

MONTANA DEPARTMENT OF TRANSPORTATION

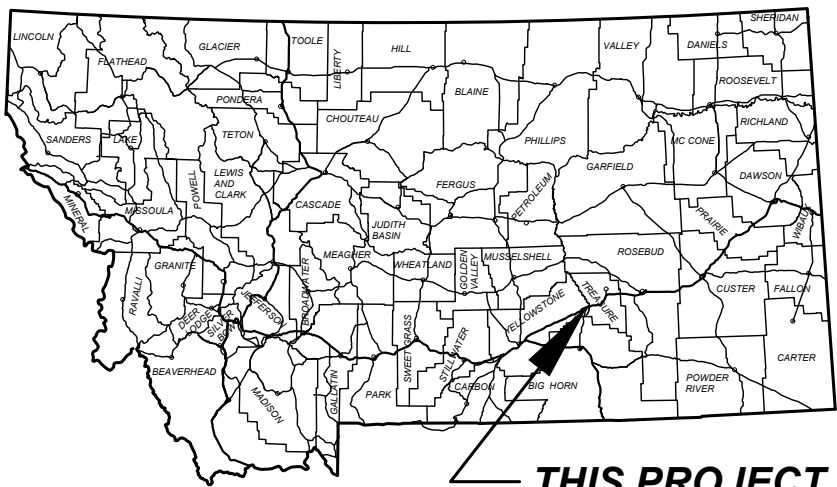
FEDERAL AID PROJECT NHPB 94-1(100)47
MINOR BRIDGE REHABILITATION
I-94 BRIDGE DECKS - CUSTER
YELLOWSTONE COUNTY

LENGTH N/A MILES

SHEET NO.

