/2021)--AT PIER BEARINGS	
								(MADSEJ, 08/30/2021)--AN AREA OF HEAVY SECTION LOSS (41% MEASURED) ON THE BOTTOM OF THE WEB IN THE PIER 7 BEARING AREA.	
								(RICKEC, 08/23/2023)--NOW 50% SECTION LOSS IN WEB OFGIRDER 3 AT PIER 7 BEARING ARE.	
								(MADSEJ, 08/30/2021)--AN AREA OF ADVANCED SECTION LOSS (68% MEASURED) ON THE BOTTOM OF THE WEB IN THE PIER 7 BEARING AREA.	
***SUBSTRUCTURE COMPONENTS***									
<u>SUBSTRUCTURE</u>		<u>SKEW</u>		<u>LENGTH</u>		<u>MATERIAL</u>		<u>CONSTRUCTION</u>	
ABUTMENT-1		22 FT 6 IN		REINFORCED CONCRETE		OPEN CONCRETE			
<u>CONDITION</u>		<u>LOCATION 1</u>		<u>LOCATION 2</u>		<u>SEVERITY</u>		<u>MEASUREMENT</u>	
<u>COMMENT</u>									
<u>ASSOCIATED COMPONENT</u>		<u>MATERIAL</u>		<u>CONSTRUCTION</u>		<u>SEVERITY</u>		<u>MEASUREMENT</u>	
BEAM CAP		REINFORCED CONCRETE		CAST-IN-PLACE					
<u>CONDITION</u>		<u>LOCATION 1</u>		<u>LOCATION 2</u>		<u>SEVERITY</u>		<u>MEASUREMENT</u>	
<u>COMMENT</u>									
SEALED		TOP		THROUGHOUT		ASPHALTICBASE			
VERTICAL CRACKS		THROUGHOUT				FEW			
COLUMN		REINFORCED CONCRETE		CAST-IN-PLACE					
<u>CONDITION</u>		<u>LOCATION 1</u>		<u>LOCATION 2</u>		<u>SEVERITY</u>		<u>MEASUREMENT</u>	
<u>COMMENT</u>									
STRAIGHT WINGS		REINFORCED CONCRETE		CAST-IN-PLACE					
<u>CONDITION</u>		<u>LOCATION 1</u>		<u>LOCATION 2</u>		<u>SEVERITY</u>		<u>MEASUREMENT</u>	
<u>COMMENT</u>									
FOOTING		REINFORCED CONCRETE		SPREAD					
<u>CONDITION</u>		<u>LOCATION 1</u>		<u>LOCATION 2</u>		<u>SEVERITY</u>		<u>MEASUREMENT</u>	
<u>COMMENT</u>									
BACKWALL		REINFORCED CONCRETE		CAST-IN-PLACE					
<u>CONDITION</u>		<u>LOCATION 1</u>		<u>LOCATION 2</u>		<u>SEVERITY</u>		<u>MEASUREMENT</u>	
<u>COMMENT</u>									

Design\_No = K0344

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# Missouri Department of Transportation

## State Bridge Inspection Report

**September 19, 2024**  
**12:34:39PM**

**COUNTY: OREGON**

**DISTRICT: SE**

**CLASS: STATBR**

**FED-ID: 5778**

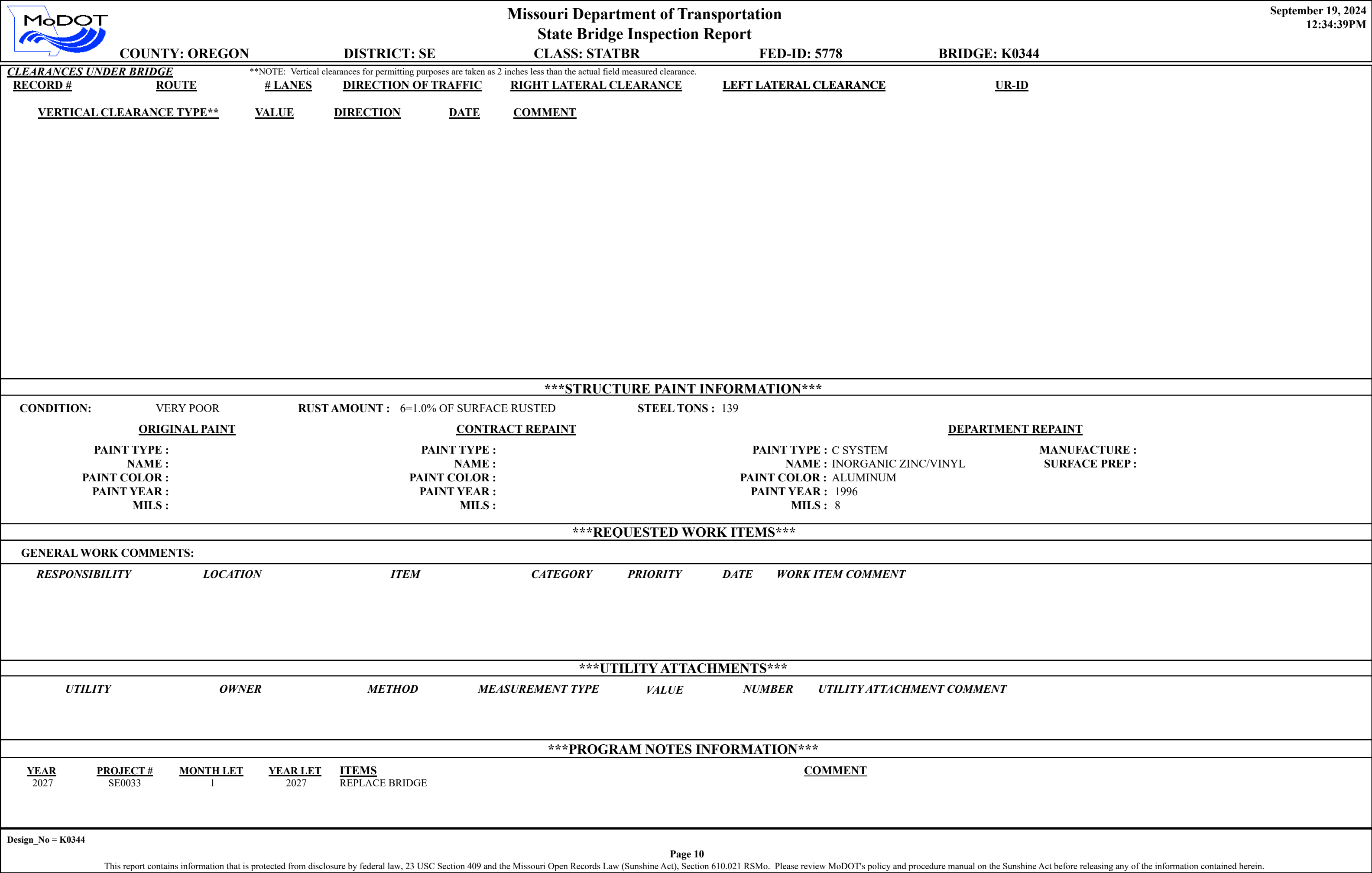
**BRIDGE: K0344**


EXPANSION BEARING	STEEL	SLIDING CURVED/FLAT PL			
PACK RUST	THROUGHOUT				
EXPANSION BEARING	STEEL	ROCKER			
RUSTING	THROUGHOUT				
ABUTMENT-7	22 FT 6 IN	REINFORCED CONCRETE	OPEN CONCRETE		
BEAM CAP	REINFORCED CONCRETE	CAST-IN-PLACE			
HIGH STEEL SPALLS	THROUGHOUT				
SEALED	TOP	THROUGHOUT	ASPHALTICBASE		
COLUMN	REINFORCED CONCRETE	CAST-IN-PLACE			
STRAIGHT WINGS	REINFORCED CONCRETE	CAST-IN-PLACE			
FOOTING	REINFORCED CONCRETE	SPREAD			
BACKWALL	REINFORCED CONCRETE	CAST-IN-PLACE			
EXPANSION BEARING	STEEL	SLIDING CURVED/FLAT PL			
PACK RUST	THROUGHOUT				

