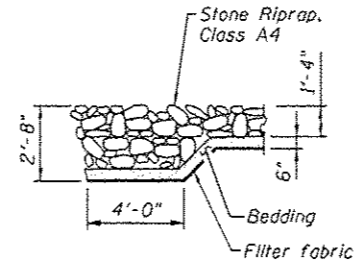
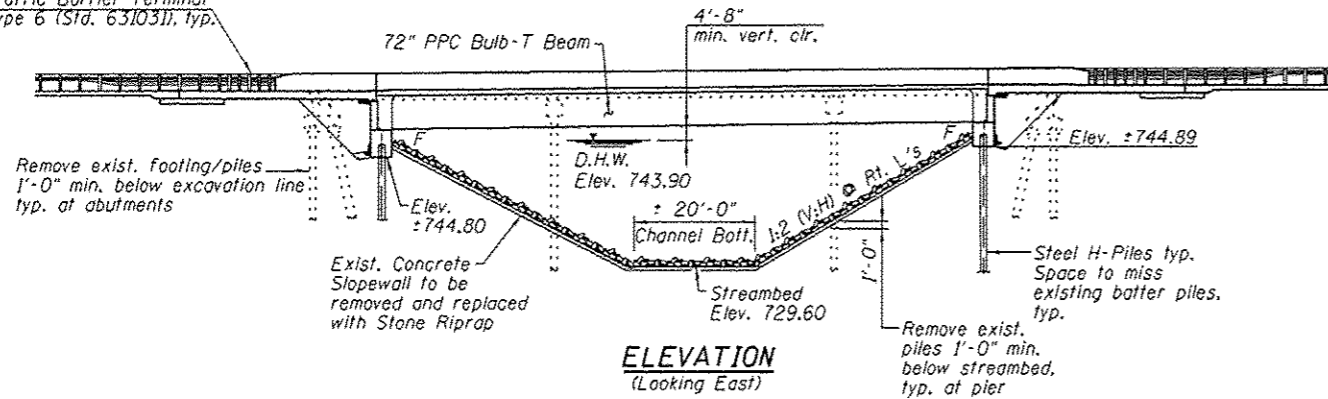


Bench Mark: BM#3 - Chiseled square located on the south end of the west wingwall WB I-74 Elevation 757.28
 Existing Structure: S.N. 048-0004 built in 1965 as F.A.I. Route 74 (WB), Section 48-25B at Sta. 417+20. Existing structure consists of 3-span continuous reinforced concrete cast in place slab supported by closed concrete abutments and concrete pile bent piers. Structure is 115'-0" long Bk. to Bk. of abutments, width is 44'-0" Out to Out of deck. Structure to be removed and replaced. Traffic to be maintained utilizing stage construction.

No salvage

Traffic Barrier Terminal
 Type 6 (Std. 631031), typ.



SECTION A-A

DESIGN SPECIFICATIONS
 2012 AASHTO LRFD Bridge Design Specifications

LOADING HL-93

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

DESIGN STRESSES
 FIELD UNITS

$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinforcement)

PRECAST PRESTRESSED UNITS

$f'_c = 6,000$ psi
 $f'_ci = 5,000$ psi
 $f_{pu} = 270,000$ psi
 (1/2" low lax strands)
 $f_{pbt} = 201,960$ psi
 (1/2" low lax strands)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
 Design Spectral Acceleration at 1.0 sec. (SD1) = 0.070g
 Design Spectral Acceleration at 0.2 sec. (SDS) = 0.111g
 Soil Site Class = C