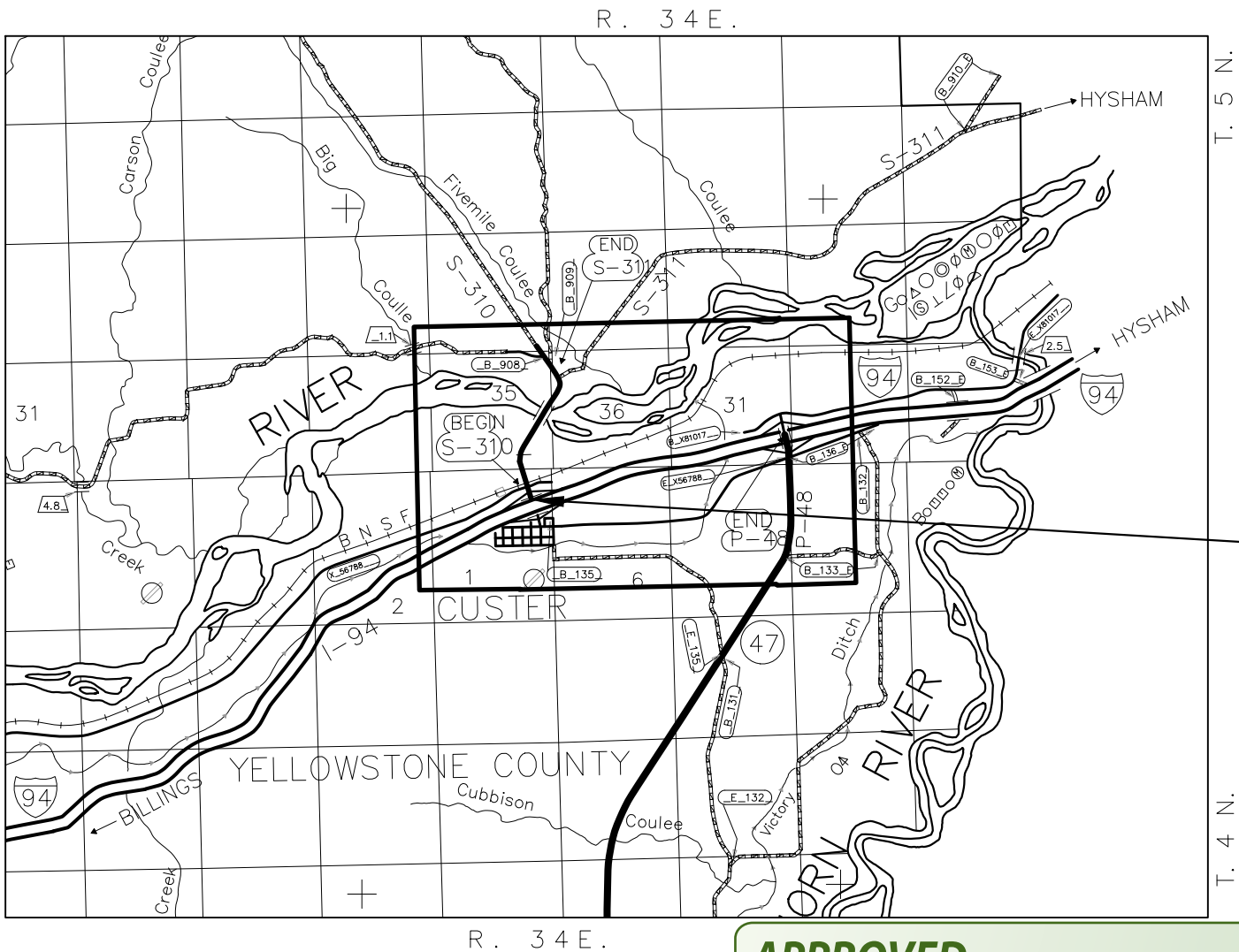
1

TITLE SHEET



PROJECT DESIGN DATA

PRESENT	2025	A.D.T. = 4,910
LETTING	2025	A.D.T. = 4,910
DESIGN	2045	A.D.T. = 5,990
		D.H.V. = 500
		TRUCKS = 31.6%
		V. = 70 MPH
		18 KIP ESAL'S = 842 DAILY
		ANNUAL GROWTH RATE = 1.0%



SURFACING SOURCES -
CONTRACTOR FURNISH

I-94
75' X 42' BR. IN PL.
R.P. 47.22
MDT STR ID 01917
NBI # I00094047+02181
MDT STR ID 01918
NBI # I00094047+02182

APPROVED

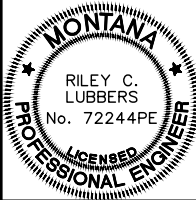
By Riley C. Lubbers at 3:22 pm, Aug 26, 2026

APPROVED

By Kelly M Williams at 8:29 am, Aug 27, 2026

HDR

BY _____
DATE _____



MONTANA
DEPARTMENT OF TRANSPORTATION

RECEIVED :

BY _____ DATE _____
CONSULTANT DESIGN ENGINEER

PROJECT NAME
I-94 BRIDGE DECKS - CUSTER

COUNTY
YELLOWSTONE

PROJECT ID
NHPB 94-1(100)47

UPN
10520000

DESIGNED BY
A. ARTMAN
07/2026

REVIEWED BY
R. LUBBERS
07/2026

CHECKED BY
L. FISCHER
07/2026

10520RDTTLZ01.DWG

MONTANA
Department of Transportation

ROAD PLANS

8/12/2026 2:08 PM



HDR

HDR
700 SW Higgins Avenue, Suite 200
Missoula, MT 59803-1489
PHONE (406) 532-2200

PLANS PREPARED BY

ASSOCIATED PROJECT
AGREEMENT NUMBERS

R/W	
I.C.	
P.E.	NHPB 94-1(99)47

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NOTES

ROAD PLANS

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BRIDGE PLANS

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UTILITIES

CALL THE UTILITIES UNDERGROUND LOCATION CENTER (811) OR OTHER NOTIFICATION SYSTEM FOR THE MARKING AND LOCATION OF ALL LINES AND SERVICE BEFORE EXCAVATING. ALL CLEARANCES OR DEPTHS PROVIDED FOR UTILITIES ARE FROM EXISTING GROUND LINE.

PUBLIC LAND SURVEY MONUMENTS

ALL MONUMENTS TO BE REMOVED AND RELOCATED OR RESET BY STATE FORCES.

AS-BUILTS

I-94 - 1(34)46
IM 94-1(79)47

DO NOT DISTURB

ALL SIGNS NOT CALLED OUT IN PLANS FOR REPLACEMENT ARE TO BE PROTECTED IN PLACE.

BASIS OF PLAN QUANTITIES

(QUANTITIES FOR ESTIMATING PURPOSES ONLY)	
COMP. AGGREGATE WEIGHT	= 3750 LBS. PER CUBIC YARD
COMP. WEIGHT OF PL. MIX BIT. SURF.	= 4167 LBS. PER CUBIC YARD
ASPHALT BINDER - GRADE S - 3/8" AGG.	= 6.2% OF PL. MIX BIT. SURF.
HYDRATED LIME	= 1.4% OF PL. MIX BIT. SURF.
BITUMINOUS MATERIAL	= 8.5 LBS. PER GAL.
EMULSIFIED ASPHALT - TACK (ALL OTHER SURFACES)	= 0.05 GAL. PER SQ. YARD (UNDILUTED)

WETLANDS

WETLANDS MAY EXIST ADJACENT TO THE ROADWAY AND BEYOND THE PROJECT LIMITS. A WETLAND DELINEATION HAS NOT BEEN COMPLETED FOR THIS PROJECT. IMPACTS TO WETLAND AREAS ARE NOT ANTICIPATED IN ASSOCIATION WITH THE PROPOSED WORK. NO PERMITS HAVE BEEN OBTAINED, ANY ACTION IMPACTING WETLAND AREAS WITHOUT THE APPROPRIATE PERMITTING IS THE RESPONSIBILITY OF THE CONTRACTOR.