**\*\*\*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.



			<b>Missouri Department of Transportation</b>		<b>September 19, 2024</b>																																										
			<b>State Bridge Inspection Report</b>		<b>12:34:39PM</b>																																										
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<b>***COMPUTER GENERATED RATINGS AND DEFICIENCY ITEMS***</b>				<b>***ADVANCED SIGN INFORMATION***</b>																																											
<div>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.</div> <table><tr><td><u>Rated Item</u></td><td><u>Rating</u></td><td><u>Rating Date</u></td></tr><tr><td>[Item 67] Structure Evaluation Rating:</td><td>2-BASICALLY INTOLRBLE REQ</td><td>3/6/2024</td></tr><tr><td>[Item 68] Deck Geometry Rating:</td><td>3-BASICALLY INTOL CORRECT</td><td>12/17/2018</td></tr><tr><td>[Item 69] Underclearance:</td><td>N-NOT APPLICABLE</td><td>5/18/2001</td></tr><tr><td>Sufficiency Rating:</td><td>4.0%</td><td>8/31/2021</td></tr><tr><td>Deficiency:</td><td>STRUCTURAL</td><td>4/2/2003</td></tr><tr><td>Funding Eligibility:</td><td>FULL</td><td>----</td></tr><tr><td>Estimated New Structure Length:</td><td>394 FT.</td><td>----</td></tr><tr><td>Estimated Structure Cost:</td><td>\$2,284,806</td><td>----</td></tr><tr><td>Estimated Total Project Cost:</td><td>\$3,427,209</td><td>----</td></tr><tr><td>Year of Cost Estimate:</td><td>2024</td><td>----</td></tr></table> <div>NOTE: The above structure length and cost estimates are computer generated using algorithms in the TMS system. These algorithms 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.</div>				<u>Rated Item</u>	<u>Rating</u>	<u>Rating Date</u>	[Item 67] Structure Evaluation Rating:	2-BASICALLY INTOLRBLE REQ	3/6/2024	[Item 68] Deck Geometry Rating:	3-BASICALLY INTOL CORRECT	12/17/2018	[Item 69] Underclearance:	N-NOT APPLICABLE	5/18/2001	Sufficiency Rating:	4.0%	8/31/2021	Deficiency:	STRUCTURAL	4/2/2003	Funding Eligibility:	FULL	----	Estimated New Structure Length:	394 FT.	----	Estimated Structure Cost:	\$2,284,806	----	Estimated Total Project Cost:	\$3,427,209	----	Year of Cost Estimate:	2024	----	<table><tr><td><b>SIGN #</b></td><td><b>SIGN TYPE</b></td><td><b>PROBLEM</b></td><td><b>PROBLEM DIRECTION</b></td></tr><tr><td>1</td><td></td><td></td><td></td></tr></table>			<b>SIGN #</b>	<b>SIGN TYPE</b>	<b>PROBLEM</b>	<b>PROBLEM DIRECTION</b>	1			
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Missouri Department of Transportation  
Bridge Inventory and Inspection System  
Structural Inventory & Appraisal Sheet

September 19, 2024  
12:36:29pm

COUNTY : OREGON      BRIDGE : K0344      REVIEW STATUS : APPROVED      NBI STATUS : T  
RECORD TYPE : ROUTE CARRIED 'ON' STRUCT      RUN DATE : 3/15/2024      SUBMITTAL YEAR : 2024

GENERAL STRUCTURE INFORMATION			ROUTE DESIGNATION INFORMATION		
1	State	MISSOURI	5A	Record Type	ROUTE CARRIED 'ON' STRUCT
2	District	SE	5B	Route Signing Prefix	MO
3	County	OREGON	5C	Designated Level of Service	MAINLINE
8	Federal ID No.	5778	5D	Route Number	00019
27	Year Built	1934	5E	Directional Suffix	NOT APPLICABLE
106	Year Reconstructed	0	7	Facility Carried	MO 19 S
42A	Type of Service On	HIGHWAY	12	Base Hwy. Network	YES
21	Structure Maintenance	STATE HIGHWAY AGENCY	13A	LRS Inventory Route No.	0000000054
22	Structure Owner	STATE HIGHWAY AGENCY	13B	Subroute No.	00
33	Br. Median Code	NO MEDIAN	20	Toll Status	ON FREE ROAD
37	Historical Significance	HISTORICAL SIGNIF UNKNWN	26	Functional Classification	06-RURAL MINOR ARTERIAL
101	Parallel Struc Desg	NONE EXISTS	28A	Lanes on Structure	02
103	Temporary Structure	NOT TEMPORARY	100	STRAHNET Designation	RTE NOT A DEFENSE HWY
112	NBIS Bridge Length	YES	104	National Highway System	NOT ON NHS
			105	Federal Lands Highway	NOT APPLICABLE
			110	Designated Nat. Network	NO
STRUCTURE LOCATION INFORMATION			STRUCTURE TRAFFIC INFORMATION		
4	Place	FALLING SPRING	29	AADT	1426
	Code	23608	30	AADT Year	2023
9	Location	S 31 T 25 N R 3 W	102	Direction of Traffic	2-WAY TRAFFIC
11	Milepoint	239.80 miles	109	AADT Truck Percent	7%
16	Latitude	36 D 47 M 39 S	114	Future AADT	2139
17	Longitude	91 D 20 M 1 S	115	Future AADT Year	2043
UNDERRECORD INFORMATION			STRUCTURE GEOMETRIC INFORMATION		
6	Features Intersected	ELEVEN POINT RVR	10	Inventory Rte. Vert. Clear	99 Ft. 99 In.
42B	Type of Service Under	WATERWAY	19	By pass Detour Length	80.63 miles
28B	Lanes Under Structure	00	32	Approach Roadway Width	20 Ft. 0 In.
54A	Vert. Clearance Ref.	N/A	34	Skew	0.00 Degrees
54B	Vert. Clearance	0 Ft. 0 In.	35	Struct. Flared	NO
55A	Rt. Lat Clear Ref.	N/A	47	Total Horiz. Clear	21 Ft. 12 In.
55B	Rt. Lat Clearance	0 Ft. 0 In.	48	Maximum Span Length	91 Ft. 2 In.
56	Left Lat Clearance	0 Ft. 0 In.	49	Structure Length	363 Ft. 10 In.
38	Navigation Control	PERMIT NOT REQ	50A	Left Curb/Sidewalk Width	0 Ft. 0 In.
39	Nav Vertical Clear	0 Ft. 0 In.	50B	Right Curb/Sidewalk Width	0 Ft. 0 In.
40	Nav Horizontal Clear	0 Ft. 0 In.	51	Curb to Curb Br. Width	21 Ft. 12 In.
111	Nav. Pier Protection		52	Deck Width (Out-Out)	23 Ft. 4 In.
116	Nav. Cl. Vert. Clear		53	Vert. Clearance Over Deck	99 Ft. 99 In.