DESIGN SCOUR ELEVATION TABLE

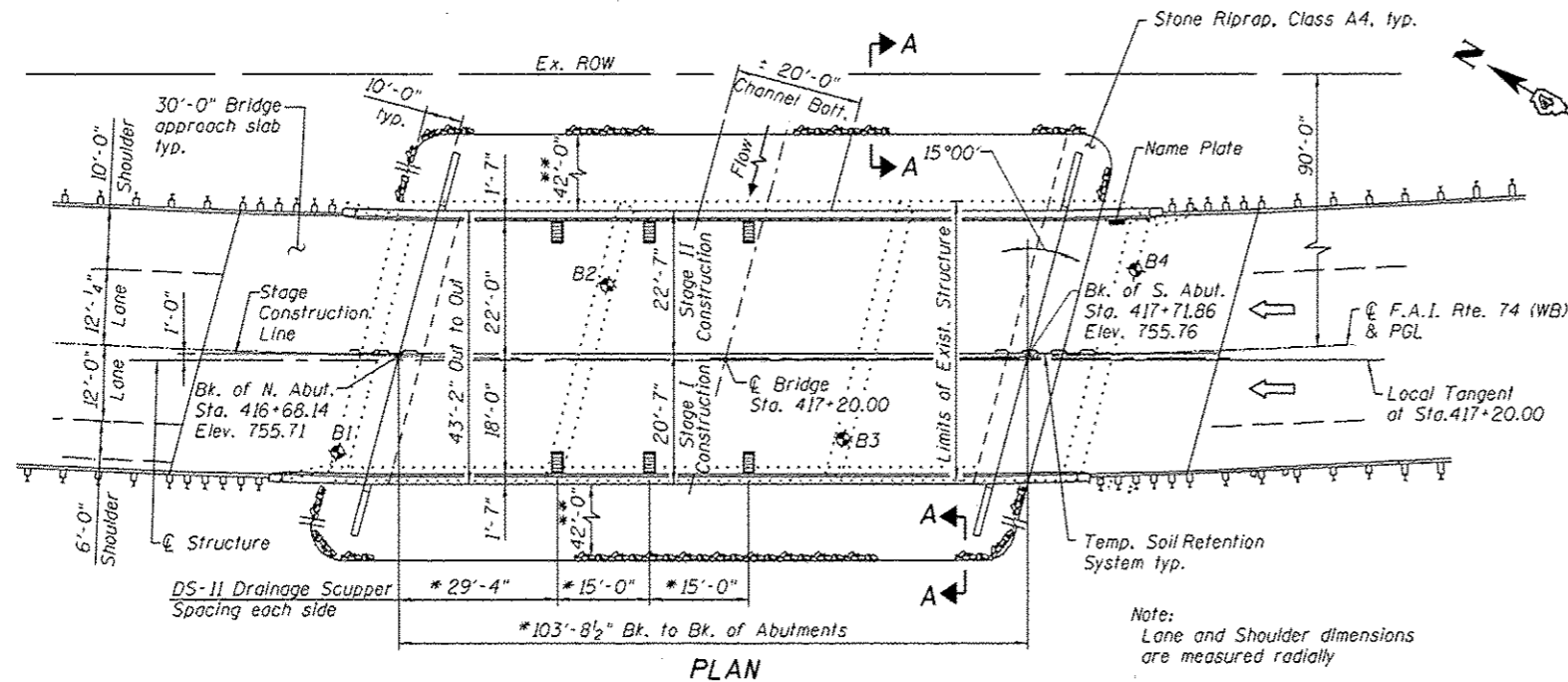
Design Scour Elevation (ft.)	N. Abut.	S. Abut.
	744.80	744.89

WATERWAY INFORMATION

Drainage Area = 9.34 sq. mi. Low Grade Elev. 755.95 ft @ Sta. 417+77.5

Flood	Freq. Yr.	C.F.S.	Opening Sq. Ft.		Nat. Head - Ft.		Headwater El.		
			Exist.	Prop.	H.W.E.	Exist.	Prop.	Exist.	Prop.
Design	10	1942	434	524	741.7	0.3	0.1	742.0	741.8
Base	50	3168	582	680	743.9	0.6	0.3	744.4	744.2
Overtopping	100	3740	642	742	744.7	0.7	0.4	745.4	745.1
Max. Calc.	500	5135	786	889	746.5	1.0	0.6	747.5	747.1

