

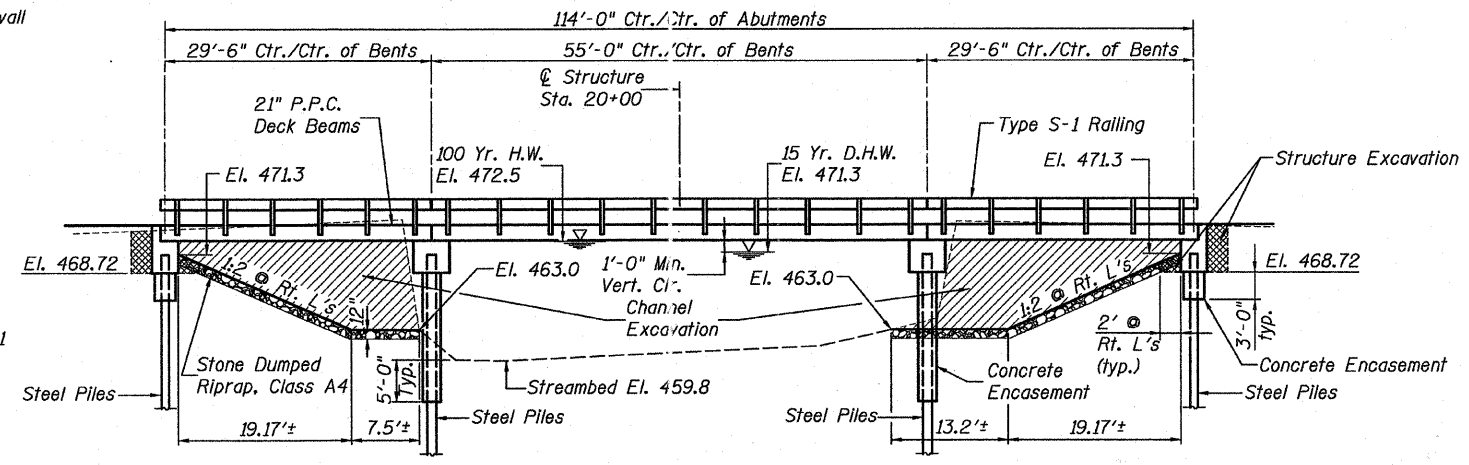
BENCHMARK: Chiseled Square in Top of Wingwall
Sta. 19+62.16, 16.64' Rt.
El. 474.44

EXISTING STRUCTURE S.N. 014-3107

The existing structure consists of a single span bridge with 6" concrete deck and overlay supported on steel beams on closed concrete abutments.
The structure measures 62.0' back to back of abutments and 18.0' out to out of bridge deck.

The Contractor shall remove and dispose of the existing structure in accordance with Section 501 of the Standard Specifications.

SALVAGE: No Salvage



GENERAL NOTES

1. Reinforcement bars shall conform to the requirements of ASTM A 706 Gr. 60 (IL Modified). See Special Provisions.
2. Reinforcement bars designated (E) shall be epoxy coated.
3. Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
4. The embankment configuration shown shall be the minimum that must be placed and compacted prior to construction of the abutments.
5. The Contractor shall drive test piles to 110% of the nominal required bearing specified in production location at substructures specified or approved by the Engineer before ordering remaining piles.

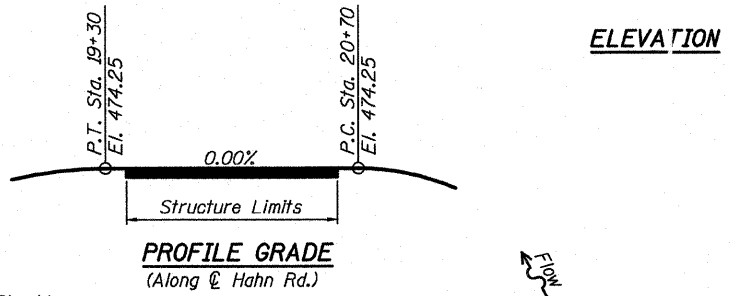
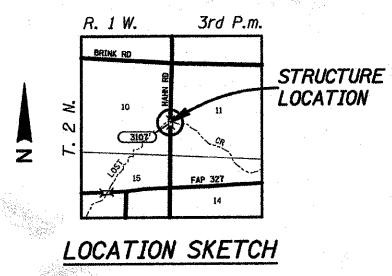
DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (Feet)	S. Abut.	Pier 1	Pier 2	N. Abut.
	465.72	454.8	454.8	465.72

