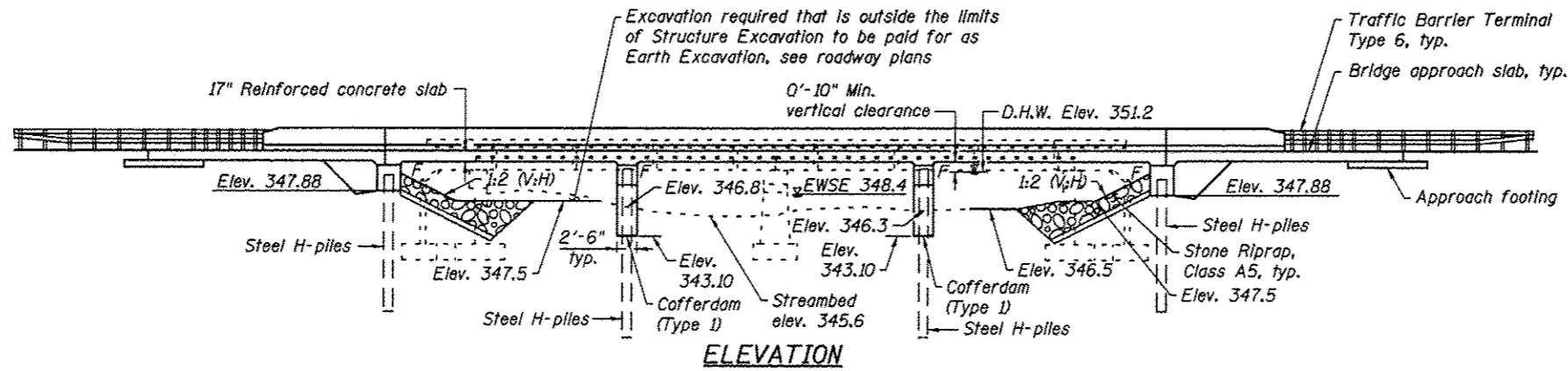


BENCHMARK: BM M-32 - Chiseled square at NE corner of SN 076-0009, elev. 351.48 (NAVD 88)

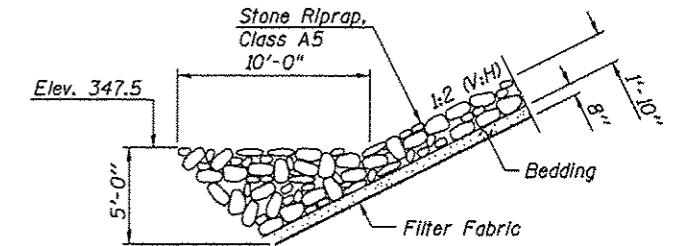
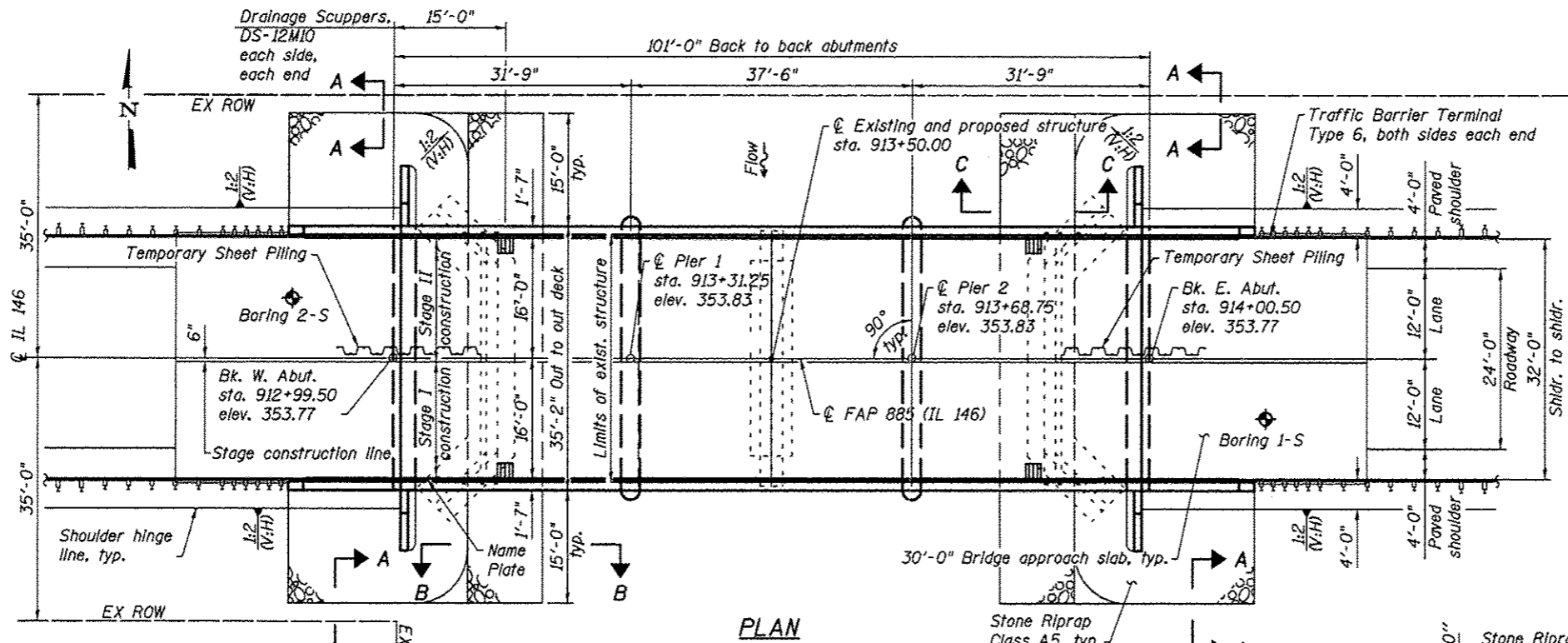
**EXISTING STRUCTURE:**  
SN 076-0009 was originally built in 1928 as SBI Route 146, Section 112-B. It had a reinforced concrete tee beam superstructure. In 1984, the substructure was widened, and the superstructure was replaced with PPC deck beams. The substructure consists of timber pile supported closed abutments and solid shaft pier. The superstructure consists of two spans (38'-0", 38'-0") with an out-to-out deck width of 33'-0". The bridge length is 76'-0" back-to-back of abutments. The structure was constructed with no skew. Traffic shall be maintained utilizing stage construction.

