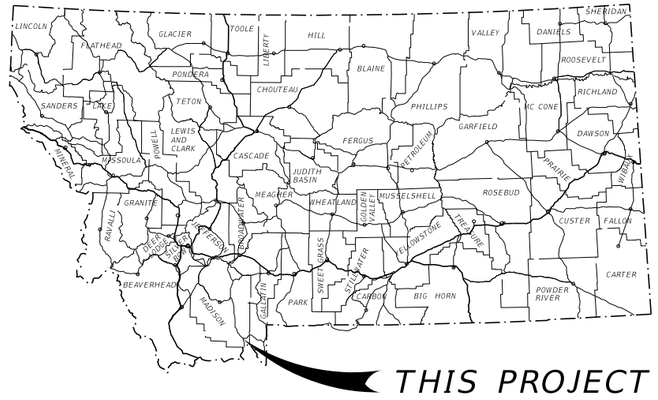
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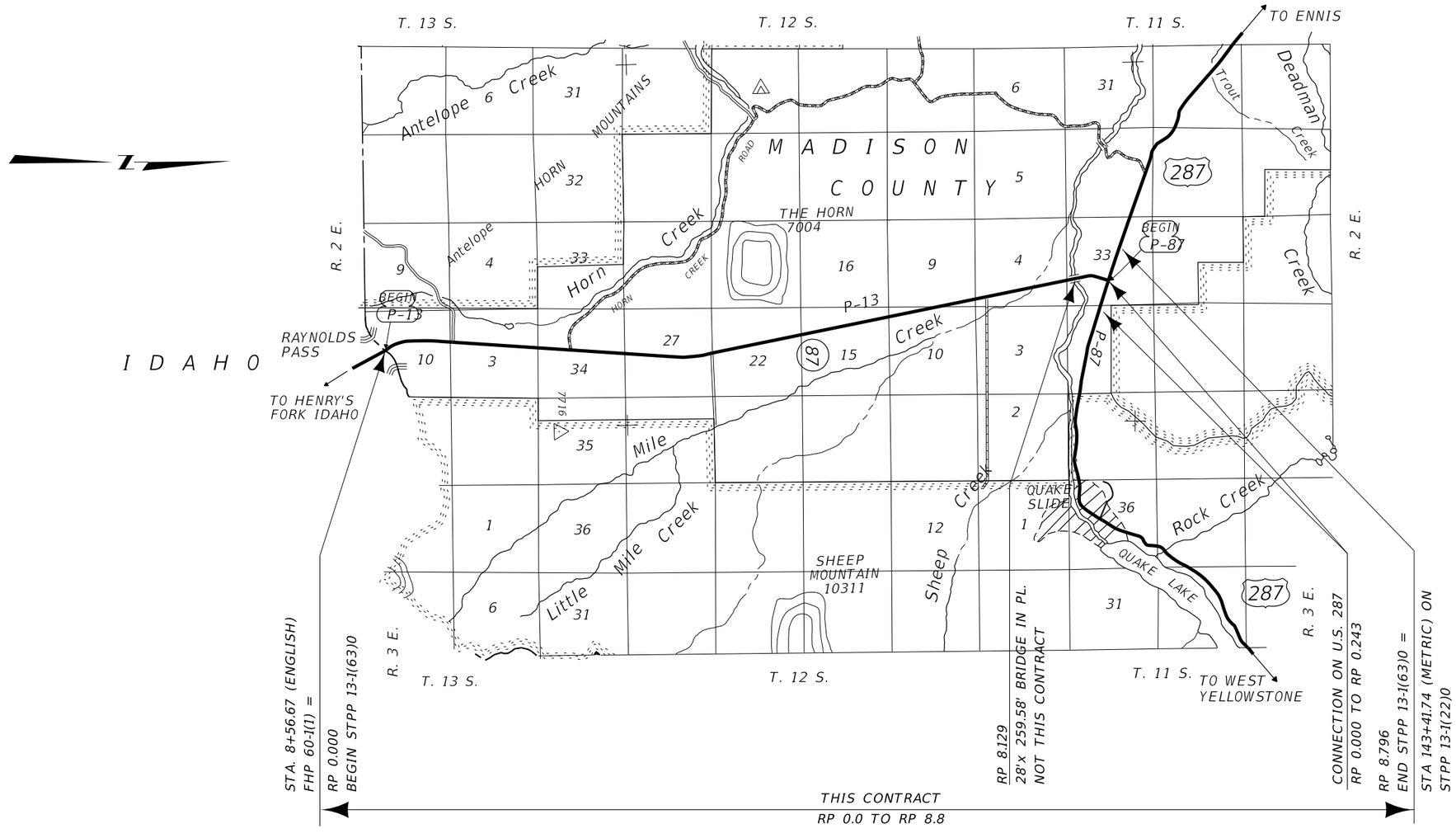
MONTANA DEPARTMENT OF TRANSPORTATION