EWSE = 732.18 (per Survey taken 01-22-2010)



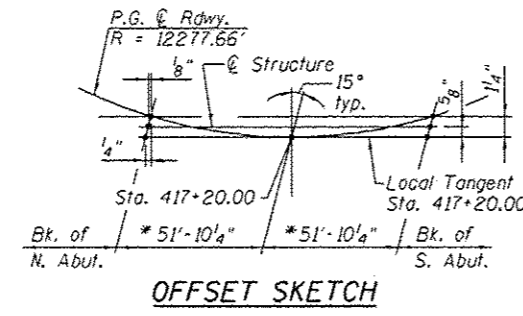
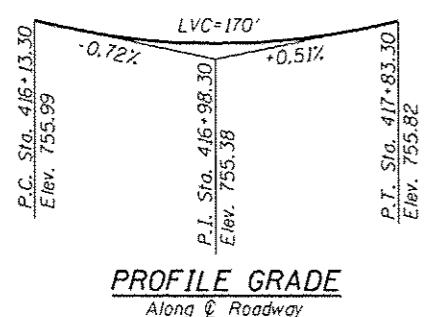
APPROVED
 For Structural Adequacy Only
St. Carl Kruger
 Engineer of Bridges & Structures

STATION 416+04.00
 BUILT 2011 BY
 STATE OF ILLINOIS
 F.A.I. RT.74 WB SEC. 48-[(25B)BR, BR-1]
 LOADING HL-93
 STR. NO. 048-0091

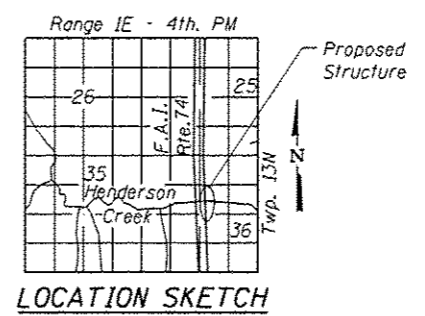
NAME PLATE
 See Std. 515001

Professional Engineer Seal: KENNETH R. CHASTAIN, LICENSED STRUCTURAL ENGINEER, No. 000008, State of Illinois, expires 11/30/2014.

Note:
 Lane and Shoulder dimensions are measured radially
 *Measured along local tangent
 **For riprap limits the Contractor shall match limits of existing slope wall



CURVE DATA
 $\Delta = 9^{\circ}-41'-02''$
 $D = 0^{\circ}-28'-00''$
 $T = 1040.04'$
 $L = 2075.12'$
 $E = 43.97'$
 $R = 12277.66'$
 P.C. = Sta. 397+59.56
 P.T. = Sta. 418+34.68
 P.I. = Sta. 407+99.60



GENERAL PLAN AND ELEVATION
WB I-74 OVER HENDERSON CREEK
F.A.I. RTE. 74 (WB) - SEC. 48-[(25B)BR, BR-1]
KNOX COUNTY
STATION 417+20.00
STRUCTURE NO. 048-0091

FILE NAME: ...N0480091-00004-001-CPE.dgn	DESIGNED: EV	REVISED: -		STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL PLAN AND ELEVATION				F.A.I. RTE.:	SECTION:	COUNTY:	TOTAL SHEETS:	SHEET NO.:
PLOT TIME: 4:29:11 PM	DRAWN: JCP	REVISED: -			74	48-[(25B)BR, BR-1]	KNOX	131	47				
PLOT DATE: 9/29/2014	CHECKED: PC	REVISED: -			STRUCTURE NO. 048-0091				CONTRACT NO. 68885				
	DATE: 05 03 2013	REVISED: -			SHEET NO. 51 OF 525 SHEETS				ILLINOIS FED. AID PROJECT				