STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Bench Mark 203: WEST SITE RR spike driven in N side of power pole on S side Rte. 3, near NW corner of gravel turn-a-round, 600' W of center of Bridge SN:060-0153 at Piasa Creek. Elev. 449.14
Bench Mark 204: EAST SITE RR spike driven in N side of power pole on S side Rte. 3, on W side of gravel service road, 232' E of center of Bridge SN:060-0153 over Piasa Creek, Elev. 443.67

Existing Structure: S.N. 060-0153 was built in 1922 under SBI Rte. 3, Section 59BR at Sta. 638+00.00. In 1979 the original single span steel truss bridge was removed and replaced with a 5 span PPC deck beam bridge. The open vault abutments were widened to accomodate the wider superstructure. Solid wall piers and approach bents, supported by concrete piles were added. In 2002, riprap was placed along the channel north of, and beneath the structure. The O. to O. width is 33'-0" and the total structure length is 286'-0" Bk. to Bk. Approach Bents.
The structure is to be replaced using stage construction.

No salvage

STATION 638+11.00
BUILT 20 BY
STATE OF ILLINOIS
F.A.U. RTE 8956 SEC. 59BR-1
LOADING HL93
STRUCTURE NO. 060-0343

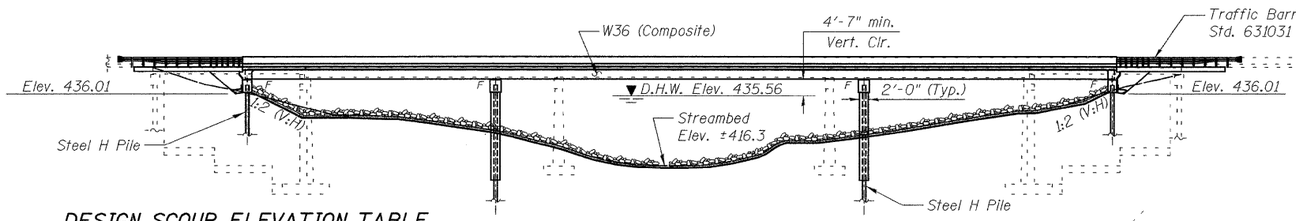
NAME PLATE
See Std. 515001

DESIGN SPECIFICATIONS
2007 AASHTO LRFD Bridge Design Specifications

LOADING HL-93
Allow 50#/sq. ft. for future wearing surface.

DESIGN STRESSES
FIELD UNITS
f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (M270 Grade 50W)

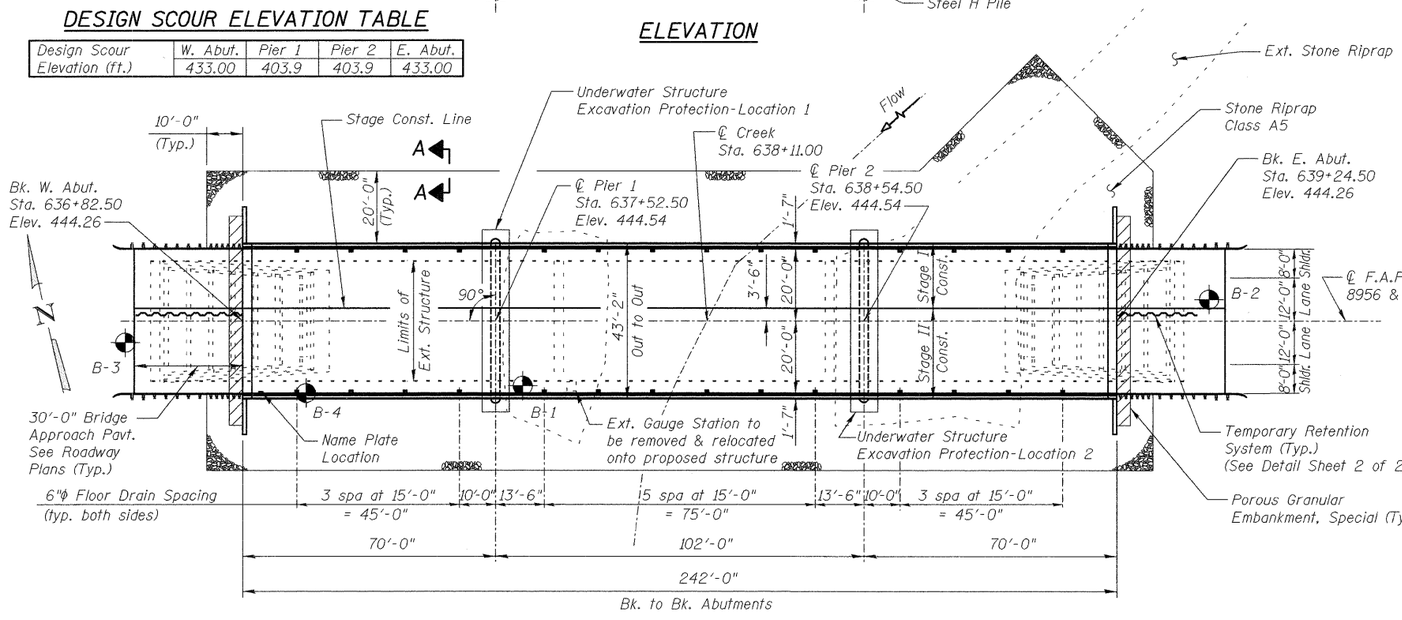
SEISMIC DATA
Seismic Performance Zone (SPZ) = 1
Bedrock Acceleration Coefficient (A) = 7.75%
Site Coefficient (S) = 1.5



