

BM #1 - PK nail in power pole,
21.6'± Lt. of Sta. 1+74 - Elev. 576.45

BM #2 - PK nail in power pole,
22'± Lt. of Sta. 7+46 - Elev. 563.06

Existing Structure No. 040-9901:
Single span concrete arch bridge with
concrete wingwalls. 30'L. X 18'W.
No skew. See Special Provisions.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

Reinforcement bars shall conform to the requirements of ASTM A 706
Grade 60 (IL Modified). See Special Provisions.

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

See Section 502 of the Standard Specifications for Structural Excavation.

Channel excavation shall be excavated as shown within the limits of the
proposed bridge, then tapered to the existing channel at the ROW line.
If the Engineer deems the material satisfactory, it may be used to
construct the roadway embankment.

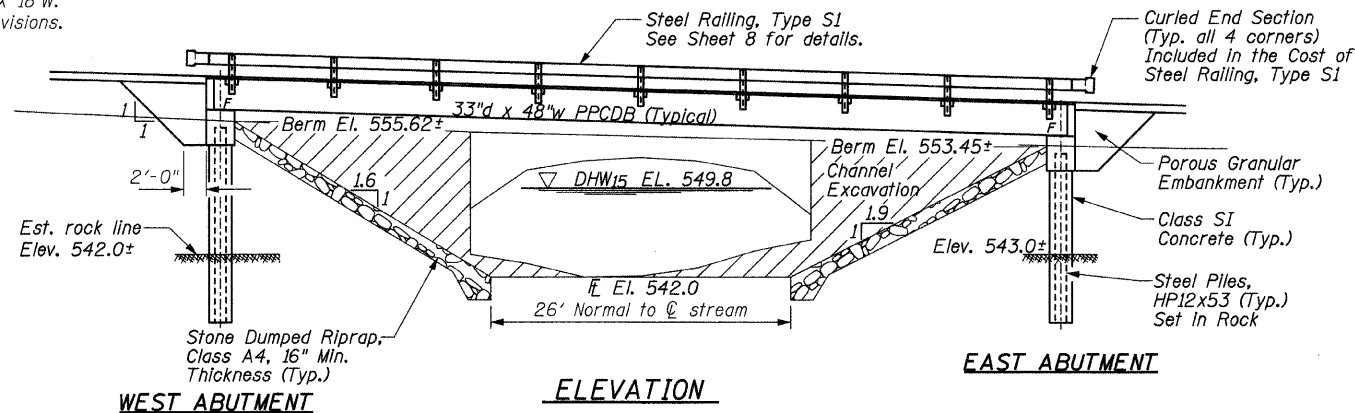
See Special Provisions for Soil Borings.

Do not scale these drawings.

The Steel H-piles shall be according to AASHTO M270 Grade 50.

The abutment bearing seat surfaces for the precast prestressed concrete
deck beams shall be adjusted by shimming to assure firm and even bearing.
As required, 1/8" fabric adjusting shims of the dimensions of the Exterior
Bearing Pad shall be provided for each bearing.

A corrosion inhibitor shall be used in the concrete for the precast prestressed
deck beams, according to Article 1020.05(b)(12) and 1021.06 of the Standard
Specifications.



STATION 4+52.00
BUILT 2010 BY
JASPER COUNTY
TR 39 SEC. 07-04124-00-BR
LOADING HL-93
STRUCTURE NO. 040-3259

NAME PLATE
See Std. 515001

LOADING HL-93
50#/sq. ft. included in dead load
for future wearing surface.

DESIGN SPECIFICATIONS
2007 (4th Ed.) AASHTO LRFD
Bridge Design Specifications,
with 2008 & 2009 Interims.

DESIGN STRESSES
FIELD UNITS

$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (reinforcement)

PRECAST PRESTRESSED UNITS

$f'_c = 6,000$ psi
 $f'_{ci} = 5,000$ psi
 $f_{pu} = 270,000$ psi (1/2" ϕ low lax. strands)
 $f_{pbt} = 201,960$ psi (1/2" ϕ low lax. strands)
 $f_y = 60,000$ psi (reinforcement)

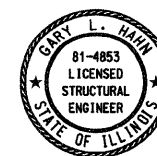
BILL OF MATERIALS (BRIDGE ONLY)

ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	Cu Yd	-	480	480
Porous Granular Embankment	Ton	-	122	122
Stone Dumped Riprap, Class A4	Ton	-	205	205
Removal of Existing Structures	Each	1	-	1
Concrete Structures	Cu Yd	-	25.4	25.4
PPCDB (33" Depth)	Sq Ft	2105	-	2105
Reinforcement Bars	Pound	-	3900	3900
Steel Railing, Type S1	Foot	152	-	152
Furnishing Steel Piles HP12x53	Foot	-	165	165
Setting Piles in Rock	Each	-	10	10
Name Plates	Each	-	1	1
Terminal Marker - Direct Applied	Each	4	-	4

SEISMIC DATA

Seismic Performance Zone (SPZ) = 2
Soil Site Classification = D
 $S_{D1} = 0.206$ $S_{D5} = 0.460$

I certify that to the best of 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
Standard Specifications for Highway Bridges.

