

ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET
CH 3	*	PIKE	17	7
PROJECT BRS-601(171)				

B.M.:  
RR Spike in Cut Off Power Pole  
Sta. 126+55.67, 40' Lt.  
Elev. 125.64

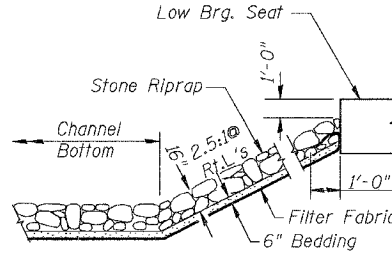
PK Nail Top South End FE CMP  
at West Side of Road, North of Bridge  
Elev. 84.65

**EXISTING STRUCTURE:**

Existing Three Span PPC Deck beam Bridge on pile bent concrete abutments and pile bent concrete piers, 163'-7" Bk. to Bk. Abut., 34'-6" O. to O. Deck, ±20° Skew Lt  
Str. No. 075-3032

Salvage 5 interior center span beams.  
See Special Provisions.

Road to be closed to traffic during construction.



**BAY CREEK  
BUILT 200 BY  
PIKE COUNTY  
SEC. 04-00079-00-BR  
C.H. 3 STATION 133+69.88  
F.A. PROJ. BRS-601(171)  
STR. NO. 075-3307 LOADING HS20-44**

**NAME PLATE**

Locate Name Plate at S.E. Wingwall Corner of Bridge (See Std. 515001)

**GENERAL NOTES**

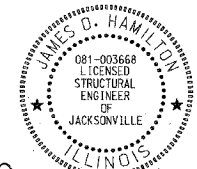
The Contractor shall drive 4 test piles, in permanent locations, one at each substructure, as directed by the Engineer before ordering the remaining piles. For Soil Boring Logs, See Special Provisions. A Corrosion Inhibitor, as covered in the Special Provisions, shall be used in the concrete for Precast Prestressed Concrete Deck Beams. Reinforcement Bars shall conform to AASHTO M-31 or M-322, Grade 60. Layout of the slope protection system may be varied in the field to suit ground conditions as directed by the Engineer. Final Slopewall Removal limits shall be determined in the field by the engineer. The top surface of the beams shall be finished in accordance with Article 504.06 of the Standard Specifications except that the surface shall not be roughened by brooming. The finished surface shall be free of depressions or high spots with sharp corners, and the top edge of keys shall be rounded or chamfered a minimum of 1/4".

**TOTAL BILL OF MATERIAL**

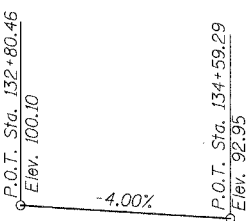
ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	CU YD	---	1,915	1,915
Riprap, Special	TON	---	645	645
Filter Fabric	SQ YD	---	935	935
Removal of Existing Structures	EACH	---	---	1
Slope Wall Removal	SQ YD	---	---	1,520
Structure Excavation	CU YD	---	150	150
Concrete Structures	CU YD	---	184.4	184.4
Precast Prestressed Concrete Deck Beams (27" Depth)	SQ FT	5,833	---	5,833
Reinforcement Bars	POUND	---	14,540	14,540
Steel Bridge Rail, Type SM	FOOT	358	---	358
Furnishing Steel Piles HPI2x53	FOOT	---	2,155	2,155
Driving Steel Piles	FOOT	---	2,155	2,155
Test Pile Steel HPI2x53	EACH	---	4	4
Concrete Encasement	CU YD	---	10.4	10.4
Name Plates	EACH	---	1	1
Waterproofing Membrane System	SQ YD	656	---	656
Portland Cement Mortar Fairing Course	FOOT	440	---	440
Bituminous Concrete Surface Course, Superpave Mix "C", N50	TON	99	---	99
Underwater Structure Excavation Protection, Location 1	EACH	---	1	1
Underwater Structure Excavation Protection, Location 2	EACH	---	1	1
Controlled Low Strength Material	CU YD	---	28.2	28.2

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 Standard Specification for Highway Bridges. This design complies with all requirements of the current AASHTO Guide Specifications for Seismic Design of highway bridges.

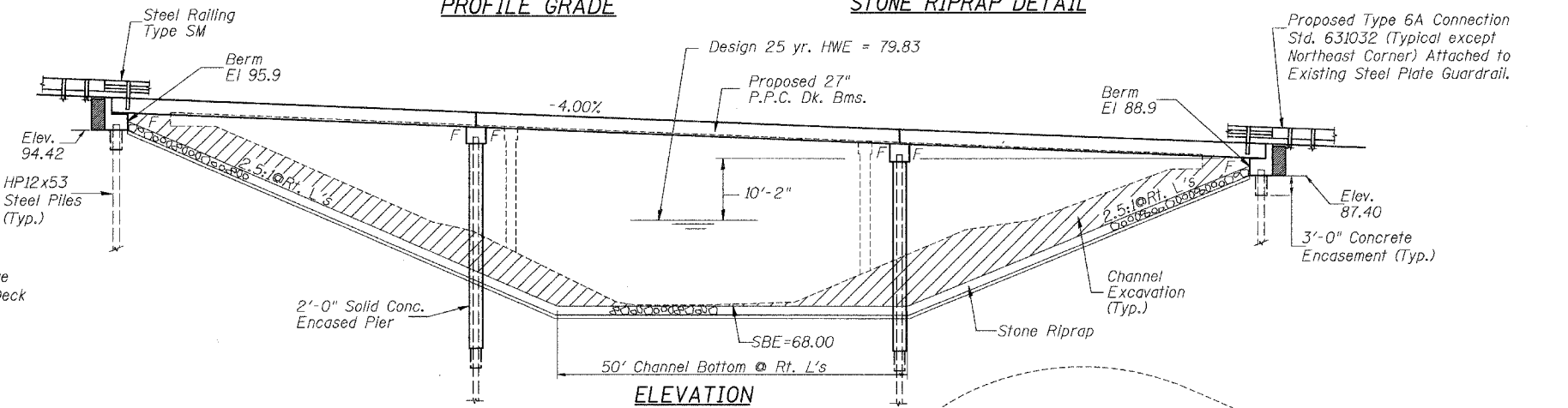
James O. Hamill  
Illinois Structural No. 3668  
Expires 11/30/2006



