

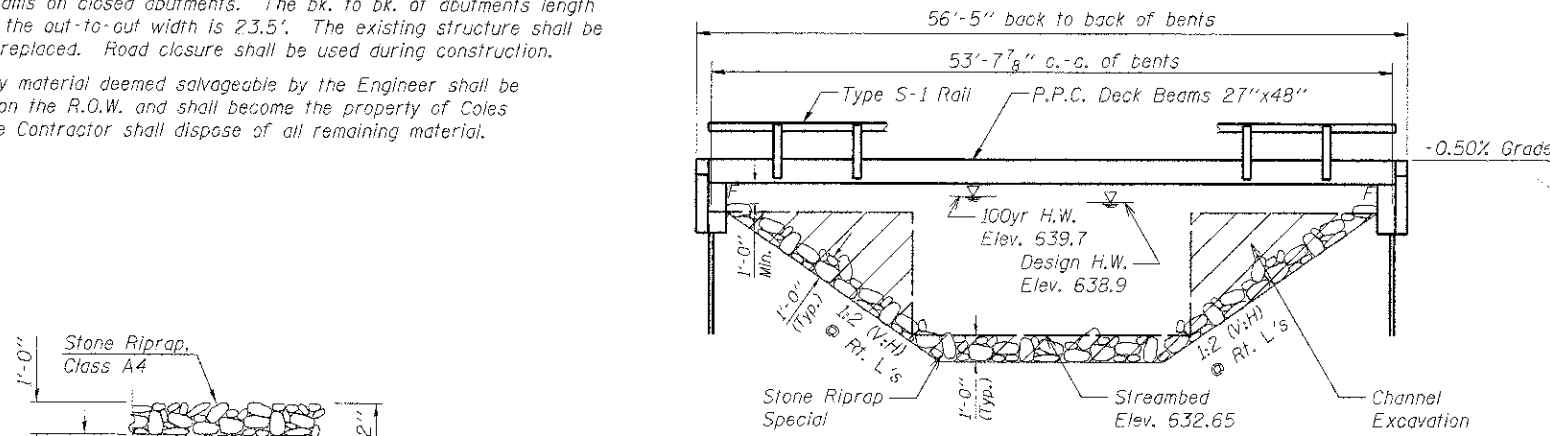
B.M.#1 - Cut square in NE corner of bridge, Sta. 13+33.15, 13.78' Left, Elev. 642.70.  
 B.M.#2 - Cut square in SE corner of bridge, Sta. 12+96.49, 12.73' Right, Elev. 642.94.

Existing Structure - Structure 015-3022 consists of single span Precast Channel Beams on closed abutments. The bk. to bk. of abutments length is 39' and the out-to-out width is 23.5'. The existing structure shall be completely replaced. Road closure shall be used during construction.

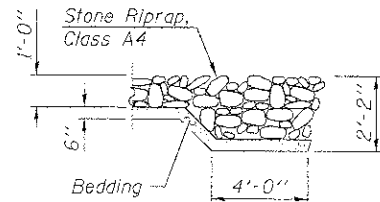
Salvage - Any material deemed salvageable by the Engineer shall be stockpiled on the R.O.W. and shall become the property of Coles County. The Contractor shall dispose of all remaining material.

**GENERAL NOTES**

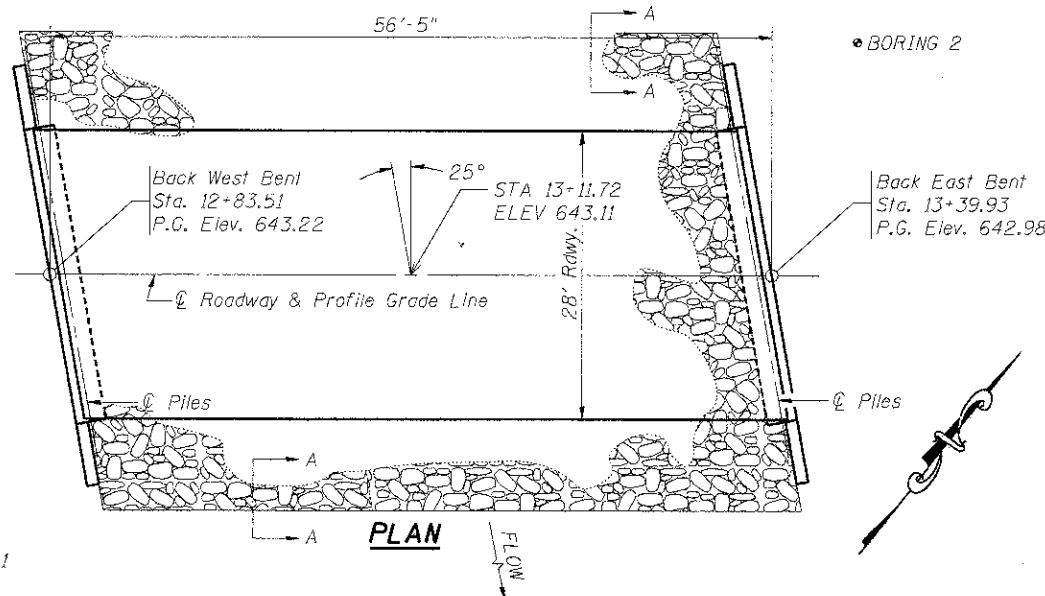
- The Contractor shall drive 1 test pile in each abutment, as specified, in a permanent location as directed by the Engineer before ordering the remaining piles.
- See Bridge Plan Sheet 7 for boring logs.
- Concrete sealer shall be applied to exterior face of each fascia beam.
- The Steel H-piles shall be according to AASHTO M270 grade 50.
- The test pile(s) shall be driven to 110 percent of the Nominal Required Bearing indicated in the pile data information.
- Reinforcement bars shall conform to the requirements of ASTM A 705 Gr. 60. See Special Provisions.
- Reinforcement bars designated (E) shall be epoxy coated.
- Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.



