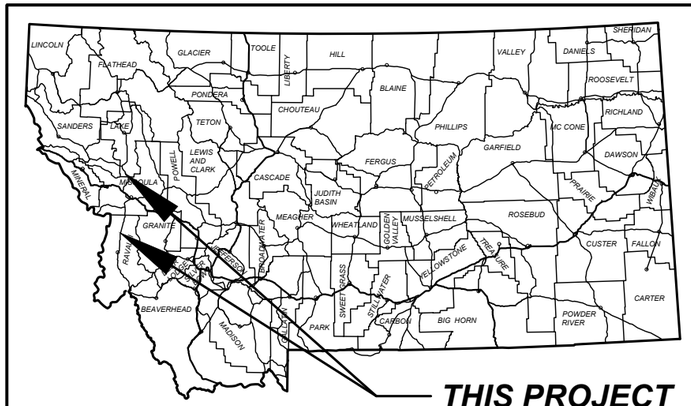
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MONTANA DEPARTMENT OF TRANSPORTATION

FEDERAL AID PROJECT NH-HSIP 7-1(180)60

RUT FILL, SEAL & COVER, SAFETY IMPROVEMENT

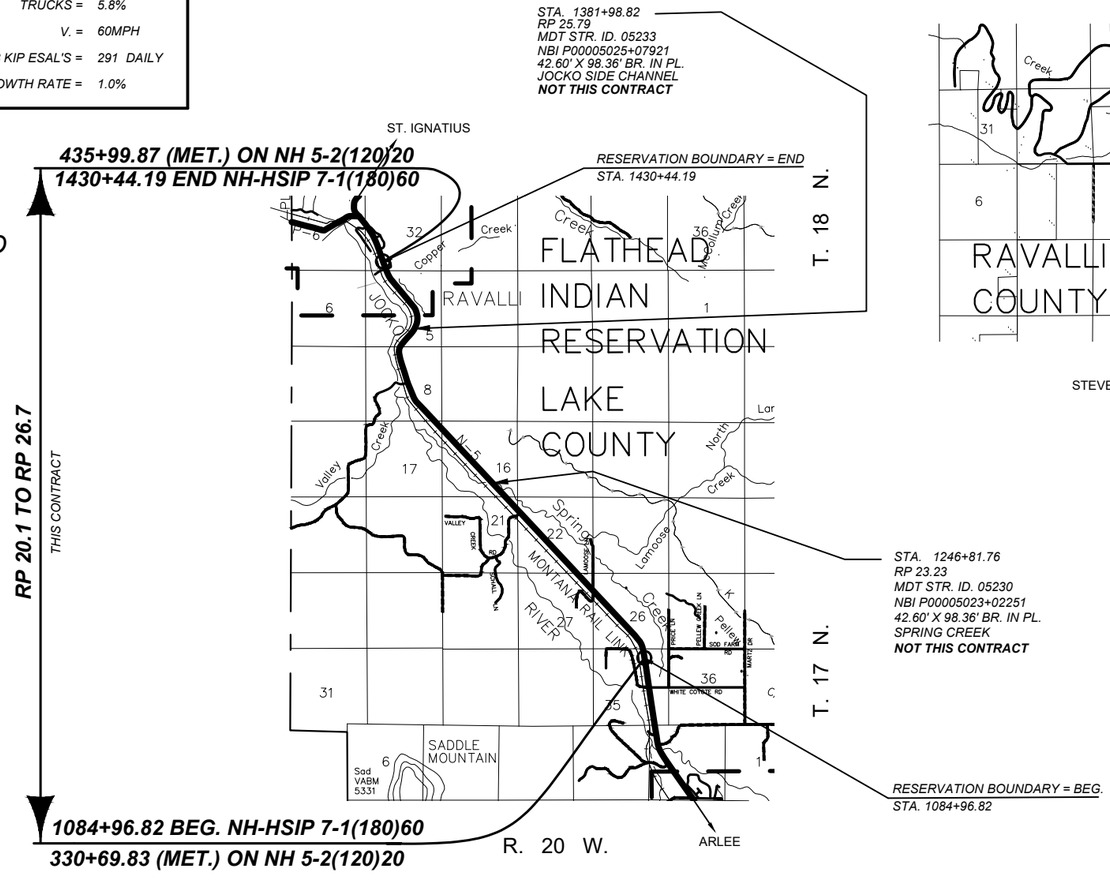
US 93 - N VICTOR & S RAVALLI

LAKE & RAVALLI COUNTIES

LENGTH 7.0 MILES

PROJECT DESIGN DATA RP 20.1 TO RP 26.7 N-5			
PRESENT	2024	A.D.T. =	8,500
LETTING	2024	A.D.T. =	8,500
DESIGN	2044	A.D.T. =	10,370
		D.H.V. =	1,330
		TRUCKS =	5.8%
		V. =	60MPH
		18 KIP ESAL'S =	291 DAILY
		ANNUAL GROWTH RATE =	1.0%

SURFACING SOURCES - CONTRACTOR FURNISHED



SHEET NO. 1

TITLE SHEET

PROJECT NAME: US 93 - N VICTOR & S RAVALLI
COUNTY: LAKE & RAVALLI COUNTIES
PROJECT ID: NH-HSIP 7-1(180)60
UPN: 10374000

DESIGNED BY	F. COBARRUBIAS 07/16/2024
REVIEWED BY	J. DOLD 10/1/2024
CHECKED BY	J. CERECK 1/29/2025
10374000RDTTL001.DWG	

MONTANA Department of Transportation

ROAD PLANS

7/18/2024 8:23 AM

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NOTES

BASIS OF PLAN QUANTITIES

(QUANTITIES FOR ESTIMATING PURPOSES ONLY)

BITUMINOUS MATERIAL	= 8.5 LBS. PER GAL.
EMULSIFIED ASPHALT - FOG SEAL (S & C)	= 0.075 GAL. PER SQ.YARD (UNDILUTED)
SEAL	= 0.42 GAL. PER SQ.YARD
COVER	= 25 LBS. PER SQ.YARD
MICROSURFACING ASPHALT EMULSION (RUT FILLING & SCRATCH COURSE)	= 11.7% OF MICRO. AGG.
EMULSIFIED ASPHALT TACK (ALL OTHER SURFACES) (UNDILUTED)	= 0.05 GAL. PER SQ. YARD (UNDILUTED)
ASPHALT CEMENT - GRADE S - 1/2" AGG.	= 5.8% OF PL.MIX BIT.SURF
MICROSURFACING AGGREGATE WEIGHT (SCRATCH COURSE)	= 26.6 LBS PER SQ. YARD
MICROSURFACING AGGREGATE WEIGHT (SCRATCH COURSE RUT FILL)	= 6.6 LBS PER SQ. YARD
MICROSURFACING (SCRATCH COURSE)	= 29.7 LBS PER SQ. YARD (LIQUID UNBROKEN EMULSION)
COMP. WEIGHT OF PL. MIX BIT. SURF.	= 3855 LBS. PER CUBIC YARD
EMULSIFIED ASPHALT - FOG SEAL (RUMBLE STRIPS)	= 0.10 GAL. PER SQ. YARD (UNDILUTED)
CRACK SEAL	= 0.7 LBS. PER LNFT

AS-BUILTS

FOR ORIGINAL HORIZONTAL ALIGNMENT AND STATIONING, REFER TO THE "AS-BUILT" PROJECTS.

S RAVALLI:
NH 5-2(120)20

N VICTOR (S OF FLORENCE):
NH 7-1(93)68 F

AUTOMATIC TRAFFIC RECORDER (ATR)

AN ATR SITE (A-008) EXISTS AT RP 26.3 AND WILL BE REMOVED BY M.D.T.

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.

UTILITIES

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

SHEET NO.
2

TABLE OF CONTENTS AND NOTES

MONTANA
Department of Transportation

ROAD PLANS

DESIGNED BY	F. COBARRUBIAS 8/1/2024
REVIEWED BY	J. DOLD 10/1/2024
CHECKED BY	J. CERECK 1/29/2025
PROJECT NAME	US 93 - N VICTOR & S RAVALLI
COUNTY	LAKE & RAVALLI COUNTIES
PROJECT ID	NH-HSIP 7-1(180)60
UPN	10374000

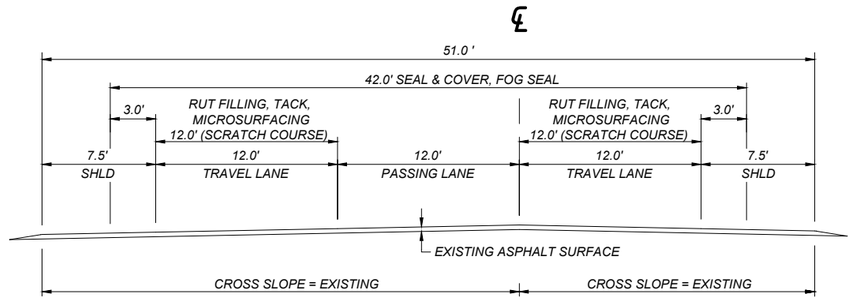
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TYPICAL SECTION NO. 1

US 93 (S OF RAVALLI)

1084+96.82	TO	1113+51.71	
1113+51.71	TO	1120+60.37	TRANS. TYP. NO. 1 TO TYP. NO. 2
1259+90.81	TO	1319+30.77	
1319+30.77	TO	1326+39.44	TRANS. TYP. NO. 1 TO TYP. NO. 4



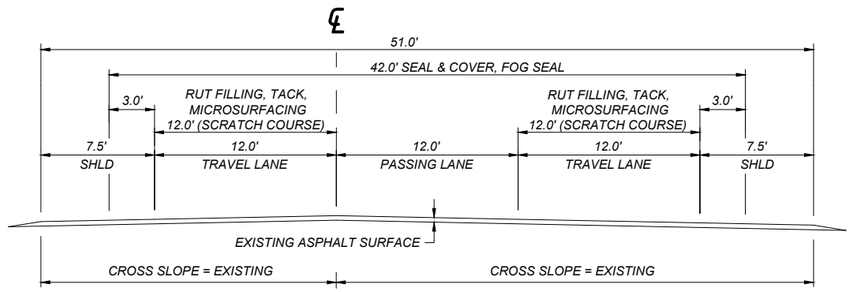
QUANTITIES									
UNIT	AGGREGATE			UNIT	BITUMINOUS MATERIAL				
	COVER	MICROSURFACING (RUT FILLING) *	MICROSURFACING (SCRATCH COURSE) *		MICROSURFACING (RUT FILL EMULSION)*	MICROSURFACING (SCRATCH COURSE EMULSION) *	EMULSIFIED ASPHALT SEAL	EMULSIFIED ASPHALT TACK (SCRATCH COURSE)*	EMULSIFIED ASPHALT FOG SEAL
AREA square feet				square yards PER STATION	267	267	467	267	467
square yards PER STATION	467	267	267	tons PER STATION	0.11	0.42	0.83		
tons PER STATION		0.9	3.6	gals. PER STATION				13	35
TOTAL tons PER STATION		4.5		TOTAL tons PER STATION	0.53				

* PLACE RUT FILLING COURSE PRIOR TO APPLICATION OF THE SCRATCH COURSE. INCLUDE RUT FILLING AGGREGATE AND EMULSION IN THE QUANTITIES FOR PAYMENT OF THE SCRATCH COURSE.
THE SCRATCH COURSE IS INTENDED ONLY AS A LEVELING COURSE. ADJUST SCRATCH COURSE QUANTITIES AS DIRECTED BY THE PROJECT MANGER.
APPLY TACK COAT ACROSS THE TRAVEL LANES AFTER THE RUT FILLING APPLICATION, FOLLOWED BY THE SCRATCH COURSE APPLICATION.

TYPICAL SECTION NO. 2

US 93 (S OF RAVALLI)

1120+60.37	TO	1131+61.42	
1131+61.42	TO	1135+15.75	TRANS. TYP. NO. 2 TO TYP. NO. 3
1155+13.12	TO	1207+40.16	
1207+40.16	TO	1210+94.49	TRANS. TYP. NO. 2 TO TYP. NO. 3
1223+21.52	TO	1238+51.71	
1238+51.71	TO	1245+60.37	TRANS. TYP. NO. 2 TO TYP. NO. 4



QUANTITIES									
UNIT	AGGREGATE			UNIT	BITUMINOUS MATERIAL				
	COVER	MICROSURFACING (RUT FILLING) *	MICROSURFACING (SCRATCH COURSE) *		MICROSURFACING (RUT FILL EMULSION)*	MICROSURFACING (SCRATCH COURSE EMULSION) *	EMULSIFIED ASPHALT SEAL	EMULSIFIED ASPHALT TACK (SCRATCH COURSE)*	EMULSIFIED ASPHALT FOG SEAL
AREA square feet				square yards PER STATION	267	267	467	267	467
square yards PER STATION	467	267	267	tons PER STATION	0.11	0.42	0.83		
tons PER STATION		0.9	3.6	gals. PER STATION				13	35
TOTAL tons PER STATION		4.5		TOTAL tons PER STATION	0.53				

* PLACE RUT FILLING COURSE PRIOR TO APPLICATION OF THE SCRATCH COURSE. INCLUDE RUT FILLING AGGREGATE AND EMULSION IN THE QUANTITIES FOR PAYMENT OF THE SCRATCH COURSE.
THE SCRATCH COURSE IS INTENDED ONLY AS A LEVELING COURSE. ADJUST SCRATCH COURSE QUANTITIES AS DIRECTED BY THE PROJECT MANGER.
APPLY TACK COAT ACROSS THE TRAVEL LANES AFTER THE RUT FILLING APPLICATION, FOLLOWED BY THE SCRATCH COURSE APPLICATION.