Design\_No = K0344 and Inventory\_Appraisal\_Submittal\_Year = 2024





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

September 19, 2024  
12:36:29pm

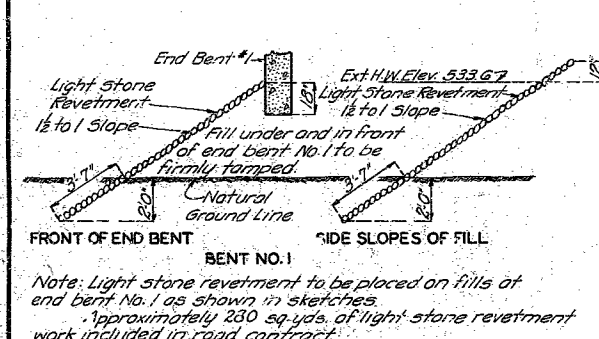
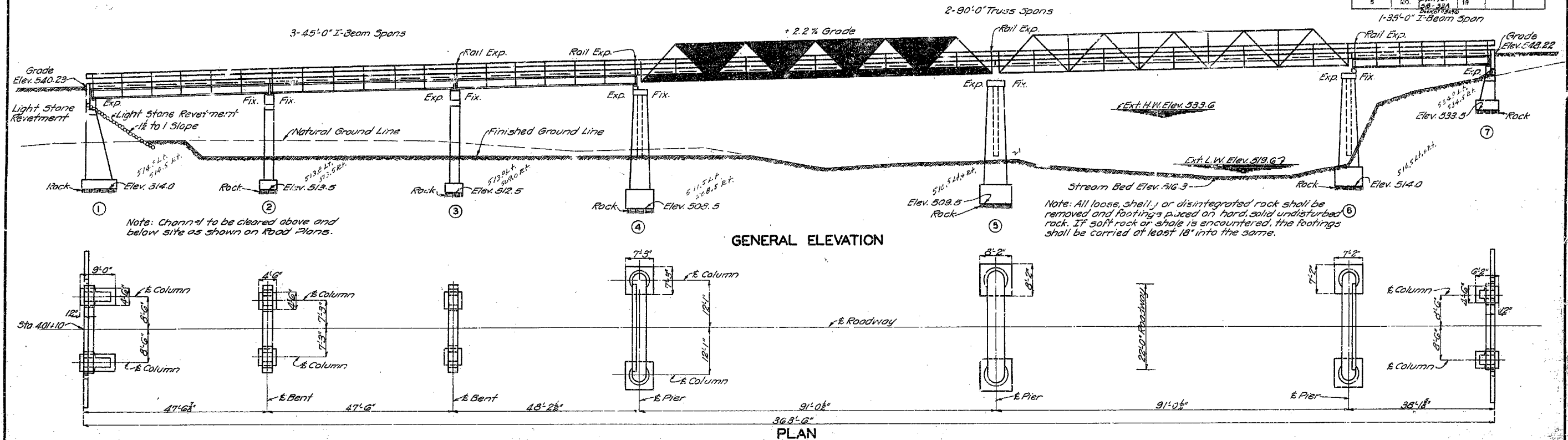
COUNTY : OREGON      BRIDGE : K0344      REVIEW STATUS : APPROVED      NBI STATUS : T  
RECORD TYPE : ROUTE CARRIED 'ON' STRUCT      RUN DATE : 3/15/2024      SUBMITTAL YEAR : 2024

LOAD RATING AND POSTING INFORMATION			MATERIAL/CONSTRUCTION INFORMATION		
31	Design Load	H 15	43A	Main Struc. Mat type	STEEL
41	Structure Status	POSTED FOR LOAD	43B	Main struc Constr. Type	TRUSS - THRU
63	Oper. Rating Meth.	ALLOWABLE STRESS	45	# of Main Spans	2
64	Operating Rating	22 Tons.	44A	Appr Struc. Mat type	STEEL
65	Inventory Rating Meth	ALLOWABLE STRESS	44B	Appr Struc. Cnstr. type	STRINGER/MULTIBEAM - GRD
66	Inventory Rating	13 Tons.	46	# of Approach Span	4
70	Bridge Posting Code	0.1-9.9% BELOW	107	Deck Mat/Constr.	1 CONCRETE CIP
PROPOSED IMPROVEMENT INFORMATION			108A	Wear Surf Mat/Constr.	6 BITUMINOUS
	Sufficiency Rating	4.0    Percent	108B	Membrane Mat/Constr.	0 NONE
	Deficiency Rating	STRUCTURAL	108C	Deck Protect Mat/Constr.	0 NONE
	Funding Eligibility	FULL	CONDITION RATING INFORMATION		
75A	Proposed Work	REPLACEMENT SUBSTND LOAD	58	Deck Cond. Rating	4
75B	Work Done By	Contract	59	Superstructure Cond. Rating	3
76	New Struc Length	393 Ft. 8 In.	60	Substructure Cond. Rating	5
94	Struc Improve Cost	\$ 2,285,000	61	Channel /Channel Protection Cond. Rating	5
95	Roadway Improve Cost	\$ 228,000	62	Culvert Cond. Rating	N
96	Total Project Cost	\$ 3,427,000	INSPECTION INFORMATION		
97	Year of Cost Estimates	2024	90	Gen. Insp Date	8 / 23
APPRAISAL RATING INFORMATION			91	Gen. Insp. Frequency	24    Months
36A	Br. Rail App. Rating	DOES NOT MEET ACCEPT STND	92A	Frac. Critical Inspection	Y    Months    24
36B	Transition Rail App. Rating	DOES NOT MEET ACCEPT STND	93A	Frac. Critical Insp. Date	8 / 23
36C	Approach Rail App. Rating	DOES NOT MEET ACCEPT STND	92B	Underwater Inspection	N    Months
36D	Rail End Treat. App. Rating	DOES NOT MEET ACCEPT STND	93B	Underwater Insp. Date	
67	Struc Eval App. Rating	2	92C	Special Inspection	N    Months
68	Deck Geometry App. Rating	3	93C	Special Inspection Date	
69	Underclearance App. Rating	N	BORDER BRIDGE INFORMATION		
71	Waterway Adeq. App. Rating	8	98	Neighboring State Code	
72	Approach Road App. Rating	6	98B	Neighboring State % Respon	
113	Scour Assess App. Rating	8	99	Neighboring State Struc. No.	
APPROVED POSTING INFORMATION			FIELD POSTING INFORMATION		
Approved Posting Category    S-7			Field Posting Category    S-7		
		Ton1    Ton2    Ton3			Ton1    Ton2    Ton3
Tonnage Values for Posting Sign    38			Tonnage Values for Posting Sign    38		
General Text for Posting Sign			General Text for Posting Sign		
TRUCKS OVER 38 TONS 15 MPH ON BRIDGE.			TRUCKS OVER 38 TONS 15 MPH ON BRIDGE.		

Design\_No = K0344 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.	20A-53A	19		



BILL OF REINFORCING STEEL									
No.	Size	Length	Mark	Location	Bending Sketches & Cutting Diagrams	No.	Size	Length	Mark
End Bents No. 1 & 7					Piers No. 4, 5 & 6 - Cont'd.				
24	3/4"	6'-3"	D1	Footings		48	3/4"	7'-9"	P6
16	3/4"	9'-3"	F1	Haunch		23	3/4"	7'-3"	P7
16	3/4"	9'-0"	F2	"		27	3/4"	3'-3"	P8
12	3/4"	12'-0"	H1	Wing Wall		16	1"	25'-6"	V7
10	3/4"	19'-0"	H2	"		24	3/4"	17'-3"	V8
12	3/4"	24'-3"	H3	Beam		16	1"	26'-6"	V9
4	3/4"	22'-3"	H4	"		24	3/4"	18'-9"	V10
6	3/4"	24'-3"	H5	"		16	1"	24'-0"	V11
2	3/4"	20'-0"	H6	Backwall		24	3/4"	21'-0"	V12
4	3/4"	14'-0"	T1	Wing Wall		2	3/4"	22'-3"	H10
4	3/4"	22'-6"	T2	Backwall		Superstr. I-Beam Spans			
4	3/4"	14'-0"	T3	Wing Wall		48	3/4"	25'-0"	C1
14	3/4"	8'-0"	V1	"		242	3/4"	2'-0"	C2
4	3/4"	6'-0"	V2	"		16	3/4"	23'-0"	C3
23	3/4"	12'-6"	V3	Beam Bkwl		860	3/4"	23'-0"	S1
12	3/4"	20'-0"	V4	Column		186	3/4"	24'-9"	S2
12	3/4"	8'-9"	V5	"		62	3/4"	19'-9"	S3
23	3/4"	12'-6"	V6	Beam Bkwl		5-H2 CUT 10 BARS			
Tri-Bents No. 2 & 3						H3-H5-G1			
16	3/4"	6'-3"	D1	Footings		V5-V6			
16	3/4"	9'-0"	F2	Haunch		P2-P3			
16	3/4"	9'-0"	F3	"		T1-T3			
24	1"	24'-3"	G1	Beam		P7			
4	3/4"	22'-3"	G2	"		P5-P6			
8	3/4"	21'-6"	P1	Column		C2			
54	3/4"	10'-0"	P2	"					
4	3/4"	16'-0"	P3	Beam					
4	3/4"	23'-6"	P4	Column					
Piers No. 4, 5 & 6									
48	3/4"	8'-0"	D2	Footings					
12	1"	24'-3"	H7	Cap					
9	1"	27'-9"	H8	Web					
48	3/4"	24'-0"	H9	"					
69	3/4"	7'-6"	P5	Cap					

## GENERAL NOTES:

Concrete in slab and curbs to be 1:2:3 1/2 mix; Class "X". All other concrete to be 1:2:4 mix; Class "B".  
Exposed edges to be beveled 1/4" where no other bevel is noted.  
Where rubber compound is specified on plans for use in part, joint, or expansion joints, the pre-molded joint shall be securely stitched to one face of concrete with copper wire.  
Shop drawings for all structural steel shall be submitted to the Missouri State Highway Department in duplicate and shall be approved before steel is fabricated.  
See Special Provisions in regard to permissible beam substitutions and basis of payment.  
For expansion device at Piers No. 5 & 6 see Std. 5912. Make details of expansion device at Pier No. 4 similar to that shown on Std. 5917. For details of shoes and rockers see Std. 5637.  
Paint: Shop, none. Field, contact surfaces of bolted field connections one coat of red lead. Surfaces inaccessible after erection three coats of red lead. No other paint to be applied by contractor. Red lead required shall be furnished by the Contractor. See Special Provisions.  
Bridge excavation in accordance with Section I of Standard Specifications issued April 1, 1930, except that quantities paid for will be computed from Ext. L.W. Elev. 519.0 where existing ground line is below this elevation.  
Rivets 3/4", holes 1 1/8". Holes for 3/4" rivets 1 1/8". Field connections riveted unless otherwise noted.  
Bar supports and spacers will be required for reinforcing steel in superstructure. See Std. 6110R and Special Provisions.

