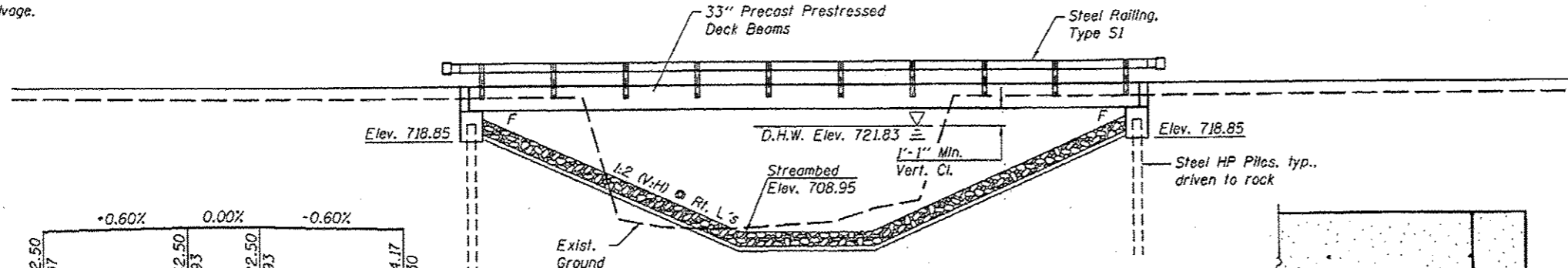


Benchmark: RR spike in PP, SE Corner of Bridge - Elev. 723.99.
 Existing Structure: Structure No. 048-3143 was constructed in 1967 as Section CA-11-10. The existing structure consists of 17" PPC Deck Beams on timber pile bent closed abutments. The structure measured 45' back to back of abutments and 22.2 feet out to out of deck. No salvage.

GENERAL NOTES

Reinforcement bars designated (E) shall be epoxy coated.
 Layout of slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.

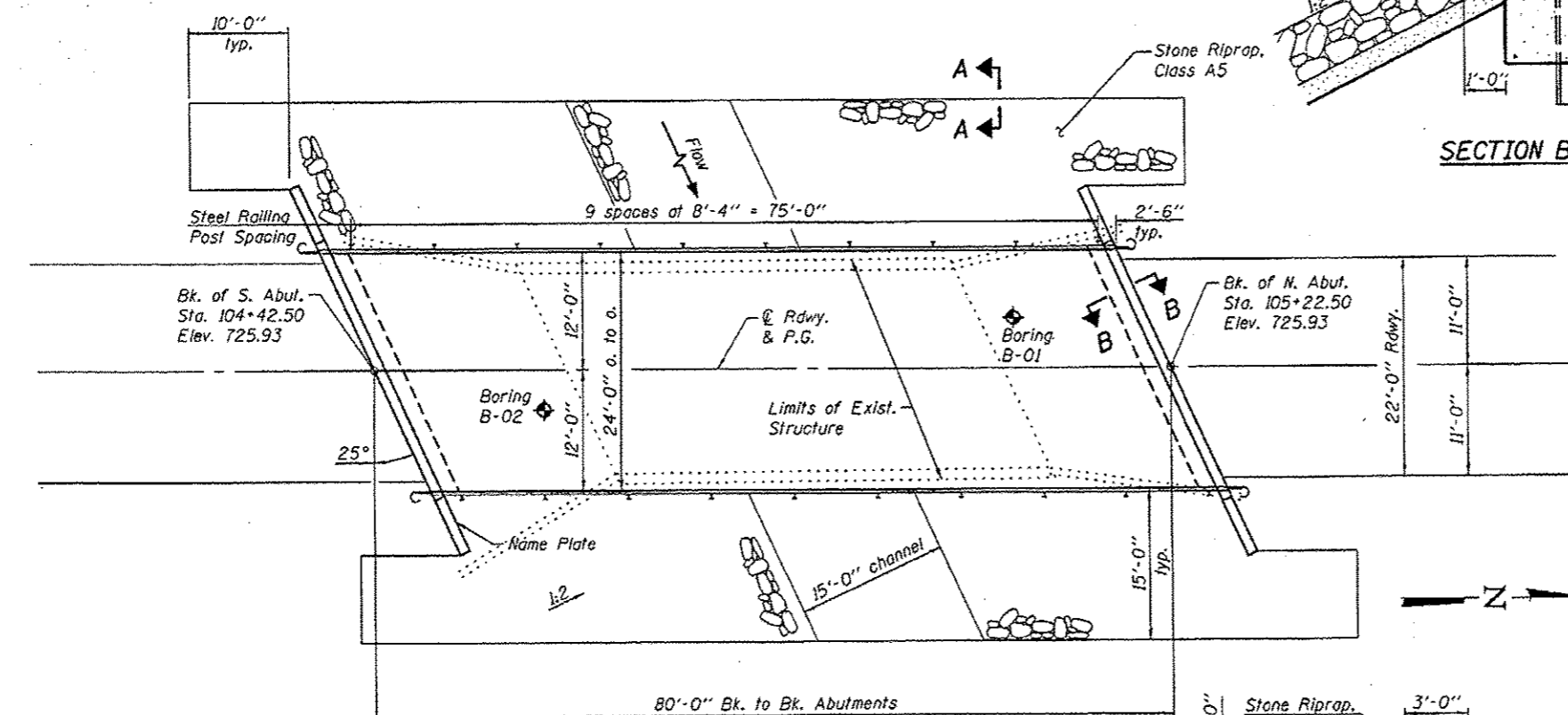
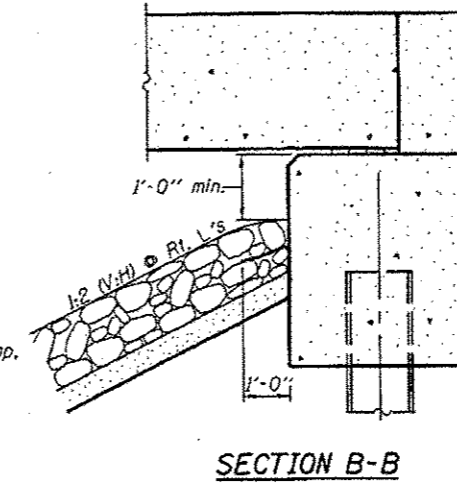


