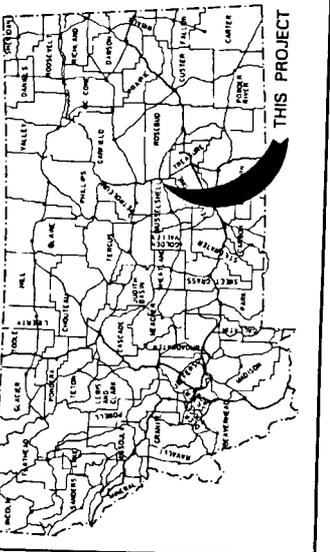


MONTANA DEPARTMENT OF TRANSPORTATION

FEDERAL AID PROJECT STPP 14-5(16)196 GRADE, GRAVEL & PLANT MIX SURFACING MELSTONE EAST & WEST MUSSELSHELL COUNTY



DESIGN DATA	
200' ADT. = 240	
200' ADT. = 260	
D.H.V. = 40	
T. = 38.7%	
V. = 100 ft/mile	
899 sq. ft. = 1.00 acre	
GROWTH RATE = 1.0%	

LETTING DATE _____

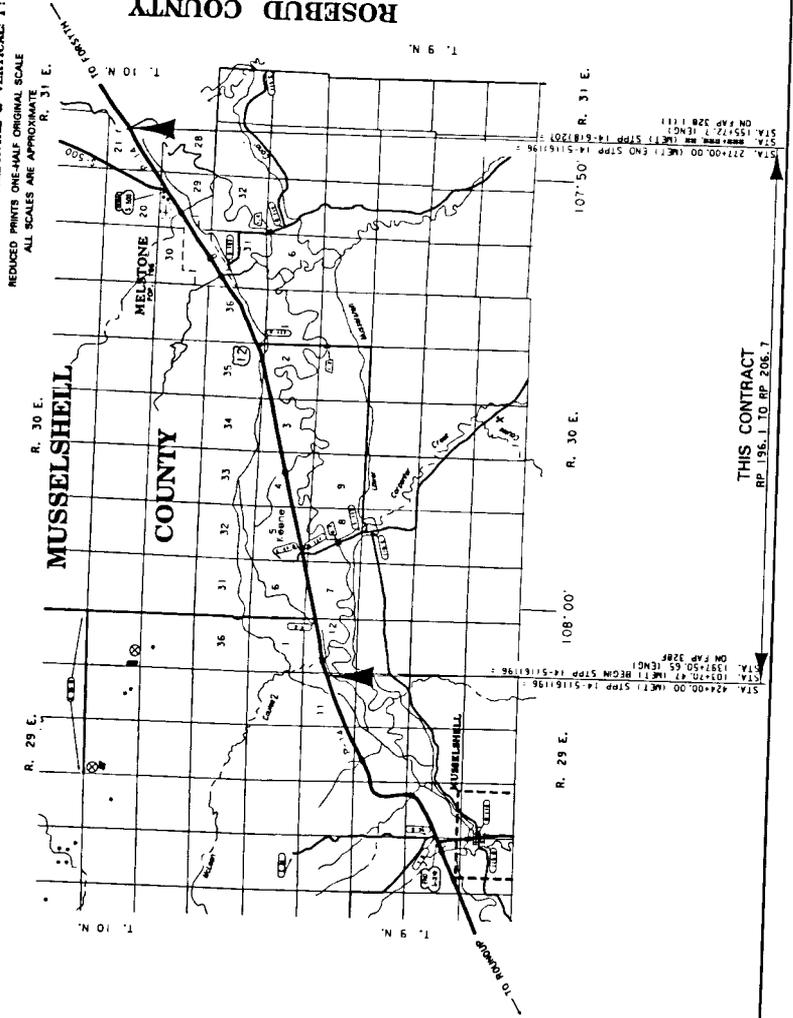
2002-90-64

COE-HLNA
OCT 10 2002

LENGTH 17.3 kilometers

SCALES
VERTICAL: 1: 100
HORIZONTAL: 1: 1000
CROSS SECTION - HORIZONTAL & VERTICAL: 1: 100
REDUCED PRINTS ONE-HALF ORIGINAL SCALE
ALL SCALES ARE APPROXIMATE

