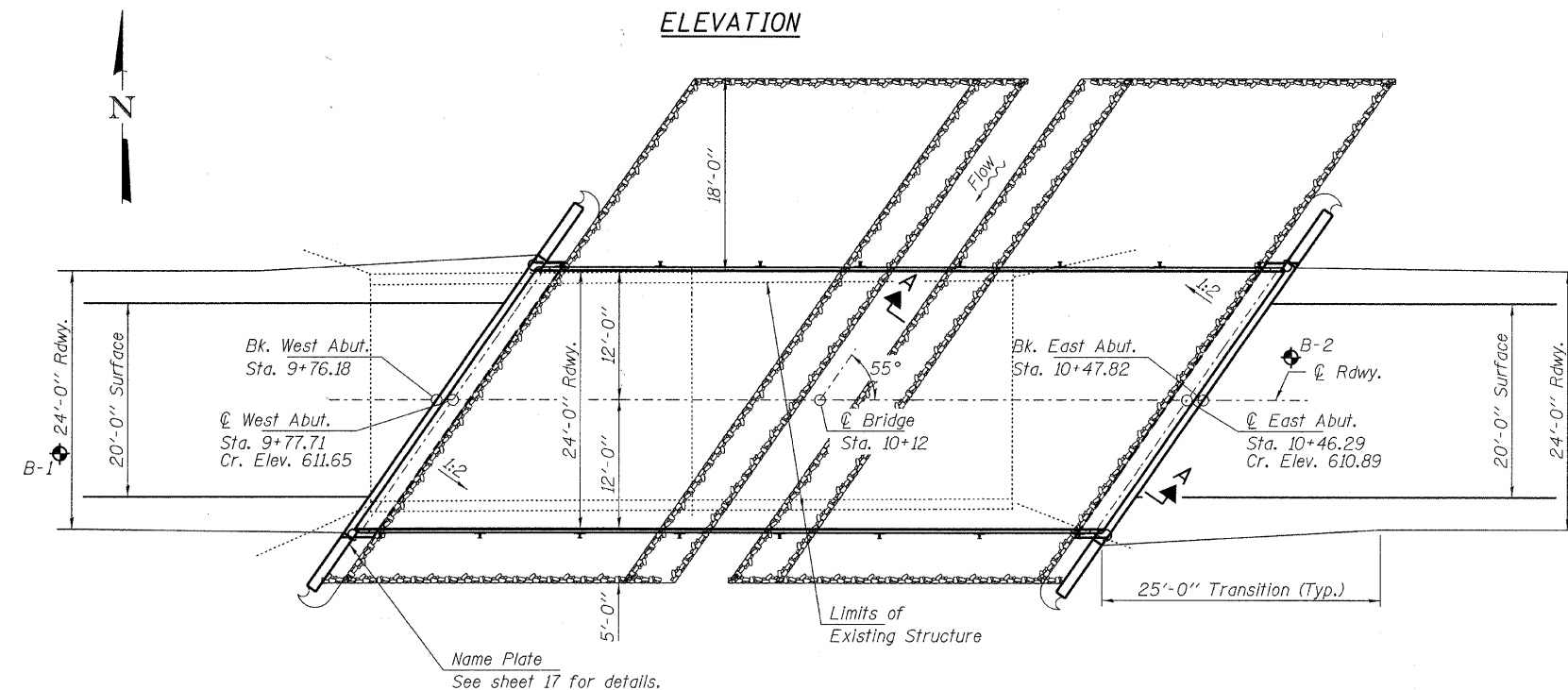
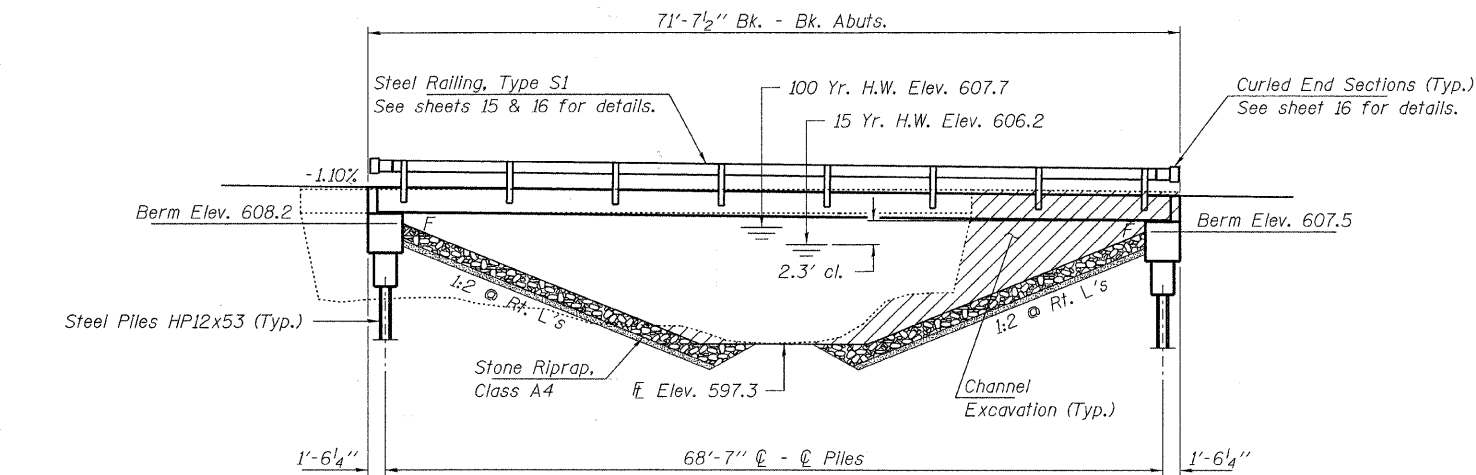