SALVAGE OF PAVEMENT MILLINGS

MILLED PAVEMENT IS THE CONTRACTOR'S PROPERTY AND MUST BE REMOVED FROM THE PROJECT UNLESS USED FOR TRAFFIC GRAVEL AND/OR SHOULDER GRAVEL. WHEN REQUIRED BY THE CONTRACT SALVAGE, HAUL, AND STOCKPILE THE MILLED PAVEMENT TO THE SPECIFIED SITE.

TABLE OF CONTENTS & NOTES

PROJECT NAME
I-94 BRIDGE DECKS - CUSTER

COUNTY

YELLOWSTONE

PROJECT ID

NHPB 94-1(100)47

UPN

10520000



ROAD PLANS

SHEET NO.	3
SUMMARY FRAMES	

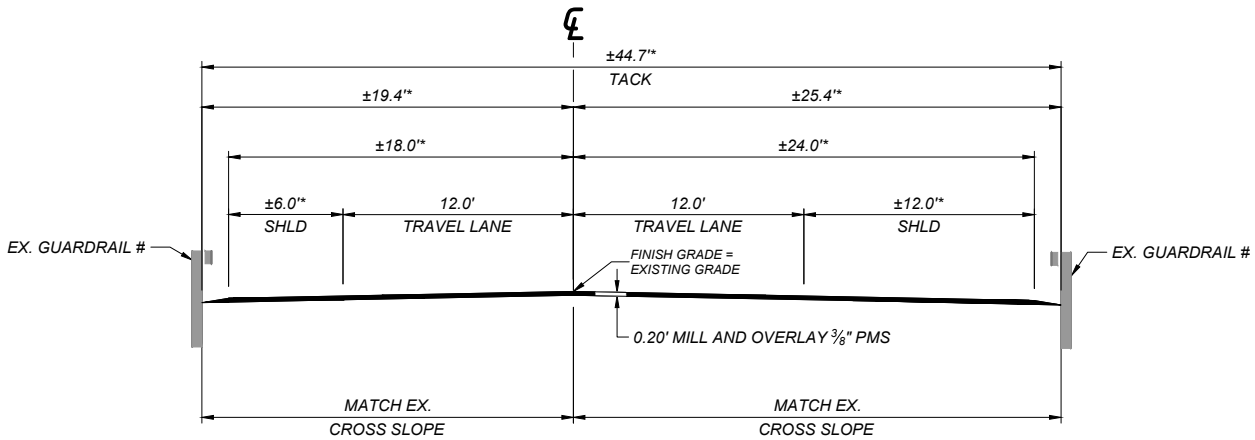
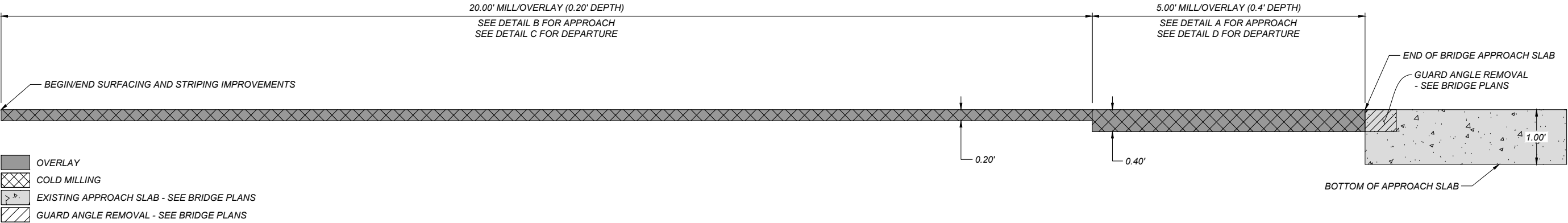
COLD MILLING			
RP	sq. yards		REMARKS
	COLD MILLING #		
FROM	0.2'	0.4'	
47.22	99.3	26.3	I-94 STR 01917 WEST END- SEE BRIDGE END DETAILS
47.22	99.3	26.3	I-94 STR 01917 EAST END - SEE BRIDGE END DETAILS
47.22	99.3	26.3	I-94 STR 01918 WEST END- SEE BRIDGE END DETAILS
47.22	99.3	26.3	I-94 STR 01918 EAST END - SEE BRIDGE END DETAILS
SUBTOTAL	397.2	105.2	
TOTAL	502.4		

DEPTH VARIES. SEE DETAILS FOR ADDITIONAL INFORMATION.