ESTIMATED QUANTITIES			
Item	Substr.	Superstr.	Total
Bridge Excavation, Class 1	Cu. Yds.	210	210
Bridge Excavation, Class 2	Cu. Yds.	330	330
Concrete 1:2:4 mix; Class "B"	Cu. Yds.	312.6	312.6
Concrete 1:2:3 1/2 mix; Class "X"	Cu. Yds.	199.0	199.0
Str. Steel (Truss Spans)	Lbs.	167000	167000
Str. Steel (I.B. Spans)	Lbs.	103700	103700
Steel Castings	Lbs.	1720	1720
Reinforcing Steel	Lbs.	16130	58510
Bearing Castings	Lbs.	2020	2020

Note: Bridge excavation above Elev. 520.0 will be paid for as Class 1. Bridge excavation below Elev. 520.0 will be paid for as Class 2. Bridge excavation.

B.M. Elev. 524.59 N.T.R. of 3" Cottonwood 100' Lt. Sta. 403+20.

## BRIDGE OVER ELEVEN POINTS RIVER

STATE ROAD FROM SHANNON CO. LINE TO ALTON  
ABOUT 25.5 MILES NORTH OF THAYER  
PROJECT NO. PWA76, SB-S3A STA. 401+10  
RTE. B

OREGON COUNTY

SUBMITTED BY: *J. H. Cautler* DATE: 8/8/34  
APPROVED BY: *J. H. Cautler* DATE: 8/8/34  
BRIDGE ENGINEER  
CHIEF ENGINEER

STD. C-110R

K-344

Drawn July 1933 by H.D.  
Traced July 1933 by G.W.  
Checked July 1933 by PAB.

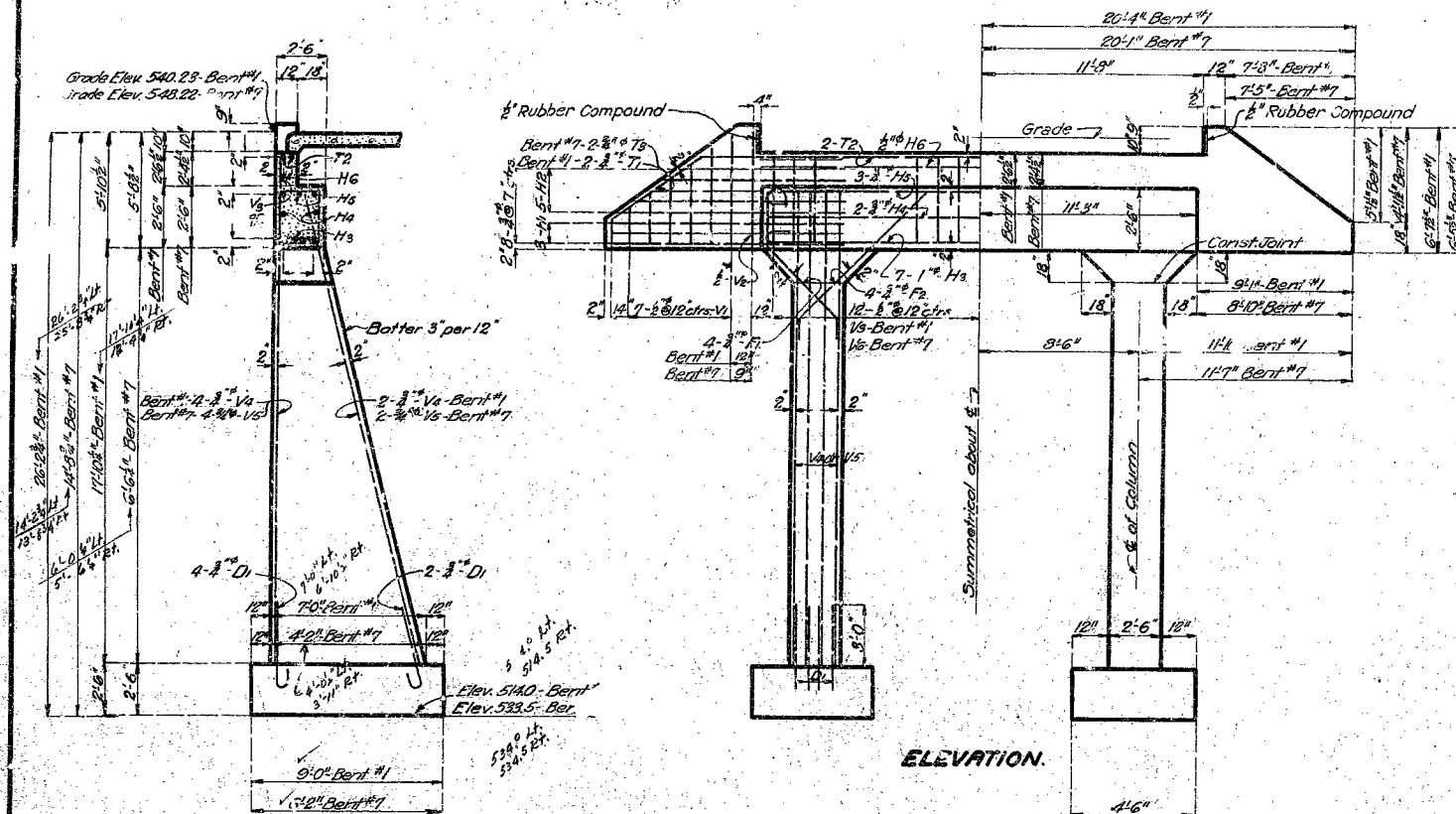
Note: This Bill of Reinforcing Steel is not complete. For rebar in 90'-0" Truss Spans see Sheet No. 6. Dimensions given are along & of bars and are for computed lengths. Reinforcing bars 1/2" or over in diameter which are bent to an angle greater than 90° shall be of structural grade.

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

Sheet No. 1 of 8.

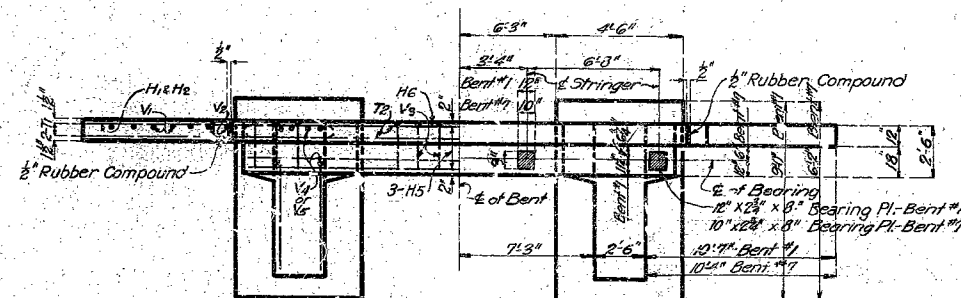
# MISSOURI STATE HIGHWAY DEPARTMENT

FED. DIST. NO.	STATE	F.D. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO	DWA 76, SB-22A	19		
Project # 2296					

