

B.M.: RR Spike in 13" Tree  
Sta. 16+37, 34' Rt.  
Elev. 525.09

RR Spike in Power Pole  
Sta. 22+86, 79' Lt.  
Elev. 533.57

Existing Structure:  
Single span timber deck on steel beam superstructure on concrete closed abutments. The structure is ±38' back to back of abutments, 20' out to out of deck with a ±19' driving surface and is not skewed. Str. No. 075-3187

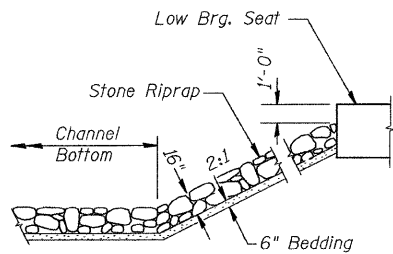
Salvage: None

Road to be closed to traffic during construction.

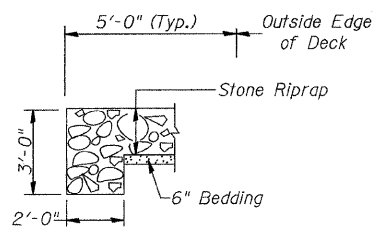
**BREWSTER CREEK  
BUILT 20L BY  
PIKE COUNTY  
SEC. 09-00083-00-BR  
C.H. 13 STATION 20+00.00  
F.A. PROJ. BRS-0597(103)  
STR. NO. 075-3317 LOADING HL-93**

**NAME PLATE**

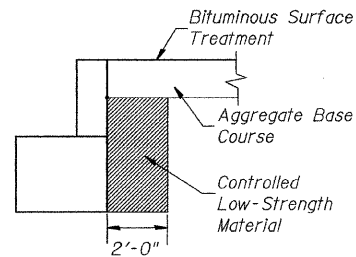
Locate Name Plate at S.W. Wingwall Corner of Bridge (See Std. 515001)