FEDERAL AID PROJECT STPP 13-1(63)0
CRACK SEAL, SEAL AND COVER
RAYNOLDS PASS-NORTH
MADISON COUNTY

PROJECT DESIGN DATA		
PRESENT 2023	A.D.T. =	1,600
LETTING 2023	A.D.T. =	1,600
DESIGN 2043	A.D.T. =	3,180
	D.H.V. =	400
	TRUCKS =	26.0%
	V. =	60 mph
	18 KIP ESAL'S =	287
	GROWTH RATE =	3.5%

LENGTH 8.8 MILES

SURFACING SOURCES –
CONTRACTOR FURNISHED



3	MONTANA Department of Transportation	C:\DGN\10266000rdtl001.dgn	DESIGNED BY	R. WIANT	12/28/2022
2		5/11/2023	REVIEWED BY	J. BRAZILL	03/14/2023
		2:58:18 PM CPS – U1150	CHECKED BY	T. JOHNSON	3/21/2023

ROAD PLANS

UPN 10266000

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NOTES

BASIS OF PLAN QUANTITIES

(QUANTITIES FOR ESTIMATING PURPOSES ONLY)

COMP. AGGREGATE WEIGHT	= 3700 LBS. PER CUBIC YARD
BITUMINOUS MATERIAL	= 8.5 LBS. PER GAL.
SEAL	= 0.42 GAL. PER SQ.YARD
COVER	= 25 LBS. PER SQ.YARD
CRACK SEALANT	= 0.5 LBS. PER LINEAR FEET
CRACK FILLING - MASTIC	= 1.5 LBS. PER LINEAR FEET

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.

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.

LINEAR DATA

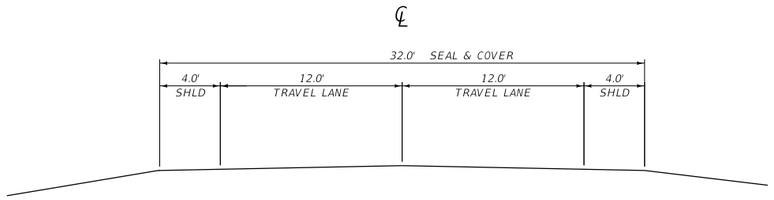
LENGTH OF ROADWAY	MADISON COUNTY	2 LANE RURAL	46,184.16 ft
LENGTH OF BRIDGE (NOT THIS CONTRACT)	MADISON COUNTY	2 LANE RURAL	259.58 ft
TOTAL LENGTH OF	STPP 13-1(63)0	2 LANE RURAL	46,443.74 ft