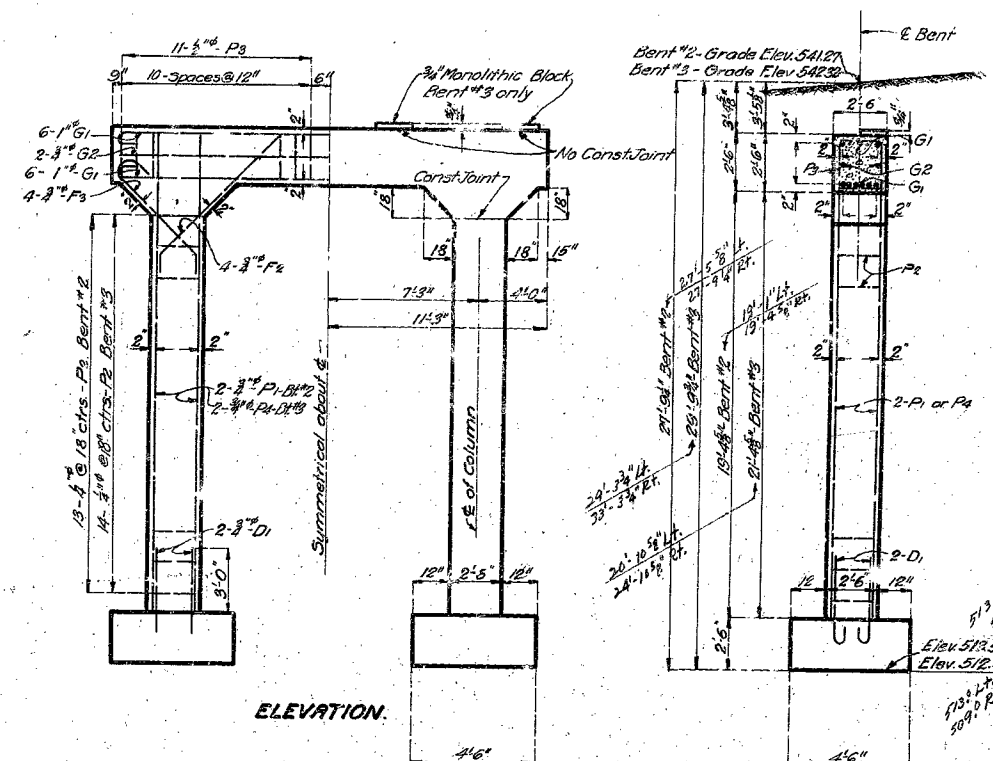


ELEVATION.

SECTION AT E.

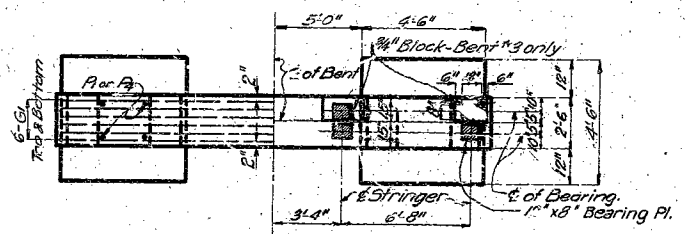


PLAN.  
DETAILS OF BENTS NO. 1 & NO. 7.



ELEVATION.

SECTION AT E.



PLAN.  
DETAILS OF BENTS NO. 2 & NO. 3.

BRIDGE OVER ELEVEN POINTS RIVER  
STATE ROAD FROM SHANNON CO. LINE TO ALTON  
ABOUT 25.5 MILES NORTH OF THAYER  
PROJECT NO. PWA 76, SB-33A STA. 401+0  
OREGON COUNTY

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

Sheet #2 of 8

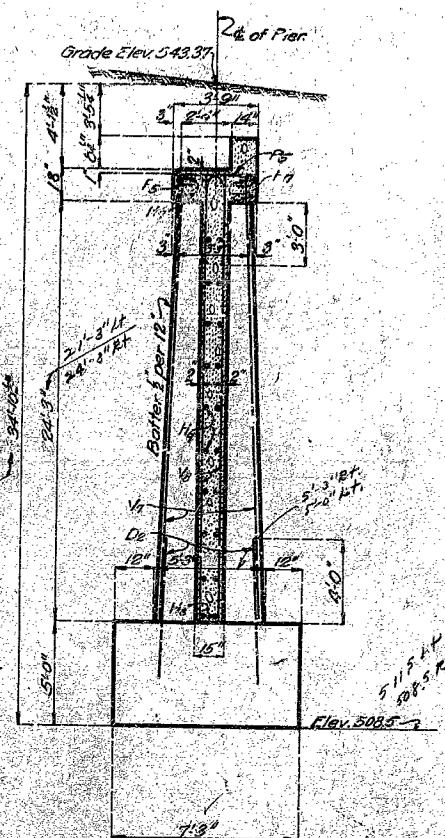
K-344

Assembled July 1938 By H.D.-L.H.S.  
Checked July 1939 By F.P.S.  
Drawn Feb. 1928 By J.T.  
Checked Feb. 1928 By B.L.O.

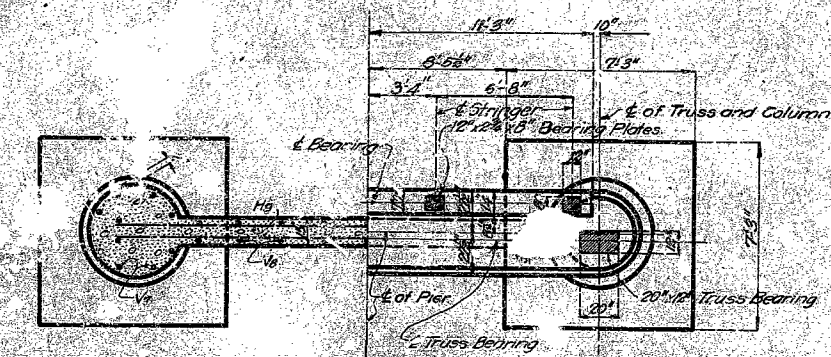
452

453

FINISHED



**SECTION AT E**



HALF HORIZONTAL SECTION HALF PLAN  
DETAILS OF PIER NO. 4

Assembled July 1933 By H.D. L.K.S.  
Checked July 1933 By RAB.  
Drawn Mar. 1925 By J.T.  
Checked April 1925 By C.B.V.

No. 2. This drawing is not to scale. Follow dimensions.

Sheet #3 of 8

BRIDGE OVER ELEVEN POINTS RIVER  
STATE ROAD FROM SHANNON CO. LINE TO ALTON  
ABOUT 25.5 MILES NORTH OF THAYER  
PROJECT NO PWA76,SB-S3A STA 461+10  
OREGON COUNTY

K-344



454

Assembled July 1923 By H.D.-L.K.S.  
Checked July 1923 By RAB.  
Drawn Mar. 1925 By J.I.  
Checked Mar. 1925 By R.G.O.

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



554

Docket # 329



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

COUNTY

Ass'd July 1933 by H.D.-L.K.S.  
Ch'kd July 1933 by RAB.  
Drown Feb. 1925 by H.G.P.  
Ch'kd March 1925 by B.J.C.

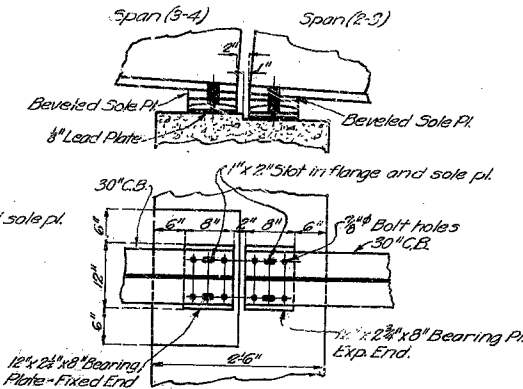
Sheet #5 of 8

K-344

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	PWA 76, 35-53A	19		

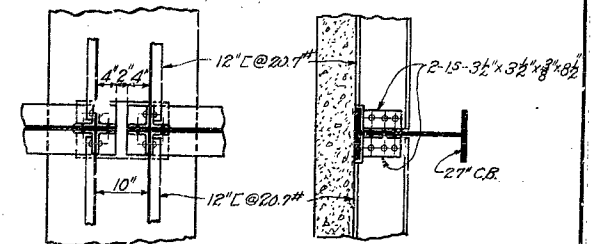
*Docket # 3276*

Note: For details of bearing plates  
see Sheet # 7.