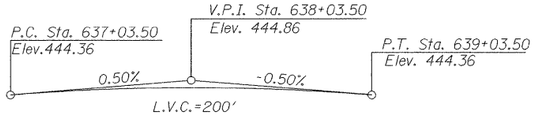
ELEVATION

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	W. Abut.	Pier 1	Pier 2	E. Abut.
	433.00	403.9	403.9	433.00



PLAN



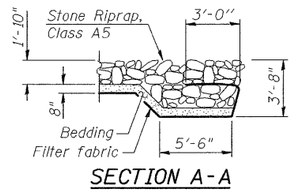
PROFILE GRADE
(along ℄roadway)

WATERWAY INFORMATION

Drainage Area = 102.43 mi² Low Grade Elev. 443.85 @ Sta. 641+09.00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
Scour	10	7,908	1,651	1,676	433.86	0.89	0.83	434.75	434.69
Design	50	12,421	1,974	2,027	435.56	1.46	1.33	437.02	436.89
Base	100	14,491	2,101	2,169	436.23	1.69	1.52	437.92	437.75
Overtopping									
Max. Calc.	500	19,484	2,373	2,477	437.66	2.27	2.00	439.93	439.66

Note: Existing Velocity (f/s) / Frequency (yr) 4.63/10; 6.04/50; 6.61/100; 7.85/500
Proposed Velocity (f/s) / Frequency (yr) 4.57/10; 5.90/50; 6.43/100; 7.55/500



SECTION A-A

GENERAL NOTES

Fasteners shall be AASHTO M164 Type 1, mechanically galvanized bolts in painted areas and M164 Type 3 in unpainted areas. Bolts $^{7}/_{8}$ in. ϕ, holes $^{15}/_{16}$ in. ϕ, unless otherwise noted.

Calculated weight of Structural Steel M270 Grade 50W = 332,950 lbs.
Calculated weight of Structural Steel - Misc. Items = 5040 lbs.

All structural steel shall be AASHTO M 270 Grade 50W.

No field welding is permitted except as specified in the contract documents.

Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.

Reinforcement bars designated (E) shall be epoxy coated.

Bearing seat surfaces shall be constructed or adjusted to their designated elevations within a tolerance of $^{1}/_{8}$ inch (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings.

The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.

Structural steel shall only be painted for a distance equal to the depth of embedment into the concrete cap plus 3 inches. Those areas shall be primed in the shop with a Department approved zinc rich primer. No field painting shall be required. All structural steel shall be cleaned as specified in the Special Provision for "Surface Preparation and Painting Requirements for Weathering Steel".

Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.

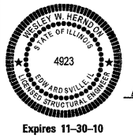
The Contractor shall drive test piles to 110% of the nominal required bearing specified in production locations at substructures specified or approved by the Engineer before ordering the remainder of piles.

If a portion of the pier wall or concrete encasement is underwater, reinforcement may be placed underwater into forms. Concrete shall be tremied according to Article 503.08 of the Standard Specifications to an elevation of 1'-0" above the water line at the time of construction.

The Contractor is advised that the existing PPC Deck beams are in a deteriorated condition with reduced load carrying capacity. It is the Contractor's responsibility to account for the condition of the beams when developing construction procedures for removal and replacement of the superstructure.

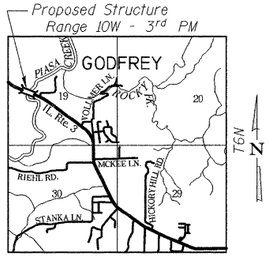
If the Contractor's procedures for existing beam removal involves placement of heavy equipment on the existing deck beams, a detailed procedure shall be submitted to the Engineer for approval. The procedure shall include calculations, sealed by an Illinois Licensed Structural Engineer, verifying the structural adequacy of the beams for the proposed loads. Cost included with Removal of Existing Structures.

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Ralph E Anderson
ENGINEER OF BRIDGES AND STRUCTURES



Expires 11-30-10

Wesley W. Herndon 3/20/09
WESLEY W. HERNDON, S.E. DATE



LOCATION SKETCH

GENERAL PLAN AND ELEVATION
ILLINOIS ROUTE 3 OVER
PIASA CREEK
F.A.U. ROUTE 8956 SEC 59BR-1
MADISON COUNTY
STATION 638+11.00
STRUCTURE NO. 060-0343

DESIGNED	DB
CHECKED	RS
DRAWN	ER
CHECKED	WWH

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Registered Professional Service Corporation License No. 184-003389

SHEET NO. 1	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
28 SHEETS	8956	59BR-1	MADISON		30
	STRUCTURE NO. 060-0343		CONTRACT NO. 76B18		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		