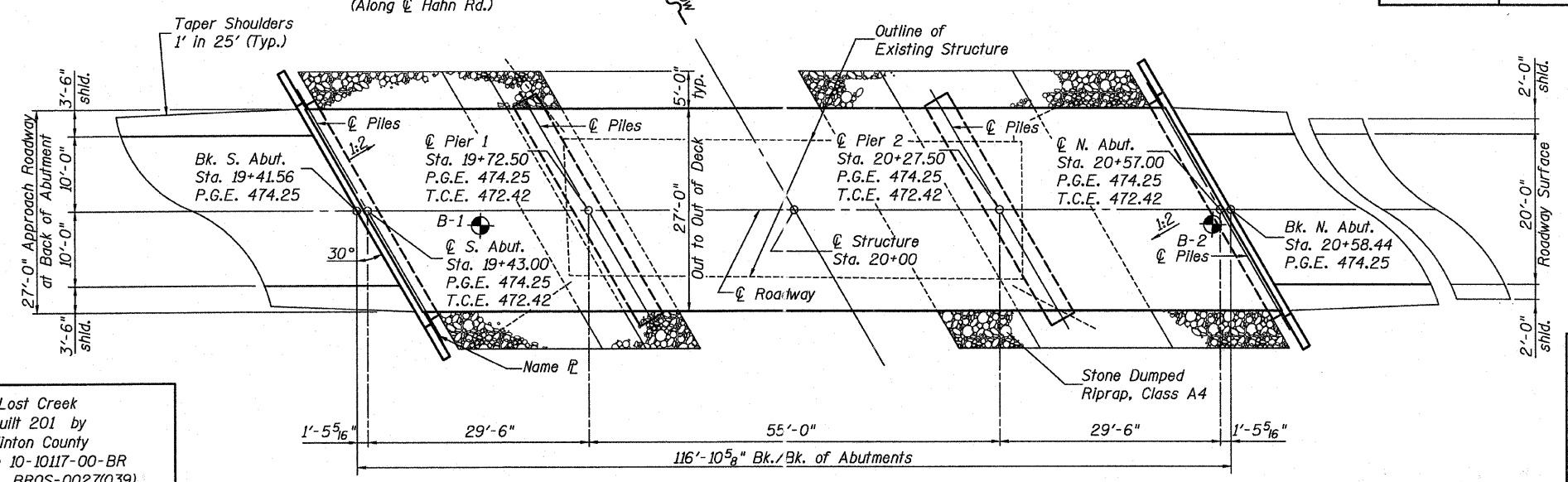
WATERWAY INFORMATION

Drainage Area = 13.3 Sq. Mi. Low Grade El. = 472.23 @ Sta. 22+50

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.		Headwater El.	
			Exlst.	Prop.		Exlst.	Prop.	Exlst.	Prop.
Design	15	2,370	572	748	471.3	0.2	0.1	471.5	471.4
Base	100	3,790	600	860	472.5	0.4	0.4	472.9	472.9
Overtopping	50	3,250	600	823	472.1	0.4	0.2	472.5	472.3
Max. Calc.	500	N/A							



Note: Channel excavation shall be transitioned from the edge of the proposed deck to match the existing channel at the R.O.W. line.



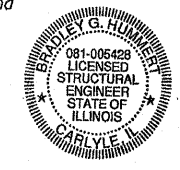
Lost Creek
Built 201 by
Clinton County
Section 10-10117-00-BR
Proj. No. BROS-0027(039)
Station 20+00
S.N. 014-4057 Loading HL-93

NAME PLATE

(See Std. 515001)
Locate Name Plate as shown in Plan View.

"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 Bridge Design Specifications' including seismic design."

Bradley G. Hammert Date: 3/29/2011
Bradley G. Hammert
Licensed Structural Engineer
in Illinois No. 081-005428 Expires: November 30, 2012



DESIGN SPECIFICATIONS

2007 AASHTO LRFD Bridge Design Specifications with 2009 Interims

DESIGN STRESSES

- FIELD UNITS**
f_c = 3,500 psi
f_y = 60,000 psi (Reinforcement)
f_y = 50,000 psi (M20 Grade 50)
- PRECAST UNITS**
f_c = 6,000 psi
f_c' = 5,000 psi
f_c = 270,000 psi (1/2" Strands)
f_c' = 201,960 psi (1/2" Strands)

LOADING HL-93

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

SEISMIC DATA

Seismic Performance Zone (SPZ) = 2
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.262 g
Design Spectral Acceleration at 0.2 sec. (S_{D5}) = 0.612 g
Soil Site Class = D

INDEX OF BRIDGE SHEETS

1. General Plan & Elevation
2. P.P.C. Deck Beam Superstructure
3. 21" x 36" P.P.C. Deck Beam - Spans 1 & 3
4. 21" x 36" P.P.C. Deck Beam - Span 2
5. 21" x 36" P.P.C. Deck Beam Details
6. Abutments
7. Pile Bent Pier
8. Steel Railing, Type S-1
9. HP Pile Details
10. Soil Boring Logs

TOTAL BILL OF MATERIALS

ITEM	UNIT	SUPER.	SUB.	Total
Channel Excavation	Cu. Yd.			928
Stone Dumped Riprap, Class A4	Ton			198
Removal of Existing Structures	Each			1
Concrete Structures	Cu. Yd.		60.4	60.4
Concrete Encasement	Cu. Yd.		19.8	19.8
Precast Prestressed Concrete Deck Beams (21" Depth)	Sq. Ft.	3,115		3,115
Reinforcement Bars, Epoxy Coated	Pound		6,860	6,860
Steel Railing, Type S-1	Foot	234		234
Furnishing Steel Piles HP 10x42	Foot		252	252
Furnishing Steel Piles HP 12x63	Foot		268	268
Driving Steel Piles	Foot		520	520
Test Piles Steel HP 10x42	Each		2	2
Test Piles Steel HP 12x63	Each		2	2
Name Plates	Each			1

GENERAL PLAN & ELEVATION

T.R. 212 (HAHN ROAD) OVER LOST CREEK
SECTION 10-10117-00-BR
CLINTON COUNTY
STATION 20+00
STRUCTURE NO. 014-4057