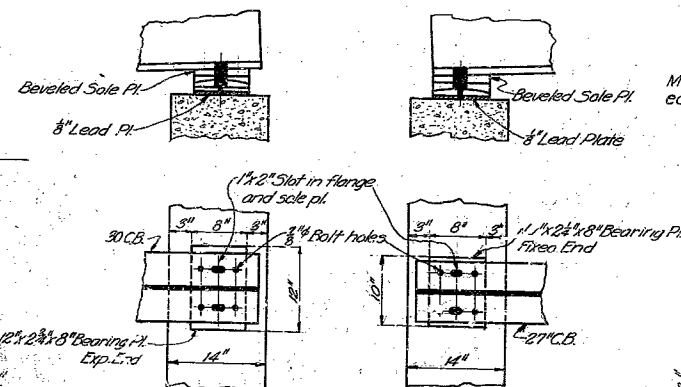
### DETAILS OF BEARINGS ON BENT NO. 3

### DETAILS OF END CHANNEL SEPARATORS



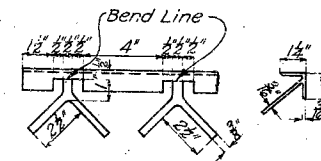
*Note: Tops of channel separators at ends of span to be flush with bottom of slab.*

*Note: Depth of outside stringers will in some cases be a fraction of an inch less than that of inside stringers and in order to keep bottom of slab horizontal it will be necessary to haunch slab down to top of outside stringers.*

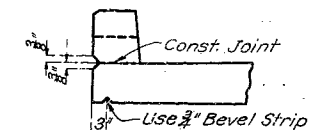


METALLIC EDGE MOULDING

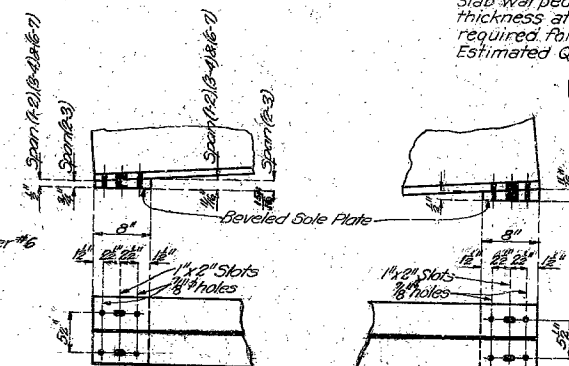
Note: Cost of metallic edge moulding will be included in unit bid price for concrete.



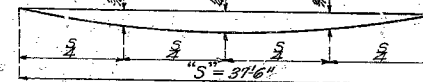
DETAIL OF BEVEL FOR CONST.  
JOINT AT CURB



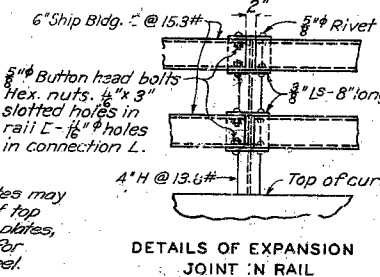
### DETAILS OF I-BEAM BEARINGS ON PIERS



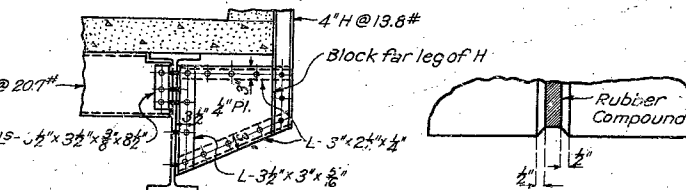
*Note: Floor slab to be brought to grade and dead load deflection taken care of by increasing slab thickness. Depth of slab at outside face of curb to be kept uniform and bottom surface of slab warped between curb and outside beam to obtain required thickness at beam. Payment will be allowed for additional concrete required for thickening slab. Additional concrete is included in Estimated Quantities.*



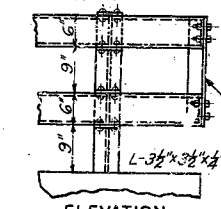
*Note: Beveled sole plates may be cast as part of top plate on bearing plates, but will be paid for as structural steel.*



### DETAILS OF EXPANSION JOINT IN RAIL



DETAIL OF RAIL BRACKET AT ENDS  
OF SPAN



### DETAIL OF BEVEL FOR RUBBER COMPOUND JOINTS

*Note: Use bevel as shown for exposed faces of all joints consisting of rubber compound except at top surface of roadway slab. Use metallic edge moulding at top surface of roadway each side of rubber compound joint.*

BRIDGE OVER ELEVEN POINTS RIVER

STATE ROAD FROM SHANNON CO. LINE TO ALTON  
ABOUT 25.5 MILES NORTH OF THAYER  
PROJECT NO. PWA76, SB-SSA STA. 401+10

OREGON

copy

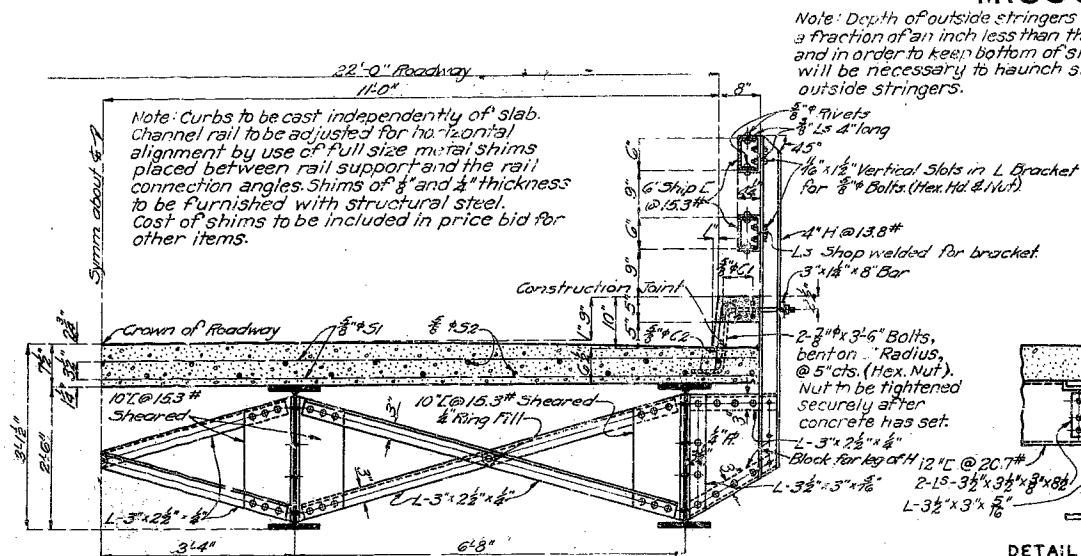
Drawn Feb. 1933 By R.J.G.  
Traced Feb. 1933 By R.J.G.  
Checked Feb. 1933 By H.D.

Note: This drawing is not to scale. Follow dimensions. Sheet No. 6 of 8

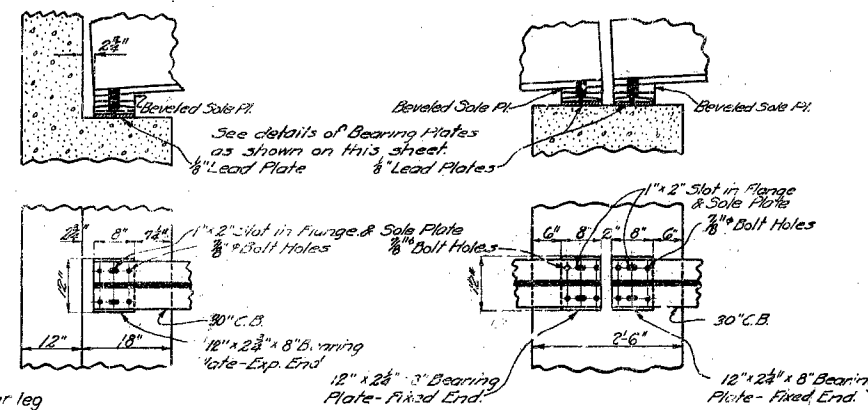
K-344

# MISSOURI STATE HIGHWAY DEPARTMENT

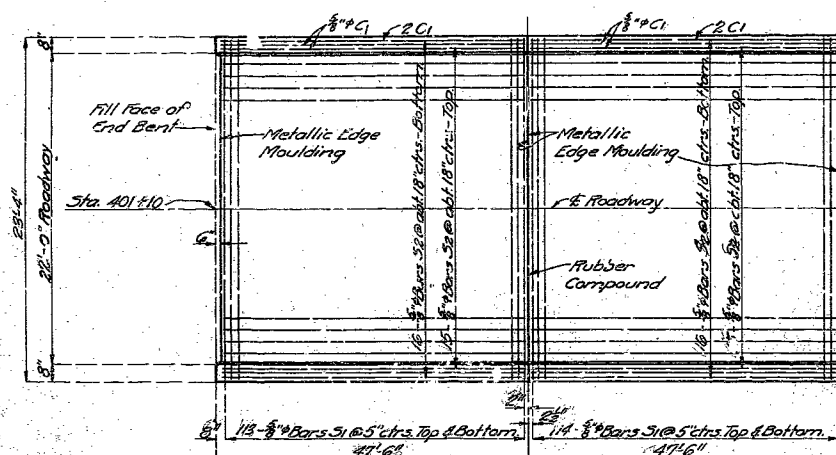
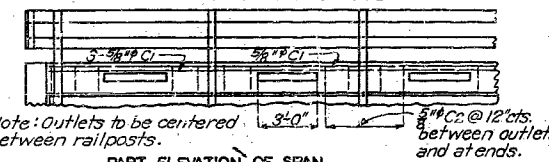
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	PHW 76, 28-33A	19		



