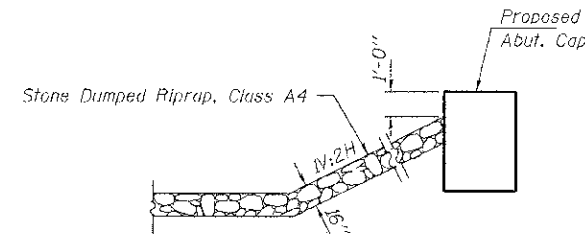
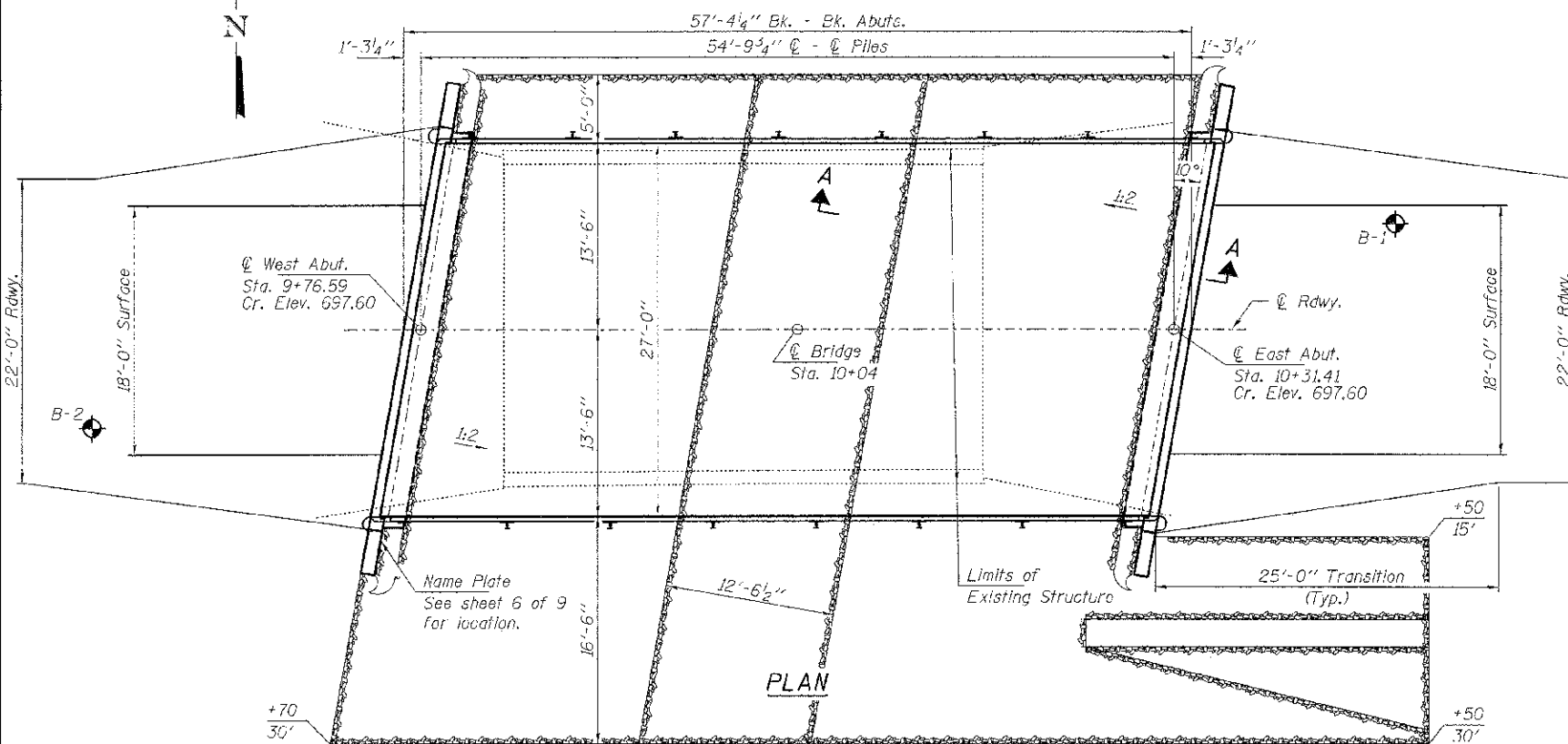
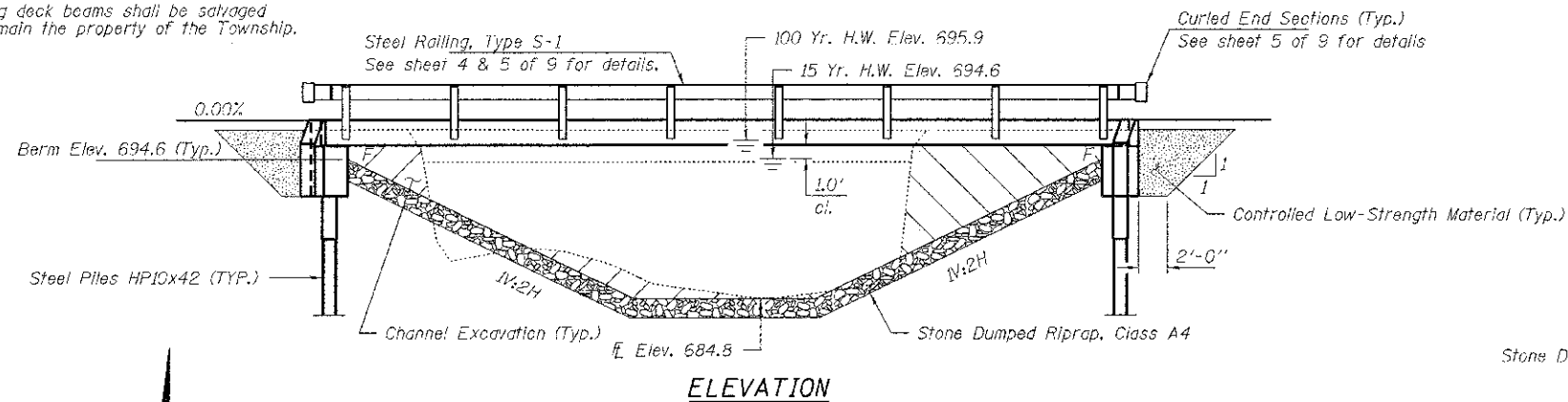


