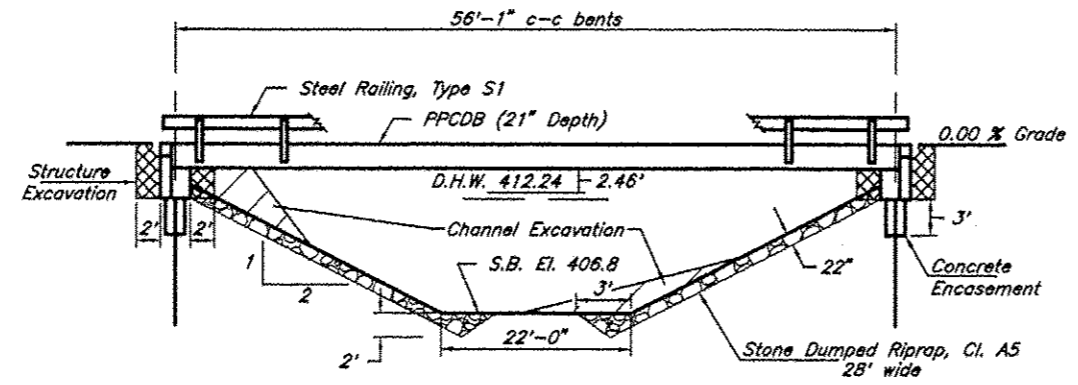


B.M. - RR Spike in 9" Tree
25' Lt. Station 14+63
Assumed Elev. 416.00

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 51	11-01200-00-BR	UNION	12	3
PROJECT NO. BROS-181(57)			CONTRACT NO. 99481	



ELEVATION

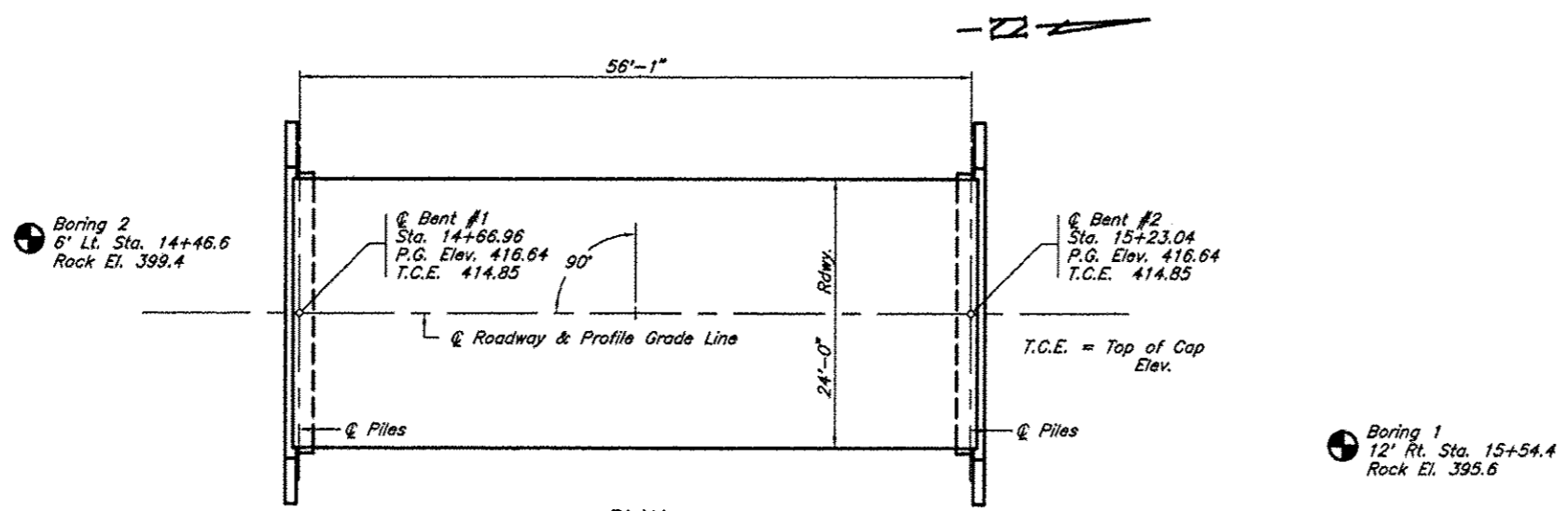
GENERAL NOTES

1. Steel H piles shall meet AASHTO M270 Grade 50 specifications.
2. See special provisions for boring logs.
3. A Corrosion inhibitor, as covered in the Standard Specifications, shall be used in the precast prestressed concrete deck beams.

