

B.M.: RR Spike in Power Pole  
Sta. 53+40, 41' Lt.  
Elev. 493.68

RR Spike in Power Pole  
Sta. 67+68, 37' Lt.  
Elev. 490.99

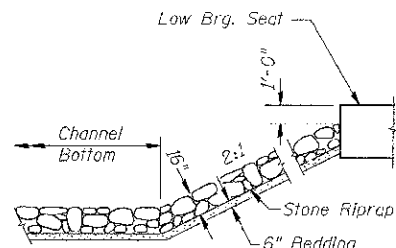
Existing Structure:  
Three span steel stringer with reinforced concrete deck and steel rail superstructure on concrete pile bent piers with exposed precast concrete piles and concrete cap bent abutments. The structure is ±81' back to back of abutments, ±26' out to out deck, and is not skewed. Str. No. 075-3009

Salvage: None  
Road to be closed to traffic during construction.

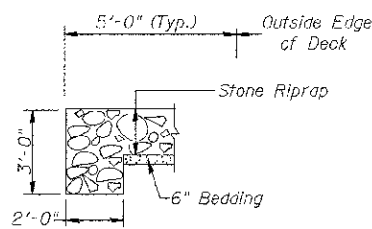
**BAY CREEK TRIBUTARY  
BUILT 201 BY  
PIKE COUNTY  
SEC. 10-00085-00-BR  
C.H. 10 STATION 60+00.00  
F.A. PROJ. BRS-0603(115)  
STR. NO. 075-3323 LOADING HL-93**

**NAME PLATE**

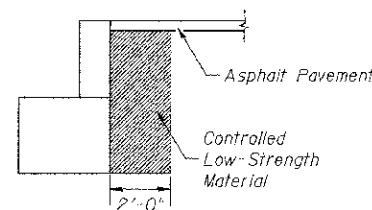
Locate Name Plate at S.W. Wingwall  
Corner of Bridge (See Std. 515001)



