

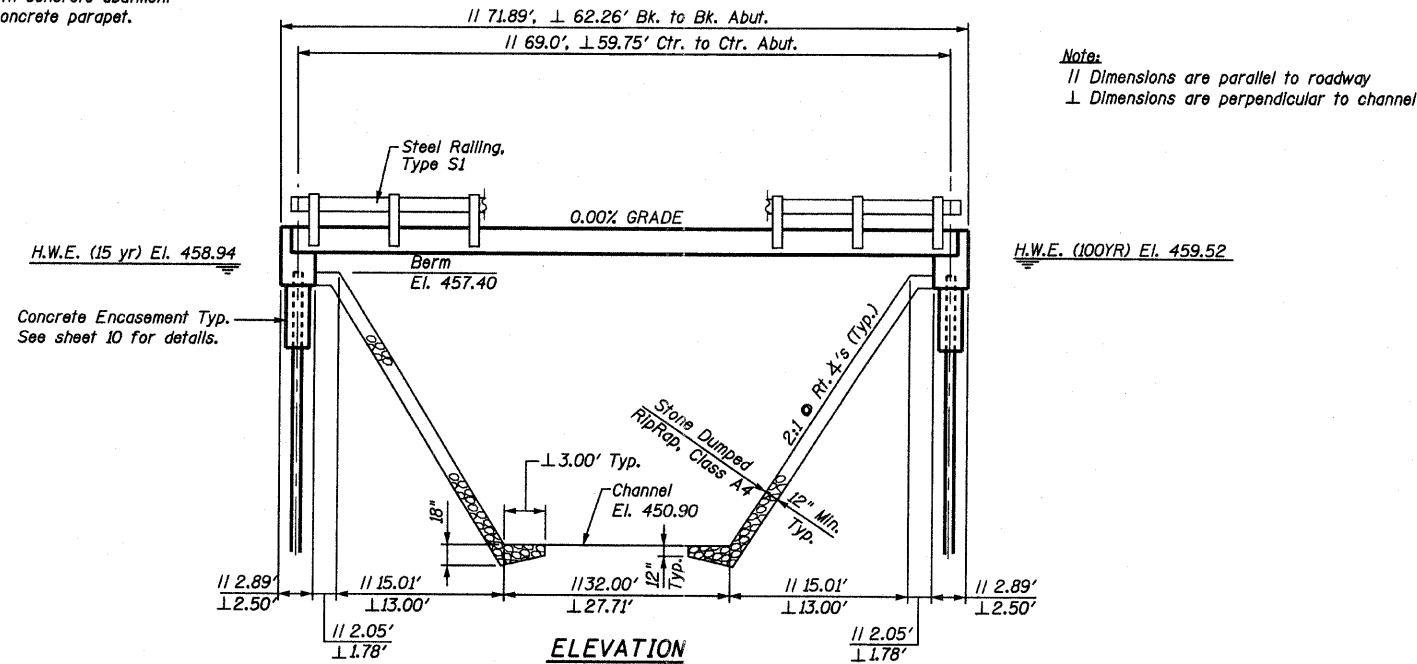
B.M. - B.M. #1, R.R. Spike In Power Pole, 46.78' RT., STA. 48+37.12, EL. 456.92
 B.M. #2, R.R. Spike In Power Pole, 42.33' LT., STA. 50+93.42, EL. 457.80

Existing Structure - Three span precast concrete deck beams (with o/c overlay), with concrete abutment and pier caps, on timber piling, with concrete wingwalls and concrete parapet.

Salvage - None

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 10	08-00118-00-BR	FAYETTE	12	4
FEDERAL AID PROJECT		ILLINOIS	PROJECT	

CONTRACT NO. 95662



Note:
 || Dimensions are parallel to roadway
 ⊥ Dimensions are perpendicular to channel

BILL OF MATERIAL (BRIDGE ONLY)

Item	Unit	Total
Removal of Existing Structures	Each	1
Concrete Structures	Cu. Yd.	25.8
Precast Prestressed Concrete Deck Beams (27" Depth)	Sq. Ft.	2100
Steel Railing, Type S1	Foot	140
Reinforcement Bars	Pound	3140
Furnishing Metal Shell Piles, 12"x0.250"	Foot	631
Driving Piles	Foot	631
Test Pile Metal Shells	Each	1
Name Plates	Each	1
Concrete Encasement	Cu. Yd.	6.6

GENERAL NOTES

The Contractor shall drive test pile to 110% of the Nominal Required Bearing specified in a production location at the substructure location specified or approved by the Engineer before ordering the remainder of piles.

See Special Provisions for boring logs.

