

B.M.: RR Spike in 18" oak tree
Sta. 18+17, 45' Lt.
Elev. 466.68

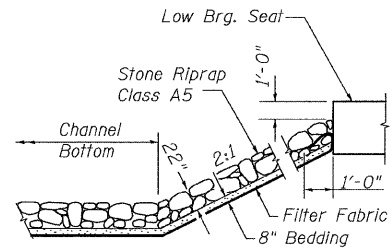
RR Spike in 24" tree
Sta. 23+84, 57' Lt.
Elev. 461.64

Existing Structure:

Three span reinforced concrete deck with curb on steel stringer superstructure supported on concrete pile bent piers and spill thru concrete pile bent abutments. The structure is 135'-0" back to back of abutments, 27'-8" out to out of deck and is not skewed. Str. No. 063-3010

Salvage: None

Road to be closed to traffic during construction.



STONE RIPRAP DETAIL

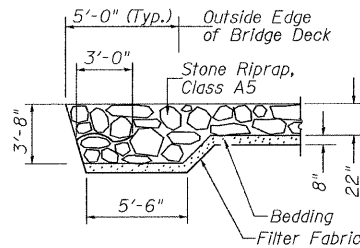
**QUIVER CREEK
BUILT 200_ BY
MASON COUNTY
SEC. 07-00032-01-BR
C.H. 3 STATION 20+00.00
F.A. PROJ. BRS-0568(102)
STR. NO. 063-3011 LOADING HL-93**

NAME PLATE

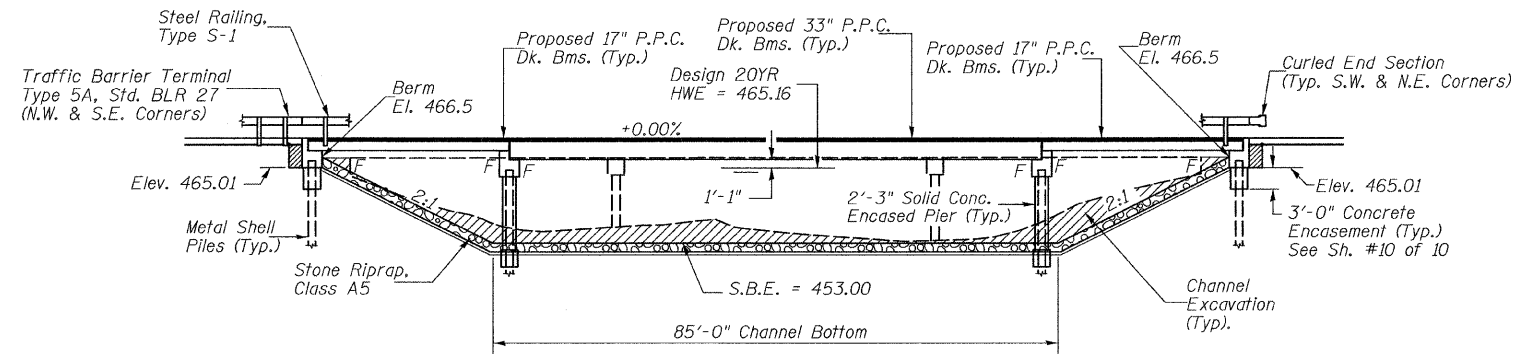
Locate Name Plate at S.E. Wingwall
Corner of Bridge (See Std. 515001)

GENERAL NOTES

The Contractor shall drive test piles to 110% of the nominal required bearing specified in production locations of 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.