**ELEVATION**



**SECTION A-A**



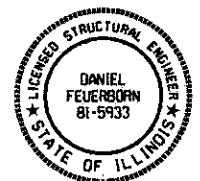
**PLAN**

**TOTAL BILL OF MATERIAL**

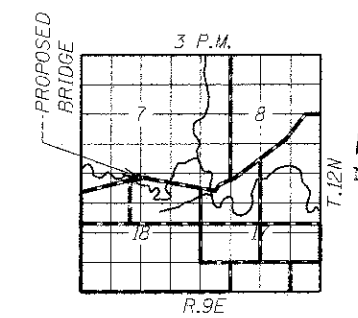
Item	Unit	Super	Sub.		Total
			Abuts.		
Removal of Existing Structures	Each	-	-	-	1
Concrete Structures	Cu. Yd.	-	-	32.2	32.2
Precast Prestressed Concrete Deck Beams (27" Depth)	Sq. Ft.	1520	-	-	1520
Steel Bridge Railing, Type S-1	Foot	109	-	-	109
Reinforcement Bars, Epoxy Coated	Pound	-	-	3740	3740
Furnishing Steel Piles HP 12x53	Foot	-	-	505	505
Driving Piles	Foot	-	-	505	505
Test Piles Steel HP 12x53	Each	-	-	2	2
Name Plates	Each	1	-	-	1
Structure Excavation	Cu. Yd.	-	-	132.4	132.4
Stone Riprap Class A4	Ton	210	-	-	210
Filter Fabric	Sq. Yd.	350	-	-	350
Channel Excavation	Cu. Yd.	25	-	-	25
Concrete Encasement	Cu. Yd.	-	-	4.2	4.2

**INDEX OF SHEETS**

- General Plan & Elevation
- Superstructure
- Superstructure Details
- Steel Railing
- Abutment Details
- Pile Details
- Boring Logs



*Daniel Feuerborn*  
 Daniel Feuerborn  
 License Expires 11-30-2014  
 2/19/2013  
 Date



**LOCATION SKETCH**

**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  
 Bedrock Acceleration Coefficient (A) = 0.075g  
 Site Coefficient (S) = 1.0

**PILE DATA (2-ABUTS.)**

Type: STEEL HP 12x53  
 Nominal Required Bearing: 355 kips  
 Factored Resistance Available: 177kips  
 Estimated Pile Length: 53 Feet East Abut. and 48 Feet West Abut.  
 Number of Production Piles: 10 West  
 Number of Test Piles: 2 (1 In Each Abutment)

DRAINAGE DITCH 3  
 BUILT 2011 BY  
 COLES COUNTY  
 SEC. 07-00142-00-BR  
 PROJECT NO. BROS-0029(292)  
 CH 7 STA.  
 STR. NO. 015-3425 LOADING HL-93

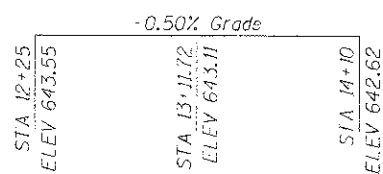
**LETTERING FOR NAME PLATE**

Locate Name Plate at Corner of Bridge (See Std. 515001)

**WATERWAY INFORMATION**

Drainage Area = 1.85 SQ MI Low Grade Elev. = 642.32 @ Sta. +

Flood	Freq. Yr.	C.F.S.	Opening Sq. Ft.		Nat. H.W.E.		Head - Ft.		Headwater El.	
			Exist.	Prop.	Exist.	Prop.	Exist.	Prop.	Exist.	Prop.
Design	20	739	167.4	191.1	638.9	0	0	638.9	638.9	
Base	100	1140	193.5	226.8	639.7	0	0	639.7	639.7	
Overtopping										
Max. Calc.	500									



**PROFILE GRADE**

**DESIGN STRESSES**

**FIELD UNITS**

f'c = 3,500 psi  
 Fy = 60,000 psi (reinforcement)

**PRECAST PRESTRESSED UNITS**

f'c = 6,000 psi  
 f'ci = 5,000 psi  
 f'pu = 270,000 psi (1/2" low relax. strands)  
 f'psl = 201,960 psi (1/2" low relax. strands)



**GENERAL PLAN & ELEVATION  
 STRUCTURE NO. 015-3425**

DATE: 02-18-2013 DRAWN BY: ADG/JEH CHECKED BY: DF

SHEET NO. 1 OF 7 SHEETS	CNTY HWY	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	7	07-00142-00-BR	COLES	18	6
FED. ROAD DIST. NO. - ILLINOIS			FED. AID PROJECT		

CONTRACT NO. 95643