PROFILE GRADE
(Along E. Roadway)

Sta. 102+82.50 Elev. 724.97	Sta. 104+42.50 Elev. 725.93	Sta. 105+22.50 Elev. 725.93	Sta. 107+94.17 Elev. 724.30
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TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Stone Riprap, Class A5	Sq. Yd.		552	552
Removal of Existing Structures	Each			1
Concrete Structures	Cu. Yd.		33.2	33.2
Concrete Encasement	Cu. Yd.		3.5	3.5
Precast Prestressed Concrete Deck Beams (33" Depth)	Sq. Ft.	1867		1867
Reinforcement Bars, Epoxy Coated	Pound		2990	2990
Steel Railing, Type S1	Foot	160		160
Furnishing Steel Piles HP12x53	Foot		522	522
Driving Piles	Foot		522	522
Test Pile Steel HP12x53	Each		1	1
Name Plates	Each			1



INDEX OF SHEETS

- General Plan and Elevation
- Deck Beam Details
- Steel Railing, Type S-1
- Abutments
- HP Pile Details
- Soil Borings

LOADING HL-93

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

DESIGN SPECIFICATIONS

2010 AASHTO LRFD Bridge Design Specifications with 2010 Interims

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
 fs = 270,000 psi (1/2" Strands)
 fsi = 201,960 psi (1/2" Strands)

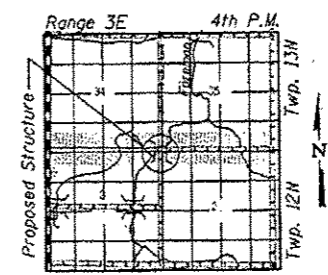
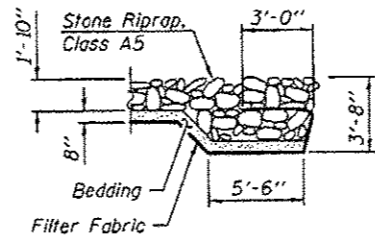
T.R. 244 OVER FOREMAN CR.
 BUILT 20 BY
 WALNUT GROVE ROAD DISTRICT
 KNOX COUNTY
 SEC. 11-21121-00-BR
 STATION 104+82.50
 STR. NO. 048-3400 LOADING HL-93

NAME PLATE

See Std. 515001

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
 Design Spectral Acceleration at 1.0 sec. (S₁) = 0.099
 Design Spectral Acceleration at 0.2 sec. (S_{0.2}) = 0.150
 Soil Site Class = D



WATERWAY INFORMATION

Drainage Area - 18.7 sq. mi. Low Grade Elev. 724.30 @ Sta. 107+93.42

Flood	Freq. Yr.	Q	Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.		Headwater El.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
10	2370	401	486	721.23	0.53	0.41	721.86	721.64	
Design	25	3150	423	525	721.83	1.07	0.71	722.90	722.54
Base	100	4360	448/222	572	722.53	2.23	1.62	724.76	724.15
Overtopping	500	5850	458/749	604/414	723.23	2.04	1.91	725.27	725.14

10 - Year Velocity through Existing Structure = 6.1 fps
 10 - Year Velocity through Proposed Structure = 4.9 fps

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	S. Abut.	N. Abut.
	718.9	718.9

Bryana Swanson
 Date Signed: 6-26-12
 Exp. Date: 11-30-14



**KNOX COUNTY
 HIGHWAY DEPARTMENT**

FILE NAME: 0483400-001-GPC.dgn	USER NAME: bswanson	DESIGNED: LVM	REVISED:
MAURER-STUTZ ENGINEERS SURVEYORS	PLDT SCALE:	CHECKED: BAS	REVISED:
PLDT DATE: 3/1/2013 10:18:16 AM	CHECKED: BAS	REVISED:	REVISED:

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
244	11-21121-00-BR	KNOX	14	4