SHEET NO. 3

TYPICAL SECTIONS

PROJECT NAME: US 93 - N VICTOR & S RAVALLI
COUNTY: LAKE & RAVALLI COUNTIES
PROJECT ID: NH-HSIP 7-1(180)60
UPN: 10374000

DESIGNED BY: F. COBARRUBIAS 8/1/2024
REVIEWED BY: J. DOLD 10/1/2024
CHECKED BY: J. CERECK 1/29/2025
10374000RDTYP002.DWG

MONTANA Department of Transportation

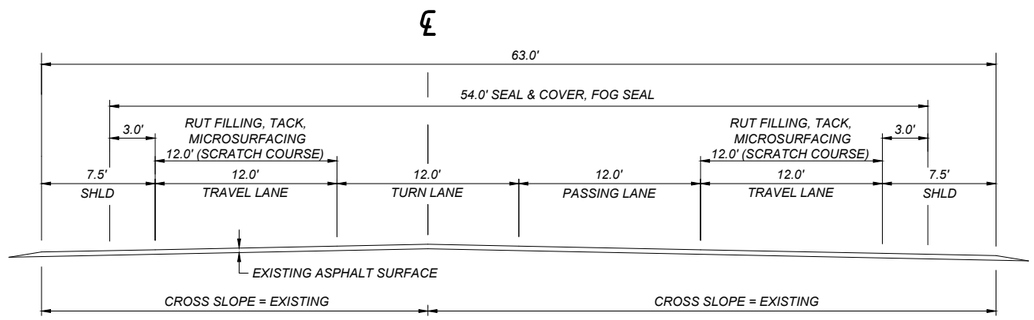
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TYPICAL SECTION NO. 3

US 93 (S OF RAVALLI)

1135+15.75	TO	1151+58.79	
1151+58.79	TO	1155+13.12	TRANS. TYP. NO. 3 TO TYP. NO. 2
1210+94.49	TO	1219+67.19	
1219+67.19	TO	1223+21.52	TRANS. TYP. NO. 3 TO TYP. NO. 2



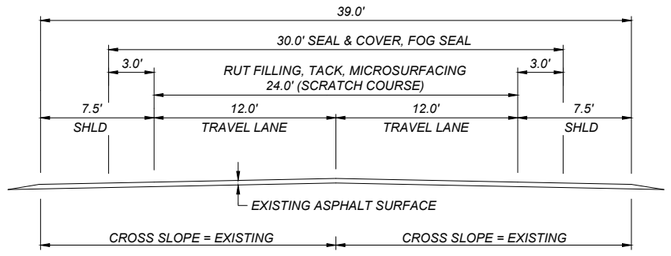
QUANTITIES									
UNIT	AGGREGATE			UNIT	BITUMINOUS MATERIAL				
	COVER	MICROSURFACING (RUT FILLING) *	MICROSURFACING (SCRATCH COURSE) *		MICROSURFACING (RUT FILL EMULSION)*	MICROSURFACING (SCRATCH COURSE EMULSION) *	EMULSIFIED ASPHALT SEAL	EMULSIFIED ASPHALT TACK (SCRATCH COURSE)*	EMULSIFIED ASPHALT FOG SEAL
AREA square feet				square yards PER STATION	267	267	600	267	600
square yards PER STATION	600	267	267	tons PER STATION	0.11	0.42	1.07		
tons PER STATION		0.9	3.6	gals. PER STATION				13	45
TOTAL tons PER STATION		4.5		TOTAL tons PER STATION	0.53				

* PLACE RUT FILLING COURSE PRIOR TO APPLICATION OF THE SCRATCH COURSE. INCLUDE RUT FILLING AGGREGATE AND EMULSION IN THE QUANTITIES FOR PAYMENT OF THE SCRATCH COURSE.
THE SCRATCH COURSE IS INTENDED ONLY AS A LEVELING COURSE. ADJUST SCRATCH COURSE QUANTITIES AS DIRECTED BY THE PROJECT MANGER.
APPLY TACK COAT ACROSS THE TRAVEL LANES AFTER THE RUT FILLING APPLICATION, FOLLOWED BY THE SCRATCH COURSE APPLICATION.

TYPICAL SECTION NO. 4

US 93 (S OF RAVALLI)

1245+60.37	TO	1246+32.58	B.E.
1247+30.94	B.E. TO	1252+82.15	
1252+82.15	TO	1259+90.81	TRANS. TYP. NO. 4 TO TYP. NO. 1
1326+39.44			ONLY
1326+39.44	TO	1329+93.77	TRANS. TYP. NO. 4 TO TYP. NO. 5
1344+43.90	TO	1381+49.64	B.E.
1382+48.00	B.E. TO	1419+71.88	
1419+71.88	TO	1423+85.27	TRANS. TYP. NO. 4 TO NO. 8



QUANTITIES									
UNIT	AGGREGATE			UNIT	BITUMINOUS MATERIAL				
	COVER	MICROSURFACING (RUT FILLING) *	MICROSURFACING (SCRATCH COURSE) *		MICROSURFACING (RUT FILL EMULSION)*	MICROSURFACING (SCRATCH COURSE EMULSION) *	EMULSIFIED ASPHALT SEAL	EMULSIFIED ASPHALT TACK (SCRATCH COURSE)*	EMULSIFIED ASPHALT FOG SEAL
AREA square feet				square yards PER STATION	267	267	333	267	333
square yards PER STATION	333	267	267	tons PER STATION	0.11	0.42	0.60		
tons PER STATION		0.9	3.6	gals. PER STATION				13	25
TOTAL tons PER STATION		4.5		TOTAL tons PER STATION	0.53				

* PLACE RUT FILLING COURSE PRIOR TO APPLICATION OF THE SCRATCH COURSE. INCLUDE RUT FILLING AGGREGATE AND EMULSION IN THE QUANTITIES FOR PAYMENT OF THE SCRATCH COURSE.
THE SCRATCH COURSE IS INTENDED ONLY AS A LEVELING COURSE. ADJUST SCRATCH COURSE QUANTITIES AS DIRECTED BY THE PROJECT MANGER.
APPLY TACK COAT ACROSS THE TRAVEL LANES AFTER THE RUT FILLING APPLICATION, FOLLOWED BY THE SCRATCH COURSE APPLICATION.

SHEET NO. 4

TYPICAL SECTIONS

PROJECT NAME: US 93 - N VICTOR & S RAVALLI
COUNTY: LAKE & RAVALLI COUNTIES
PROJECT ID: NH-HSIP 7-1(180)60
UPN: 10374000

DESIGNED BY	DATE	REVIEWED BY	DATE	CHECKED BY	DATE
F. COBARRUBIAS	8/1/2024	J. DOLD	10/1/2024	J. CERECK	1/29/2025

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MONTANA
Department of Transportation

ROAD PLANS

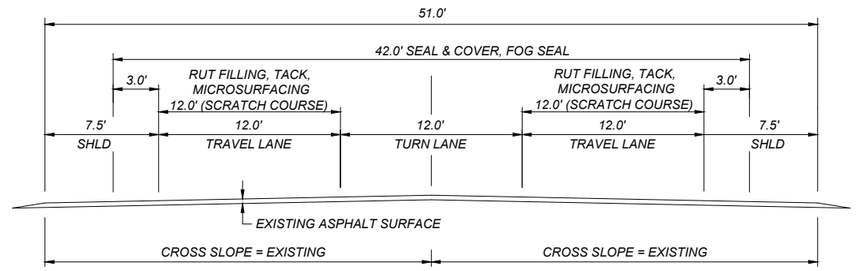
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1329+93.77 TO 1338+67.13 THEN TO TYP. NO. 6

TYPICAL SECTION NO. 5

US 93 (S OF RAVALLI)



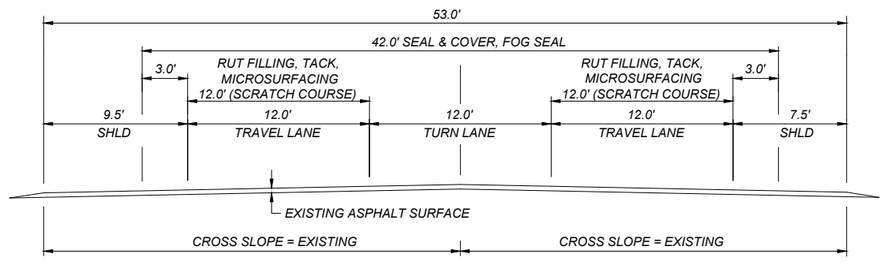
QUANTITIES									
UNIT	AGGREGATE			UNIT	BITUMINOUS MATERIAL				
	COVER	MICROSURFACING (RUT FILLING) *	MICROSURFACING (SCRATCH COURSE) *		MICROSURFACING (RUT FILL EMULSION)*	MICROSURFACING (SCRATCH COURSE EMULSION) *	EMULSIFIED ASPHALT SEAL	EMULSIFIED ASPHALT TACK (SCRATCH COURSE)*	EMULSIFIED ASPHALT FOG SEAL
AREA square feet				square yards PER STATION	267	267	467	267	467
square yards PER STATION	467	267	267	tons PER STATION	0.11	0.42	0.83		
tons PER STATION		0.9	3.6	gals. PER STATION				13	35
TOTAL tons PER STATION		4.5		TOTAL tons PER STATION	0.53				

* PLACE RUT FILLING COURSE PRIOR TO APPLICATION OF THE SCRATCH COURSE. INCLUDE RUT FILLING AGGREGATE AND EMULSION IN THE QUANTITIES FOR PAYMENT OF THE SCRATCH COURSE.
THE SCRATCH COURSE IS INTENDED ONLY AS A LEVELING COURSE. ADJUST SCRATCH COURSE QUANTITIES AS DIRECTED BY THE PROJECT MANGER.
APPLY TACK COAT ACROSS THE TRAVEL LANES AFTER THE RUT FILLING APPLICATION, FOLLOWED BY THE SCRATCH COURSE APPLICATION.

1338+67.13 ONLY
1338+67.13 TO 1342+21.46 TRANS. TYP. NO. 6 TO TYP. NO. 7

TYPICAL SECTION NO. 6

US 93 (S OF RAVALLI)



QUANTITIES									
UNIT	AGGREGATE			UNIT	BITUMINOUS MATERIAL				
	COVER	MICROSURFACING (RUT FILLING) *	MICROSURFACING (SCRATCH COURSE) *		MICROSURFACING (RUT FILL EMULSION)*	MICROSURFACING (SCRATCH COURSE EMULSION) *	EMULSIFIED ASPHALT SEAL	EMULSIFIED ASPHALT TACK (SCRATCH COURSE)*	EMULSIFIED ASPHALT FOG SEAL
AREA square feet				square yards PER STATION	267	267	467	267	467
square yards PER STATION	467	267	267	tons PER STATION	0.11	0.42	0.83		
tons PER STATION		0.9	3.6	gals. PER STATION				13	35
TOTAL tons PER STATION		4.5		TOTAL tons PER STATION	0.53				

* PLACE RUT FILLING COURSE PRIOR TO APPLICATION OF THE SCRATCH COURSE. INCLUDE RUT FILLING AGGREGATE AND EMULSION IN THE QUANTITIES FOR PAYMENT OF THE SCRATCH COURSE.
THE SCRATCH COURSE IS INTENDED ONLY AS A LEVELING COURSE. ADJUST SCRATCH COURSE QUANTITIES AS DIRECTED BY THE PROJECT MANGER.
APPLY TACK COAT ACROSS THE TRAVEL LANES AFTER THE RUT FILLING APPLICATION, FOLLOWED BY THE SCRATCH COURSE APPLICATION.

SHEET NO. 5

TYPICAL SECTIONS

PROJECT NAME: US 93 - N VICTOR & S RAVALLI
COUNTY: LAKE & RAVALLI COUNTIES
PROJECT ID: NH-HSIP 7-1(180)60
UPN: 10374000

DESIGNED BY F. COBARRUBIAS 8/1/2024
REVIEWED BY J. DOLD 10/1/2024
CHECKED BY J. CERECK 1/29/2025
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MONTANA Department of Transportation

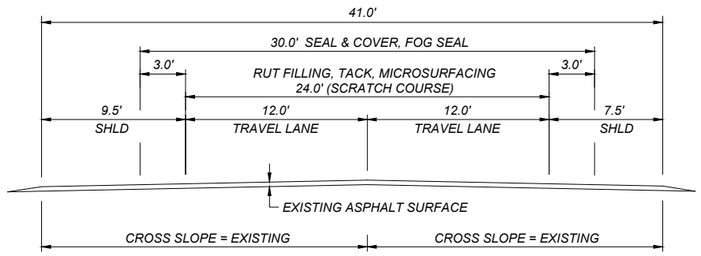
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1342+21.46 TO 1344+08.46
1344+08.46 TO 1344+43.90 TRANS. TYP. NO. 7 TO TYP. NO. 4

TYPICAL SECTION NO. 7

US 93 (S OF RAVALLI)



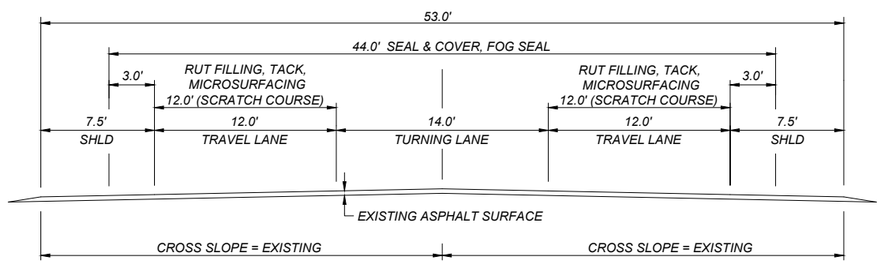
QUANTITIES									
UNIT	AGGREGATE			UNIT	BITUMINOUS MATERIAL				
	COVER	MICROSURFACING (RUT FILLING)*	MICROSURFACING (SCRATCH COURSE) *		MICROSURFACING (RUT FILL EMULSION)*	MICROSURFACING (SCRATCH COURSE EMULSION) *	EMULSIFIED ASPHALT SEAL	EMULSIFIED ASPHALT TACK (SCRATCH COURSE)*	EMULSIFIED ASPHALT FOG SEAL
AREA square feet				square yards PER STATION	267	267	333	267	333
square yards PER STATION	333	267	267	tons PER STATION	0.11	0.42	0.60		
tons PER STATION		0.9	3.6	gals. PER STATION				13	25
TOTAL tons PER STATION		4.5		TOTAL tons PER STATION	0.53				

* PLACE RUT FILLING COURSE PRIOR TO APPLICATION OF THE SCRATCH COURSE. INCLUDE RUT FILLING AGGREGATE AND EMULSION IN THE QUANTITIES FOR PAYMENT OF THE SCRATCH COURSE.
THE SCRATCH COURSE IS INTENDED ONLY AS A LEVELING COURSE. ADJUST SCRATCH COURSE QUANTITIES AS DIRECTED BY THE PROJECT MANGER.
APPLY TACK COAT ACROSS THE TRAVEL LANES AFTER THE RUT FILLING APPLICATION, FOLLOWED BY THE SCRATCH COURSE APPLICATION.