SECTION A-A



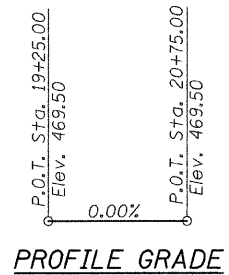
ELEVATION

TOTAL BILL OF MATERIAL

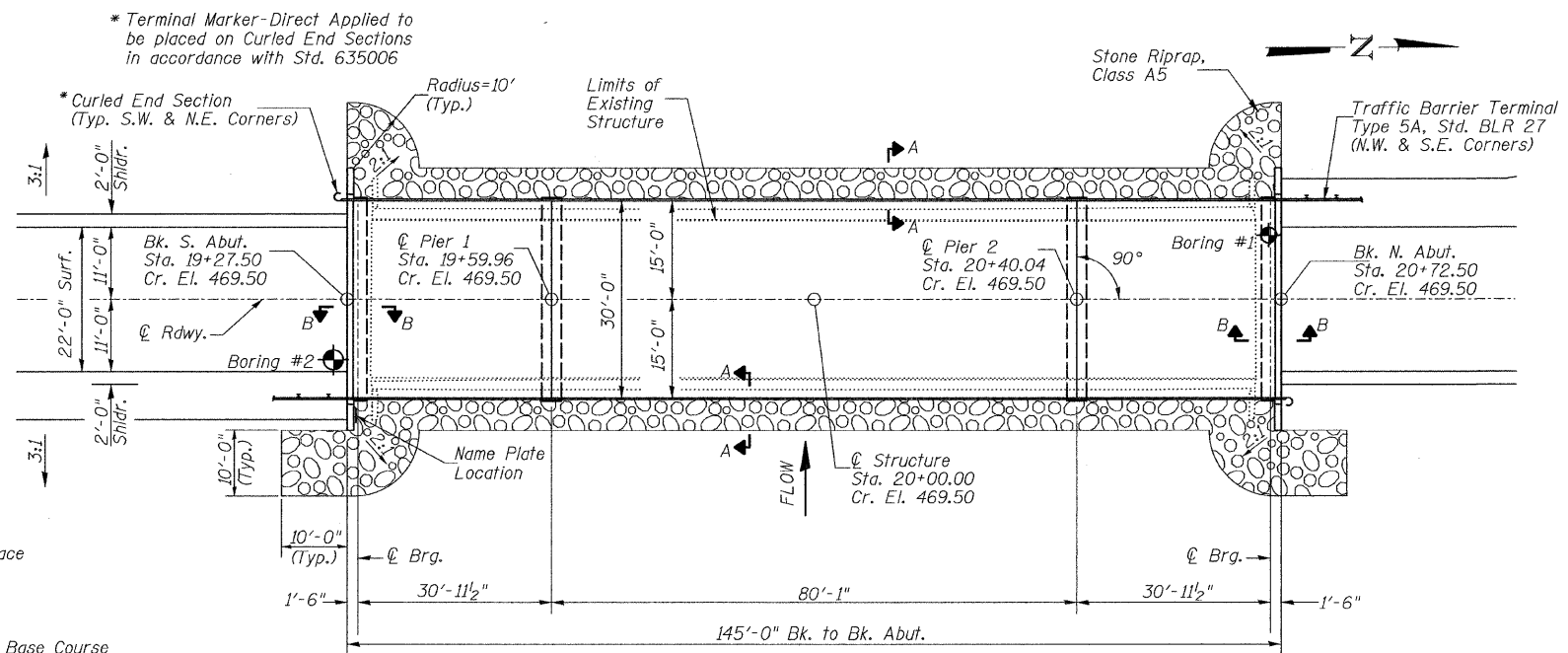
ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	CU YD	---	790	790
Stone Riprap, Class A5	TON	---	845	845
Filter Fabric	SQ YD	---	715	715
Removal of Existing Structures	EACH	---	---	1
Structure Excavation	CU YD	---	75	75
Concrete Structures	CU YD	---	96.8	96.8
Precast Prestressed Concrete Deck Beams (17" Depth)	SQ FT	1,890	---	1,890
Precast Prestressed Concrete Deck Beams (33" Depth)	SQ FT	2,400	---	2,400
Reinforcement Bars	POUND	---	8,610	8,610
Steel Railing, Type S1	FOOT	290	---	290
Furnishing Metal Shell Piles 12"x0.250"	FOOT	---	168	168
Furnishing Metal Shell Piles 14"x0.312"	FOOT	---	414	414
Driving Piles	FOOT	---	582	582
Test Pile Metal Shells	EACH	---	4	4
Pile Shoes	EACH	---	14	14
Concrete Encasement	CU YD	---	8.6	8.6
Name Plates	EACH	---	1	1
Waterproofing Membrane System	SQ YD	483	---	483
Portland Cement Mortar Fairing Course	FOOT	375	---	375
Controlled Low-Strength Material	CU YD	---	14.2	14.2
Underwater Structure Excavation Protection, Location 1 (Pier #1)	EACH	---	1	1
Underwater Structure Excavation Protection, Location 2 (Pier #2)	EACH	---	1	1
Hot-Mix Asphalt Surface Course, Mix "C", N50	TON	69	---	69

① See Special Provisions

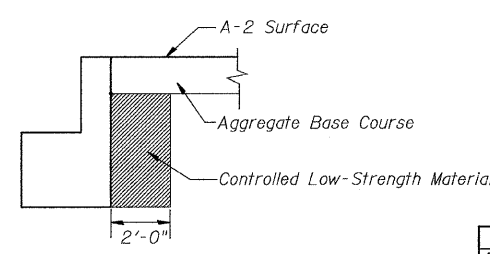
* Terminal Marker-Direct Applied to be placed on Curled End Sections in accordance with Std. 635006



PROFILE GRADE



PLAN



SECTION B-B

DESIGN SCOUR TABLE

Location	S. Abut	Pier 1	Pier 2	N. Abut
Design Scour Elevation	465.01	448.93	448.93	465.01

WATERWAY INFORMATION

Drainage Area = 177.2 Sq. Mi.		Low Grade Elev. = 469.01 @ Sta. 24+00.00							
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Prop.	Nat. H.W.E.	Head - Ft. Exist.	Prop.	Headwater El. Exist.	Prop.
Design	20	6,206	967	1,277	465.16	0.51	0.23	465.67	465.39
Base	100	8,990	1,065	1,380	465.95	0.98	0.44	466.93	466.39

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

DESIGN SPECIFICATIONS

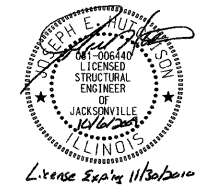
2007 AASHTO (LRFD) & Interims

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)

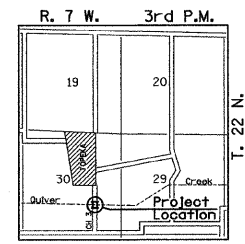
LOADING HL-93

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



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] 10/16/2009
Illinois Structural No. 6440
Expires 11/30/2010



LOCATION SKETCH

**GENERAL PLAN & ELEVATION
MASON COUNTY
SECTION 07-00032-01-BR
C.H. 3 OVER QUIVER CREEK**

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

SHEET NO. 1	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
10 SHEETS	CH 3	07-00032-01-BR	MASON	21	7
S.N. 063-3011			CONTRACT NO. 99505		
FED. ROAD DIST. NO. 7 ILLINOIS			FED. AID PROJECT BRS-0568(102)		