BENCHMARK: Chiseled square on N.E. curb, 12' Lt. Sta. 10+30, Elev. 611.40

EXISTING STRUCTURE NO. 087-3169: Sta. 10+00 - Two span PPC deck beam bridge with concrete curbs on closed timber abutments, wingwalls, & pier.
Structure closed to traffic. 57.0' fc.-fc. abuts.; 20.0' o.-o. deck

No Salvage



DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
fy = 60,000 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 = 60,000 psi (Reinf.)

LOADING HL-93

Design Specifications: 2007 AASHTO LRFD with all applicable interims.
50#/Sq. Ft. included in dead load for future wearing surface.

DESIGNED - A.S.L.
CHECKED - S.W.M.
DRAWN - D.T.M.
CHECKED - S.W.M.

SEISMIC DATA

Seismic Performance Zone (SPZ) = 2
Design Spectral Acceleration at 1.0 sec. (SD1) = 0.188g
Design Spectral Acceleration at 0.2 sec. (SDS) = 0.397g
Soil Site Class = D

WATERWAY INFORMATION

Drainage Area = 3.4 Sq. Mi.		Existing Low Grade Elev. 610.10 @ Sta. 11+40 Proposed Low Grade Elev. 610.10 @ Sta. 11+40							
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Prop.	Natural H.W.E.	Head - Ft. Exist.	Prop.	Headwater El. Exist.	Prop.
Design	10	1100	260	240	605.72	0.80	0.02	606.52	605.74
Base	15	1270	270	260	606.15	0.76	0.07	606.91	606.22
Max. Calc.	100	2130	340	330	607.66	0.62	0.46	608.28	608.12
	500	2900	390	380	608.69	1.19	1.62	609.88	610.31

