

Existing Structure: Concrete Slab on Steel Beams supported by timber piling at each end and a timber pile center support. 25'-0" Long and 18'-0" Wide.

BM #1 - Chiseled "X" in SW corner of curb, Elev. 100.00

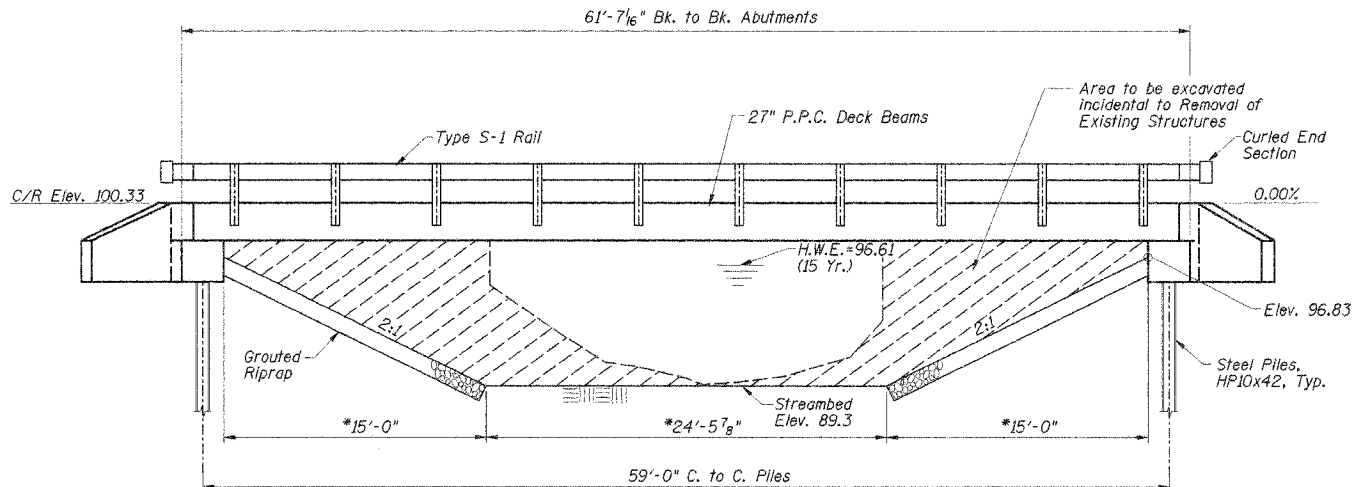
BM #2 - R.R. Spike in E/Road, Sta 10+66, 9' Left, Elev. 98.93

BORING DATA

N - Standard Penetration Test - Blows per foot to drive 2" O.D. split spoon sampler 12" with 140 lb. hammer falling 30".
Qu - Unconfined Compressive Strength - Tons/Sq. Ft.
W - Water Content - Percentage of oven dry weight - %
B - Bulge Failure, S - Shear Failure, E - Estimated Value

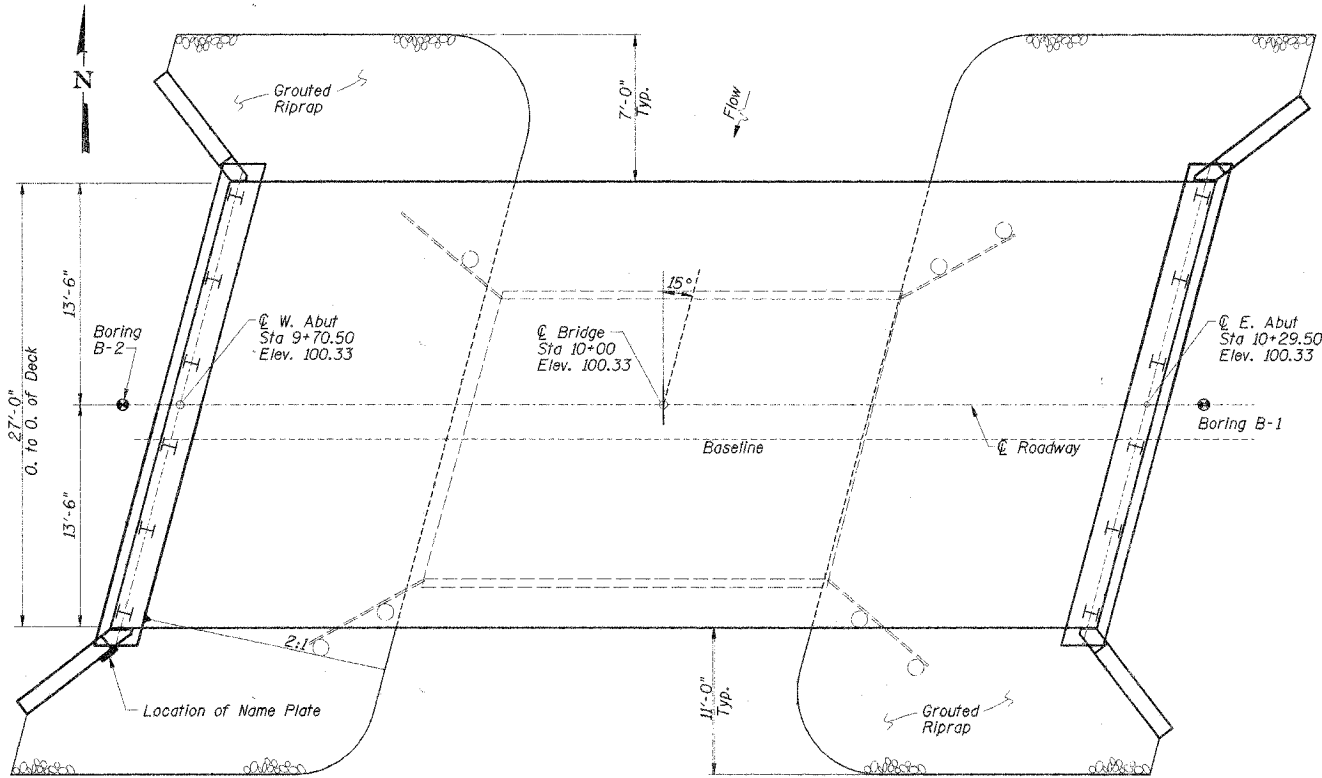
ROUTE NO.	SECTION	COUNTY	SHEET NO.
TR 397	#	Vermilion	9
FED. ROAD DIST. NO. 7			
ELLSWORTH PROJECT			