1423+85.27 TO 1430+44.19

TYPICAL SECTION NO. 8

US 93 (S OF RAVALLI)



QUANTITIES									
UNIT	AGGREGATE			UNIT	BITUMINOUS MATERIAL				
	COVER	MICROSURFACING (RUT FILLING) *	MICROSURFACING (SCRATCH COURSE) *		MICROSURFACING (RUT FILL EMULSION)*	MICROSURFACING (SCRATCH COURSE EMULSION) *	EMULSIFIED ASPHALT SEAL	EMULSIFIED ASPHALT TACK (SCRATCH COURSE)*	EMULSIFIED ASPHALT FOG SEAL
AREA square feet				square yards PER STATION	267	267	489	267	489
square yards PER STATION	489	267	267	tons PER STATION	0.11	0.42	0.88		
tons PER STATION		0.9	3.6	gals. PER STATION				13	37
TOTAL tons PER STATION		4.5		TOTAL tons PER STATION	0.53				

* PLACE RUT FILLING COURSE PRIOR TO APPLICATION OF THE SCRATCH COURSE. INCLUDE RUT FILLING AGGREGATE AND EMULSION IN THE QUANTITIES FOR PAYMENT OF THE SCRATCH COURSE.
THE SCRATCH COURSE IS INTENDED ONLY AS A LEVELING COURSE. ADJUST SCRATCH COURSE QUANTITIES AS DIRECTED BY THE PROJECT MANGER.
APPLY TACK COAT ACROSS THE TRAVEL LANES AFTER THE RUT FILLING APPLICATION, FOLLOWED BY THE SCRATCH COURSE APPLICATION.

SHEET NO. 6

TYPICAL SECTIONS

PROJECT NAME US 93 - N VICTOR & S RAVALLI
COUNTY LAKE & RAVALLI COUNTIES
PROJECT ID NH-HSIP 7-1(180)60
UPN 10374000

DESIGNED BY F. COBARRUBIAS 8/1/2024
REVIEWED BY J. DOLD 10/1/2024
CHECKED BY J. CERECK 1/29/2025
10374000RDTYP002.DWG

MONTANA Department of Transportation

ROAD PLANS

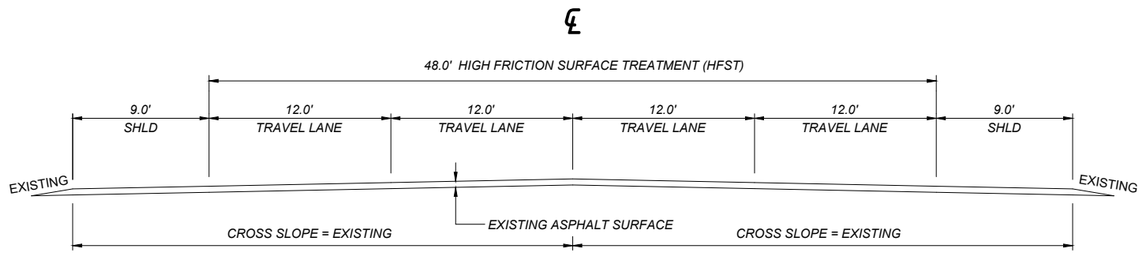
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579+90.72 TO 593+87.34 THEN TO TYP. NO. 10
596+02.17 TO 604+59.78

TYPICAL SECTION NO. 9

US 93 (N OF VICTOR)

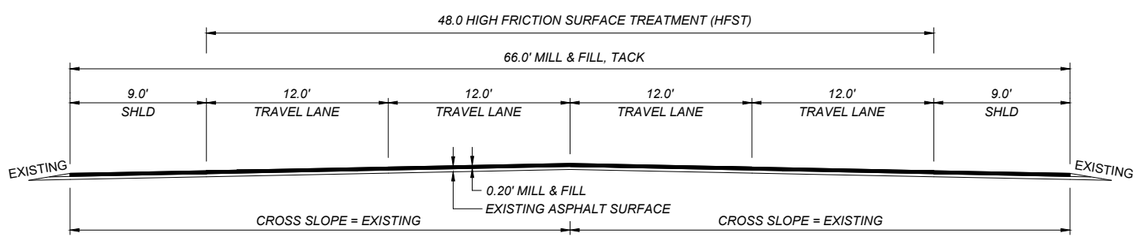


QUANTITIES	
UNIT	BITUMINOUS MATERIAL HIGH FRICTION SURFACE TREATMENT
AREA square feet	
cubic yards PER STATION	
tons PER STATION	
square yards PER STATION	533

593+87.34 TO 594+37.34 B.E. (HFST & PMS MILL/FILL)
594+37.34 B.E. TO 595+52.17 B.E. (HFST ONLY)
595+52.17 B.E. TO 596+02.17 THEN TO TYP. NO. 9 (HFST & PMS MILL/FILL)

TYPICAL SECTION NO. 10

US 93 (N OF VICTOR)



QUANTITIES					
UNIT	AGGREGATE PLANT MIX	UNIT	BITUMINOUS MATERIAL HIGH FRICTION SURFACE TREATMENT	 EMULSIFIED ASPHALT TACK *	COLD MILLING
AREA square feet	13.20	square yards PER STATION	533	733	733
cubic yards PER STATION	48.9	tons PER STATION			
tons PER STATION	94.3	gals. PER STATION		37	
square yards PER STATION					

*BASED ON 1 APPLICATION

SHEET NO. 7

TYPICAL SECTIONS

PROJECT NAME US 93 - N VICTOR & S RAVALLI
COUNTY LAKE & RAVALLI COUNTIES
PROJECT ID NH-HSIP 7-1(180)60
UPN 10374000

DESIGNED BY F. COBARRUBIAS 09/12/2024
REVIEWED BY J. DOLD 10/1/2024
CHECKED BY J. CERECK 1/29/2025
10374000RDTYP003.DWG

MONTANA Department of Transportation

ROAD PLANS

2/4/2025 9:21 AM

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SUMMARY

SURFACING

STATION FROM	STATION TO	linear feet GROSS	linear feet NET	linear feet +	linear feet -	FOR	AGGREGATE sq. yards COVER TYPE 3	AGGREGATE tons COMMERCIAL MIX-1/2 IN-PG 58V-34	AGGREGATE tons MICRO-SURFACING AGGREGATE TYPE 3	BITUMINOUS MATERIAL tons MICRO-SURFACING EMULSION	BITUMINOUS MATERIAL tons EMULSIFIED ASPHALT SEAL CHFRS-2P	BITUMINOUS MATERIAL gallons EMULSIFIED ASPHALT TACK	BITUMINOUS MATERIAL gallons EMULSIFIED ASPHALT FOG SEAL	BITUMINOUS MATERIAL sq. yards HIGH FRICTION SURFACE TREATMENT *	sq. yards COLD MILLING 0.20'	REMARKS
US 93 (S OF RAVALLI)																
1084+96.82	1113+51.71	2,854.89	2,854.89				13,332		128	15.1	23.7	371	999			TYP. NO. 1
1113+51.71	1120+60.37	708.66	708.66				3,309		32	3.8	5.9	92	248			TRANS. TYP. NO. 1 TO TYP. NO. 2
1120+60.37	1131+61.42	1,101.05	1,101.05				5,142		50	5.8	9.1	143	385			TYP. NO. 2
1131+61.42	1135+15.75	354.33	354.33				1,890		16	1.9	3.4	46	142			TRANS. TYP. NO. 2 TO TYP. NO. 3
1135+15.75	1151+58.79	1,643.04	1,643.04				9,858		74	8.7	17.6	214	739			TYP. NO. 3
1151+58.79	1155+13.12	354.33	354.33				1,890		16	1.9	3.4	46	142			TRANS. TYP. NO. 3 TO TYP. NO. 2
1155+13.12	1207+40.16	5,227.04	5,227.04				24,410		235	27.7	43.4	680	1,829			TYP. NO. 2
1207+40.16	1210+94.49	354.33	354.33				1,890		16	1.9	3.4	46	142			TRANS. TYP. NO. 2 TO TYP. NO. 3
1210+94.49	1219+67.19	872.70	872.70				5,236		39	4.6	9.3	113	393			TYP. NO. 3
1219+67.19	1223+21.52	354.33	354.33				1,890		16	1.9	3.4	46	142			TRANS. TYP. NO. 3 TO TYP. NO. 2
1223+21.52	1238+51.71	1,530.19	1,530.19				7,146		69	8.1	12.7	199	536			TYP. NO. 2
1238+51.71	1245+60.37	708.66	708.66				2,835		32	3.8	5.1	92	213			TRANS. TYP. NO. 2 TO TYP. NO. 4
1245+60.37																
1246+32.58 B.E.	1247+30.94 B.E.				98.36	BRIDGE										
	1252+82.15	721.78	623.42				2,076		28	3.3	3.7	81	156			TYP. NO. 4
1252+82.15	1259+90.81	708.66	708.66				2,835		32	3.8	5.1	92	213			TRANS. TYP. NO. 4 TO TYP. NO. 1
1259+90.81	1319+30.77	5,939.96	5,939.96				27,740		267	31.5	49.3	772	2,079			TYP. NO. 1
1319+30.77	1326+39.44	708.67	708.67				2,835		32	3.8	5.1	92	213			TRANS. TYP. NO. 1 TO TYP. NO. 4
1326+39.44	1329+93.77	354.33	354.33				1,417		16	1.9	2.5	46	106			TRANS. TYP. NO. 4 TO TYP. NO. 5
1329+93.77	1338+67.13	873.36	873.36				4,079		39	4.6	7.2	114	306			TYP. NO. 5
1338+67.13	1342+21.46	354.33	354.33				1,417		16	1.9	2.5	46	106			TRANS. TYP. NO. 6 TO TYP. NO. 7
1342+21.46	1344+08.46	187.00	187.00				623		8	1.0	1.1	24	47			TYP. NO. 7
1344+08.46	1344+43.90	35.44	35.44				118		2	0.2	0.2	5	9			TRANS. TYP. NO. 7 TO TYP. NO. 4
1344+43.90																
1381+49.64 B.E.	1382+48.00 B.E.				98.36	BRIDGE										
	1419+71.88	7,527.98	7,429.62				24,741		334	39.4	44.6	966	1,857			TYP. NO. 4
1419+71.88	1423+85.27	413.39	413.39				1,699		19	2.2	3.1	54	128			TRANS. TYP. NO. 4 TO TYP. NO. 8
1423+85.27	1430+44.19	658.92	658.92				3,222		30	3.5	5.8	86	244			TYP. NO. 8
SUB-TOTAL		34,547.37	34,350.65		196.72		151,630		1,546	182.3	270.6	4,466	11,374			FLATHEAD INDIAN RESERVATION
US 93 (N OF VICTOR)																
579+90.72	593+87.34	1,396.62	1,396.62											7,444		TYP. NO. 9
593+87.34	594+37.34 B.E.	50.00	50.00					47				19		267	367	TYP. NO. 10
594+37.34 B.E.	595+52.17 B.E.	114.83	114.83			BRIDGE								612		TYP. NO. 10
595+52.17 B.E.	596+02.17	50.00	50.00					47				19		267	367	TYP. NO. 10
596+02.17	604+59.78	857.61	857.61											4,571		TYP. NO. 9
SUB-TOTAL		2,469.06	2,469.06					94				38		13,161	734	NON-RESERVATION
TOTAL		37,016.43	36,819.71	~	196.72		151,630	94	1,546	182.3	270.6	4,504	11,374	13,161	734	

* SEE SPECIAL PROVISION

RUT FILLING *

STATION FROM	STATION TO	linear feet RUT FILLING	ton # RUT FILLING	REMARKS
1084+96.82	1430+44.19	137,403	302	US 93 (S OF RAVALLI)
SUBTOTAL		137,403	302	
TOTAL		137,403	~	FLATHEAD INDIAN RESERVATION

FOR INFORMATION ONLY. BASED ON 6.6 LBS. PER SQUARE YARD.
* INITIAL RUT FILLING USING RUT BOX. PERFORMED PRIOR TO TACK AND MICROSURFACING SCRATCH COURSE. RUT FILLING IS APPLIED TO EACH WHEEL PATH IN BOTH TRAVEL LANES.

CRACK SEALING *

STATION FROM	STATION TO	TRANSVERSE & LONGITUDINAL CRACK SEALING CRACK SEALING pounds	TRANSVERSE & LONGITUDINAL CRACK SEALING CRACK SEALING linear feet	REMARKS
1084+96.82	1430+44.19	8,499	12,142	US 93 (S OF RAVALLI)
SUBTOTAL		8,499	#	
TOTAL		8,499	#	FLATHEAD INDIAN RESERVATION

* SEE DETAIL SHEET
# FOR INFORMATION ONLY

SHEET NO. 8

SUMMARIES

PROJECT NAME US 93 - N VICTOR & S RAVALLI
COUNTY LAKE & RAVALLI COUNTIES
PROJECT ID NH-HSIP 7-1(180)60
UPN 10374000

DESIGNED BY F. COBARRUBIAS 8/1/2024
REVIEWED BY J. DOLD 10/1/2024
CHECKED BY J. CERECK 1/29/2025
10374000RDSUM001.DWG

MONTANA Department of Transportation

ROAD PLANS

3/26/2025 4:06 PM

SUMMARY

RUMBLE STRIPS

STATION		miles			gals	REMARKS
		RUMBLE STRIPS		SINUSOIDAL RUMBLE STRIPS	EMULSIFIED ASPHALT FOG SEAL #	
FROM	TO	INTER-MITTENT SHOULDERS	CENTERLINE	CENTERLINE		
1084+96.82	1430+44.19	12.9		6.5	2,331	LT., RT. & CL - US 93 (S OF RAVALLI) *
SUBTOTAL		12.9		6.5	2,331	**FLATHEAD INDIAN RESERVATION**
593+87.34	596+02.17	0.04	0.02		7	LT. & RT. - US 93 (S OF RAVALLI)
SUBTOTAL		**0.04**	**0.02**		**7**	**NON-RESERVATION**
TOTAL		**13.0**		**6.5**	~	

* SEE RUMBLE STRIP DETAIL FOR MODIFIED RUMBLE STRIP CONFIGURATION ON OUTSIDE SHOULDERS.
# FOR INFORMATION ONLY, INCLUDE IN THE COST OF RUMBLE STRIPS.