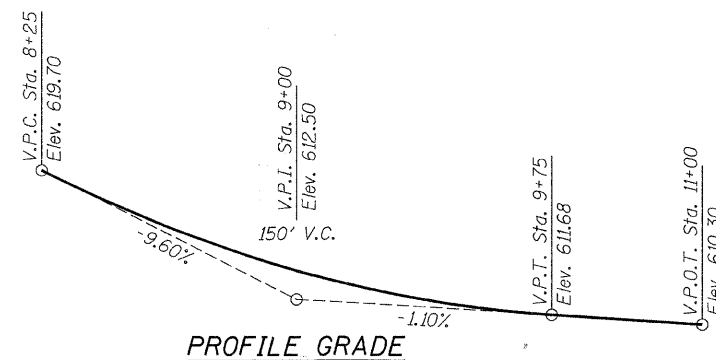
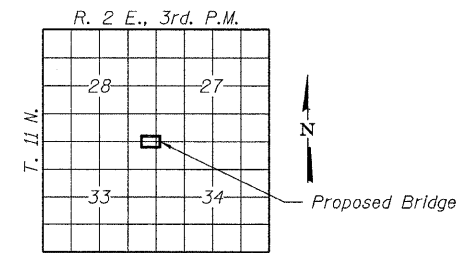
GENERAL NOTES

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 West 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 (IL Modified). See Special Provisions.
Excavation required to construct the Abutments shall be included in the cost of Concrete Structures. No additional compensation will be allowed for Structure Excavation.
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.

BUILT 201 BY
SHELBY COUNTY
SEC. 09-23113-00-BR
TOWER HILL ROAD DISTRICT
STR. NO. 087-3570
LOADING HL-93

NAME PLATE

See Std. 515001



INDEX OF STRUCTURE SHEETS

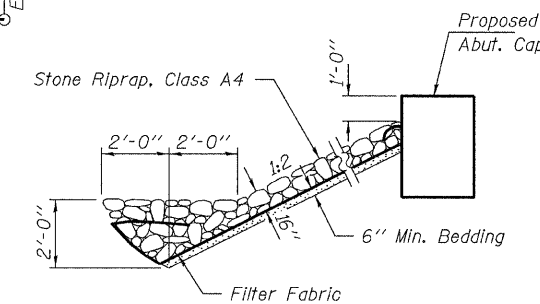
1. General Plan & Elevation
2. Superstructure
- 3-4. Superstructure Details
5. Steel Railing, Type S1
6. West Abutment
7. East Abutment
8. Pile Details
9. Borings

TOTAL BILL OF MATERIAL

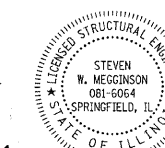
ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	Cu. Yd.			185
Stone Riprap, Class A4	Ton			270
Filter Fabric	Sq. Yd.			275
Removal of Existing Structures	Each			1
Concrete Structures	Cu. Yd.		29.6	29.6
Concrete Encasement	Cu. Yd.		14.0	14.0
Precast Prestressed Concrete Deck Beams (27" Depth)	Sq. Ft.	1,680		1,680
Reinforcement Bars	Pound		3,020	3,020
Steel Railing, Type S1	Foot	140		140
Furnishing Steel Piles HP12x53	Foot		204	204
Setting Piles in Rock	Foot		8	8
Name Plates	Each		1	1

SECTION A-A

Note: See Special Provisions for Stone Riprap, Class A4.



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. Magnuson 081/000
ILLINOIS STRUCTURAL No. 081-6064 Expires 11-30-2010

**GENERAL PLAN AND ELEVATION
STRUCTURE NO. 087-3570**

HAMPTON, LENZINI AND RENWICK, INC. CIVIL ENGINEERS - STRUCTURAL ENGINEERS - LAND SURVEYORS 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 217.546.3400 www.hlrengineering.com 184 000950 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORPORATION PROJECT NUMBER: 09.0135.130 DATE: 02/09/10	SHEET NO. 1	T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	9 SHEETS	231	09-23113-00-BR	SHELBY	20	12
			TOWER HILL ROAD DISTRICT	CONTRACT NO. 95631		
			FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT BROS-173(171)	