HALF SECTION THRU SPAN



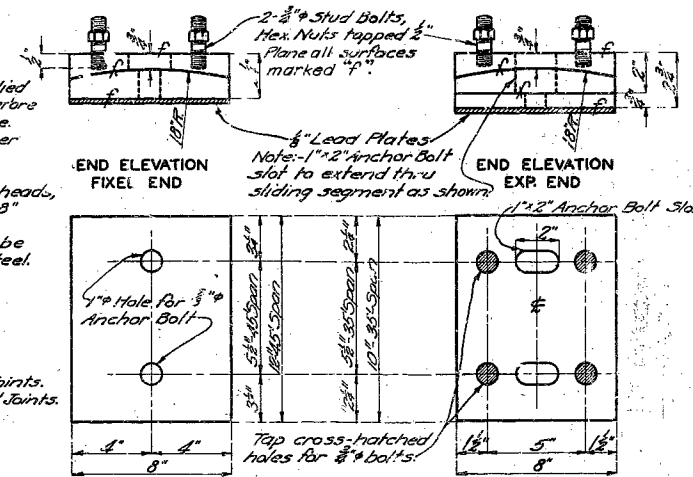
DETAILS OF END CHANNEL SEPARATORS



PLAN OF SLAB SHOWING REINFORCEMENT

Note: A mixture of graphite and oil to be applied to surfaces in contact before placing plates in structure. Bearing plates to be either cast steel or gray iron. See Special Provisions. Anchor bolts to be  $\frac{3}{4}$ " no heads, hex nuts and to extend 8" into concrete. Stud bolts and nuts to be paid for as structural steel.

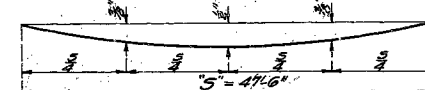
1" Rubber Compound at Exp. Joints.  
1" Rubber Compound at Fixed Joints.



Note: Tops of bents and piers to be finished as nearly as possible to within  $\frac{1}{8}$ " of final elevation of bottom of plates. Plates to be seated to proper elevation by inserting soft lead plates between top of bent and bottom of plate. Concrete seat under lead plates to be dressed to a uniform level bearing with carborundum brick. Cost of lead plates to be included in price bid for other items.

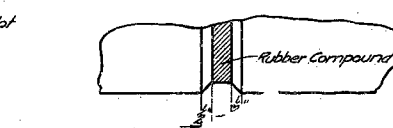
DETAILS OF BEARING PLATES

Note: 4 fixed and 4 expansion plates required for each span.

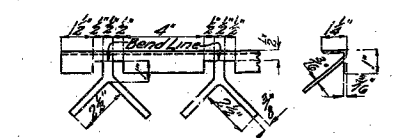


Note: Floor slab to be brought to grade and dead load deflection taken care of by increasing slab thickness. Depth of slab at outside face of curb to be kept uniform and bottom surface of slab warped between curb and outside beam to obtain required thickness of beam. Payment will be allowed for additional concrete required for thickening slab. Additional concrete is included in Estimated Quantities.

DETAIL OF BEVEL FOR CONST. JOINT AT CURB

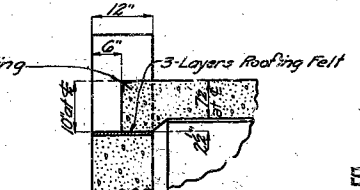


DETAIL OF BEVEL FOR RUBBER COMPOUND JOINTS

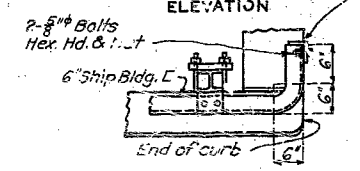
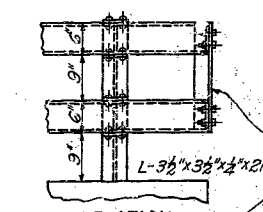


METALLIC EDGE Moulding

Note: Cost of metallic edge moulding will be included in unit bid price for concrete.



DETAIL OF SLAB AT END BENT



DETAILS OF RAIL AT ENDS OF BRIDGE

BRIDGE OVER ELEVEN POINTS RIVER

STATE ROAD FROM SHANNON CO. LINE TO ALTON  
ABOUT 25.5 MILES NORTH OF THAYER  
PROJECT NO. PHW 76, 28-33A STA. 1+00 TO 1+05  
OREGON COUNTY

457

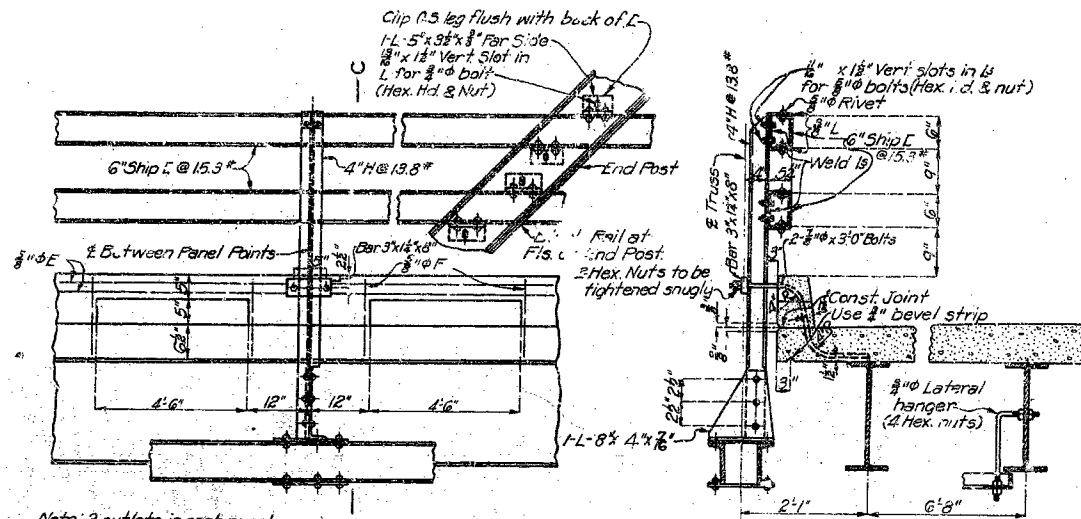
PERMISSIBLE BEAM SUBSTITUTIONS:  
Inside 30" Beth. Brn. @ 115"  
Outside 30" Beth. Brn. @ 105"

DEFLECTION DIAGRAM

# MISSOURI STATE HIGHWAY DEPARTMENT

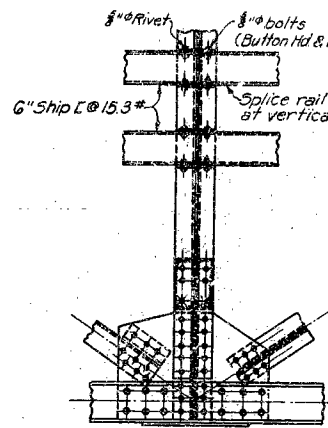
FED. ROAD DIST. NO.	STATE	FWD. A.D. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOT. SHE.
5	MO.	70-72	19		
		30-33A			