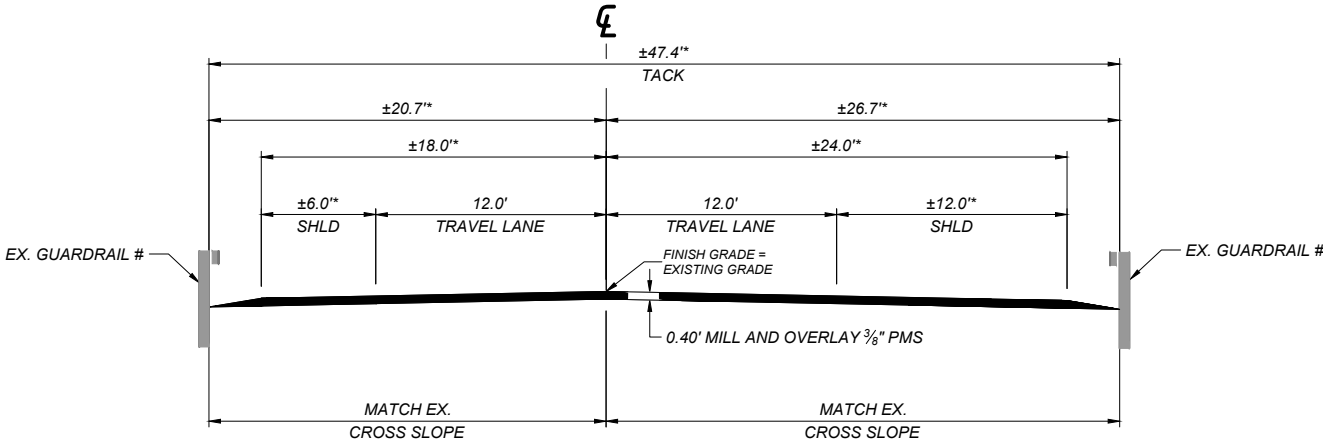
GUARDRAIL #					
RP	linear feet		each		REMARKS
	RESET GUARDRAIL		RESET BRIDGE APPROACH SECTION TYPE 1		
	LEFT	RIGHT	LEFT	RIGHT	
47.22	12.5	12.5	1	1	STR 01917 EB WEST END
47.22		37.5			STR 01917 EB EAST END - OUTSIDE EDGE
47.22	37.5				STR 01918 WB WEST END - OUTSIDE EDGE
47.22	12.5	12.5	1	1	STR 01918 WB EAST END
SUBTOTAL	62.5	62.5	2	2	
TOTAL	125.0		4		

PROJECT NAME		I-94 BRIDGE DECKS - CUSTER	
DESIGNED BY	07/2026	COUNTY	
A. ARTMAN			
REVIEWED BY			
R. LUBBERS	07/2026	PROJECT ID	
CHECKED BY			
L. FISCHER	07/2026		
UPN		NHPB 94-1(100)47	
10520RDSUMZ01.DWG		10520000	

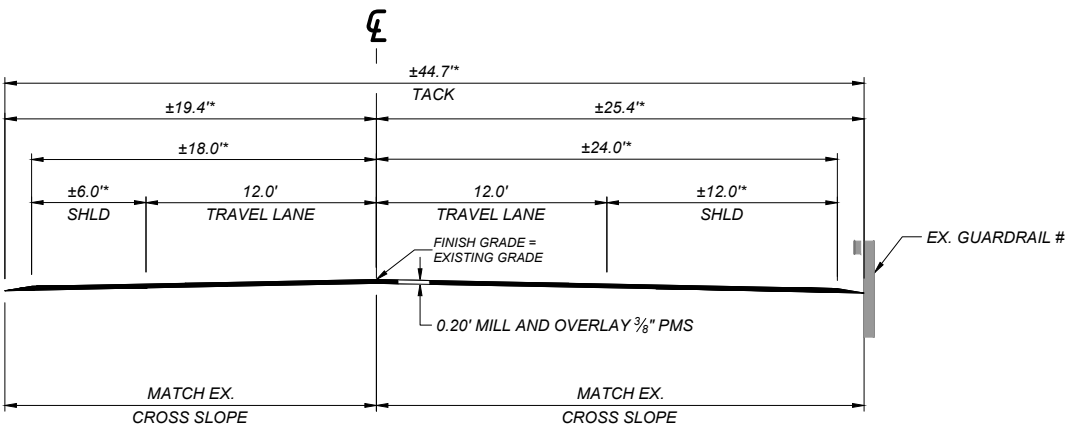
 MONTANA Department of Transportation	ROAD PLANS	8/12/2026 2:08 PM
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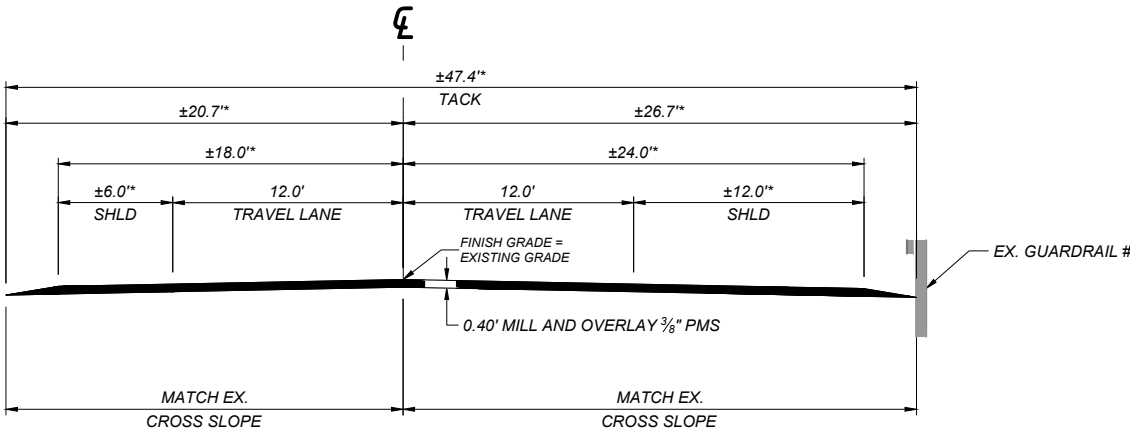
DETAIL B
EB & WB APPROACH