BENCHMARK: RR Spike in power pole. 21' Rt. Sta. 8+91, Elev. 695.86

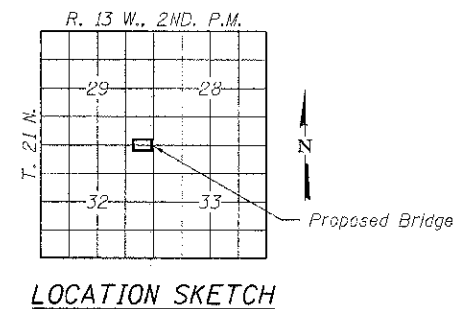
EXISTING STRUCTURE NO. 092-3115: Sta. 10+00, Single span cast in place concrete bridge with concrete curbs on closed timber abutments and wingwalls. 32.8' fc.-fc. abutts.; 24.3' o.-o. deck.

Structure closed to traffic during construction.

Existing deck beams shall be salvaged and remain the property of the Township.



SECTION A-A  
Note: See Special Provisions for Stone Dumped Riprap, Class A4.



**GENERAL NOTES**

Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.  
The Contractor shall drive test piles to 110% of the nominal required bearing specified in production locations at each Abutment or approved by the Engineer before ordering the remainder of piles. Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.  
All proposed construction activities shall be in accordance with Nationwide Permit number 14 of the Department of the Army authorized under Section 404 of the Clean Water Act. The IEPA has issued Section 401 Water Quality Certification for this activity. See Special Provisions for conditions.

