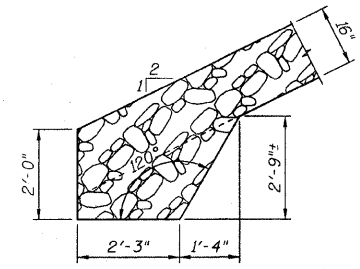
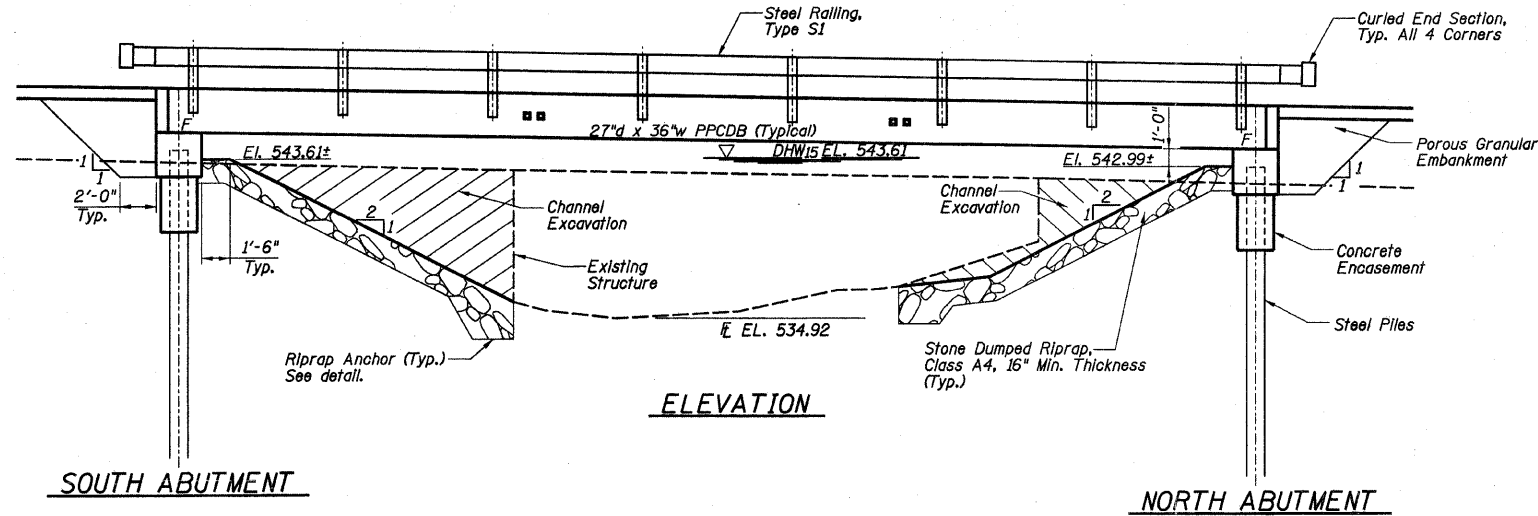


BM #1 - RR spike in power pole,
62.3' Rt. of Sta. 9+40 - Elev. 545.33
BM #2 - RR spike in power pole,
26.6' Rt. of Sta. 13+02 - Elev. 550.93

Existing Structure: Single span steel I-beam and concrete deck structure on closed concrete abutments, 30' L x 13.5' W. No salvage.



RIPRAP ANCHOR DETAIL

**NORTH FORK
BUILT 201 BY
MARION COUNTY
SEC. 09-07116-00-BR
LOADING HL-93
STRUCTURE NO. 061-3314**

NAME PLATE

(See State Standard 515001 for details)

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)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 2
Soil Site Classification = D
 $S_{D1} = 0.246$ $S_{D5} = 0.565$

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.