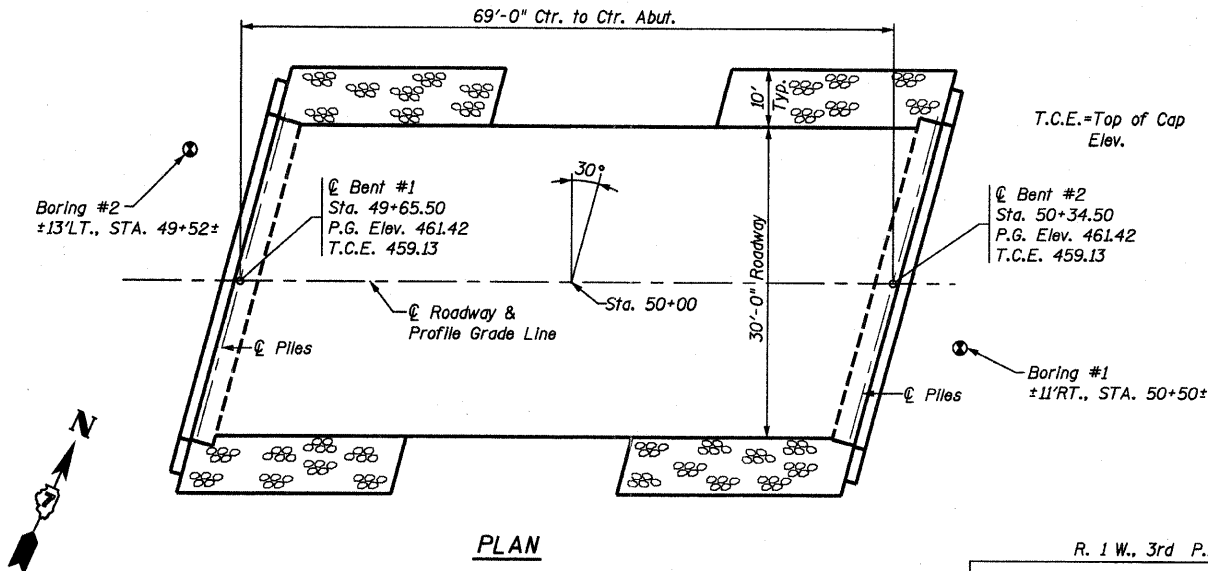
A Calcium Nitrite Corrosion Inhibitor, as covered in the Special Provisions, shall be used in the concrete for precast prestressed concrete deck beams.

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.

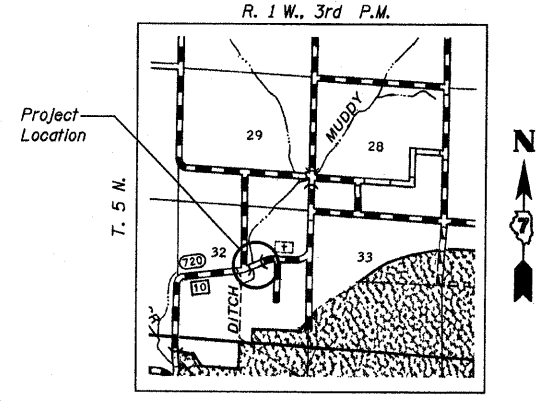
Do not scale these drawings.

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, 1/8" fabric adjusting shims of the dimensions of the Exterior Bearing Pad shall be provided for each bearing.

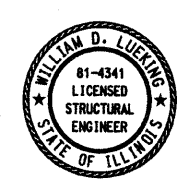


STATION 50+00
 MUDDY CREEK DITCH
 SEC. 08-00118-00-BR BUILT 20L
 PROJECT NO. BROS-0720(107)
 FAYETTE COUNTY
 LOADING HL93
 STR. NO. 026-3451

LETTERING FOR NAME PLATE
 Locate Name Plate at Southeast Corner of Bridge (See Std. 515001)



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.



William D. Lueking
 William D. Lueking
 05-18-2011
 Date of Signing
 11-30-2012
 Date of License Expiration

DESIGN SPECIFICATIONS
 2007 (4th Edition) AASHTO LRFD Bridge Design Specifications with 2008 and 2009 Interims

LOADING HL-93

Allow 50# / Sq. Ft. for Future Wearing Surface.

SEISMIC DATA
 Seismic Performance Zone (SPZ) = 2
 Design Spectral Acceleration at 1.0 sec. (SD1) = 24.3
 Design Spectral Acceleration at 0.2 sec. (SDS) = 54.9
 Soil Site Class = D

PILE DATA (2-ABUTS.)

Pile Type and Size: Concrete Metal Shell Piles, 12", with 0.25" Wall Thickness
 Nominal Required Bearing: 255 kips
 Allowable Resistance Available: 85 kips
 Estimated Pile Length: 56 Feet Bent #1, 59 Feet Bent #2
 Number of Production Piles: 11
 Number of Test Piles: 1 (located in Bent #2)

WATERWAY INFORMATION

Drainage Area = 5.1 Sq. Mi.		Low Grade Elev. 459.59 @ Sta. 46+00							
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Nat. H.W.E. Ft.	Head - Ft.		Headwater Elev. - Ft.	
			Exlst.	Prop.		Exlst.	Prop.	Exlst.	Prop.
Design	15	1392	317	353	458.94	1.20		460.14	
Base	100	2269	317	353	459.52	1.36		460.88	
Overlapping									
Max. Calc.									

GENERAL PLAN AND ELEVATION

FAS 720 (C.H. 10)
 OVER MUDDY CREEK DITCH
 SECTION 08-00118-00-BR
 FAYETTE COUNTY
 STRUCTURE NO. 026-3451

RHUTASEL and ASSOCIATES, INC.
 CONSULTING ENGINEERS & LAND SURVEYORS
 CENTRALIA, ILLINOIS FREEBURG, ILLINOIS

PREPARED FOR:
AECOM
 60097894

Date: 04/07/2011
 Design: MRQ, WDL
 Drawn: JSD
 Job No.: 51410