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TYPICAL SECTION NO. 1

MAINLINE

RP 0.000 TO RP 8.039
RP 8.039 TO RP 8.104 BE TRANS. TYP. SECT. NO. 1 TO TYP. SECT. NO. 2
RP 8.211 TO RP 8.607

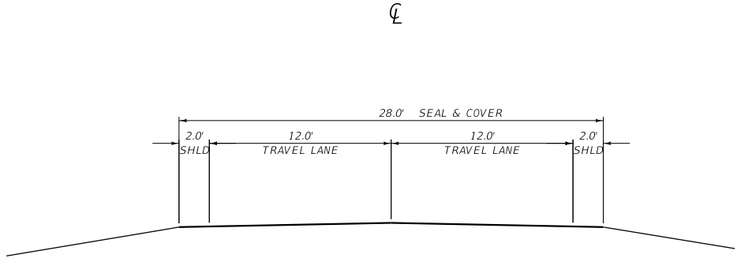


QUANTITIES			
UNIT	AGGREGATE COVER	UNIT	BITUMINOUS MATERIAL SEAL
AREA square feet		square yards PER STATION	356
cubic yards PER STATION		tons PER STATION	0.64
tons PER STATION		gals. PER STATION	
square yards PER STATION	356		

TYPICAL SECTION NO. 2

MAINLINE

RP 8.153 BE TO RP 8.211 TRANS. TYP. SECT. NO. 2 TO TYP. SECT. NO. 1



QUANTITIES			
UNIT	AGGREGATE COVER	UNIT	BITUMINOUS MATERIAL SEAL
AREA square feet		square yards PER STATION	311
cubic yards PER STATION		tons PER STATION	0.56
tons PER STATION		gals. PER STATION	
square yards PER STATION	311		

AWARD COPY

SUMMARY

SURFACING

REFERENCE POSTS FROM	REFERENCE POSTS TO	linear feet GROSS	linear feet NET	linear feet +	linear feet -	FOR	AGGREGATE sq. yards COVER TYPE 1	BITUMINOUS MATERIAL tons EMULSIFIED ASPHALT CHFRS-2P	REMARKS
0.000	8.039	42,445.92	42,445.92				151,107	271.7	TYPICAL SECTION NO. 1
8.039	8.104	343.20	343.20				1,145	2.1	TRANS. TYP. NO. 1 TO TYP. NO. 2
8.104 BE	8.153 BE	259.58			259.58	BRIDGE			
8.153	8.211	306.24	306.24				1,021	1.8	TRANS. TYP. NO. 2 TO TYP. NO. 1
8.211	8.607	2,090.88	2,090.88				7,444	13.4	TYPICAL SECTION NO. 1
8.607	8.796	997.92	997.92				7,179	12.8	MEASURED IN CADD, RADII INCLUDED
						ADDITIONAL SURFACING	10,782	19.3	
TOTAL		46,443.74	46,184.16	~	259.58		178,678	321.1	

ADDITIONAL SURFACING (INCLUDED IN SURFACING FRAME)

REFERENCE POSTS FROM	REFERENCE POSTS TO	linear feet GROSS	linear feet NET	linear feet +	linear feet -	FOR	AGGREGATE sq. yards COVER TYPE 1	BITUMINOUS MATERIAL tons EMULSIFIED ASPHALT CHFRS-2P	REMARKS
8.000	8.060					PARKING AREA - RT	1,880	3.4	MEASURED IN CADD
8.323	8.411					MAINTENANCE AREA - LT	2,120	3.8	MEASURED IN CADD
0.000	0.243					CONNECTION U.S. 287, P-87	6,782	12.1	MEASURED IN CADD, RADII INCLUDED
SUBTOTAL		~	~	~	~		10,782	19.3	

PAVEMENT MARKINGS

ITEM	UNIT	INTERIM APPLICATION #	FINAL APPLICATION	TOTAL
STRIPING - WHITE PAINT	gallon	307		307
STRIPING - YELLOW PAINT	gallon	153		153
WORDS & SYMBOLS - WHITE PAINT	gallon	2		2
STRIPING - WHITE EPOXY	gallon		409	409
STRIPING - YELLOW EPOXY	gallon		203	203
WORDS & SYMBOLS - WHITE EPOXY	gallon		2	2
FINAL SWEEP AND BROOM	course mile			8.8

BASED ON SINGLE APPLICATION. IF MORE THAN ONE APPLICATION IS NEEDED, MULIPLY INTERIM QUANTITIES BY THE NUMBER OF APPLICATIONS NEEDED.