Docket # 4890

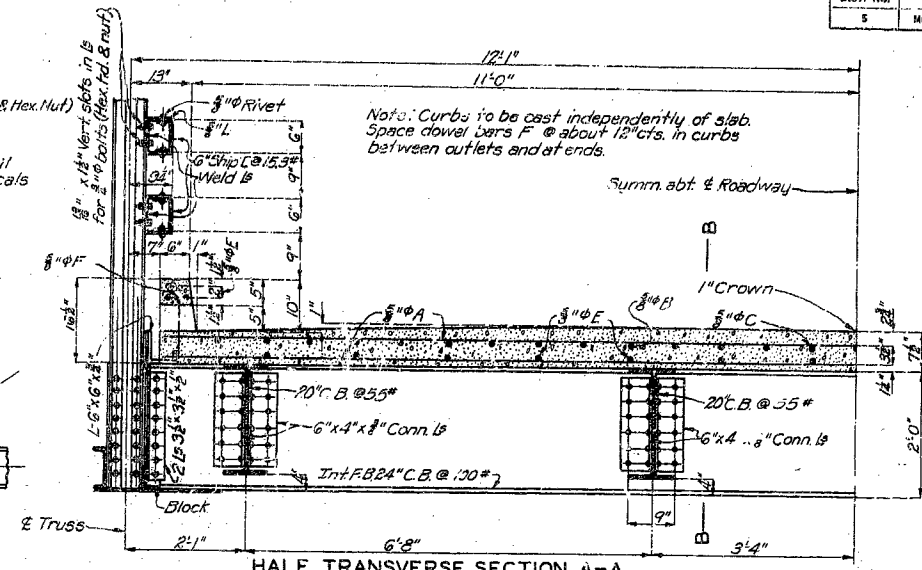


PART ELEVATION OF HANDRAIL & OUTLETS

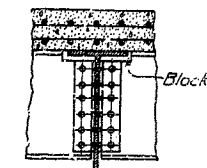
SECTION C-C



TYPICAL JOINT

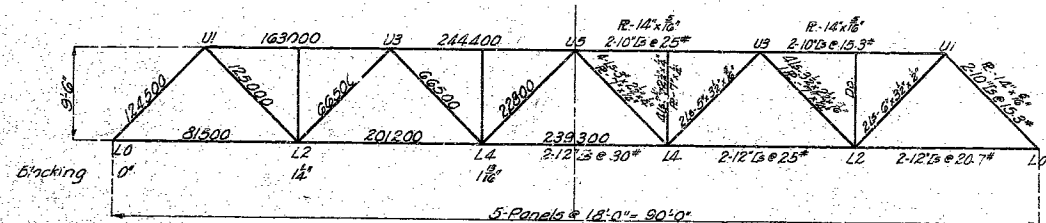


HALF TRANSVERSE SECTION A-A

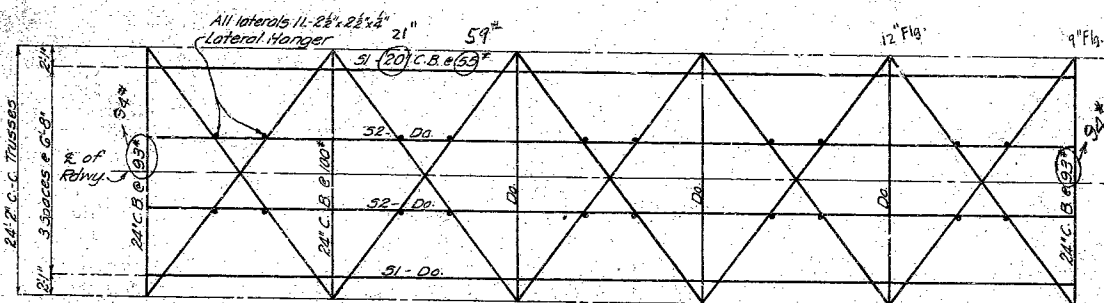


SECTION B-B

Note: Channel rail to be adjusted for horizontal alignment by use of full size metal shims placed between rail support and the rail connection angles. Shims of 1/2" and 1" thickness to be furnished with structural steel. Cost of shims to be included in price bid for other items.



STRESS DIAGRAM

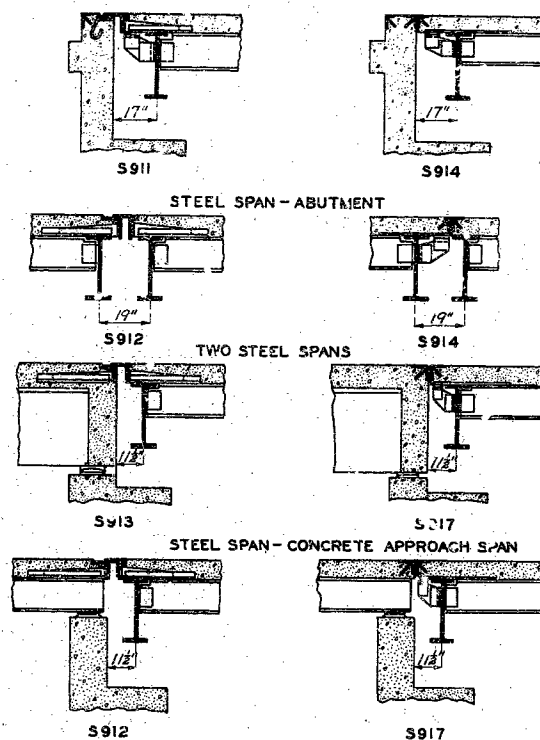


FLOOR SYSTEM

90' TRUSS

Carrigan Bms	Beth Bms	Std. T Bms
31-20'@55"	20'@55"	20'@65.4"
32-20'@55"	20'@55"	21'@75"
24'@93"	24'@93"	24'@105.9"
24'@100"	24'@100"	24'@115"

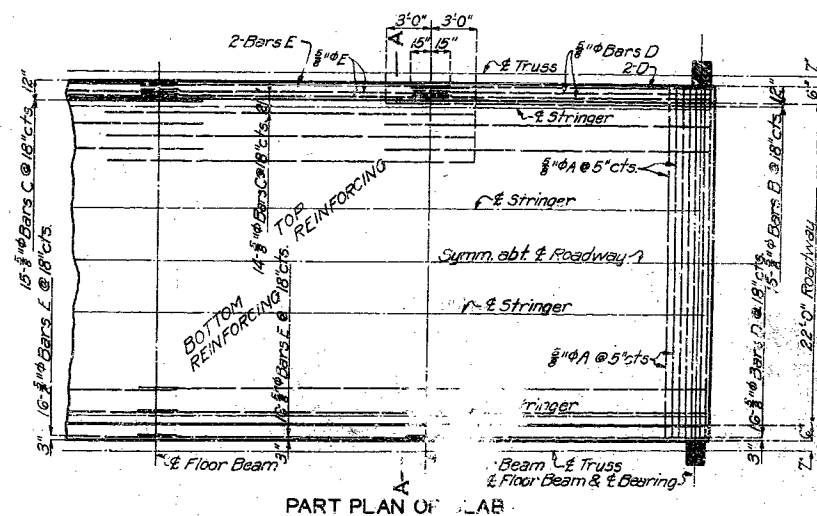
Note: See Special Provisions in regard to permissible substitutions and basis of payment.



EXPANSION ENDS

FIXED ENDS

DETAILS OF SLAB ENDS



PART PLAN OF SLAB

No.	Size	Length	Mark
440	1/2"	22'9"	A
30	1/2"	21'9"	B
43	1/2"	21'0"	C
48	1/2"	20'0"	D
72	1/2"	20'6"	E
114	1/2"	12"	F

Note: Reinforcing for 1 span.

Note: For General Notes see Sheet No. 1. Rivets 3/4" Holes 1/2" unless otherwise noted. For details of shoes see Std. S-907. Details of trusses similar to those shown on Std. S-890.

BRIDGE OVER ELEVEN POINTS RIVER

STATE ROAD SHAW IN CO. LINE TO ALTON  
ABOUT 25.5 MILES NORTH OF THAYER  
PROJECT NOPWA76, SB-53A STA. 401+10

OREGON COUNTY

K-344

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

Sheet No. 8 of 8

Assembled July 1933 By H.D.-G.W.  
Checked July 1933 By FAD  
Drawn Sept. 1932 By L.H.  
Traced Sept. 1932 By H.W.H.  
Checked Sept. 1932 By F.W.H.

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