No salvage.

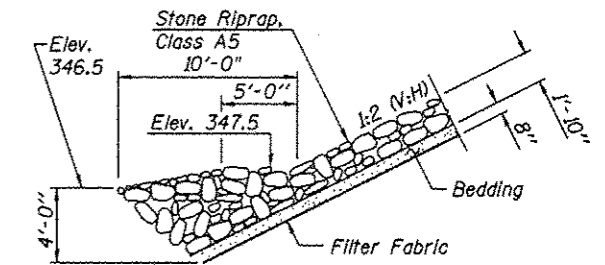


**STRUCTURE INDEX OF SHEETS**

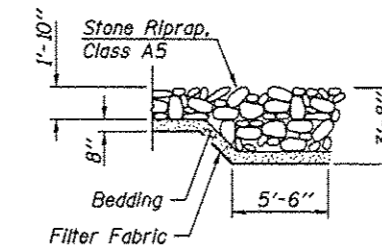
General Plan & Elevation	Sheet No. 1 of 21
General Data	Sheet No. 2 of 21
Stage Construction Details	Sheet No. 3 of 21
Temporary Concrete Barrier for Stage Construction	Sheet No. 4 of 21
Top of Slab Elevations	Sheet No. 5 of 21
Top of West Approach Slab Elevations	Sheet No. 6 of 21
Top of East Approach Slab Elevations	Sheet No. 7 of 21
Superstructure	Sheet No. 8 of 21
Superstructure Details	Sheet Nos. 9 & 10 of 21
Bridge Approach Slab Details	Sheet Nos. 11 & 12 of 21
Drainage Scupper, DS-12M10	Sheet No. 13 of 21
West Abutment	Sheet No. 14 of 21
East Abutment	Sheet No. 15 of 21
Pier 1	Sheet No. 16 of 21
Pier 2	Sheet No. 17 of 21
HP Pile Details	Sheet No. 18 of 21
Bar Splicer Assembly Details	Sheet No. 19 of 21
Boring Logs	Sheet Nos. 20 & 21 of 21



