

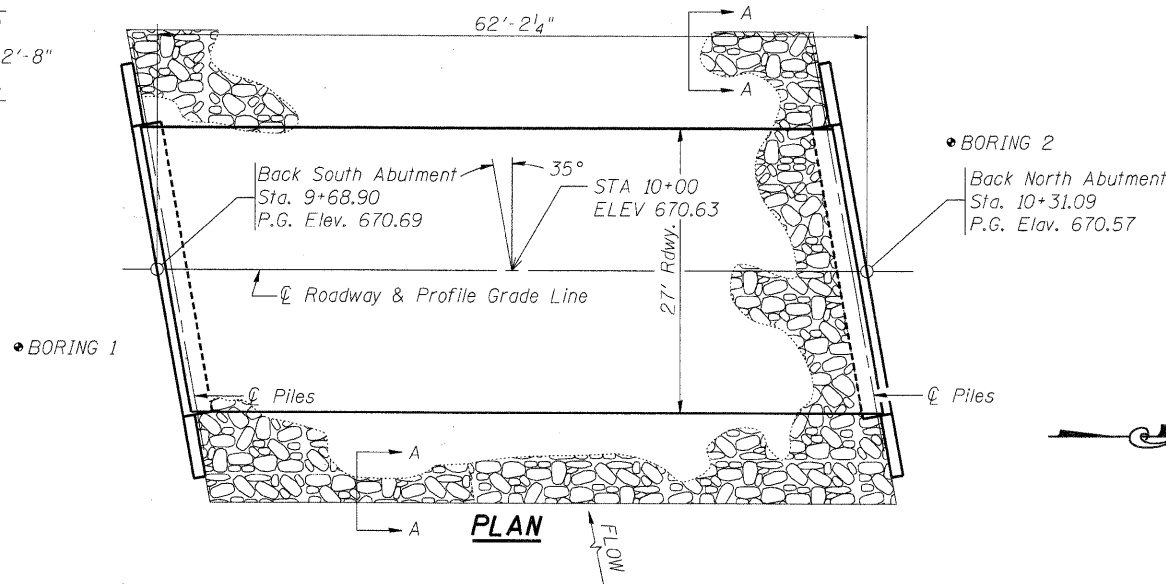
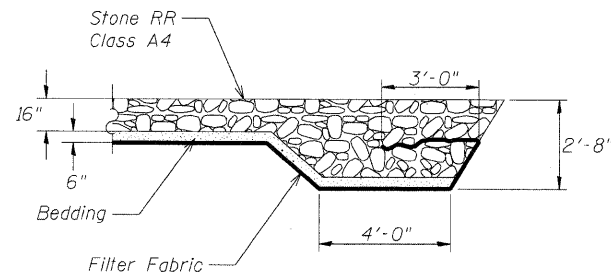
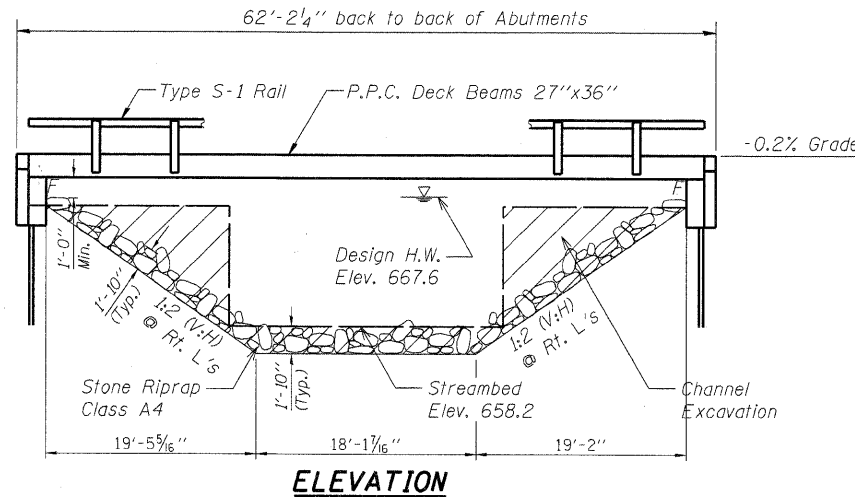
B.M.#1 - Cut square in SW corner of bridge, Sta. 9+81.98, 8.61' Left, Elev. 669.46.
 B.M.#2 - Cut square in NE corner of bridge, Sta. 10+18.15, 9.24' Right, Elev. 669.20.

Existing Structure - Structure 092-3123 consists of two span Continuous Steel Beams and a reinforced concrete deck on closed abutments. The bk. to bk. of abutments length is 30' and the out-to-out width is 18.5'. The existing structure shall be completely replaced. Road closure shall be used during construction.