TOTAL BILL OF MATERIAL

Item	Unit	Super	Sub.		Total
			Piers	Abuts.	
Channel Excavation	Cu. Yds.			37	37
Stone Dumped Riprap, Cl. A5	Tons			154	154
Removal of Existing Structures	Each				1
Structure Excavation	Cu. Yds.			61	61
Concrete Structures	Cu. Yds.			16.8	16.8
Concrete Encasement	Cu. Yds.			2.7	2.7
P.P. Conc. Dk. Bm. 21" Dp.	Sq. Ft.	1,368			1,368
Reinforcement Bars	Pound			2,254	2,254
Steel Railing, Type S1	Foot	116			116
Furnishing Steel Piles HP10X42	Foot			136	136
Driving Piles	Foot			136	136
Name Plates	Each			1	1

Existing Structure - Timber deck on timber pile bent abutments. Timber deck has collapsed into creek. 20' wide x 60' long



PLAN

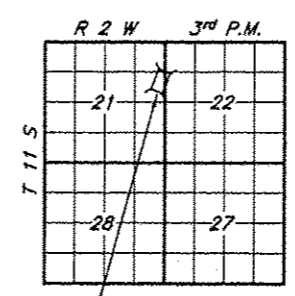
PILE DATA (2-ABUTS.)

Type & Size : HP10X42
Nominal Required Bearing : 273 kips
Factored Resistance Available : 150 kips
Estimated Length : 16 Feet Bent #1, 18 Feet Bent #2
Number Required : 8

SEMINARY FORK
SEC. 11-01200-00-BR BUILT 20
COUNTY UNIT ROAD DISTRICT
UNION COUNTY
LOADING HL-93
STR. NO. 091-3240

LETTERING FOR NAME PLATE

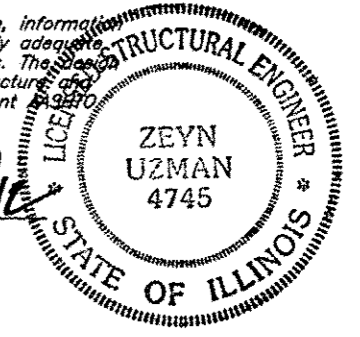
Locate Name Plate at Southeast Corner of Bridge (See Sheet 8)



LOCATION SKETCH

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 type of structure and comply with the requirements of the current LRFD Specifications.

Zeyn B. Uzman
S.E. #81-4745
Expires Nov. 30, 2012



DESIGN SPECIFICATIONS

2007 AASHTO LRFD Bridge Design Specifications and all applicable interims.

LOADING HL-93

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

SEISMIC DATA

Soil Site Class = D
Design Spectral Acceleration at 0.2 sec. (S_{0.2}) = 0.969
Design Spectral Acceleration at 1.0 sec. (S₁) = 0.421
Seismic Performance Zone (SPZ) = 3

WATERWAY INFORMATION

Drainage Area = 1.97 Sq. Mi. Low Grade Elev. = 414.86 At Sta. 12+80									
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Natural H.W.E.	Head-Ft.		Headwater El.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	15	1,560	174.6	178.8	412.24	0.08	0.00	412.32	412.24
Base	100	2,510	242.0	242.4	413.61	0.10	0.20	413.71	413.81
Overlapping									
Max. Calc.	500	3,430	299.7	299.5	414.70	0.48	0.49	415.18	415.19

GENERAL PLAN & ELEVATION
TOWNSHIP ROUTE 51 (RHINE ROAD)
SEMINARY FORK
SECTION 11-01200-00-BR
UNION COUNTY
STRUCTURE NO. 091-3240