*00-09115-00-BR



ELEVATION

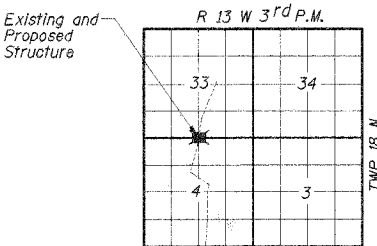
*Perpendicular to Skew



GENERAL NOTES

- The Contractor shall drive 1 steel test pile in a permanent location at each abutment as directed by the Engineer before ordering the remainder of piles. Test piles shall be driven to 110 percent of the Nominal Required Bearing indicated in the pile data information.
- Boring Data is shown only as a guide to bidders in estimating soil conditions which may be encountered during construction.
- Class SI or MS Concrete shall be used in the abutments.
- Reinforcement bars shall conform to the requirements of AASHTO M31, M42 or M53 Grade 60.
- Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.

NO.	DATE	REVISION	BY	APVD



LOCATION SKETCH

STRUCTURE NO. 092-3486
SEC. 96-09115-00-BR BUILT 200
JAMAICA ROAD DISTRICT
VERMILION COUNTY
LOADING HS-20-44

NAME PLATE

See Standard 515001

PROFILE GRADE

DESIGN SPECIFICATIONS

AASHTO (2002) and applicable Interims

DESIGN LOADING

HS 20-44
25 P.S.F Future Wearing Surface

DESIGN STRESSES

$f'_c = 3,500$ psi (Cast in Place Concrete)
 $f'_c = 5,000$ psi (P.P.C. Units)
 $f_{ci} = 4,000$ psi (P.P.C. Units)
 $f_y = 60,000$ psi (Reinforcement)
 $f'_s = 270,000$ psi ($\frac{1}{2}$ " ϕ Strands)
 $f_{sl} = 201,960$ psi ($\frac{1}{2}$ " ϕ Strands)

WATERWAY DATA

Drainage Area 3.63 Sq. Mi.
Existing Opening (15 Yr.) 128 Sq. Ft.
Required Opening (15 Yr.) 128 Sq. Ft.
Proposed Opening (15 Yr.) 198 Sq. Ft.
Design Discharge (15 Yr.) 250 C.F.S.
Computed Discharge (100 Yr.) 369 C.F.S.
15 Yr. Head 0.00 Ft.
100 Yr. Head 0.00 Ft.

Elev.	N	Qu	W	Soil Description
100.00				
5	4	--	28	Brown Gray Mottled Silty CLAY Loom
10	2	0.3B	27	
15	5	--	--	Coarse Gray SAND
20	16	--	--	Medium Brown SAND
25	18	2.9B	22	Gray Silty CLAY
30	7	0.8B	15	Gray CLAY Loom Till
35	9	1.4B	14	
40	8	1.4B	12	
45	56	2.1S	11	Brown CLAY Loom Till
50	33	5.6B	11	
55	40	3.7S	10	Dark Gray CLAY Loom Till
60	52	5.0S	12	
65	70	--	--	End of Boring

BORING B-1
STA 10+33, E

Elev.	N	Qu	W	Soil Description
99.80				
5	4	--	--	Dark Gray Silty CLAY Loom
10	3	0.4B	19	Mottled Brown Gray CLAY Loom
15	9	--	--	Medium Brown SAND
20	13	--	--	
25	10	--	--	
30	8	1.7B	12	Gray CLAY Loom Till
35	12	1.5B	12	
40	10	1.8B	12	
45	29	3.7B	11	
50	51	3.5S	10	Brown CLAY Loom Till
55	34	4.4S	11	
60	43	4.3S	10	Gray CLAY Loom Till
65	29	4.0S	12	
70	38	5.6B	12	
75	34	5.0S	12	End of Boring

BORING B-2
STA 9+67, E

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Structures	Each	1		1
Precast Prestressed Concrete Deck Beams (27" Deep)	Sq. Ft.	1626		1626
Steel Railing, Type S-1	Foot	120		120
Concrete Structures	Cu. Yds.		19.0	19.0
Furnishing Steel Pile, HP10x42	Foot	390		390
Driving Piles	Foot	390		390
Test Piles, Steel HP10x42	Each	2		2
Pile Shoes	Each	12		12
Concrete Cut-off Wall	Cu. Yds.		5.6	5.6
Grouted Riprap	Sq. Yds.	190		190
Name Plate	Each	1		1
Reinforcement Bars	Pound		2020	2020
Structure Excavation	Cu. Yds.		107	107

I certify that to the best of my knowledge, information and belief, this bridge design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with the requirements of the current "AASHTO Standard Specifications for Highway Bridges."

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License Expires 11/30/08

FRAUENHOFER

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GENERAL PLAN AND ELEVATION

JAMAICA ROAD DISTRICT
SECTION 00-09115-00-BR
VERMILION COUNTY

SHEET 6
DWA NO. jam2-goe.dgn
DATE OCT 2006
PROJ NO. 1077