PAVEMENT MARKINGS

ITEM	UNIT	INTERIM APPLICA-TION #	FINAL APPLICA-TION	TOTAL	INTERIM APPLICA-TION #	FINAL APPLICA-TION	TOTAL	TOTAL
		FLATHEAD INDIAN RESERVATION			NON-RESERVATION			
STRIPING - WHITE PAINT	gallon	357		357	29		29	386
STRIPING - YELLOW PAINT	gallon	386		386	51		51	437
WORDS & SYMBOLS - WHITE PAINT	gallon	12		12				12
WORDS & SYMBOLS - YELLOW PAINT	gallon	11		11				11
STRIPING - WHITE EPOXY	gallon		476	476		38	38	514
STRIPING - YELLOW EPOXY	gallon		514	514		68	68	582
WORDS & SYMBOLS - WHITE EPOXY	gallon		16	16				16
WORDS & SYMBOLS - YELLOW EPOXY	gallon		15	15				15
TEMPORARY STRIPING	linear feet			81,669			4,709	86,378

BASED ON 1 APPLICATION.

BRIDGE DECK TREATMENT

STATION		sq. yards	REMARKS
		BRIDGE DECK CRACK SEAL	
FROM	TO		
594+37.34 B.E.	595+52.17 B.E.	138	WILDLIFE CROSSING
TOTAL		**138**	**NON-RESERVATION**

SHEET NO. 9

SUMMARIES

PROJECT NAME: US-93 N VICTOR & S RAVALLI
COUNTY: LAKE & RAVALLI COUNTIES
PROJECT ID: NH-HSIP 7-1(180)60
UPN: 10374000

DESIGNED BY	DATE	REVIEWED BY	DATE	CHECKED BY	FIRST INITIAL LAST NAME MM/YYYY
F. COBARRUBIAS	8/1/2024	J. DOLD	10/1/2024		10374000RDSUM001.DWG

MONTANA Department of Transportation

ROAD PLANS

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DETAIL

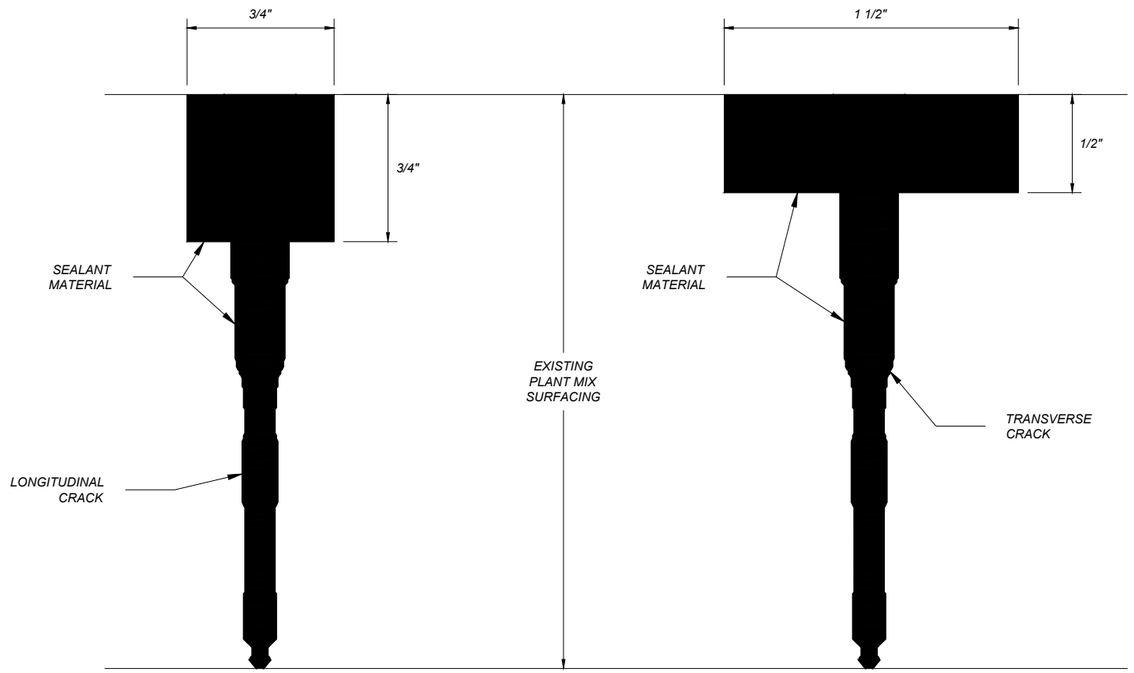
CRACKS 1/8" TO 1 1/2" WIDE

LONGITUDINAL CRACK

ROUT 3/4" WIDE x 3/4" DEEP
PRIOR TO APPLYING SEALANT

TRANSVERSE CRACK

ROUT 1 1/2" WIDE x 1/2" DEEP
PRIOR TO APPLYING SEALANT



SHEET NO.
10

DETAIL
CRACK SEALING
NO SCALE

PROJECT NAME: US 93 - N VICTOR & S RAVALLI
COUNTY: LAKE & RAVALLI COUNTIES
PROJECT ID: NH-HSIP 7-1(180)60
UPN: 10374000

DESIGNED BY	8/1/2024
F. COBARRUBIAS	
REVIEWED BY	10/1/2024
J. DOLD	
CHECKED BY	1/29/2025
J. CERECK	

MONTANA
Department of Transportation

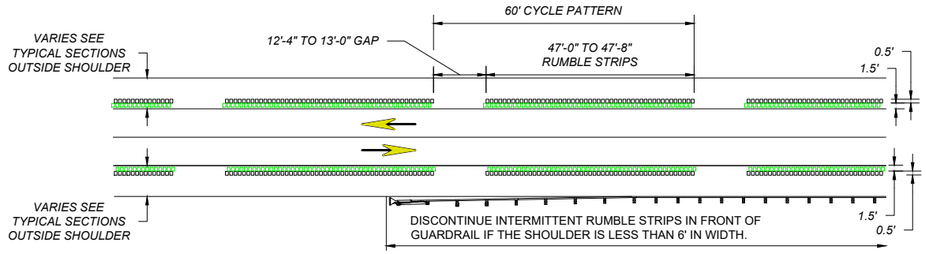
ROAD PLANS

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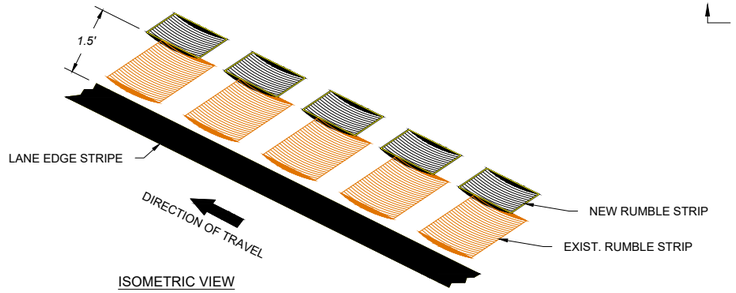
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AWARD COPY

DETAIL

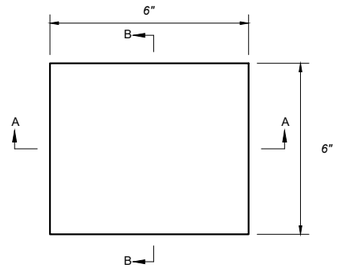


RUMBLE STRIP PLACEMENT & INTERMITTENT RUMBLE STRIP SPACING



ISOMETRIC VIEW

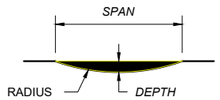
ALIGN NEW MODIFIED RUMBLE STRIP AS CLOSE TO THE OLD RUMBLE STRIP, BUT MAY NOT LINE UP EXACTLY.



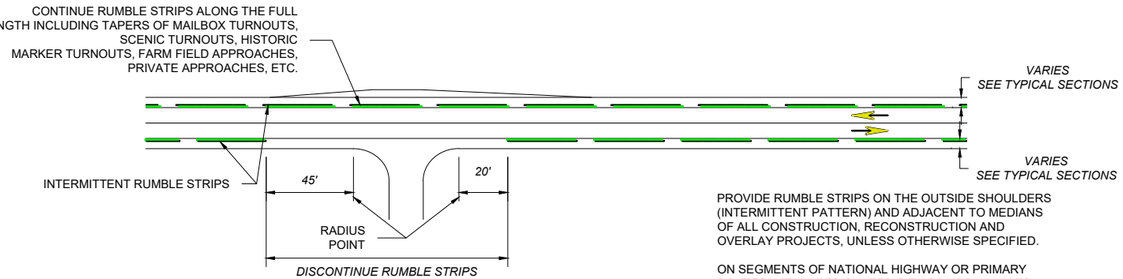
PLAN



SECTION A-A



SECTION B-B

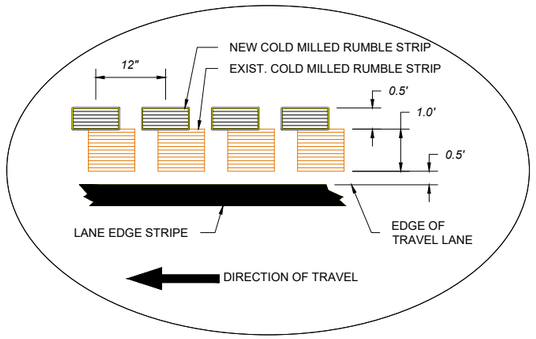


TYPICAL APPLICATION

PROVIDE RUMBLE STRIPS ON THE OUTSIDE SHOULDERS (INTERMITTENT PATTERN) AND ADJACENT TO MEDIANS OF ALL CONSTRUCTION, RECONSTRUCTION AND OVERLAY PROJECTS, UNLESS OTHERWISE SPECIFIED.

ON SEGMENTS OF NATIONAL HIGHWAY OR PRIMARY ROUTES WITHIN DESIGNATED CITY OR URBAN LIMITS, USE ENGINEERING JUDGEMENT ON A CASE-BY-CASE BASIS TO DETERMINE IF RUMBLE STRIP INSTALLATION IS APPROPRIATE.

	DEPTH	RADIUS	SPAN
ASPHALT	1/2" TO 3/4"	12" MAX.	6 7/8" TO 8 3/8"



TYPICAL SHOULDER INSTALLATION (ASPHALT PAVEMENT)

RUMBLE STRIP DETAIL

US-93 (N-5) SOUTH OF RAVALLI SECTION

NOTE:

DO NOT INSTALL RUMBLE STRIPS OVER CONCRETE BRIDGE DECKS OR WHERE OBSTACLES, SUCH AS CONCRETE BARRIER RAIL, PREVENT PROPER PLACEMENT.

INSTALLATION ON SHOULDERS LESS THAN 4-FT WILL BE DECIDED ON A CASE-BY-CASE BASIS.

THIS DETAIL IS FOR OUTSIDE SHOULDER RUMBLE STRIPS ONLY ON US-93 (N-5, S OF RAVALLI SECTION) FROM RP 20.1-26.7). REFER TO STD. DETAILED DRAWING NO. 411-02 WHEN GRINDING ALL OTHER SHOULDER RUMBLE STRIPS.

SHEET NO. 11

MODIFIED SHOULDER RUMBLE STRIPS NO SCALE

PROJECT NAME: US 93 - N VICTOR & S RAVALLI
COUNTY: LAKE & RAVALLI COUNTIES
PROJECT ID: NH-HSIP 7-1(180)60
UPN: 10374000

DESIGNED BY	REVIEWED BY	CHECKED BY
F. COBARRUBIAS 8/1/2024	J. DOLD 10/1/2024	J. CERECK 1/29/2025

MONTANA Department of Transportation

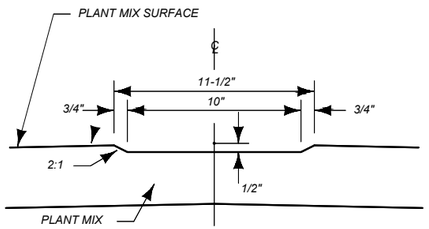
ROAD PLANS

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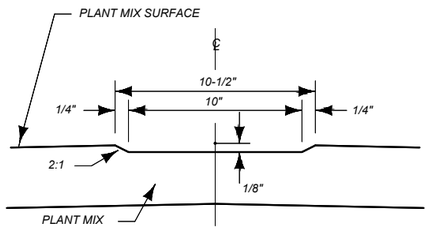
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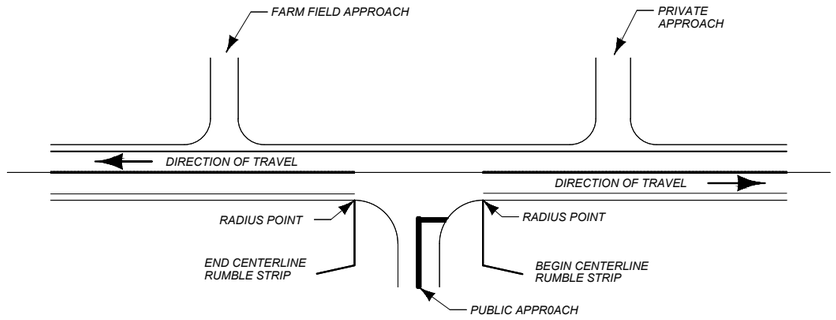
DETAIL