**INDEX OF STRUCTURE SHEETS**

1. General Plan & Elevation
2. 21"x36" PPC Deck Beam
3. 21"x36" PPC Deck Beam Details
4. Superstructure Details
5. Steel Railing, Type S-1
6. Abutments
7. Steel HP Pile Details
- 8-9. Borings

BUILT 201 BY  
VERMILION COUNTY  
SEC. 10-15144-00-BR  
PILOT ROAD DISTRICT  
STR. NO. 092-3524  
LOADING HL-93

NAME PLATE  
See Std. 515001

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	Cu. Yd.			140
Stone Dumped Riprap, Class A4	Ton			275
Removal of Existing Structures	Each			1
Structure Excavation	Cu. Yd.		65	65
Concrete Structures	Cu. Yd.		24.8	24.8
Precast Prestressed Concrete Deck Beams (21" Depth)	Sq. Ft.	1,512		1,512
Reinforcement Bars	Pound		2,560	2,560
Steel Railing, Type S1	Foot	109		109
Furnishing Steel HP10x42	Foot		680	680
Driving Piles	Foot		680	680
Test Pile Steel HP10x42	Each		2	2
Pile Shoes	Each		10	10
Name Plates	Each		1	1
Controlled Low-Strength Material	Cu. Yd.			56
Concrete Cut-Off Wall	Cu. Yd.		6.4	6.4

**DESIGN STRESSES**

**FIELD UNITS**

f'c = 3,500 psi  
fy = 50,000 psi (Reinf.)

**PRECAST PRESTRESSED UNITS**

f'c = 6,000 psi  
f'ci = 5,000 psi  
fpu = 270,000 psi (1/2" low lax. strands)  
fpbt = 201,960 psi (1/2" low lax. strands)  
fy = 50,000 psi (Reinf.)

**LOADING HL-93**

Design Specifications: 2012 AASHTO LRFD with all applicable Interims.  
50#/Sq. Ft. included in dead load for future wearing surface.

**SEISMIC DATA**

Seismic Performance Zone (SPZ) = 1  
Design Spectral Acceleration at 1.0 sec. (S<sub>D1</sub>) = 0.128g  
Design Spectral Acceleration at 0.2 sec. (S<sub>D5</sub>) = 0.217g  
Soil Site Class = D

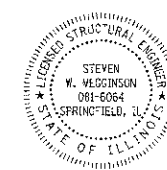
**WATERWAY INFORMATION**

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.	Natural H.W.E. Exist.	Prop. H.W.E. Exist.	Head - Ft. Exist.	Prop. Head - Ft. Exist.	Headwater El. Exist.	Prop. Headwater El. Exist.
Design	10	738	230	290	694.25	0.00	0.00	694.25	694.25
Base	15	850	240	310	694.62	0.00	0.00	694.62	694.62
Max. Calc.	100	1450	240	360	695.87	0.46	0.00	696.33	695.87
	500	2010	240	360	696.68	0.61	0.29	697.29	696.97

Drainage Area = 2.56 Sq. Mi. Existing Low Grade Elev. 696.6 @ Sta. 9+50  
Proposed Low Grade Elev. 697.6 @ Sta. 10+00

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 requirements of the current "AASHTO LRFD Specifications."

Steven W. Megginson 10/09/12  
ILLINOIS STRUCTURAL ENGINEER NO. 081-6064



Expires 11-30 2014

TITLE NAME = 118290 sht br-bridge.dgn	USER NAME =	DESIGNED - A.S.L.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC.		CHECKED - S.W.M.	REVISED -
3008 STEVENSON DRIVE, SUITE 201		DRAWN - D.A.B.	REVISED -
SPRINGFIELD, ILLINOIS 62705	PLOT SCALE =	CHECKED - S.W.M.	REVISED -
ILLINOIS PROFESSIONAL DESIGN FIRM	PLOT DATE = 10/9/2012		
LS.F.T.E. SB CORP. 14-200989			

STATE OF ILLINOIS  
VERMILION COUNTY HIGHWAY DEPARTMENT

GENERAL PLAN & ELEVATION  
STRUCTURE NO. 092-3523

SHEET NO. 1 OF 9 SHEETS

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
143	10-15144-00-BR	VERMILION	20	12
PILOT ROAD DISTRICT			CONTRACT NO. 91472	
[ILLINOIS] FED. AID PROJECT				