Salvage - Any material deemed salvageable by the Engineer shall be stockpiled on the R.O.W. and shall become the property of Vermilion County. The Contractor shall dispose of all remaining material.

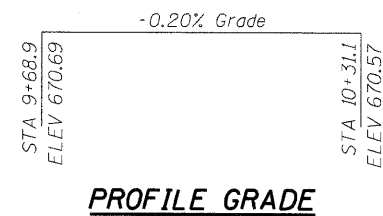
GENERAL NOTES

1. The Contractor shall drive 1 test pile in each abutment, as specified, in a permanent location as directed by the Engineer before ordering the remaining piles.
2. See Bridge Plan Sheet 7 for boring logs.
3. Concrete sealer shall be applied to exterior face of each fascia beam.
4. The Steel H-piles shall be according to AASHTO M270 grade 50.
5. Reinforcement bars shall conform to the requirements of ASTM A 706 Gr. 60. See Special Provisions.
6. Reinforcement bars designated (E) shall be epoxy coated.
7. Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.



TOTAL BILL OF MATERIAL

Item	Unit	Super	Abuts.	Total
Removal of Existing Structures	Each	-	-	1
Concrete Structures	Cu. Yd.	-	31.0	31.0
Precast Prestressed Concrete Deck Beams (27" Depth)	Sq. Ft.	1614	-	1614
Steel Bridge Railing, Type S-1	Foot	120	-	120
Reinforcement Bars, Epoxy Coated	Pound	-	4390	4390
Furnishing Steel Piles HP 10x42	Foot	-	350	350
Driving Piles	Foot	-	350	350
Test Piles Steel HP 10x42	Each	-	2	2
Name Plates	Each	1	-	1
Structure Excavation	Cu. Yd.	-	115.4	115.4
Stone Riprap Class A4	Sq. Yd.	-	-	312
Channel Excavation	Cu. Yd.	-	-	450
Controlled Low-Strength Material	Cu. Yd.	-	65	65
Concrete Cut-Off Wall	Cu. Yd.	-	6.4	6.4



DESIGN SPECIFICATIONS

2007 AASHTO LRFD Bridge Design Specifications with 2008 & 2009 Interims

LOADING HL-93

Allow 50#/sq. ft. for future wearing surface.

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
 Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.140
 Design Spectral Acceleration at 2.0 sec. (S_{D5}) = 0.248
 Soil Site Class = D

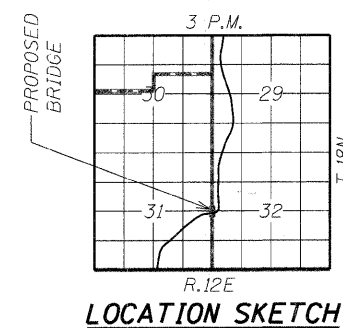
PILE DATA (2-ABUTS.)

Type STEEL HP 10x42
 Nominal Required Bearing 302 kips
 Factored Resistance Available 166 kips
 Estimated Pile Length 35 Feet North Abut. and 35 Feet South Abut.
 10 West
 Number of Production Piles 2
 Number of Test Piles 2 (1 In Each Abutment)

SWANK CREEK
 BUILT 201_ BY
 VERMILION COUNTY
 SEC. 09-09123-00-BR
 PROJECT NO. BROS-0183(303)
 TR160 STA. 10+00
 STR. NO. 092-3518 LOADING HL-93

LETTERING FOR NAME PLATE

Locate Name Plate on the Outside face of the Southeast Wingwall



INDEX OF SHEETS

1. General Plan & Elevation
2. Superstructure
3. Superstructure Details
4. Steel Railing
- 5.-6. Abutment Details
7. Pile Details
8. Boring Logs



Daniel Feuerborn
 License Expires 11-30-2012

10/13/2010
 Date

I certify that to the best of 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 requirements of the current AASHTO Standard Specifications for Highway Bridges.

WATERWAY INFORMATION

Drainage Area = 4.24 SQ MI Low Grade Elev. = 668.31 @ Sta. 14+00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.		Headwater E.I.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	15	471	175.6	282.3	667.6	0.1	0.1	667.7	667.7
Base	100	870	201.3	306.9	668.7	0.5	0.1	669.2	668.8
Overtopping									
Max. Calc.	500								

**GENERAL PLAN & ELEVATION
 STRUCTURE NO. 092-3518**

DATE: 09-20-2010 DRAWN BY: JEH CHECKED BY: JDF

SHEET NO. 1 OF 8 SHEETS	T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		160	09-09123-00-BR	VERMILION	19
			CONTRACT NO. 91437		
			FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT		