SURFACING SOURCES - CONTRACTOR FURNISHED



RELATED PROJECTS	
ASSOCIATED PROJECT AGREEMENT NUMBERS	
P.W. & I.C.	STPP 14-5(16)196
P.E.	STPP 14-5(16)196
CONTROL NO. 287	

PRELIMINARY
FOR PLAN IN HAND ONLY

MONTANA DEPARTMENT OF TRANSPORTATION	
APPROVED:	DATE: _____
DAVID A. GALT DIRECTOR OF TRANSPORTATION	
BY: _____ PRECONSTRUCTION ENGINEER	
U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION	
APPROVED:	DATE: _____
DIVISION ADMINISTRATOR	

THIS CONTRACT
RP 196.1 TO RP 206.7

Wetland/Stream Summary Table

Stream Type or Feature	Approximate Station	Legal Description	Summary of Proposed Work	Approximate Jurisdictional Wetland Impact Areas/Fill Volumes
McLean Coulee (Wetland 112+60 LR)	112+60	T9N, R29E, NW ¼ Sec. 12	Remove existing 9.4 m x 17.4 m pile bridge at 112+55. Install a 4200 mm x 3000 mm x 41.5 m reinforced concrete box at 112+60. Proposed work includes inlet and outlet concrete cut-off walls, concrete edge protection at inlet, riprap edge protection at outlet.	Wetland area impacted would be 0.045 ha (0.111 ac), with 660 cubic meters (863 cubic yards) of fill material. Additional fill volumes at this crossing include 59.5 cubic meters (77.8 cubic yards) of concrete, 81.5 cubic meters (106.6 cubic yards) of bedding material, and 1.5 cubic meters (2.0 cubic yards) of Class I riprap.
Unnamed drainage	114+70	T9N, R29E, NW ¼ Sec. 12	Remove existing 9.45 m x 3.35 m pile bridge. Install a 1485 mm x 915 mm x 35.0 m reinforced concrete pipe arch.	No jurisdictional wetland impacts proposed.
Unnamed drainage	154+20	T9N, R30E, SE ¼ Sec. 5	No existing pipes at this location. Install a 900 mm x 38.5 m reinforced concrete pipe and a 900 mm x 27.0 m reinforced concrete pipe under road and through railroad grade.	No jurisdictional wetland impacts proposed. Fill volumes at this crossing include 4.9 cubic meters (6.4 cubic yards) of concrete.
Unnamed drainage (Wetland 158.4 LR)	158+47	T9N, R30E, SE ¼ Sec. 5	Remove existing 9.45 m x 3.35 m timber stringer bridge at 158+35. Install a 1855 mm x 1145 mm x 35.0 m reinforced	Wetland area impacted would be 0.011 ha (0.027 ac), with 150 cubic meters (196 cubic yards) of fill material. Additional fill volumes at this crossing include 16.2 cubic meters (21.2 cubic