GUARDRAIL

REFERENCE POSTS FROM	REFERENCE POSTS TO	linear feet REMOVE GUARDRAIL LEFT	linear feet REMOVE GUARDRAIL RIGHT	linear feet MGS GUARDRAIL LEFT	linear feet MGS GUARDRAIL RIGHT	each MASH W-BEAM TERMINAL SECTION LEFT	each MASH W-BEAM TERMINAL SECTION RIGHT	each GUARDRAIL END SECTION WIDENING LEFT	each GUARDRAIL END SECTION WIDENING RIGHT	REMARKS
NEW RAIL										
8.409	8.532			550.0		2		2		
REMOVE RAIL										
8.409	8.532	650.0								
SUBTOTAL		650.0	~	550.0	~	2	~	2	~	
TOTAL		650.0		550.0		2		2		

CRACK SEALING *

REFERENCE POSTS FROM	REFERENCE POSTS TO	TRANSVERSE & LONGITUDINAL CRACK SEALING: CRACK SEALING NEW pounds	CRACK SEALING NEW linear feet	CRACK FILLING - MASTIC ** NEW pounds	CRACK FILLING - MASTIC ** NEW linear feet	REMARKS
0.000	8.800	5,600	11,200	1,000	667	
TOTAL		5,600	#	1,000	#	

* SEE DETAIL SHEET
** IN ACCORDANCE WITH ASTM-D8260-20
# FOR INFORMATION ONLY

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DETAIL

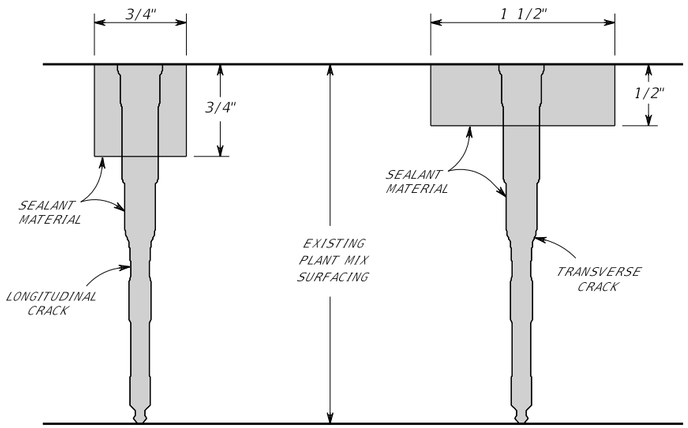
CRACKS 1/8" TO 1" WIDE

LONGITUDINAL CRACK

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

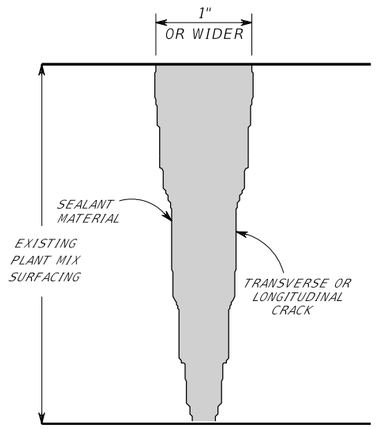
TRANSVERSE CRACK

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



CRACKS 1" OR WIDER
MASTIC REQUIRED

LEAVE EXISTING CRACK SEAL IN PLACE



DETAIL

CRACK SEALING

NO SCALE

AWARD COPY

DETAIL



DETAIL

CONNECTION

NO SCALE

2	MONTANA Department of Transportation	C:\DGN\10266000rdsum001.dgn	DESIGNED BY	R. WIANT	12/28/2022	ROAD PLANS		RAYNOLDS PASS-NORTH	STPP 13-1(63)0
1		5/11/2023	REVIEWED BY					UPN 10266000	6
		2:58:55 PM CPS - U1150	CHECKED BY			MADISON COUNTY			