DETAIL A
EB & WB APPROACH



DETAIL C
EB & WB DEPARTURE



DETAIL D
EB & WB DEPARTURE

NOTE:

- SEE BRIDGE PLANS FOR APPROACH SLAB GUARD ANGLE REMOVAL DETAILS.
- WESTBOUND BRIDGE ENDS SHOWN. MIRROR FOR EASTBOUND BRIDGE ENDS.

* MATCH EXISTING EDGE.

RESET GUARDRAIL, WHERE NEEDED, TO FACILITATE FULL WIDTH MILLING AND PAVING. CONFIRM LIMITS OF GUARDRAIL RESET WITH PROJECT MANAGER PRIOR TO PERFORMING WORK.

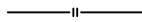
BRIDGE END DETAIL
I-94
STR 01917 & 01918



- 

MILL AND OVERLAY
SEE BRIDGE END DETAIL
- 

TEMPORARY SIGN FOR RAMP DETOUR TRAFFIC CONTROL DURING STRUCTURE 01917 & 01918 CLOSURES
- 

EXISTING SIGN TO TEMPORARILY COVER FOR RAMP DETOUR TRAFFIC CONTROL DURING STRUCTURE 01917 & 01918 CLOSURES
- 

EXISTING GUARDRAIL
- 

TAPERED CURB. REFER TO MDT DETAILED DRAWING DWG. NO. 606-27. COST OF REMOVE AND RECONSTRUCTION OF TAPERED CURB INCIDENTAL TO THE UNIT PRICE BID FOR RESET BRIDGE APPROACH SECTION.

- NOTES:
1. UTILIZE EB AND WB ON/OFF RAMPS TO DETOUR TRAFFIC DURING CLOSURE OF STRUCTURES. INSTALL TRAFFIC CONTROL TO MEET REQUIREMENTS OF MDT DETAIL DRAWINGS AND STANDARD SPECIFICATIONS. SEE SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION AND DETOUR REQUIREMENTS. INCLUDE COST FOR TRAFFIC CONTROL IN THE UNIT PRICE BID FOR TRAFFIC CONTROL DEVICES CB.

2. PARKING IS NOT ALLOWED ON SHOULDER OF RAMPS WHILE DETOUR IS ACTIVE.

3. TEMPORARILY COVER ALL SIGNS CONFLICTING WITH TRAFFIC MOVEMENTS DURING RAMP DETOUR. INCLUDE ALL COSTS IN THE UNIT PRICE BID FOR TRAFFIC CONTROL - RAMP CROSSOVER.

4. INSTALL TWO (2) TEMPORARY VARIABLE MESSAGE SIGNS (VMS) ALONG THE CUSTER FRONTAGE ROAD, NORTH AND SOUTH OF THE I-94 OVERPASS, A MINIMUM OF TWO WEEKS PRIOR TO BRIDGE CLOSURE(S). THE VMS WILL NOTIFY THE PUBLIC OF UPCOMING BRIDGE CLOSURES AND CHANGING TRAFFIC CONDITIONS. FURNISH AND OPERATE VMS UNITS IN ACCORDANCE WITH THE REQUIREMENTS OF STANDARD SPECIFICATION 618. INCLUDE ALL COSTS ASSOCIATED WITH THE VMS IN THE TRAFFIC CONTROL - RAMP CROSSOVER PAY ITEM.