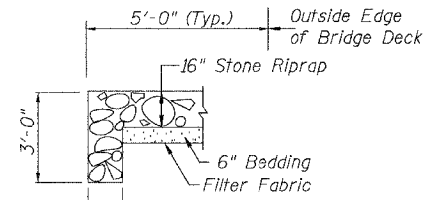
James O. Hamill  
2/10/2006  
License Expires 11/30/2006



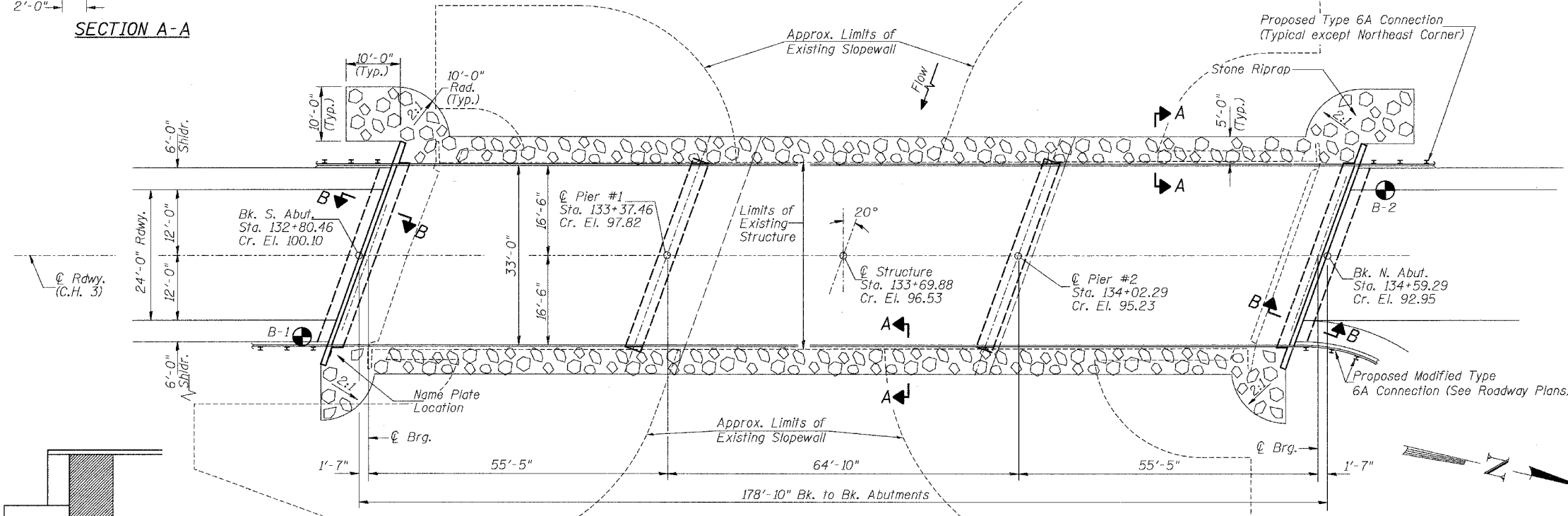
**PROFILE GRADE**



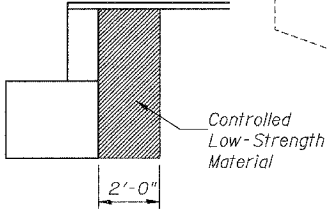
**ELEVATION**



**SECTION A-A**



**PLAN**



**SECTION B-B**

**WATERWAY INFORMATION**

Drainage Area = 19.33 Sq. Mi. Low Grade Elev. = 84.97 @ Sta. 139+09

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. ft.		Nat. H.W.E. ft.	Head - ft.		Headwater Elev. - ft.
			Exist.	Prop.		Exist.	Prop.	
Design	25	3,915	543	847	79.83	0.20	0.00	80.03
Base	100	5,301	581	922	80.31	0.75	0.10	81.06

Construction of this project complies with IDNR, Office of Water Resources Statewide Permit No. 2

**DESIGN SPECIFICATIONS**

2002 AASHTO & Interims

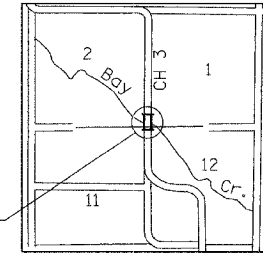
**DESIGN STRESSES**

(FIELD UNITS) f'c = 3,500 p.s.i. fy = 60,000 p.s.i. (Rein.)  
(PRECAST PRESTRESSED UNITS) f'c = 5,000 p.s.i. f'ci = 4,000 p.s.i. f's = 270,000 p.s.i. (1/2" Strands) f'si = 201,960 p.s.i. (1/2" Strands)

**LOADING HS20-44**

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

R. 4 W. 4th P.M.



**LOCATION SKETCH**

DESIGNED	B.A.N.
CHECKED	J.E.H.
DRAWN	C.E.T.
CHECKED	J.E.H.

**GENERAL PLAN & ELEVATION**

C.H. 3 OVER BAY CREEK  
SECTION 04-00079-00-BR  
PIKE COUNTY  
STATION 133+69.88  
STR. NO. 075-3307