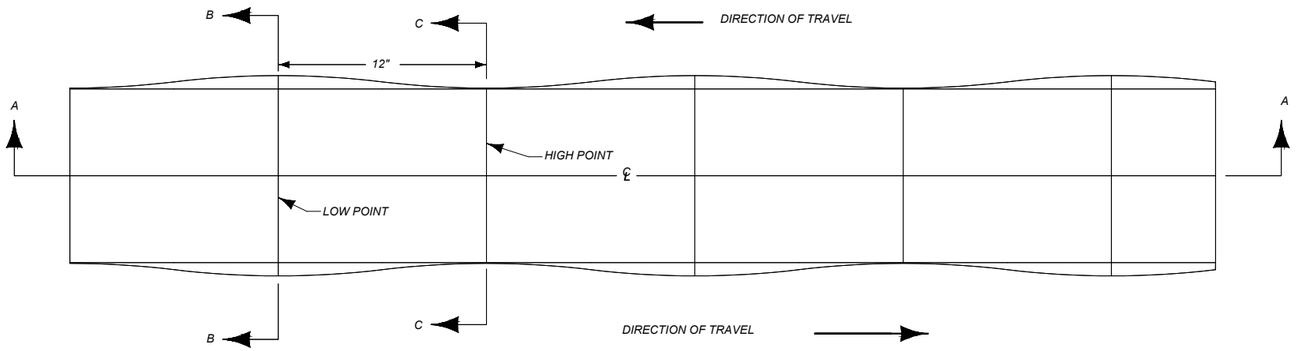
SECTION B-B



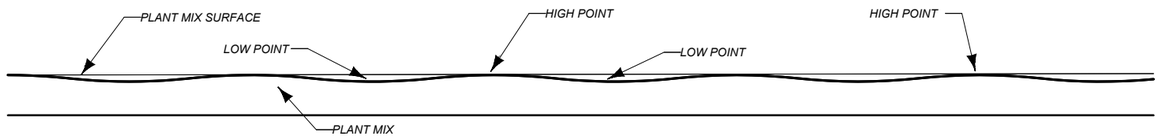
SECTION C-C



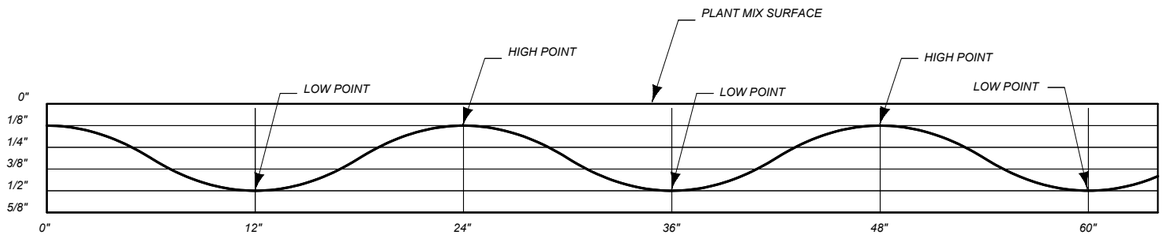
SINUSOIDAL CENTERLINE RUMBLE STRIP APPROACH DETAIL



SINUSOIDAL CENTERLINE RUMBLE STRIP WITH TAPERED GROOVE PLAN VIEW

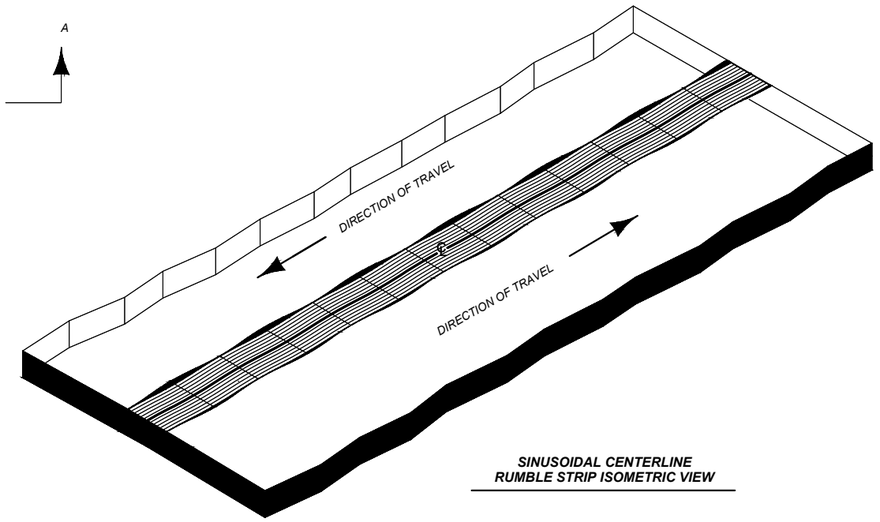


SECTION A-A



SINUSOIDAL CENTERLINE RUMBLE STRIP PROFILE VIEW

EXAGGERATED VERTICAL SCALE 10:1



SINUSOIDAL CENTERLINE RUMBLE STRIP ISOMETRIC VIEW

NOTES:

BREAK SINUSOIDAL CENTERLINE RUMBLE STRIPS FOR PUBLIC APPROACHES ONLY.

INSTALL SINUSOIDAL CENTERLINE RUMBLE STRIPS ACROSS LEFT TURN LANES AND STRIPED MEDIANS.

DO NOT INSTALL SINUSOIDAL CENTERLINE RUMBLE STRIPS ON CONCRETE BRIDGE DECKS AND CONCRETE BRIDGE APPROACH SLABS.

DO NOT INSTALL SINUSOIDAL CENTERLINE RUMBLE STRIPS IN AREAS POSTED AT 45 MPH OR LESS.

ROUTES WITHIN DESIGNATED CITY OR URBAN LIMITS USE ENGINEERING JUDGEMENT ON A CASE BY CASE BASIS TO DETERMINE IF SINUSOIDAL CENTERLINE RUMBLE STRIP INSTALLATION IS APPROPRIATE.

MINIMUM VERTICAL MILLING DEPTHS AND DIFFERENCE BETWEEN MILLING HIGH POINTS AND LOW POINTS SHOWN IN DETAIL. ADDITIONAL 1/8" DEPTH OF MILLING IS ALLOWABLE ON INSTALLATION OF SINUSOIDAL CENTERLINE RUMBLE STRIP.

SEE DETAILED DRAWING 620-30 FOR CENTERLINE RUMBLE STRIP PAVEMENT MARKING INFORMATION.

OMIT CENTERLINE RUMBLE STRIPES IN AREAS WHERE TWO WAY LEFT TURN LANES ARE PRESENT UNLESS SPECIFIED IN PROJECT PLANS AND/OR SPECIAL PROVISIONS. CENTERLINE RUMBLE STRIPES MAY BE INSTALLED THROUGH TWO WAY LEFT TURN LANES ON A CASE BY CASE BASIS AS A RESULT OF SAFETY ENGINEERING ANALYSIS DEMONSTRATING NEED.

SHEET NO. 12

SINUSOIDAL CENTERLINE RUMBLE STRIPS DETAIL NO SCALE

PROJECT NAME: US 93 - N VICTOR & S RAVALLI
COUNTY: LAKE & RAVALLI COUNTIES
PROJECT ID: NH-HSIP 7-1(180)60
UPN: 10374000

DESIGNED BY	F. COBARRUBIAS	12/18/2024
REVIEWED BY	J. DOLD	12/18/2024
CHECKED BY	J. CERECK	1/29/2025

10374000RDDET002.DWG

MONTANA Department of Transportation

ROAD PLANS

12/18/2024 8:50 AM

NOTES AND ABBREVIATIONS:

MOUNTING HEIGHT REQUIREMENTS: MOUNTING HEIGHTS SHOWN REFER TO THE BOTTOM OF THE MAJOR PANEL. SEE DETAILED DRAWINGS 619-00 & 619-08

ALL MARKINGS ARE PAINT, EXCEPT AS NOTED. WHERE SPECIFIED ON THE PLANS AS PLASTIC, INSTALL INLAID HOT EXTRUDED HYDRO-CARBON THERMOPLASTIC PAVEMENT MARKINGS.

SEE LOCATION AND SPECIFICATION SHEETS FOR PORTIONS OF PROJECT NOT INCLUDED WITHIN SIGNING PLAN SHEETS.

SIGN POSTS SYMBOLS SHOWN ARE FOR REFERENCE ONLY TO SHOW EXISTING SIGNS THAT REQUIRE NO ACTION.

SIGNING LOCATIONS ARE APPROXIMATE. ENGINEERING PROJECT MANAGER TO FIELD ADJUST AS NECESSARY.

ADOPT A HIGHWAY: IF SIGNS N7-1/N7-1P EXIST, CONTRACTOR WILL CONFIRM THAT THE GROUP NAME ON THE SIGN(S) EXISTING AT THE TIME OF CONSTRUCTION CORRESPONDS TO THE GROUP NAME ON THE SIGN(S) SHOWN IN PLANS. IF NAME IS DIFFERENT, ENGINEERING PROJECT MANAGER WILL CONTACT TRAFFIC & SAFETY BUREAU SIGNING SECTION WITH THE CORRECT NAME AND A NEW SIGN DESIGN WILL BE PROVIDED.

FY = FLUORESCENT YELLOW SHEETING REQUIRED

FYG = FLUORESCENT YELLOW-GREEN SHEETING REQUIRED

✕ = STANDARD BREAKAWAY DEVICE:
- FOR WOOD POST SEE DETAILED DRAWING 619-20.
- FOR STRUCTURAL STEEL SEE DETAILED DRAWING 619-13.

▲ = SINGLE SQUARE TUBE REQUIRED. MOUNTED IN HEAVY DUTY STUB.

★ = TELESCOPED SQUARE TUBES (2-1/4" & 2-1/2") WITH SLIP BASE BREAKAWAY REQUIRED. MOUNTED IN HEAVY DUTY STUB.

■ = FRANGIBLE SIGN POST. BREAKAWAY DEVICE REQUIRED.

AIR = ANGLE IRON REQUIRED 2 1/2" x 2 1/2" x 3/8" x 6'-4" (37 lbs.)

BBR = BACKBRACING REQUIRED:
- FOR WOOD POLE SEE DET. DWG 619-22
- FOR STEEL POST 2" X 2" X ¼" REQUIRED. SEE DET. DWG 619-16
- FOR STRUCTURAL STEEL POST 2 ¾" X 2 ⅜" EXTRUDED "T" SECTION BACKBRACE REQUIRED. SEE DET. DWG 619-19
- FOR CANTILEVER POST, SEE DET. DWG 619-18
- FOR GUIDE SIGN PANELS, USE EXTRUDED "T" SECTION BACKBRACE. SEE DET. DWG 619-04

USE HARDWARE MEETING REQUIREMENTS OF SECTION 704

BGR = BEHIND GUARDRAIL

MBB = MOUNT BACK TO BACK

RSFO = REPLACE SIGN FACE ONLY

SITE 1: SOUTH OF RAVALLI
SIGNING & DELINEATION QUANTITIES

MATERIAL	TOTALS	UNIT
SIGNS-SHEET ALUM SHT INCR XI	218.5	SQFT
SIGNS-ALUM REFL SHEET XI	503.6	SQFT
REMOVE SIGN	77	EACH
REMOVE SIGN-GUIDE	9	EACH
POSTS-STEEL U SIGN	559	LB
POLES-TREATED WOOD 4 IN	412	LNFT
POLES-TREATED WOOD 5 IN	608	LNFT
POLES-TREATED WOOD 6 IN	18	LNFT
DELINEATOR TYPE 1	317	EACH

SITE 1: SOUTH OF RAVALLI
DELINEATION SPECIFICATIONS

SYMBOL	DESIGN	TOTALS
⊣	A	253
⊣⊢	D	10
⊢	F	38
⊣	G	16

SITE 2: NORTH OF VICTOR
SIGNING & DELINEATION QUANTITIES

MATERIAL	TOTALS	UNIT
SIGNS-ALUM REFL SHEET XI	30.0	SQFT
REMOVE SIGN	4	EACH
POSTS-STEEL U SIGN	30	LB
POLES-TREATED WOOD 4 IN	52	LNFT
PANEL DELINEATOR DESIGN A	40	EACH
TOP MOUNTED W-BEAM WHITE DELINEATOR	107	EACH
DELINEATION-LINEAR-WHITE-W-BEAM	425	EACH
TOP MOUNTED BARRIER WHITE DELINEATOR	10	EACH
DELINEATION-LINEAR-BARRIER-WHITE	48	EACH

SITE 2: NORTH OF VICTOR
DELINEATION SPECIFICATIONS

SYMBOL	DESIGN	TOTALS
⊣	Panel A	40
⊙	TOP MNT GRail White	107
⌒	White Linear W-Beam	425
⊖	TOP MNT BAR White	10
⌒	Linear Barrier	48

SHEET NO.
S1

SIGNING SUMMARY
FRAMES AND NOTES

PROJECT NAME: US 93 - N VICTOR & S RAVALLI
COUNTY: LAKE (S RAVALLI), RAVALLI (N VICTOR)
PROJECT ID: NH-HSIP 7-1(180)60
UPN: 10374000

DESIGNED BY	DATE	REVIEWED BY	DATE	CHECKED BY	DATE
L.MOREY	07/2024	R.SCHROEDER	07/2024	N.THOLT	07/2024

10374000SISUM001.DWG

MONTANA
Department of Transportation

SIGNING PLANS

3/20/2025 9:30 AM

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SIGN LOCATION				SIGN PANEL SPECIFICATIONS						SIGN ASSEMBLY SPECIFICATIONS										SIGN ASSEMBLY QUANTITIES														ADDITIONAL INFORMATION	
STATION		DIRECTION	RAMP NO.	SIGN NO. (MUTCD)	PANEL SIZE (INCHES)	FY OR FYG	BACK BRACING REQ'D ANGLE IRON REQ'D	MOUNT BACK TO BACK	REPLACE SIGN FACE ONLY	FEET	TYPE OF SUPPORT	FEET					CANTILEVER	BREAKAWAY TYPE	BEHIND GUARDRAIL	PANEL (SQ. FT.)		WOOD POLE (LNR. FT.)			STEEL POST (LBS.)				# OF BREAKAWAYS	REMOVE		RESET		SIGN IMAGE	SIGN STATUS & REMARKS
LFT	MDN	RGT			W X H					CLEARANCE/OFFSET (SHOULDER TO EDGE OF SIGN)		SIGN SUPPORT SPACING	MOUNTING HEIGHT	SIGN HEIGHT + GAPS	FOUNDATION DEPTH	SUPPORT LENGTH (ESTIMATED) X Y Z				SHEET ALUMINUM	SHEET ALUMINUM INCREMENT	4" TOP DIA.	5" TOP DIA.	6" TOP DIA.	ROUND TUBULAR	SQUARE TUBULAR	STRUCTURAL STEEL	"U" POST		SIGN	GUIDE	SIGN	GUIDE		
Site 1: South of Ravalli																																	
20.367																																	
X				RA-3	12 X 18					ROW Boundary	2.0lb Steel U Post		3.0	1.5	3.0	7.5				1.5							15		1					
20.591																																	
		X		N99-1																													USE AS IS
20.646																																	
		X		RA-3	12 X 18					ROW Boundary	2.0lb Steel U Post		3.0	1.5	3.0	7.5				1.5							15		1					
20.682																																	
		X		R4-3	36 X 48					10.0	5" Treated Wood Pole		5.0	4.0	3.5	14.4			X	12.0			16					1					
20.827																																	
X				R4-3	36 X 48					10.0	5" Treated Wood Pole		5.0	4.0	3.5	14.4			X	12.0			16					1					
20.982																																	
X				RA-3	12 X 18					ROW Boundary	2.0lb Steel U Post		3.0	1.5	3.0	7.5				1.5							15		1					
21.000																																	
X				D10-2	10 X 27					4.0	2.0lb Steel U Post		4.0	2.3	3.0	10.0				1.9							20		1					
21.000																																	**REPLACE** - ADOPT A HIGHWAY, **REMOVE** - DESIGNS FOR HEALTH PLAQUE
X				N7-1	36 X 48					20.0	5" Treated Wood Pole		5.0	4.0	3.5	16.1			X	12.0			18					1					
21.000																																	
		X		D10-2	10 X 27					4.0	2.0lb Steel U Post		4.0	2.3	3.0	10.0				1.9							20		1					
21.000																																	
X				N7-1	36 X 48					20.0	5" Treated Wood Pole		5.0	4.0	3.5	16.1			X	12.0			18					1					
21.020							BBR																										
		X		G5-21a	84 X 30					20.0	4" Treated Wood Pole	4.2	5.0	2.5	3.0	14.1	14.8				17.5	32							1					
21.260																																	
X				D3 (2x)	36 X 10			MBB		6.0	5" Treated Wood Pole		5.0	3.9	3.5	13.7			X	5.0			14					1					
																																	