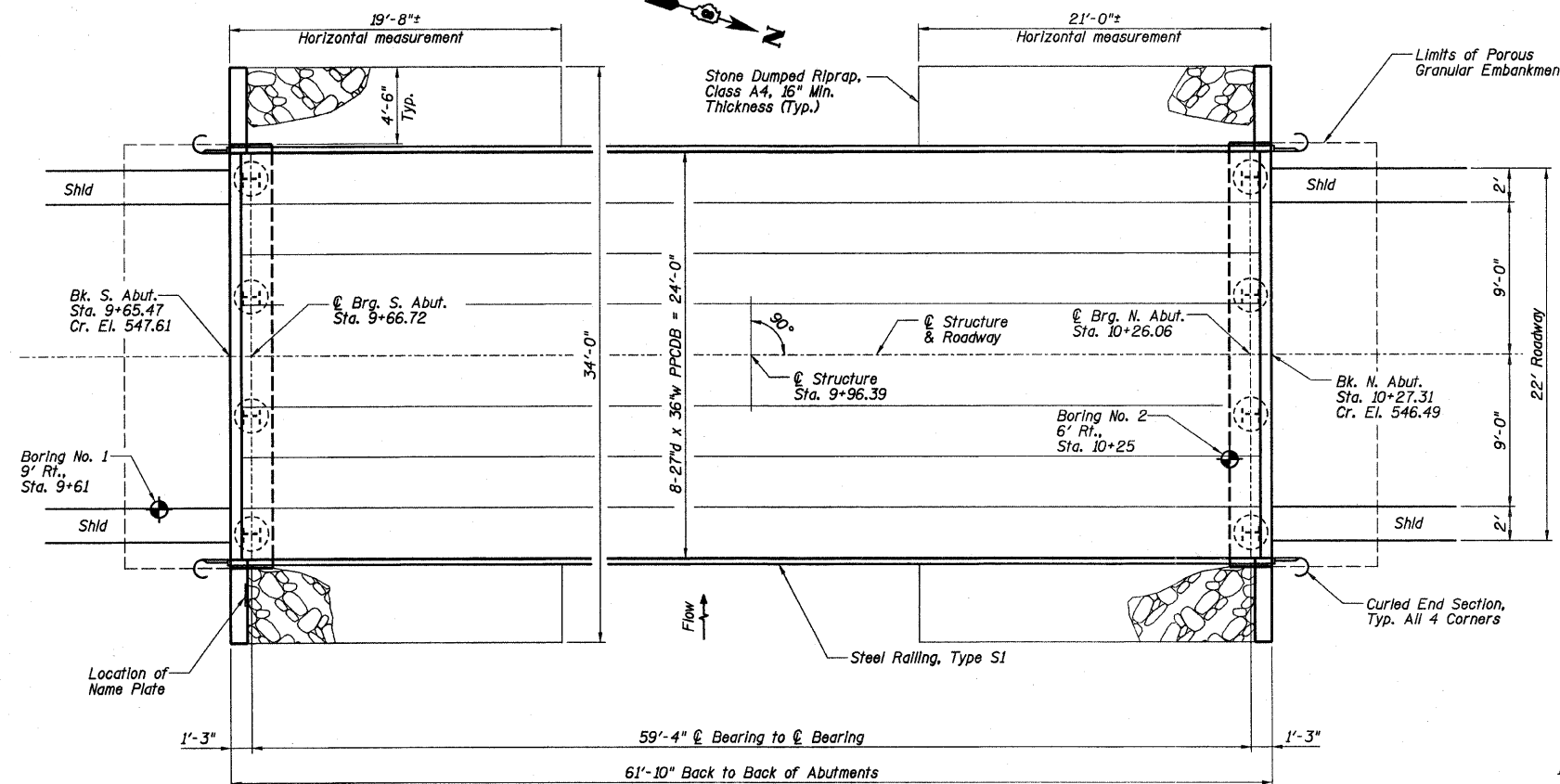
Gary L. Hahn
Gary L. Hahn
02-10-2012
Date of Signing
11-30-2012
Date of License Expiration

BILL OF MATERIALS (BRIDGE ONLY)

ITEM	UNIT	TOTAL
Channel Excavation	Cu Yd	142
Porous Granular Embankment	Ton	66
Stone Dumped Riprap, Class A4	Ton	130
Removal of Existing Structures	Each	1
Concrete Structures	Cu Yd	18.0
Concrete Encasement	Cu Yd	2.8
PPCDB (27" Depth)	Sq Ft	1452
Reinforcement Bars	Pound	3470
Steel Railing, Type S1	Foot	124
Furnishing Steel Piles HP12x53	Foot	273
Driving Piles	Foot	273
Test Pile Steel HP12x53	Each	1
Name Plates	Each	1
Terminal Marker - Direct Applied	Each	4

GENERAL NOTES

Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.
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 Specifications for Soil Borings.
Do not scale these drawings.
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, $1/2$ " fabric adjusting shims of the dimensions of the Exterior Bearing Pad shall be provided for each bearing.



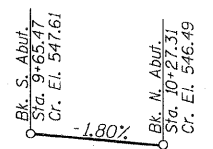
PLAN

WATERWAY DATA

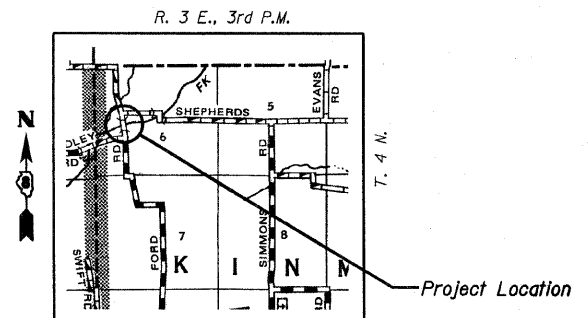
Drainage Area = 7.49 Sq. Mi. Low Grade Elev. 541.49 @ Sta. 11+00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Natural H.W.E.		Head - Ft.		Headwater El.	
			Exlst.	Prop.	Exlst.	Prop.	Exlst.	Prop.	Exlst.	Prop.
Design	15	1324	189	297	543.61	0.10	0.27	543.71	543.88	
Base	100	2250	189	344	544.52	0.08	0.85	544.60	545.37	
Max. Calc.	500	3010	189	345	545.18	0.07	1.51	545.15	546.59	

**PROFILE GRADE
ACROSS STRUCTURE**



Along ϕ Roadway



LOCATION SKETCH

02/10/2012 RAAI #51509

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

DESIGNED - GLH	REVISED -
DRAWN - JN	REVISED -
CHECKED - GLH	REVISED -
DATE - 01/31/2012	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**GENERAL PLAN AND ELEVATION
STRUCTURE NO. 061-3314**

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 304A	09-07116-00-BR	MARION	11	4
CONTRACT NO. 97491				
ILLINOIS FED. AID PROJECT				