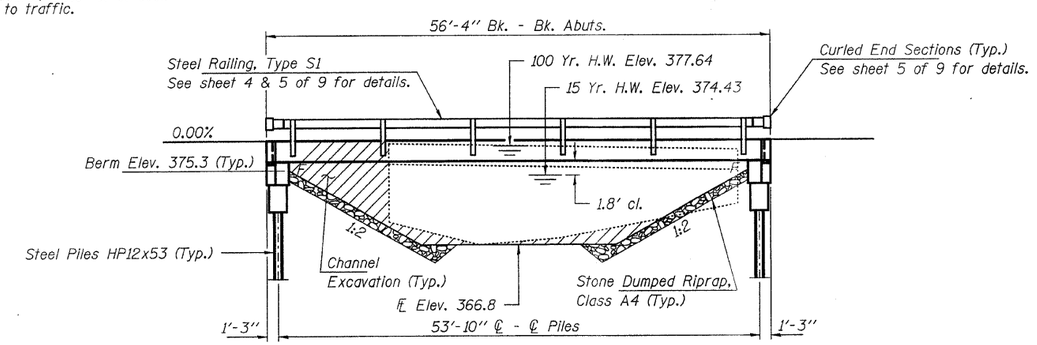
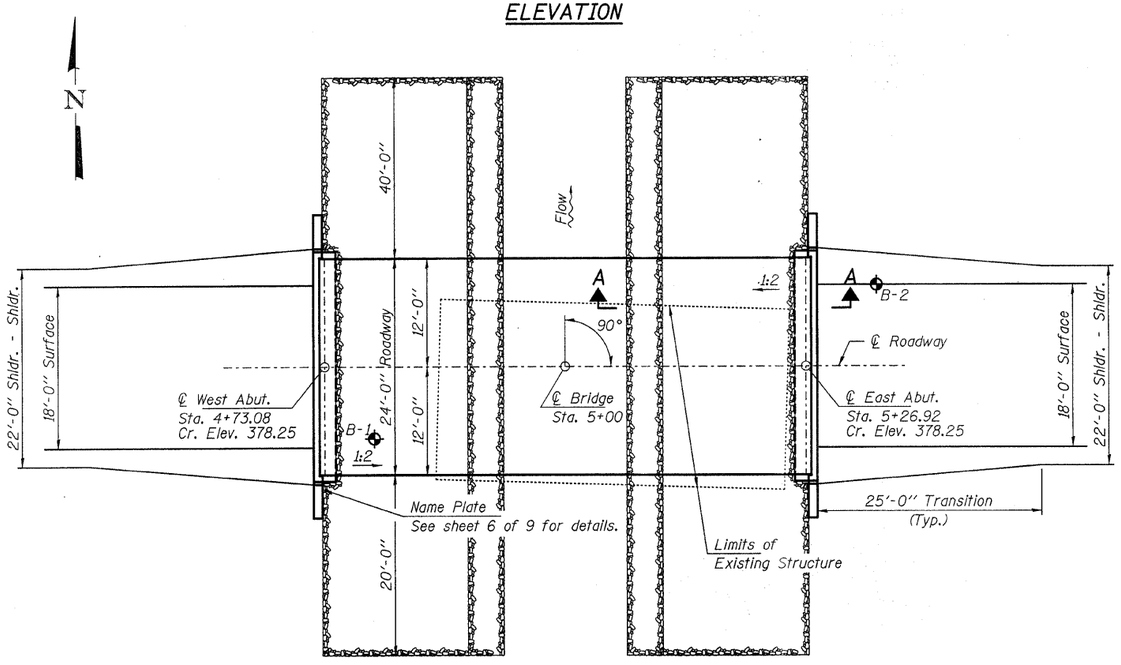
BENCHMARK: Iron Pin. Sta. ±4+31.56, 6.78' Lt., Elev. 375.83

EXISTING STRUCTURE: Sta. 5+05 - Single span steel I-beam timber deck bridge with timber abutments & wingwalls.
39.0' bk. - bk. abuts.; 20.0' o.-o. deck
Structure closed to traffic.

No Salvage



ELEVATION



PLAN

GENERAL NOTES

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

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.

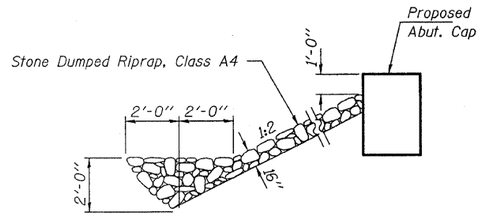
All proposed construction activities shall be in accordance with Nationwide Permit number 14 of the Department of the Army authorized under Section 404 of the Clean Water Act.
The IEPA has issued Section 401 Water Quality Certification for this activity. See Special Provisions for conditions.

See Sheets 8 & 9 of 9 for Borings.

BROAD RUN CREEK
BUILT 200_ BY
WHITE COUNTY
SEC. 06-09121-00-BR
MILL SHOALS ROAD DISTRICT
STR. NO. 097-3252
LOADING HL-93

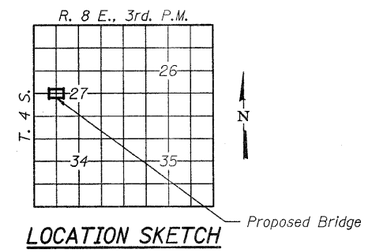
NAME PLATE

See Std. 515001



SECTION A-A

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



LOCATION SKETCH

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 (½"ϕ low lax. strands)
fpbt = 201,960 psi (½"ϕ 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.

SEISMIC DATA

Seismic Performance Zone (SPZ) = 3
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.448g
Design Spectral Acceleration at 0.2 sec. (S_{DS}) = 0.858g
Soil Site Class = E

WATERWAY INFORMATION

Drainage Area = 6.3 Sq. Mi. — Existing Low Grade Elev. 375.8 @ Sta. 4+31.56; Proposed Low Grade Elev. 376.25 @ Sta. 5+00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Natural H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
Design	15	1644	196	250	374.43	0.51	0.00	374.94	374.43
Base	100	2770	247	342	377.64	1.07'	0.55'	378.71	378.19
Max. Calc.	500	3790	-	-	-	-	-	-	-

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Stone Dumped Riprap, Class A4	Ton			330
Removal of Existing Structures	Each			1
Concrete Structures	Cu. Yd.		22.2	22.2
Concrete Encasement	Cu. Yd.		2.8	2.8
Precast Prestressed Concrete Deck Beams (21" Depth)	Sq. Ft.	1,320		1,320
Reinforcement Bars	Pound		2,430	2,430
Steel Railing, Type S1	Foot	107		107
Furnishing Steel Piles HP12x53	Foot		500	500
Driving Piles	Foot		500	500
Name Plates	Each		1	1

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

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 3/5/2009
ILLINOIS STRUCTURAL NO. 081-6064

LICENSED STRUCTURAL ENGINEER — STEVEN W. MEGGINSON 081-6064 SPRINGFIELD, IL — STATE OF ILLINOIS

Expires 11-30-2010

GENERAL PLAN AND ELEVATION STRUCTURE NO. 097-3252

HAMPTON, LENZINI & RENWICK, INC.
CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS
HLR
3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
(217) 546-3400

PROJECT NUMBER: 08.0263.130 | DATE: 03/03/09

SHEET NO. 1
9 SHEETS

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
125	06-09121-00-BR	WHITE	13	5
MILL SHOALS ROAD DISTRICT		CONTRACT NO. 99371		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT BROS-193(27)		