				R1-1	36 X 36															7.5													
21.270																																	
		X		D3 (2x)	30 X 10			MBB		6.0	5" Treated Wood Pole		5.0	3.9	3.5	13.6			X	4.2			14					1					
																																	
				R1-1	36 X 36															7.5													
21.301																																	
		X		RA-3	12 X 18					ROW Boundary	2.0lb Steel U Post		3.0	1.5	3.0	7.5				1.5							15		1					

SHEET NO.
S2

SIGN LOCATIONS AND SPECIFICATIONS

PROJECT NAME: US 93 - N VICTOR & S RAVALLI
COUNTY: LAKE (S RAVALLI), RAVALLI (N VICTOR)
PROJECT ID: NH-HSIP 7-1(180)60
UPN: 10374000

DESIGNED BY	DATE
L.MOREY	07/2024
REVIEWED BY	DATE
R.SCHROEDER	07/2024
CHECKED BY	DATE
N.THOLT	07/2024

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MONTANA Department of Transportation

SIGNING PLANS

3/20/2025 9:30 AM

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SIGN LOCATION				SIGN PANEL SPECIFICATIONS							SIGN ASSEMBLY SPECIFICATIONS											SIGN ASSEMBLY QUANTITIES														ADDITIONAL INFORMATION	
STATION		DIRECTION	RAMP NO.	SIGN NO. (MUTCD)	PANEL SIZE (INCHES)	FY OR FYG	BACK BRACING REQ'D ANGLE IRON REQ'D	MOUNT BACK TO BACK	REPLACE SIGN FACE ONLY	FEET		FEET					CANTILEVER	BREAKAWAY TYPE	BEHIND GUARDRAIL	PANEL (SQ. FT.)		WOOD POLE (LNR. FT.)	STEEL POST (LBS.)					# OF BREAKAWAYS	REMOVE		RESET		SIGN IMAGE	SIGN STATUS & REMARKS
LFT	MDN	RGT			W X H					CLEARANCE/OFFSET (SHOULDER TO EDGE OF SIGN)	TYPE OF SUPPORT	SIGN SUPPORT SPACING	MOUNTING HEIGHT	SIGN HEIGHT + GAPS	FOUNDATION DEPTH	SUPPORT LENGTH (ESTIMATED) X	Y	Z				SHEET ALUMINUM	SHEET ALUMINUM INCREMENT	4" TOP DIA.	5" TOP DIA.	6" TOP DIA.	ROUND TUBULAR	SQUARE TUBULAR	STRUCTURAL STEEL	"U" POST		SIGN	GUIDE	SIGN	GUIDE		
21.525																																					
X				G5-21b	84 X 30		BBR			20.0	4" Treated Wood Pole	4.2	5.0	2.5	3.0	14.1	14.8					17.5	32									1				RENFRO LN / LAMOOSE LN	
21.615																																					
X				RA-3	12 X 18					ROW Boundary	2.0lb Steel U Post		3.0	1.5	3.0	7.5					1.5								15		1				ACCESS RESTRICTED	
21.907																																					
		X		RA-3	12 X 18					ROW Boundary	2.0lb Steel U Post		3.0	1.5	3.0	7.5					1.5								15		1				ACCESS RESTRICTED	
22.000																																					
X				D10-2	10 X 27					4.0	2.0lb Steel U Post		4.0	2.3	3.0	10.0					1.9								20		1				MILE 22	
22.000																																					
		X		D10-2	10 X 27					4.0	2.0lb Steel U Post		4.0	2.3	3.0	10.0					1.9								20		1				MILE 22	
22.240																																					
X				RA-3	12 X 18					ROW Boundary	2.0lb Steel U Post		3.0	1.5	3.0	7.5					1.5								15		1				ACCESS RESTRICTED	
22.447																																					
		X		G8-22a	96 X 18		BBR			20.0	4" Treated Wood Pole	4.8	5.0	1.5	3.0	13.1	13.9					12.0	28									1				S VALLEY CR RD	
22.533																																					
		X		RA-3	12 X 18					ROW Boundary	2.0lb Steel U Post		3.0	1.5	3.0	7.5					1.5								15		1				ACCESS RESTRICTED	
22.695																																					
X				D17-4	60 X 54		BBR			20.0	5" Treated Wood Pole	3.0	5.0	4.5	3.5	16.5	17.0			X			22.5		36							1				PASSING LANE 2 MILES	
22.705																																					
X				D3 (2x)	42 X 10			MBB		6.0	5" Treated Wood Pole		5.0	3.9	3.5	13.7				X		5.8		14							1				S VALLEY CR RD	
				R1-1	36 X 36																	7.5													STOP	
22.865																																					
X				RA-3	12 X 18					ROW Boundary	2.0lb Steel U Post		3.0	1.5	3.0	7.5					1.5								15		1				ACCESS RESTRICTED	
22.884																																					
		X		W9-1	36 X 36					10.0	4" Treated Wood Pole		5.0	4.1	3.0	14.0					9.0		14								1				RIGHT LANE ENDS	
22.925																																					
		X		W4-2R	36 X 36					10.0	4" Treated Wood Pole		5.0	4.1	3.0	14.0					9.0		14								1					
22.965																																					
X				G8-22b	96 X 18		BBR			20.0	4" Treated Wood Pole	4.8	5.0	1.5	3.0	13.1	13.9					12.0	28									1				S VALLEY CR RD	
23.000																																					
X				D10-2	10 X 27					4.0	2.0lb Steel U Post		4.0	2.3	3.0	10.0					1.9								20		1				MILE 23	
23.000																																					
X				N7-1	36 X 48					20.0	5" Treated Wood Pole		5.0	4.0	3.5	16.1				X		12.0		18							1				ADOPT A HIGHWAY KEEP IT GREEN KEEP IT CLEAN	
23.000																																					
		X		D10-2	10 X 27					4.0	2.0lb Steel U Post		4.0	2.3	3.0	10.0					1.9								20		1				MILE 23	

SHEET NO.
S3

SIGN LOCATIONS AND SPECIFICATIONS

PROJECT NAME: US 93 - N VICTOR & S RAVALLI
COUNTY: LAKE (S RAVALLI), RAVALLI (N VICTOR)
PROJECT ID: NH-HSIP 7-1(180)60
UPN: 10374000

DESIGNED BY: L MOREY 07/2024
REVIEWED BY: R SCHROEDER 07/2024
CHECKED BY: N THOLT 07/2024

MONTANA Department of Transportation

SIGNING PLANS

3/20/2025 9:30 AM

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SIGN LOCATION				SIGN PANEL SPECIFICATIONS						SIGN ASSEMBLY SPECIFICATIONS										SIGN ASSEMBLY QUANTITIES														ADDITIONAL INFORMATION	
STATION		DIRECTION	RAMP NO.	SIGN NO. (MUTCD)	PANEL SIZE (INCHES)	FY OR FYG	BACK BRACING REQ'D ANGLE IRON REQ'D	MOUNT BACK TO BACK	REPLACE SIGN FACE ONLY	FEET	TYPE OF SUPPORT	FEET						CANTILEVER	BREAKAWAY TYPE	BEHIND GUARDRAIL	PANEL (SQ. FT.)		WOOD POLE (LNR. FT.)			STEEL POST (LBS.)				# OF BREAKAWAYS	REMOVE		RESET		SIGN IMAGE	SIGN STATUS & REMARKS
LFT	MDN	RGT			W X H					CLEARANCE/OFFSET (SHOULDER TO EDGE OF SIGN)		SIGN SUPPORT SPACING	MOUNTING HEIGHT	SIGN HEIGHT + GAPS	FOUNDATION DEPTH	SUPPORT LENGTH (ESTIMATED) X	Y	Z				SHEET ALUMINUM	SHEET ALUMINUM INCREMENT	4" TOP DIA.	5" TOP DIA.	6" TOP DIA.	ROUND TUBULAR	SQUARE TUBULAR	STRUCTURAL STEEL	"U" POST		SIGN	GUIDE	SIGN	GUIDE		
23.000																																			
		X		N7-1	36 X 48					20.0	5" Treated Wood Pole		5.0	4.0	3.5	16.1				X		12.0			18						1				
23.031																																			
		X		W6-3	36 X 36					10.0	4" Treated Wood Pole		5.0	4.1	3.0	14.0						9.0		14							1				
23.111																																			
		X		RA-3	12 X 18					ROW Boundary	2.0lb Steel U Post		3.0	1.5	3.0	7.5						1.5								15		1				
23.155																																			
X				N99-1																																USE AS IS
23.176																																			
		X		N99-1																BGR															USE AS IS
23.225																																			
X				N99-1																BGR															USE AS IS
23.465																																			
X				W6-3	36 X 36					10.0	4" Treated Wood Pole		5.0	4.1	3.0	14.0						9.0		14							1				
23.475																																			
X				RA-3	12 X 18					ROW Boundary	2.0lb Steel U Post		3.0	1.5	3.0	7.5						1.5								15		1				
23.620																																			
X				W4-2R	36 X 36					10.0	4" Treated Wood Pole		5.0	4.1	3.0	14.0						9.0		14							1				
23.660																																			
X				W9-1	36 X 36					10.0	4" Treated Wood Pole		5.0	4.1	3.0	14.0						9.0		14							1				
23.737																																			
		X		RA-3	12 X 18					ROW Boundary	2.0lb Steel U Post		3.0	1.5	3.0	7.5						1.5								15		1				
23.918																																			
X				R1-1	36 X 36					6.0	4" Treated Wood Pole		5.0	3.0	3.0	12.3						7.5		14							1				
24.000																																			
X				D10-2	10 X 27					4.0	2.0lb Steel U Post		4.0	2.3	3.0	10.0						1.9								20		1				
24.000																																			
		X		D10-2	10 X 27					4.0	2.0lb Steel U Post		4.0	2.3	3.0	10.0						1.9								20		1				
24.098																																			
X				RA-3	12 X 18					ROW Boundary	2.0lb Steel U Post		3.0	1.5	3.0	7.5						1.5								15		1				
24.381																																			
		X		RA-3	12 X 18					ROW Boundary	2.0lb Steel U Post		3.0	1.5	3.0	7.5						1.5								15		1				
24.385																																			
		X		W8-12A																																USE AS IS (Hinged) (ACTUAL SIGN "NEXT 1 MI")
24.451																																			
		X		W3-5	36 X 36					10.0	4" Treated Wood Pole		5.0	4.1	3.0	14.0						9.0		14							1				
24.573																																			
X				R2-2A																																USE AS IS

SHEET NO.
S4

SIGN LOCATIONS AND SPECIFICATIONS

PROJECT NAME: US 93 - N VICTOR & S RAVALLI
COUNTY: LAKE (S RAVALLI), RAVALLI (N VICTOR)
PROJECT ID: NH-HSIP 7-1(180)60
UPN: 10374000