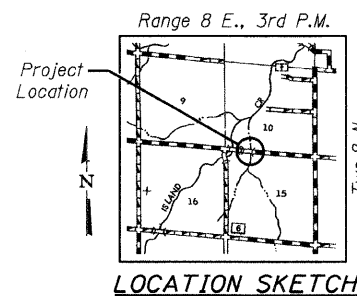
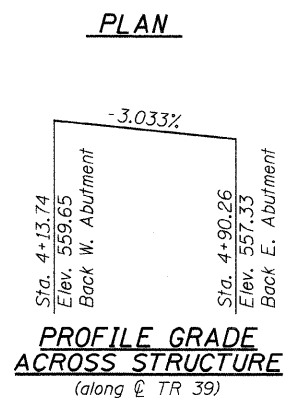
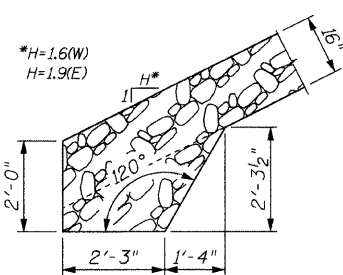
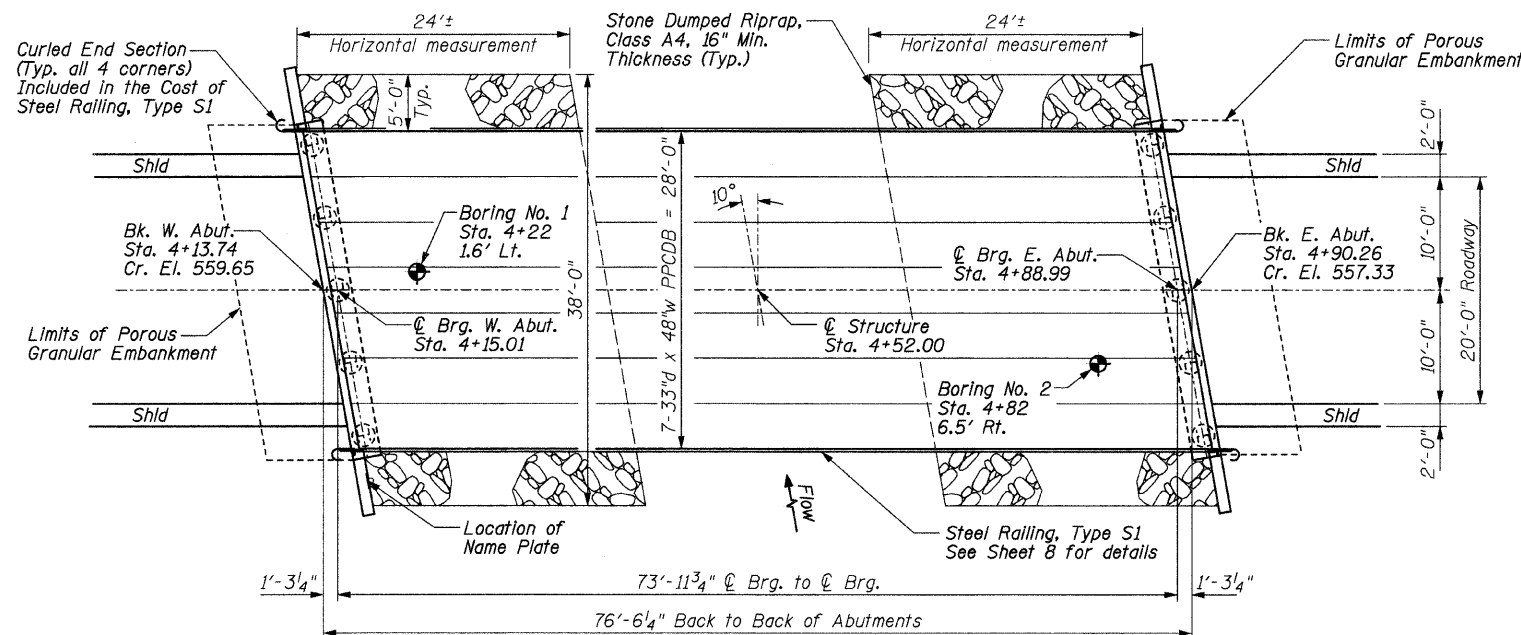


Gary L. Hahn
Date of Signing: 02-10-2010
Date of License Expiration: 11-30-2010

GENERAL PLAN AND ELEVATION
TR 39 OVER TRIBUTARY TO ISLAND CREEK
SECTION 07-04124-00-BR
JASPER COUNTY
STATION 4+52.00
STRUCTURE NO. 040-3259

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 39	07-04124-00-BR	JASPER	9	5
CONTRACT NO. 95622				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

RHUTASEL and ASSOCIATES, INC.
CONSULTING ENGINEERS • LAND SURVEYORS
CENTRALIA, ILLINOIS FREEBURG, ILLINOIS
ILLINOIS DESIGN FIRM LICENSE NO. 184-000287



WATERWAY INFORMATION

(By Connor & Connor, Inc.)

Drainage Area = 3.56 sq. mi. Low Grade Elev. 555.69 @ Sta. 5+88.73

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Nat. H.W.E.		Head - Ft.		Headwater El.	
			Exist.	Prop.	Exist.	Prop.	Exist.	Prop.	Exist.	Prop.
Design	15	1120	182	299	549.80	0.80	1.00	552.90	552.00	
Base	100	1920	204	357	551.00	1.90	1.00	552.90	552.00	

02/10/2010 RAAI #51109