Wetland/Stream Summary Table

Stream Type or Feature	Approximate Station	Legal Description	Summary of Proposed Work	Approximate Jurisdictional Wetland Impact Areas/Fill Volumes
			concrete pipe arch at 158+47.	yards) of concrete, 70 cubic meters (91.6 cubic yards) of foundation material, 99 cubic meters (129.5 cubic yards) of bedding material, and 2 cubic meters (2.6 cubic yards) of Class I riprap.
Unnamed drainage (Wetland 170 LR)	170+08	T9N, R30E, NW¼, SE¼ Sec. 4	Remove existing a 9.45 m x 11.58 m pile bridge. Install a 3350 mm x 1200 mm x 25.5 m double cell reinforced concrete box. Proposed work includes inlet and outlet concrete cut-off walls, concrete edge protection at inlet, riprap edge protection at outlet.	Wetland area impacted would be 0.023 ha (0.057 ac), with 135 cubic meters (177 cubic yards) of fill material. Additional fill volumes at this crossing include 49 cubic meters (64 cubic yards) of concrete, 137 cubic meters (179 cubic yards) of foundation material, 79.9 cubic meters (104.5 cubic yards) of bedding material, and 1.5 cubic meters (2.0 cubic yards) of Class I riprap.
Wetland 171 LR	171+00 – 171+90 LR	T9N, R30E, NW¼, SE¼ Sec. 4	Fill placement	Wetland area impacted would be 0.026 ha (0.064 ac), with 700 cubic meters (916 cubic yards) of fill material.
Abandoned meander channel of Musselshell River (Wetland 193.5 LR)	193+49 (Wetland from 189+55 – 193+70 LR)	T9N, R30E, NE¼ Sec. 3	Remove existing 9.45 m x 17.37 m pile bridge at 193+63. Install a 2100 mm x 2100 mm x 34.0 m at 193+49. Proposed work includes inlet and outlet concrete cut-off walls, concrete edge protection at inlet, riprap edge protection at outlet. Grade to drain through abandoned railroad berm.	Wetland area impacted would be 0.699 ha (1.73 ac), with 15,772 cubic meters (20,629 cubic yards) of fill material. Additional fill volumes at this crossing include 5.5 cubic meters (7.2 cubic yards) of concrete, 56 cubic meters (73 cubic yards) of foundation material, 36.3 cubic meters (47.5 cubic yards) of bedding material, and 13.1 cubic meters (17.1 cubic yards) of Class I riprap.

Wetland/Stream Summary Table

Stream Type or Feature	Approximate Station	Legal Description	Summary of Proposed Work	Approximate Jurisdictional Wetland Impact Areas/Fill Volumes
Unnamed drainage	203+69	T9N, R30E, NW¼ NE¼ Sec. 2	Remove existing 914 mm pipe at 203+67. Install a 1200 mm x 34.0 m reinforced concrete pipe at 203+69.	No jurisdictional wetland impacts proposed. Fill volumes at this crossing include 9.6 cubic meters (12.6 cubic yards) of concrete, 63 cubic meters (82 cubic yards) of bedding material, and 1 cubic meters (1.3 cubic yards) of riprap.
Unnamed drainage	209+00	T10N, R30E, SE¼ SE¼ Sec. 35	Remove existing 1219 mm pipe at 209+05. Install a 1110 mm x 675 mm x 31.5 m reinforced concrete pipe arch at 209+00.	No jurisdictional wetland impacts proposed. Fill volumes at this crossing include 4.8 cubic meters (6.3 cubic yards) of concrete.
Unnamed drainage	214+99	T10N, R30E, SW¼ Sec. 36	Remove existing 610 mm pipe. Install a 600 mm x 28.5 m reinforced concrete pipe.	No jurisdictional wetland impacts proposed. Fill volumes at this crossing include 1.8 cubic meters (2.4 cubic yards) of concrete.
Unnamed drainage (Wetland 218+60 LR)	218+69	T10N, R30E, NE¼ SW¼ Sec. 36	Remove existing 9.45 m x 5.79 m pile bridge. Install a 2100 mm x 2100 mm x 32.0 m reinforced concrete box. Proposed work includes inlet and outlet concrete cut-off walls, concrete edge protection at inlet, riprap edge protection at outlet.	Wetland area impacted would be 0.023 ha (0.057 ac), with 280 cubic meters (366 cubic yards) of fill material. Additional fill volumes at this crossing include 28 cubic meters (37 cubic yards) of concrete, 34.7 cubic meters (45.4 cubic yards) of bedding material, and 1.5 cubic meters (2.0 cubic yards) of Class I riprap.
Unnamed drainage (Wetland 233+20 – 238 LR)	233+26	T10N, R31E, NW¼ Sec. 31	Remove existing 9.45 m x 23.17 m pile bridge. Install a 2400 mm x 2100 mm x 30.5 m double cell reinforced concrete box. Proposed work	Wetland area impacted would be 0.018 ha (0.044 ac). Additional fill volumes at this crossing include 52 cubic meters (68 cubic yards) of concrete, 121 cubic meters (158 cubic yards) of foundation material,