DESIGNED BY: L MOREY 07/2024
REVIEWED BY: R SCHROEDER 07/2024
CHECKED BY: N THOLT 07/2024

MONTANA Department of Transportation

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SIGN LOCATION				SIGN PANEL SPECIFICATIONS						SIGN ASSEMBLY SPECIFICATIONS										SIGN ASSEMBLY QUANTITIES														ADDITIONAL INFORMATION	
STATION		DIRECTION	RAMP NO.	SIGN NO. (MUTCD)	PANEL SIZE (INCHES)	FY OR FYG	BACK BRACING REQ'D ANGLE IRON REQ'D	MOUNT BACK TO BACK	REPLACE SIGN FACE ONLY	FEET		FEET						CANTILEVER	BREAKAWAY TYPE	BEHIND GUARDRAIL	PANEL (SQ. FT.)		WOOD POLE (LNR. FT.)			STEEL POST (LBS.)				# OF BREAKAWAYS	REMOVE		RESET		SIGN IMAGE	SIGN STATUS & REMARKS
LFT	MDN	RGT			W X H					CLEARANCE/OFFSET (SHOULDER TO EDGE OF SIGN)	TYPE OF SUPPORT	SIGN SUPPORT SPACING	MOUNTING HEIGHT	SIGN HEIGHT + GAPS	FOUNDATION DEPTH	SUPPORT LENGTH (ESTIMATED) X	Y	Z				SHEET ALUMINUM	SHEET ALUMINUM INCREMENT	4" TOP DIA.	5" TOP DIA.	6" TOP DIA.	ROUND TUBULAR	SQUARE TUBULAR	STRUCTURAL STEEL	"U" POST		SIGN	GUIDE	SIGN	GUIDE		
24.586																																	
X				R2-1	36 X 48					5.0	6" Treated Wood Pole		5.0	6.1	4.5	17.2				BGR	12.0				18						1				SPEED LIMIT 70	
				R2-3A	36 X 24																6.0												NIGHT 65	
24.591																																	
		X		R2-1	36 X 48					10.0	5" Treated Wood Pole		5.0	4.0	3.5	14.4				X	12.0			16						1				SPEED LIMIT 60	
24.671																																	
X				RA-3	12 X 18					ROW Boundary	2.0lb Steel U Post		3.0	1.5	3.0	7.5					1.5								15		1				ACCESS RESTRICTED	
24.691																																	
		X		G8-24	96 X 18		BBR			20.0	4" Treated Wood Pole	4.8	5.0	1.5	3.0	13.1	13.9					12.0	28								1			N VALLEY CR RD	
24.731																																	
X				R4-3	36 X 48					5.0	5" Treated Wood Pole		5.0	4.0	3.5	14.1				X	12.0			16						1				SLOWER TRAFFIC KEEP RIGHT	
24.831																																	
		X		W10-3	36 X 36					5.0	4" Treated Wood Pole		5.0	3.0	3.0	12.6				BGR	9.0		14								1					
24.945																																	
X				D3 (2x)	42 X 10			MBB		6.0	5" Treated Wood Pole		5.0	3.9	3.5	13.7				X	5.8			14						1				N VALLEY CR RD	
				R1-1	36 X 36																7.5												STOP	
25.000																																	
X				D10-2	10 X 27					4.0	2.0lb Steel U Post		4.0	2.3	3.0	10.0					1.9								20		1				MILE 25	
25.000																																	
X				N7-1	36 X 48					20.0	5" Treated Wood Pole		5.0	4.0	3.5	16.1				X	12.0			18						1				ADOPT A HIGHWAY	
25.000																																	
		X		D10-2	10 X 27					4.0	2.0lb Steel U Post		4.0	2.3	3.0	10.0					1.9								20		1				MILE 25	
25.000																																	
		X		N7-1	36 X 48					20.0	5" Treated Wood Pole		5.0	4.0	3.5	16.1				X	12.0			18												ADOPT A HIGHWAY	NEW
25.030																																	
		X		RA-3	12 X 18					ROW Boundary	2.0lb Steel U Post		3.0	1.5	3.0	7.5					1.5								15		1				ACCESS RESTRICTED	
25.060																																	
X				W10-3	36 X 36					10.0	4" Treated Wood Pole		5.0	4.1	3.0	14.0					9.0		14								1					
25.110																																	
		X		W13-20																														YOUR SPEED 42	USE AS IS
25.200																																	
X				G8-25	96 X 18		BBR			5.0	4" Treated Wood Pole	4.8	5.0	1.5	3.0	11.2	12.4			BGR		12.0	26								1			N VALLEY CR RD	

SHEET NO.
S5

SIGN LOCATIONS AND SPECIFICATIONS

PROJECT NAME: US 93 - N VICTOR & S RAVALLI
COUNTY: LAKE (S RAVALLI), RAVALLI (N VICTOR)
PROJECT ID: NH-HSIP 7-1(180)60
UPN: 10374000

DESIGNED BY		REVIEWED BY		CHECKED BY	
L.MOREY	07/2024	R.SCHROEDER	07/2024	N.THOLT	07/2024

10374000SISUM001.DWG

MONTANA Department of Transportation

SIGNING PLANS

3/20/2025 9:30 AM

SIGN LOCATION				SIGN PANEL SPECIFICATIONS						SIGN ASSEMBLY SPECIFICATIONS												SIGN ASSEMBLY QUANTITIES														ADDITIONAL INFORMATION	
STATION		DIRECTION	RAMP NO.	SIGN NO. (MUTCD)	PANEL SIZE (INCHES)	FY OR FYG	BACK BRACING REQ'D ANGLE IRON REQ'D	MOUNT BACK TO BACK	REPLACE SIGN FACE ONLY	FEET	TYPE OF SUPPORT	FEET						CANTILEVER	BREAKAWAY TYPE	BEHIND GUARDRAIL	PANEL (SQ. FT.)		WOOD POLE (LNR. FT.)			STEEL POST (LBS.)				# OF BREAKAWAYS	REMOVE		RESET		SIGN IMAGE	SIGN STATUS & REMARKS
LFT	MDN	RGT			W X H					CLEARANCE/OFFSET (SHOULDER TO EDGE OF SIGN)		SIGN SUPPORT SPACING	MOUNTING HEIGHT	SIGN HEIGHT + GAPS	FOUNDATION DEPTH	SUPPORT LENGTH (ESTIMATED) X	Y	Z				SHEET ALUMINUM	SHEET ALUMINUM INCREMENT	4" TOP DIA.	5" TOP DIA.	6" TOP DIA.	ROUND TUBULAR	SQUARE TUBULAR	STRUCTURAL STEEL	"U" POST		SIGN	GUIDE	SIGN	GUIDE		
25.240																																					
		X		W8-12A																																ICY SPOTS NEXT 5 MI	USE AS IS (Hinged) (ACTUAL SIGN "NEXT 1/2 MI")
25.300																																					
X				RA-3	12 X 18					ROW Boundary	2.0lb Steel U Post		3.0	1.5	3.0	7.5				BGR	1.5								15		1				ACCESS RESTRICTED	
25.311																																					
		X		W1-2R																																	USE AS IS
25.325																																					
X				W1-8 (2x)	24 X 30	FY		MBB		10.0	5" Treated Wood Pole		7.0	2.5	3.5	15.8				BGR	10.0			16							1					
25.355																																					
X				W1-8 (2x)	24 X 30	FY		MBB		10.0	5" Treated Wood Pole		7.0	2.5	3.5	15.8				BGR	10.0			16							1					
25.385																																					
X				W1-8 (2x)	24 X 30	FY		MBB		10.0	5" Treated Wood Pole		7.0	2.5	3.5	15.8				BGR	10.0			16							1					
25.415																																					
X				W1-8 (2x)	24 X 30	FY		MBB		10.0	5" Treated Wood Pole		7.0	2.5	3.5	15.8				BGR	10.0			16							1					
25.440																																					
X				W1-8 (2x)	24 X 30	FY		MBB		10.0	5" Treated Wood Pole		7.0	2.5	3.5	15.8				BGR	10.0			16							1					
25.470																																					
X				W1-8 (2x)	24 X 30	FY		MBB		10.0	5" Treated Wood Pole		7.0	2.5	3.5	15.8				BGR	10.0			16							1					
25.499																																					
X				W1-8 (2x)	24 X 30	FY		MBB		10.0	5" Treated Wood Pole		7.0	2.5	3.5	15.8				BGR	10.0			16							1					
25.530																																					
X				W1-8 (2x)	24 X 30	FY		MBB		10.0	5" Treated Wood Pole		7.0	2.5	3.5	15.8				BGR	10.0			16							1					
25.561																																					
X				W1-8	24 X 30	FY				10.0	5" Treated Wood Pole		7.0	2.5	3.5	15.8				BGR	5.0			16							1					
25.551																																					
		X		D17-4	60 X 54		BBR			20.0	5" Treated Wood Pole	3.0	5.0	4.5	3.5	16.5	17.0		X				22.5		36								1				PASSING LANE 2 MILES	
25.606																																					
		X		RA-3	12 X 18					ROW Boundary	2.0lb Steel U Post		3.0	1.5	3.0	7.5					1.5								15		1				ACCESS RESTRICTED	
25.605																																					
X				W1-2L	36 X 36	FY				5.0	4" Treated Wood Pole		5.0	4.1	3.0	13.7				BGR	9.0		14									1					
25.641																																					
		X		W1-2L	36 X 36	FY				10.0	4" Treated Wood Pole		5.0	4.1	3.0	14.0					9.0		14									1					
25.681																																					
		X		W8-12B	36 X 36					5.0	4" Treated Wood Pole		5.0	4.1	3.0	13.7				BGR	9.0		14									1				WATCH FOR ICE ON BRIDGES	(Hinged)
25.706																																					
		X		W1-8																																	USE AS IS
25.741																																					
		X		W1-8																																	USE AS IS
25.787																																					
		X		W1-8																																	USE AS IS

SHEET NO.
S6

SIGN LOCATIONS AND SPECIFICATIONS

PROJECT NAME: US 93 - N VICTOR & S RAVALLI
COUNTY: LAKE (S RAVALLI), RAVALLI (N VICTOR)
PROJECT ID: NH-HSIP 7-1(180)60
UPN: 10374000

DESIGNED BY		REVIEWED BY		CHECKED BY	
L MOREY	07/2024	R SCHROEDER	07/2024	N THOLT	07/2024

10374000SIGSUM001.DWG

MONTANA Department of Transportation

SIGNING PLANS

3/20/2025 9:30 AM

SIGN LOCATION				SIGN PANEL SPECIFICATIONS						SIGN ASSEMBLY SPECIFICATIONS												SIGN ASSEMBLY QUANTITIES														ADDITIONAL INFORMATION	
STATION		DIRECTION	RAMP NO.	SIGN NO. (MUTCD)	PANEL SIZE (INCHES)	FY OR FYG	BACK BRACING REQ'D ANGLE IRON REQ'D	MOUNT BACK TO BACK	REPLACE SIGN FACE ONLY	FEET		FEET							CANTILEVER	BREAKAWAY TYPE	BEHIND GUARDRAIL	PANEL (SQ. FT.)		WOOD POLE (LNR. FT.)			STEEL POST (LBS.)				# OF BREAKAWAYS	REMOVE		RESET		SIGN IMAGE	SIGN STATUS & REMARKS
LFT	MDN	RGT			W X H					CLEARANCE/OFFSET (SHOULDER TO EDGE OF SIGN)	TYPE OF SUPPORT	SIGN SUPPORT SPACING	MOUNTING HEIGHT	SIGN HEIGHT + GAPS	FOUNDATION DEPTH	SUPPORT LENGTH (ESTIMATED) X	Y	Z				SHEET ALUMINUM	SHEET ALUMINUM INCREMENT	4" TOP DIA.	5" TOP DIA.	6" TOP DIA.	ROUND TUBULAR	SQUARE TUBULAR	STRUCTURAL STEEL	"U" POST		SIGN	GUIDE	SIGN	GUIDE		
25.812																																					
		X		W1-8																																	USE AS IS
25.842																																					
		X		W1-8																																	USE AS IS
25.860																																					
X				W8-12B	36 X 36					5.0	4" Treated Wood Pole		5.0	4.1	3.0	13.7					BGR	9.0		14								1					(Hinged)
25.877																																					
		X		W1-8																																	USE AS IS
25.912																																					
		X		W1-8																																	USE AS IS
25.947																																					
		X		W1-8																																	USE AS IS
25.950																																					
X				RA-3	12 X 18					ROW Boundary	2.0lb Steel U Post		3.0	1.5	3.0	7.5						1.5								15		1					
25.982																																					
		X		W1-8																																	USE AS IS
25.992							BBR													X			22.0		32						1					(Hinged)
		X		R99-1a	66 X 48					10.0	5" Treated Wood Pole	3.3	5.0	4.0	3.5	14.3	14.9																				
26.000																																					
		X		D10-2	10 X 27					4.0	2.0lb Steel U Post		4.0	2.3	3.0	10.4					BGR	1.9								22		1					
26.000																																					
X				D10-2	10 X 27					4.0	2.0lb Steel U Post		4.0	2.3	3.0	10.4						1.9								22							NEW
26.015																																					
		X		W1-8																																	USE AS IS
26.050																																					
		X		W1-8																																	USE AS IS
26.085																																					
		X		W1-8																																	USE AS IS
26.165																																					
X				W1-2R	36 X 36	FY				5.0	4" Treated Wood Pole		5.0	4.1	3.0	13.7					BGR	9.0		14								1					
26.250																																					
		X		RA-3	12 X 18					ROW Boundary	2.0lb Steel U Post		3.0	1.5	3.0	7.5						1.5								15		1					
26.365																																					
X				W8-12A							Flasher Pole																											USE AS IS (Hinged) (ACTUAL SIGN "NEXT 1 MI")
26.491							BBR													X			22.0		32						1					(Hinged)
		X		R99-1b	66 X 48					10.0	5" Treated Wood Pole	3.3	5.0	4.0	3.5	14.3	14.9																				
26.551																																					
		X		W3-5	36 X 36					10.0	4" Treated Wood Pole		5.0	4.1	3.0	14.0						9.0		14								1					
26.540																																					
X				RA-3	12 X 18					ROW Boundary	2.0lb Steel U Post		3.0	1.5	3.0	7.5						1.5								15		1					

SHEET NO.
S7

SIGN LOCATIONS AND SPECIFICATIONS

PROJECT NAME: US 93 - N VICTOR & S RAVALLI
COUNTY: LAKE (S RAVALLI), RAVALLI (N VICTOR)
PROJECT ID: NH-HSIP 7-1(180)60
UPN: 10374000