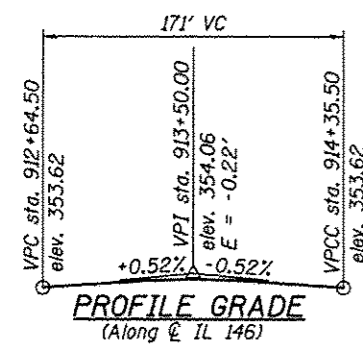
**SECTION B-B**



**SECTION C-C**



**SECTION A-A**



**DESIGN SCOUR ELEVATIONS (ft.)**

	W. Abut.	Pier 1	Pier 2	E. Abut.
Q100	347.9	341.3	340.8	347.9
Q500	347.9	341.9	341.4	347.9

**WATERWAY INFORMATION**

Ex. & Prop. Low Grade Elev. 352.62 @ Sta. 921+00  
Drainage Area = 4.30 Sq. Mi.

Frequency Year	Structure	Opening-Sq. Ft.		Nat. H.W.E.	Head-Ft.		Headwater El.		
		C.F.S.	Exist. Prop.		Exist.	Prop.	Exist.	Prop.	
10 Year	SN076-0009	1980	259	330	350.7	1.7	1.5	352.4	352.2
	SN076-7006	390	56	56					
Totals		2370	315	386					
14 Year Overtop	SN076-0009	2166	266	-	350.8	1.8	-	352.6	-
	SN076-7006	409	58	-					
Totals		2575	324	-					
23 Year Overtop	SN076-0009	2618	-	358	351.0	-	1.7	-	352.7
	SN076-7006	412	-	60					
Totals		3030	-	418					
50 Year Design	SN076-0009	3295	294	376	351.2	1.8	1.7	353.0	352.9
	SN076-7006	425	60	60					
Totals		3720	354	436					
100 Year Base	SN076-0009	3893	308	394	351.4	1.8	1.7	353.2	353.1
	SN076-7006	427	60	60					
Totals		4320	368	454					

10 year velocity through existing structure = 6.0 FPS  
10 year velocity through proposed structure = 4.9 FPS

**APPROVED**  
For Structural Adequacy Only

*Carl Krueger*  
Engineer of Bridges & Structures

**DESIGN SPECIFICATIONS**

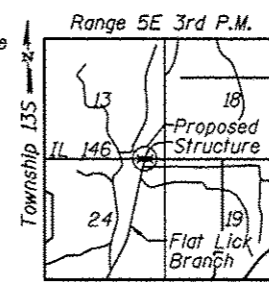
2012 AASHTO LRFD  
Bridge Design Specifications  
6th Edition  
**LOADING HL-93**  
Allow 50 psf for future wearing surface

**DESIGN STRESSES**

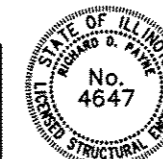
**FIELD UNITS**  
f'c = 3,500 psi  
fy = 60,000 psi (reinforcement)

**SEISMIC DATA**

Seismic Performance Zone (SPZ) = 3  
Design Spectral Acceleration at 1.0 sec. (S<sub>D1</sub>) = 0.405g  
Design Spectral Acceleration at 0.2 sec. (S<sub>D5</sub>) = 0.939g  
Soil Site Class = D



**LOCATION SKETCH**



EXPIRES 11-30-14  
*Carl Krueger*  
SIGNATURE

080513  
DATE

STATION 913+50.00  
BUILT 2011 BY  
STATE OF ILLINOIS  
F.A.P. RT. 885 SEC. 112B-1  
LOADING HL-93  
STR. NO. 076-0032

**NAME PLATE**  
See Std. 515001

**GENERAL PLAN & ELEVATION**  
**IL 146 OVER FLAT LICK BRANCH**  
**FAP ROUTE 885 - SECTION 112B-1**  
**POPE COUNTY**  
**STATION 913+50**  
**STRUCTURE NO. 076-0032**



USER NAME = has	DESIGNED - SHL	12/12	REVISED -
ESCA PROJECT NO. 988.12	CHECKED - RDP	03/13	REVISED -
PLOT SCALE = 0/2" = 1' / IN.	DRAWN - HAS	12/12	REVISED -
PLOT DATE = 8/2/2013	CHECKED - RDP	06/13	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
885	112B-1	POPE	56	23
CONTRACT NO. 78230				
ILLINOIS FED. AID PROJECT AID				

SHEET NO. 1 OF 21 SHEETS