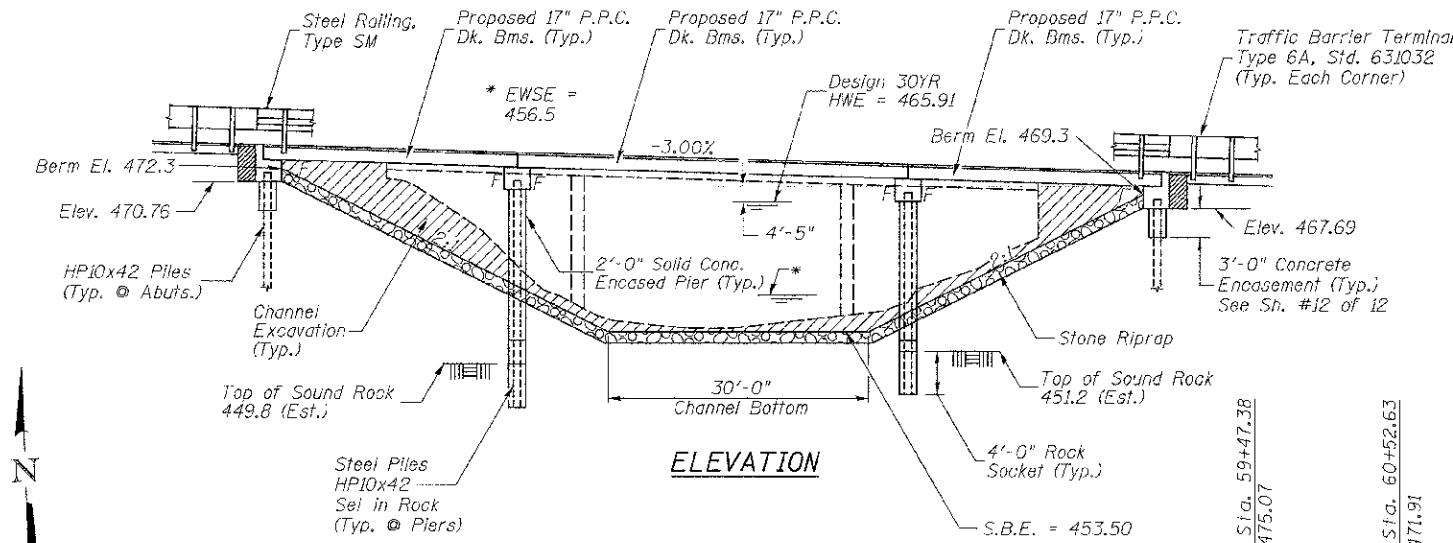
**STONE RIPRAP DETAIL**



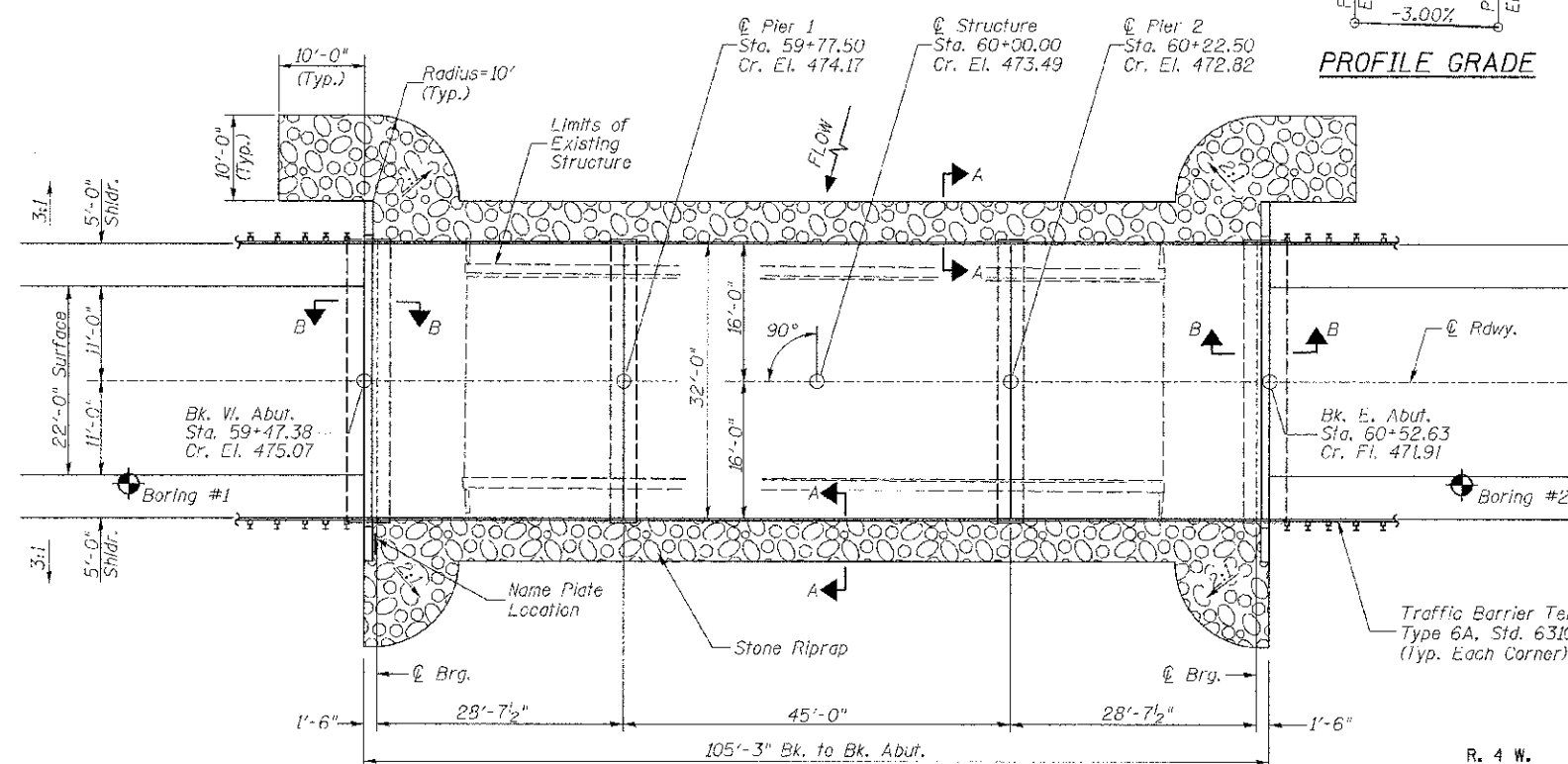
**SECTION A-A**



**SECTION B-B**



**ELEVATION**



**PLAN**

**DESIGN SCOUR TABLE**

Location	W. Abut.	Pier 1	Pier 2	E. Abut.
Design Scour Elevation	470.76	449.80	451.20	467.69

