

Benchmark: Chiseled square on northeast wingwall of SN 011-0037, Sta. 470+76.0, 17.0' L1, (Prop. US 51), Elev. 647.33
Existing Structure: None

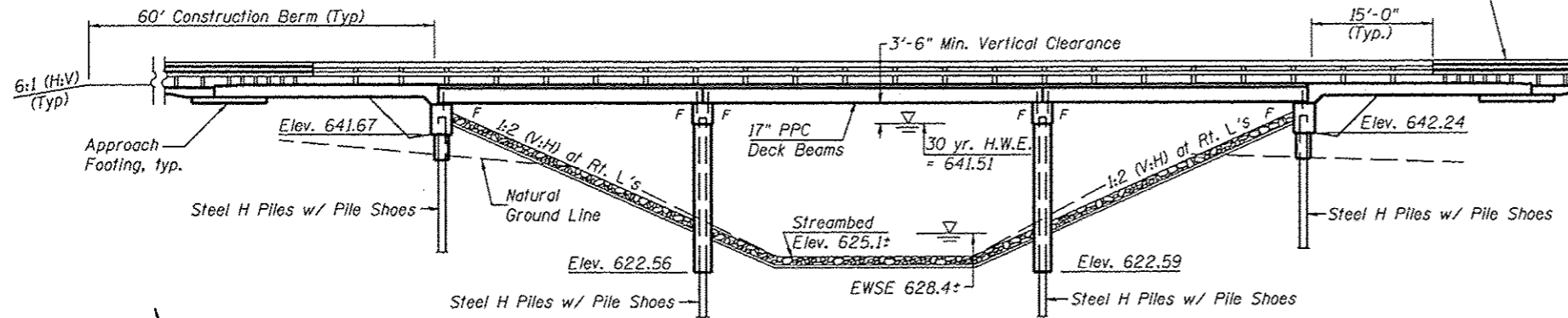
Traffic Barrier Terminal
Type 6A, Std 631032
(Typ. all four corners)

CURVE DATA

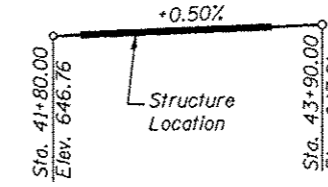
$\Delta = 33^\circ 47' 56''$ RT.
 $D = 16^\circ 22' 13''$
 $T = 106.33'$
 $L = 206.47'$
 $E = 15.80'$
 $R = 350.00'$
 $S.E. = 3.9\%$
 $P.C. = \text{Sta. } 39+22.94$
 $P.T. = \text{Sta. } 41+29.40$
 $P.I. = \text{Sta. } 40+29.27$
 $S.E. \text{ Attained Sta. } 38+49 \text{ to Sta. } 39+47$
 $S.E. \text{ Removed Sta. } 41+05 \text{ to Sta. } 42+03$

INDEX OF SHEETS

1. General Plan and Elevation
2. General Data
- 3-4. Top of Approach Slab Elevations
5. Superstructure
6. Superstructure Details
7. Steel Railing, Type SM with Concrete Wearing Surface
- 8-9. Bridge Approach Slab Details
10. PPC Deck Beam
11. PPC Deck Beam Details
12. Abutments
13. Pier Details
14. HP Pile Details
- 15-16. Soil Borings



ELEVATION



PROFILE GRADE
(Along \bar{C} Roadway)

LOADING HL-93

Allow 50 psf for future wearing surface.

DESIGN SPECIFICATIONS

2010 AASHTO LRFD Bridge Design Specifications with 2010 Interims

SEISMIC DATA

Seismic Performance Zone (SPZ) = 2
Design Spectral Acceleration at 1.0 sec. (S_{01}) = 0.18g
Design Spectral Acceleration at 0.2 sec. (S_{05}) = 0.37g
Soil Site Class = D

DESIGN STRESSES

FIELD UNITS

$f'_c = 5,000$ psi (Wearing Surface)
 $f'_c = 3,500$ psi (Substructure)
 $f_y = 60,000$ psi (Reinf.)

PRECAST PRESTRESSED UNITS

$f'_c = 6,000$ psi
 $f'_ci = 5,000$ psi
 $f_{pu} = 270,000$ psi ($\frac{1}{2}$ " Low Relaxation Strands)
 $f_{pbt} = 201,960$ psi ($\frac{1}{2}$ " Low Relaxation Strands)

STATION 42+70.00
BUILT 20__ BY
STATE OF ILLINOIS
F.A.P. RT. 322 SEC. 11-13
LOADING HL-93
STRUCTURE NO. 011-3362

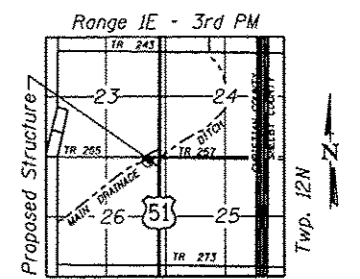
NAME PLATE
See Std. 515001



Michael T. Haley 11-21-12
Date
Michael T. Haley
Licensed Structural Engineer
State of Illinois No. 81-5991
Expires 11/30/2012

APPROVED
For Structural Adequacy Only

Michael J. Haley
Engineer of Bridges & Structures



LOCATION SKETCH

DESIGN SCOUR ELEVATION TABLE

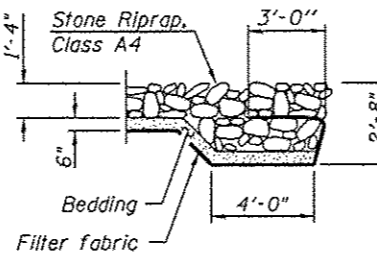
Design Scour Elevation (ft.)	W. Abut.	Pier 1	Pier 2	E. Abut.
	638.6	613.6	613.1	639.2

WATERWAY INFORMATION

Drainage Area = 28.2 Sq. Mi. Prop. Low Grade Elev. 643.20 @ Sta. 38+06.33

Flood	Freq. Yr.	C.F.S.	Opening Sq. Ft.		Natural H.W.E.		Head-Ft.		Headwater El.	
			Exist.	Prop.	H.W.E.	Exist.	Prop.	Exist.	Prop.	
Design	10	2270	-	680	640.50	-	0.2	-	640.68	
Base	30	3080	-	760	641.51	-	0.5	-	641.96	
Overlapping	100	4150	-	800	642.07	-	0.6	-	642.65	
Max. Calc.	500	5530	-	880	642.98	-	0.8	-	643.73	

10 year velocity through proposed Structure = 3.5 fps



SECTION A-A



USER NAME *	DESIGNED -	REVISIONS
FILE NAME *	CHECKED -	REVISIONS
PLOT SCALE *	DRAWN -	REVISIONS
PLOT DATE *	CHECKED -	REVISIONS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
STRUCTURE NO. 011-3362
SHEET NO. 1 OF 16 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
322	11-13	CHRISTIAN	437	235

CONTRACT NO. 72961
ILLINOIS FED. AID PROJECT