5. WHILE RAMP DETOUR IS ACTIVE, DO NOT ALLOW TRAFFIC QUEUE ON CROSSROAD TO CONFLICT WITH NEARBY INTERSECTIONS AND RAILROAD CROSSINGS. INSTALL TRAFFIC CONTROL, AS NEEDED AND WITH APPROVAL FROM EPM, TO MITIGATE CONFLICTS.

6. CONTRACTOR TO FIELD VERIFY LOCATIONS OF BRIDGE ENDS AND EXISTING CONDITIONS. ALL PAVEMENT MEASUREMENTS BEGIN AT BRIDGE END.

7. RESET GUARDRAIL, WHERE NEEDED, TO FACILITATE FULL WIDTH OF MILLING AND PAVING. CONFIRM LIMITS OF GUARDRAIL RESET WITH PROJECT MANAGER PRIOR TO PERFORMING WORK

SITE OVERVIEW
I-94
STR 01917 & STR 01918

SHEET NO. 5		SITE OVERVIEW			
PROJECT NAME I-94 BRIDGE DECKS - CUSTER		COUNTY YELLOWSTONE		PROJECT ID NHPB 94-1(100)47	
DESIGNED BY A. ARTMAN		REVIEWED BY R. LUBBERS		CHECKED BY L. FISCHER	
8/12/2026		8/12/2026		8/12/2026	
10520RDP1N201.DWG		10520RDP1N201.DWG		10520RDP1N201.DWG	
MONTANA Department of Transportation		ROAD PLANS		8/12/2026 2:08 PM	

BRIDGE IDENTIFICATION	
MDT STR ID	NBI NUMBER
01917	I00094047+02181
01918	I00094047+02182

APPROVED

SCALES SHOWN ON BRIDGE PLANS SHEETS
ARE FOR HALF SIZE (11X17) PRINTS
FULL SIZE PRINTS ARE APPROXIMATELY
TWICE ORIGINAL SCALE

[illegible]

BRIDGE WORK SUMMARY							
MDT STRUCTURE ID	BRIDGE DECK MILLING	CLASS A BRIDGE DECK REPAIR	CLASS B BRIDGE DECK REPAIR	CONCRETE - CLASS OVERLAY	TRANSVERSE DECK GROOVING	BRIDGE DECK CRACK SEAL	REMOVE GUARD ANGLE
01917	✓	✓	✓	✓	✓	✓	✓
01918	✓	✓	✓	✓	✓	✓	✓

NOTE: See Roadway Plans for Approach Roadway and Approach Curb details.

NOTE: Bridge Deck Milling, Concrete - Class Overlay, Transverse Deck Grooving, and Bridge Deck Crack Seal included on both bridge deck and approach slab surfaces.

ESTIMATED BRIDGE PLAN QUANTITIES									
MDT STRUCTURE ID	FEATURE INTERSECTED	GENERAL LAYOUT DRAWING NO.	REMOVE GUARD ANGLE (LN FT)	TRANSVERSE DECK GROOVING (YD ²)	*BRIDGE DECK CRACK SEAL (YD ²)	BRIDGE DECK MILLING (YD ²)	**CLASS A BRIDGE DECK REPAIR (YD ²)	**CLASS B BRIDGE DECK REPAIR (YD ²)	***CONCRETE - CLASS OVERLAY (YD ²)
01917	INT Custer - S 310	10229	83.3	541.4	577.9	561.8			561.8
01918	INT Custer - S 310	10229	83.3	541.4	577.9	561.8			561.8
PROJECT TOTAL			166.6	1082.8	1155.8	1123.6	5.0	5.0	1123.6

*NOTE: Bridge Deck Crack Seal quantities are measured over the total bridge length between face of barrier/curb, including approach slabs.

**NOTE: Specific Class A Deck Repair & Class B Deck Repair areas have not been measured but quantities are provided for contingency after hyrdomilling. The Project Manager will identify and authorize any deck repair, if needed. Perform Class A Deck Repairs on the approach slab as identified and authorized by the Project Manager.

***NOTE: Estimated overlay concrete volume for Structures 01917 and 01918 is 23.4 YD³ and 23.4 YD³, respectively. These quantities will not be measured for payment. These quantities will be used to determine overrun quantities for payment if applicable.