**WATERWAY INFORMATION**

Drainage Area = 5.35 Sq. Mi. Low Grade Elev. = 459.92 @ Sta. 62+00.00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exst.	Prop.	Nat. H.W.F. Exst.	Prop.	Headwater El. Exst.	Prop.
Design	30	2,565	531	642	465.91	0.10	0.00	466.01
Base	100	3,400	611	740	467.18	0.29	0.12	467.47

**DESIGN SPECIFICATIONS**

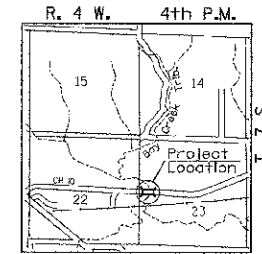
2010 AASHTO (LRFD) & Interims

**DESIGN STRESSES**

(FIELD UNITS) f'c = 3,500 p.s.i. fy = 60,000 p.s.i. (Rein.)  
(PRECAST PRESTRESSED UNITS) f'c = 6,000 p.s.i. f'ci = 5,000 p.s.i. f's = 270,000 p.s.i. (1/2" Strands) f'si = 201,960 p.s.i. (1/2" Strands)

**LOADING HL-93**

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



**LOCATION SKETCH**

**GENERAL NOTES**

The Contractor shall drive test piles to 110% of the nominal required bearing specified in production locations at the substructures specified or approved by the Engineer before ordering the remainder of the piles.  
For Soil Boring Logs, See Special Provisions.  
A Corrosion Inhibitor shall be used in the concrete for Precast Prestressed Concrete Deck Beams according to Article 1020.05(b)(12) of the Standard Specifications.  
Reinforcement Bars shall conform to the requirements of ASTM A706 Grade 60. Reinforcement Bars designated (E) shall be epoxy coated.  
Layout of the slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.  
The existing structural steel coating may contain lead. The contractor should take appropriate precautions to deal with the presence of lead on this project.  
The top surface of the beams shall be finished according to the IDOT Manual for Fabrication of Precast Prestressed Concrete Products.  
Each Pier Stem shall be constructed in a single continuous concrete pour.

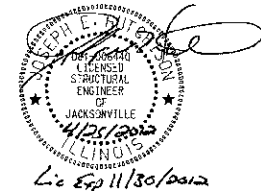
**TOTAL BILL OF MATERIAL**

ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	CU YD	---	450	450
Stone Riprap, Class B4 (Special)	TON	---	515	515
Removal of Existing Structures	CACH	---	1	1
Structure Excavation	CU YD	---	70	70
Cofferdam Excavation	CU YD	---	75	75
Concrete Structures	CU YD	---	123.7	123.7
Precast Prestressed Concrete Deck Beams (17" Depth)	SQ FT	3,304	---	3,304
Reinforcement Bars	POUND	---	10,050	10,050
Steel Railing, Type SM	FOOT	211	---	211
Furnishing Steel Piles HP10x42	FOOT	---	490	490
Driving Piles	FOOT	---	196	196
Test Pile Steel HP10x42	EACH	---	2	2
Setting Piles in Rock	EACH	---	12	12
Concrete Encasement	CU YD	---	6.0	6.0
Name Plates	EACH	---	1	1
Cofferdam (Type 1) (Location-1) (Pier #1)	EACH	---	1	1
Cofferdam (Type 1) (Location-2) (Pier #2)	EACH	---	1	1
Controlled Low-Strength Material	CU YD	---	19.1	19.1
Bituminous Surface Treatment, A-2 Special	SQ YD	374	---	374

① See Special Provisions

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.

*[Signature]* 4/25/2012  
Illinois Structural No. 6440  
Expires 11/30/2012



**GENERAL PLAN & ELEVATION  
PIKE COUNTY  
SECTION 10-00085-00-BR  
C.H. 10 OVER BAY CREEK TRIBUTARY**

DESIGNED	S.T.M.
CHECKED	J.E.H.
DRAWN	S.T.M.
CHECKED	J.E.H.

SHEET NO. 1 12 SHEETS	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	CH 10	10-00085-00-BR	PIKE	23	7
S.N. 075-3323			CONTRACT NO. 93582		
FED. ROAD DIST. NO. 7 ILLINOIS			FED. AID PROJECT BRS-0603(115)		