DESIGNED BY: L MOREY 07/2024
REVIEWED BY: R SCHROEDER 07/2024
CHECKED BY: N THOLT 07/2024

MONTANA Department of Transportation

SIGNING PLANS

3/20/2025 9:30 AM

10374000SISUM001.DWG

SIGN LOCATION				SIGN PANEL SPECIFICATIONS						SIGN ASSEMBLY SPECIFICATIONS													SIGN ASSEMBLY QUANTITIES															ADDITIONAL INFORMATION	
STATION / R.P.		DIRECTION	RAMP NO.	SIGN NO. (MUTCD)	PANEL SIZE (INCHES)	FY OR FYG	BACK BRACING REQ'D ANGLE IRON REQ'D	MOUNT BACK TO BACK	REPLACE SIGN FACE ONLY	FEET			FEET						CANTILEVER	BREAKAWAY TYPE	BEHIND GUARDRAIL	PANEL (SQ. FT.)		WOOD POLE (LNR. FT.)			STEEL POST (LBS.)				# OF BREAKAWAYS	REMOVE		RESET		SIGN IMAGE	SIGN STATUS & REMARKS
LFT	MDN	RGT			W X H					CLEARANCE/OFFSET (SHOULDER TO EDGE OF SIGN)	TYPE OF SUPPORT	SIGN SUPPORT SPACING	MOUNTING HEIGHT	SIGN HEIGHT + GAPS	FOUNDATION DEPTH	SUPPORT LENGTH (ESTIMATED) X	Y	Z				SHEET ALUMINUM	SHEET ALUMINUM INCREMENT	4" TOP DIA.	5" TOP DIA.	6" TOP DIA.	ROUND TUBULAR	SQUARE TUBULAR	STRUCTURAL STEEL	"U" POST		SIGN	GUIDE	SIGN	GUIDE		
26.605																																					
X				D17-4	60 X 54		BBR			20.0	5" Treated Wood Pole	3.0	5.0	4.5	3.5	16.5	17.0			X			22.5		36								1			PASSING LANE 2 MILES	
26.606																																					
		X		W10-2	36 X 36					10.0	4" Treated Wood Pole		5.0	4.1	3.0	14.0						9.0		14								1					REMOVE - RR XING TEE INTERSECTION, NEW - RR XING CROSS INTERSECTION
26.661																																					
		X		R2-1	36 X 48					10.0	5" Treated Wood Pole		5.0	4.0	3.5	14.4				X		12.0			16							1				SPEED LIMIT 45	
26.685																																					
X				R2-1	36 X 48					10.0	5" Treated Wood Pole		5.0	4.0	3.5	14.4				X		12.0			16							1				SPEED LIMIT 60	
26.742																																					
		X		R99-1cR	72 X 48		BBR			10.0	5" Treated Wood Pole	3.7	5.0	4.0	3.5	14.4	15.0			X			24.0		32								1				MANDATORY WATERCRAFT INSPECTION →	(Hinged)
Site 2: North of Victor																																					
69.382																																					
		X		W1-2R	36 X 36	FY				10.0	4" Treated Wood Pole		5.0	4.1	3.0	14.0						9.0		14													NEW
69.441																																					
X				RA-3	12 X 18					ROW Boundary	2.0lb Steel U Post		3.0	1.5	3.0	7.5						1.5								15		1					
69.673																																					
		X		N6-99	36 X 18					5.0	4" Treated Wood Pole		5.0	1.5	3.0	10.6					BGR	4.5		12								1				DAWN'S CROSSING	
69.681																																					
X				N6-99	36 X 18					5.0	4" Treated Wood Pole		5.0	1.5	3.0	10.6					BGR	4.5		12								1				DAWN'S CROSSING	
69.738																																					
		X		RA-3	12 X 18					ROW Boundary	2.0lb Steel U Post		3.0	1.5	3.0	7.5						1.5								15		1					
69.876																																					
X				W1-2L	36 X 36	FY				10.0	4" Treated Wood Pole		5.0	4.1	3.0	14.0						9.0		14													NEW
PROJECT TOTALS																						533.6	218.5	464	608	18			589		81	9					

SHEET NO.
S8

SIGN LOCATIONS AND SPECIFICATIONS

PROJECT NAME: *US 93 - N VICTOR & S RAVALLI*
COUNTY: *LAKE (S RAVALLI), RAVALLI (N VICTOR)*
PROJECT ID: *NH-HSIP 7-1(180)60*
UPN: *10374000*

DESIGNED BY		REVIEWED BY		CHECKED BY	
L.MOREY	07/2024	R.SCHROEDER	07/2024	N.THOLT	07/2024

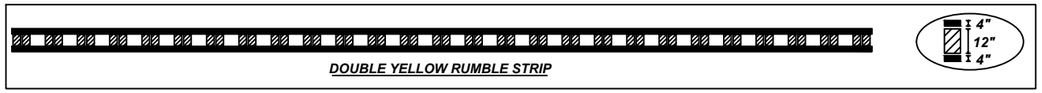
MONTANA
Department of Transportation

SIGNING PLANS

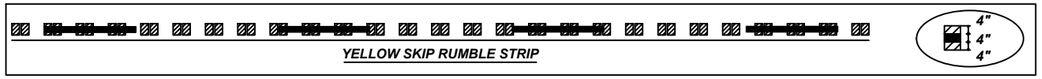
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3/20/2025 9:30 AM

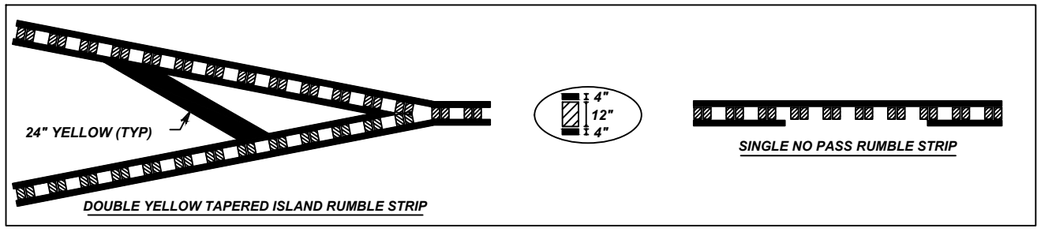
TYPICAL RURAL CENTERLINE PAVEMENT MARKINGS AND RUMBLE STRIPS. SEE ROAD DESIGN PLANS FOR RUMBLE STRIP QUANTITY (IF USED)



DOUBLE YELLOW RUMBLE STRIP

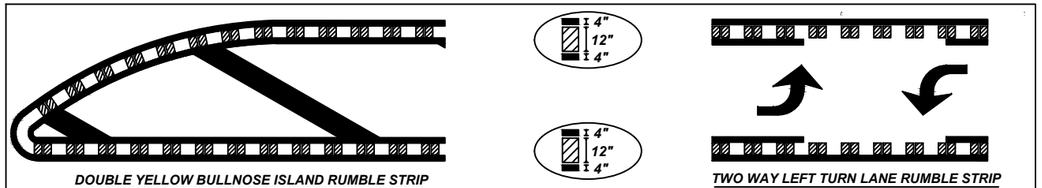


YELLOW SKIP RUMBLE STRIP



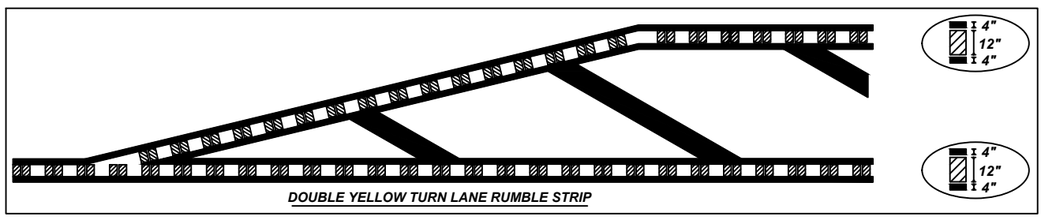
DOUBLE YELLOW TAPERED ISLAND RUMBLE STRIP

SINGLE NO PASS RUMBLE STRIP

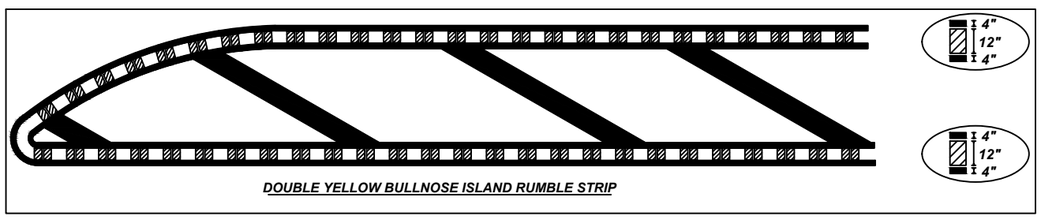


DOUBLE YELLOW BULLNOSE ISLAND RUMBLE STRIP

TWO WAY LEFT TURN LANE RUMBLE STRIP



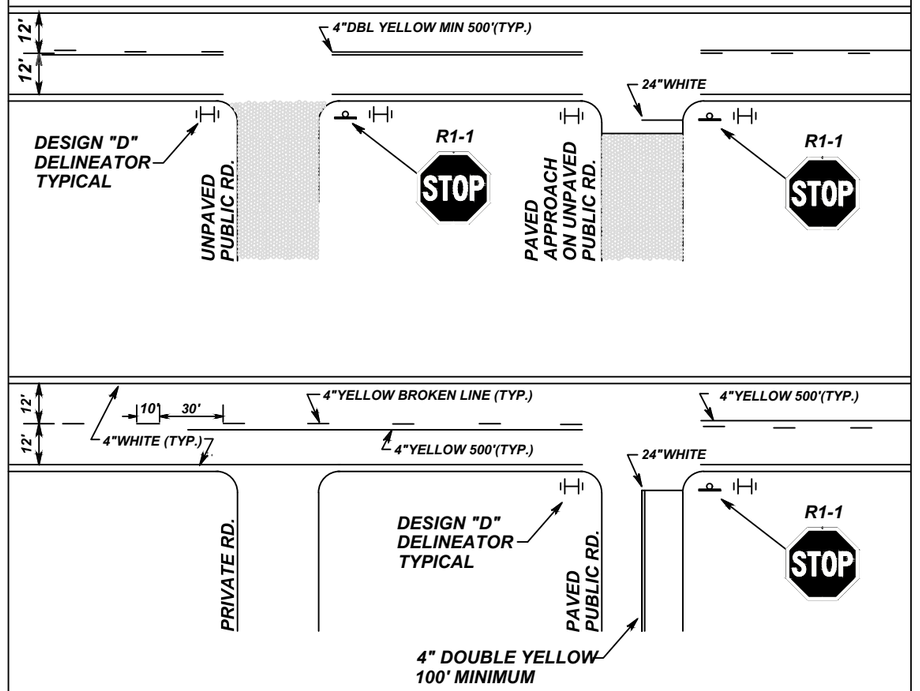
DOUBLE YELLOW TURN LANE RUMBLE STRIP



DOUBLE YELLOW BULLNOSE ISLAND RUMBLE STRIP

TYPICAL RURAL PAVEMENT MARKINGS

NO SCALE



NOTE: *FINAL CENTERLINE CONFIGURATION AND NO PASSING ZONES TO BE DETERMINED BY THE PROJECT MANAGER.*

ALL PAVEMENT MARKINGS TO BE EPOXY UNLESS OTHERWISE SPECIFIED.

NOTES:

1. *SEE CENTERLINE RUMBLE STRIPS DTL. DWG. NO. 411-05 FOR ADDITIONAL INFORMATION.*
2. *ALL PAVEMENT MARKINGS ARE TO CONFORM TO THE REQUIREMENTS OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AND "STANDARD HIGHWAY SIGNS" PUBLICATIONS, FROM THE FEDERAL HIGHWAY ADMINISTRATION.*
3. *SEE CENTERLINE PAVEMENT MARKINGS FOR RURAL HIGHWAYS MEMO DATED JUNE 18, 2019 FOR APPLICATION METHODOLOGY*
4. *DASHED LINES WILL HAVE A 10:30 SKIP IN RURAL LOCATIONS, AND A 9:15 SKIP IN URBAN LOCATIONS*

SHEET NO.
S9

DETAIL

PROJECT NAME: US 93 - N VICTOR & S RAVALLI
COUNTY: LAKE (S RAVALLI), RAVALLI (N VICTOR)
PROJECT ID: NH-HSIP 7-1(180)60
UPN: 10374000

DESIGNED BY	07/2024	L.MOREY	
REVIEWED BY	07/2024	R.SCHROEDER	
CHECKED BY	07/2024	N.THOLT	

MONTANA Department of Transportation

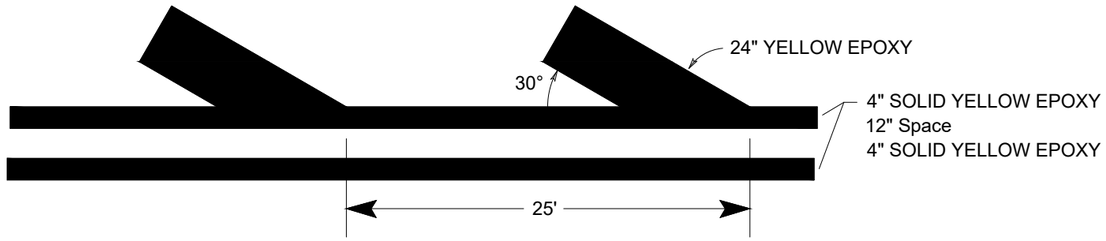
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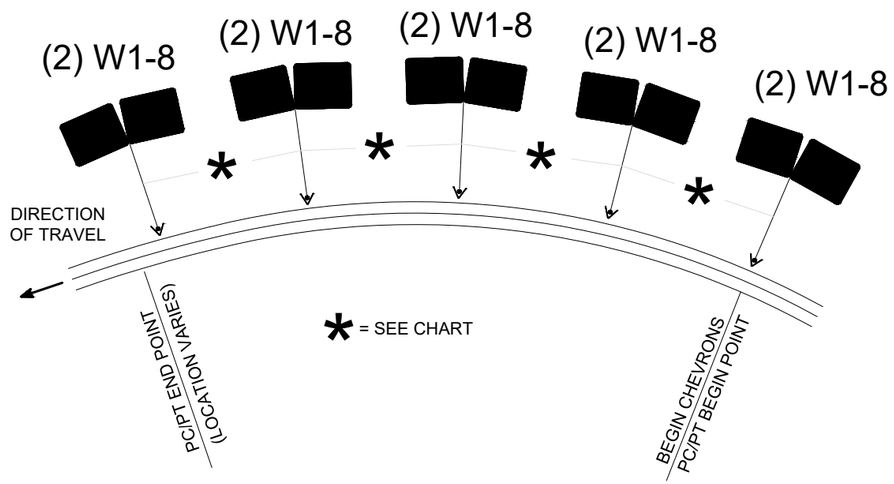
YELLOW PAINTED MEDIAN DETAIL

NO SCALE



CHEVRON PLACEMENT DETAIL

(GUIDANCE ONLY)



CURVE RADIUS	SIGN SPACING		R.P. CONVERSION
<200'	40'	=	.008±
200' - 400'	80'	=	.015±
401' - 700'	120'	=	.023±
701' - 1250'	160'	=	.030±
>1250'	200'	=	.038±

1) SEE SPEC SHEET FOR CHEVRON PLACEMENT

2) USE BEGINNING OF CURVE LOCATION AS REFERENCE POINT TO INSTALL CHEVRONS (BEGIN POINT - ALWAYS ON OUTSIDE OF CURVE IN DIRECTION OF TRAVEL)

SHEET NO.
S10

DETAIL

PROJECT NAME
US 93 - N VICTOR & S RAVALLI

COUNTY
LAKE (S RAVALLI), RAVALLI (N VICTOR)

PROJECT ID
NH-HSIP 7-1(180)60

UPN
10374000

DESIGNED BY L MOREY 07/2024
REVIEWED BY R SCHROEDER 07/2024
CHECKED BY N THOLT 07/2024

MONTANA
Department of Transportation

SIGNING PLANS

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