SHEET NO.
B2

BRIDGE WORK SUMMARY &
ESTIMATED BRIDGE PLAN
QUANTITIES

SCALE: No Scale

PROJECT NAME
I-94 BRIDGE DECKS - CUSTER

MDT STRUCTURE ID
01917 & 01918

FEDERAL AID PROJECT
NHPB 94-1(100)47

COUNTY
YELLOWSTONE

REVISED
REVISED
REVISED
CHECKED
DRAWN
DESIGNED

03-13-25
02-20-25
02-19-25

P.C.I.
G.H.S.
J.B.F.

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MONTANA
Department of Transportation



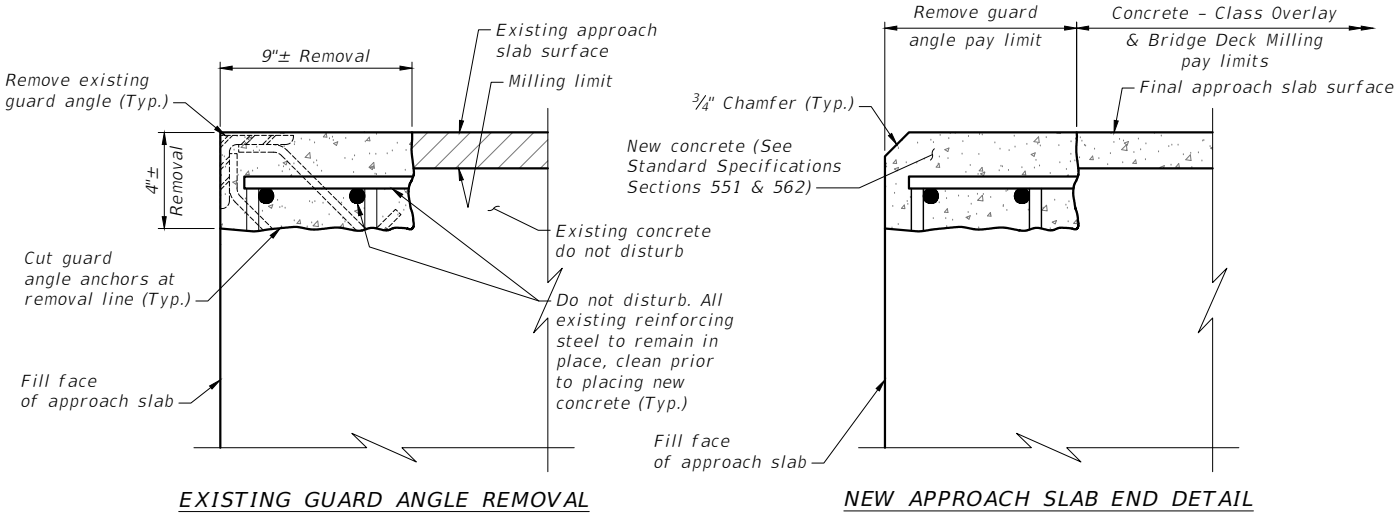
BRIDGE BUREAU

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UPN NUMBER
10520000

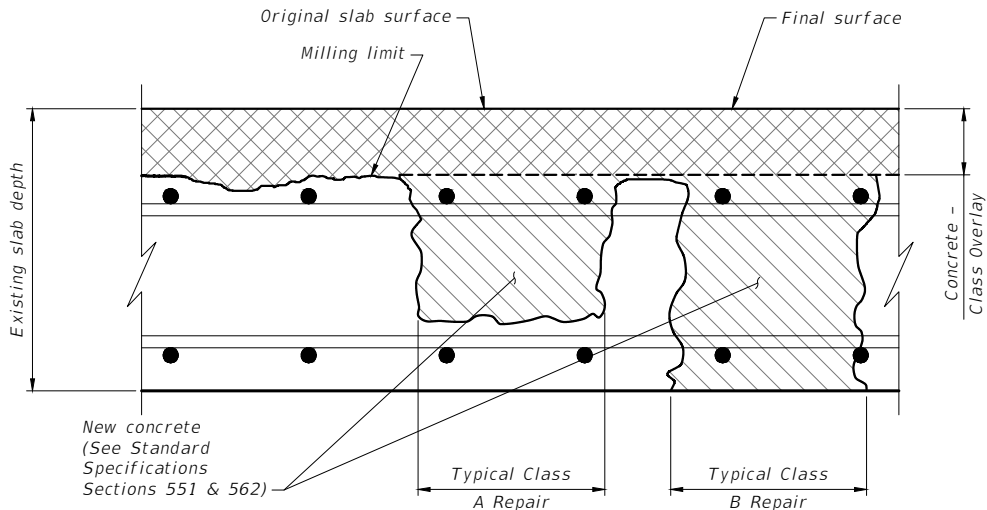
DRAWING NO.
20961

TABLE OF REMOVAL AND OVERLAY DEPTHS			
MDT STRUCTURE ID	REMOVAL DEPTH	MODIFIED CONCRETE OVERLAY THICKNESS	TOTAL GRADE RAISE
	(IN)	(IN)	(IN)
01917	1½	1½	0
01918	1½	1½	0