Wetland/Stream Summary Table

Stream Type or Feature	Approximate Station	Legal Description	Summary of Proposed Work	Approximate Jurisdictional Wetland Impact Areas/Fill Volumes
			includes inlet and outlet concrete cut-off walls, concrete edge protection at inlet, riprap edge protection at outlet.	71.4 cubic meters (93.4 cubic yards) bedding material, and 1.5 cubic meters (2.0 cubic yards) of Class I riprap.
Unnamed drainage (Wetland 238+20 – 239+00 L)	238+29 (Wetland 238+20 – 239+00 L)	T10N, R31E, NW¼ NE¼ Sec. 31	Remove existing 610 mm pipe. Install a 600 mm x 22.5 m reinforced concrete pipe.	Wetland area impacted would be 0.045 ha (0.111 ac), with 495 cubic meters (647 cubic yards) of fill material. Additional fill volumes at this crossing include 1.5 cubic meters (2.0 cubic yards) of concrete.
Unnamed drainage (Wetland 248+00 – 251+00 R)	249+72 (Wetland 248+00 – 251+00 R)	T10N, R31E, SW¼ Sec. 29	Remove existing 914 mm pipe. Install a 900 mm x 33.0 m reinforced concrete pipe, with outlet riprap apron.	Wetland area impacted would be 0.081 ha (0.200 ac), with 331 cubic meters (433 cubic yards) of fill material. Additional fill volumes at this crossing include 4.2 cubic meters (5.5 cubic yards) of concrete, and 5.4 cubic meters (7.1 cubic yards) of Class I riprap for outlet apron.
Unnamed drainage (Wetland 253+90 LR)	254+04	T10N, R31E, Sec. 29	Remove existing 8.11 m x 11.58 m pile bridge. Install a 3350 mm x 2400 mm x 34.5 m reinforced concrete box. Proposed work includes inlet and outlet concrete cut-off walls, concrete edge protection at inlet, riprap edge protection at outlet.	Wetland area impacted would be 0.011 ha (0.027 ac), with 275 cubic meters (360 cubic yards) of fill material. Additional fill volumes at this crossing include 41 cubic meters (54 cubic yards) of concrete, 95 cubic meters (124 cubic yards) of foundation material, 55.3 cubic meters (72.3 cubic yards) bedding material, and 1.5 cubic meters (2.0 cubic yards) of Class I riprap.
Unnamed drainage	260+13	T10N, R31E, NE¼ Sec. 29	No existing pipes at this location. Install a 600 mm x 22.0 m	No jurisdictional wetland impacts proposed. Fill volumes at this crossing include 0.9 cubic meters

Melstone – East & West
 STPP 14-5(16)196
 (CN# 2152)

Wetland/Stream Summary Table

Stream Type or Feature	Approximate Station	Legal Description	Summary of Proposed Work	Approximate Jurisdictional Wetland Impact Areas/Fill Volumes
			reinforced concrete approach pipe.	(1.2 cubic yards) of concrete (unless plastic option used).
Unnamed drainage	263+15	T10N, R31E, NE¼ Sec. 29	Remove existing 914 mm pipe at 263+19. Install a 900 mm x 29.0 m reinforced concrete pipe at 263+15.	No jurisdictional wetland impacts proposed. Fill volumes at this crossing include 3.7 cubic meters (4.8 cubic yards) of concrete

Notes:

Additional work to install pipes and box culverts would include minor excavation, fill, and grading to facilitate installation and drainage.

Other pipes shown in the plans are for irrigation, approaches, and ditch drains, and are not included in the above table.