**STONE RIPRAP DETAIL**



**SECTION A-A**



**SECTION B-B**

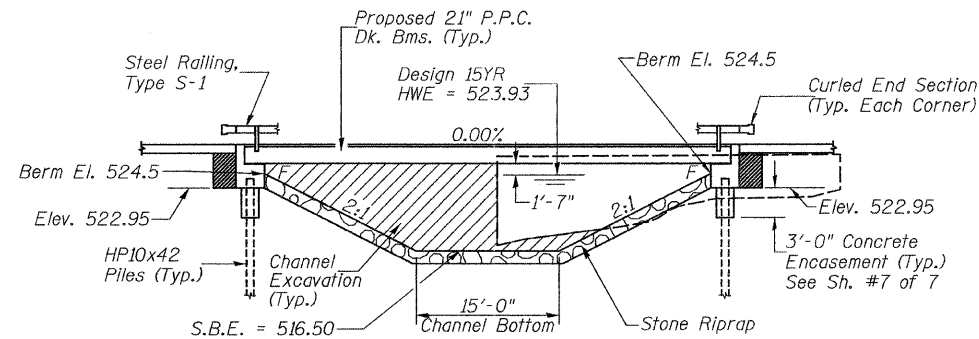
**DESIGN SCOUR TABLE**

Location	W. Abut. E.	E. Abut.
Design Scour Elevation	522.95	522.95

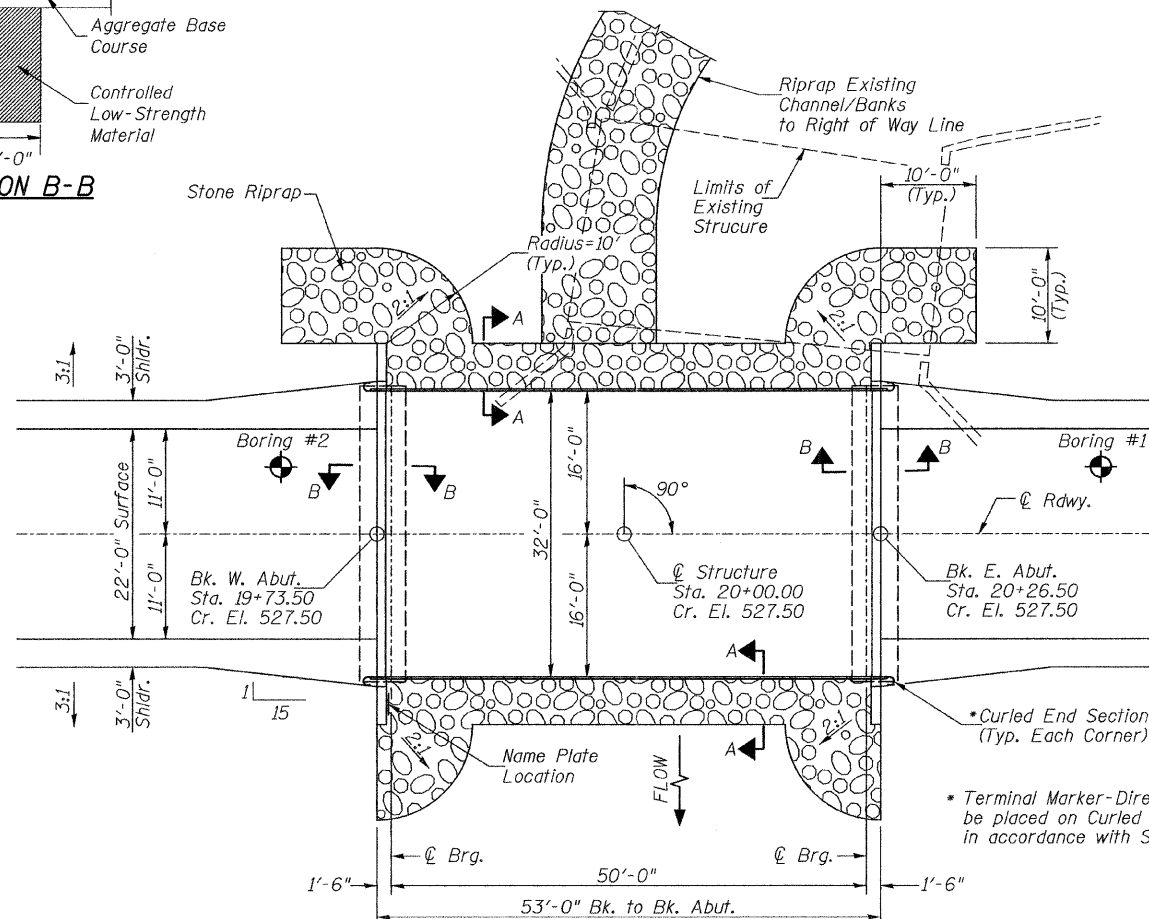
**WATERWAY INFORMATION**

Drainage Area = 1.17 Sq. Mi.		Low Grade Elev. = 519.45 @ Sta. 14+50.00							
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Prop.	Nat. H.W.E. Exist.	Prop.	Headwater El. Exist.	Prop.	
Design	15	960	132	222	523.93	0.75	0.10	524.68	524.03
Base	100	1,630	173	271	525.00	1.16	0.24	526.16	525.24

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



**ELEVATION**



**PLAN**

**DESIGN SPECIFICATIONS**

2007 AASHTO (LRFD) & Interims

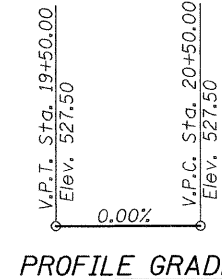
**DESIGN STRESSES**

(FIELD UNITS)  $f'c = 3,500$  p.s.i.  $f_y = 60,000$  p.s.i. (Rein.)

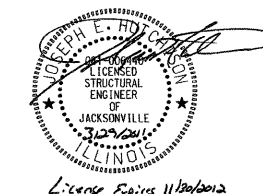
(PRECAST PRESTRESSED UNITS)  $f'c = 6,000$  p.s.i.  $f'ci = 5,000$  p.s.i.  $f's = 270,000$  p.s.i. ( $1/2$ " Strands)  $f'si = 201,960$  p.s.i. ( $1/2$ " Strands)

**LOADING HL-93**

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

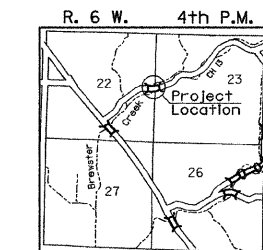


**PROFILE GRADE**



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.

Illinois Structural No. 6440  
Expires 11/30/2012



**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. Excavation behind existing closed abutment walls shall be done before removing existing Superstructure. 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.

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	CU YD	—	100	100
Stone Riprap, Class B4 (Special)	TON	—	300	300
Removal of Existing Structures	EACH	—	—	1
Structure Excavation	CU YD	—	70	70
Concrete Structures	CU YD	—	25.8	25.8
Precast Prestressed Concrete Deck Beams (21" Depth)	SQ FT	1,637	—	1,637
Reinforcement Bars	POUND	—	2,870	2,870
Steel Railing, Type S1	FOOT	106	—	106
Furnishing Steel Piles HP10x42	FOOT	—	196	196
Driving Piles	FOOT	—	196	196
Test Pile Steel HP10x42	EACH	—	2	2
Concrete Encasement	CU YD	—	3.5	3.5
Name Plates	EACH	—	1	1
Controlled Low-Strength Material	CU YD	—	15.1	15.1
Bituminous Surface Treatment, A-2 Special	SQ YD	188	—	188

① See Special Provisions

**GENERAL PLAN & ELEVATION**

**PIKE COUNTY**

**SECTION 09-00083-00-BR  
C.H. 13 OVER BREWSTER CREEK**

SHEET NO. 1	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7 SHEETS	CH 13	09-00083-00-BR	PIKE	26	7
S.N. 075-3317			CONTRACT NO. 98550		
FED. ROAD DIST. NO. 7 ILLINOIS			FED. AID PROJECT BRS-0597(103)		