- NOTE:** If two transverse reinforcing bars are not present within 3" of the top of approach slab, place new epoxy coated #4 transverse bars as necessary so there are two bars within the repair area. Ensure new bars have a minimum 1½" clear cover.
- NOTE:** Include all costs associated with removing the existing guard angle and placing new reinforcing steel and concrete that is required to complete the work in the unit price bid for Remove Guard Angle.
- NOTE:** See Roadway Plans for bridge end detail adjacent to approach slab guard angle removal.
- NOTE:** Reinforcing steel cover to top mat of approach slabs is unknown. Verify depth of the top map prior to starting milling operation and inform the Project Manager if the cover is less than the desired removal depth shown on this sheet.

REMOVE GUARD ANGLE DETAIL
No Scale



- NOTE:** Existing reinforcing steel may be located above the milling limit. Ensure reinforcing is not damaged by milling. Repair all damage to the satisfaction of the Project Manager at no cost to the State.
- NOTE:** For removal depths, see Table of Removal and Overlay Depths on this sheet.
- NOTE:** Bridge deck shown, approach slab similar other than no Class B Repair on approach slab.

BRIDGE DECK REPAIR AND THICK OVERLAY DEFINITION
No Scale

GENERAL NOTES

GENERAL: Plans were prepared from original drawings and as-built drawings. No additional survey information was procured for this project. Existing structure dimensions may vary from those shown on the drawings. Verify all dimensions necessary to complete the work.

SPECIFICATIONS: The current version of the Standard and Supplemental Specifications for Road and Bridge Construction, adopted by the Montana Department of Transportation, applies. The design was prepared in accordance with AASHTO LRFD Bridge Design Specifications, 9th edition - 2020, with standard HL-93 loading.

DIMENSIONS: Verify all necessary dimensions of the existing structures in the field before ordering materials. Obtain approval of shop plans from the State of Montana, Department of Transportation before beginning fabrication. If the dimensions and details of the existing structure are not as shown on the plans, vary construction as necessary to best suit existing conditions and the nature of the intended work.

REINFORCING STEEL: Use new deformed type reinforcing steel meeting the requirements of AASHTO M 31 Grade 60.

Avoid damaging existing reinforcing steel. Replace any reinforcing bars damaged during construction that have lost more than 25% of the cross-sectional area at no cost to the State.

Include cleaning exposed existing reinforcing steel in other items of work.

REINFORCING STEEL COVER: Unless specified otherwise on the drawings, provide 2" minimum concrete cover measured from the face of concrete to the face of any reinforcing steel, except as noted below:

Bottom of Slab	1"
Top of Slab	2½"
Concrete Barrier & Curbs	1½"

Concrete cover to any tie bar is ½" less than what is listed above.

TRAFFIC CONTROL PLAN AND SEQUENCE OF OPERATION: See Special Provisions.

CLASS A AND B BRIDGE DECK REPAIR: Quantities shown may vary from actual field quantities. Refer to Section 562 of the Standard Specifications.

OVERLAY TREATMENT: Use Concrete Class Overlay on bridge decks and approach slabs requiring Modified Concrete Overlay.

CONTROL SURVEY: Establish a control elevation at each bridge before milling. New bridge deck and approach slab profile to follow surveyed existing profile and include noted grade raise shown in Table of Removal and Overlay Depths on this page.

CONSTRUCTION JOINT: Roughen all construction joints for Class A, Class B and approach slab end repairs to ¼" amplitude between hardened concrete and new concrete.

BRIDGE DECK MILLING: Use Hydrodemolition to reach final depth shown on this page. Do not damage existing guard angles at Bent No. 1 & Bent No. 2. Hold back milling 6" from the face of the edge of the guard angle.

REMOVE GUARD ANGLE: Remove existing guard angles at end of approach slabs. Protect in place back to back angles at Bent No. 1 & Bent No. 2.

SHEET NO. B3	
GENERAL NOTES, REMOVAL DETAILS, OVERLAY DEPTHS & REPAIR DETAILS	
PROJECT NAME I-94 BRIDGE DECKS - CUSTER	MDT STRUCTURE ID 01917 & 01918
FEDERAL AID PROJECT NHPB 94-1(100)47	COUNTY YELLOWSTONE
REVISED	REVISED
REVISED	REVISED
REVISED	REVISED
CHECKED	P.C.I.
DRAWN	G.H.S.
DESIGNED	J.B.F.
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MONTANA Department of Transportation	
BRIDGE BUREAU	
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UPN NUMBER 10520000	
DRAWING NO. 20962	