

Bench Mark: BM 109 - Chiseled square in southwest wingwall of SN 097-0029, Elev. 391.40.

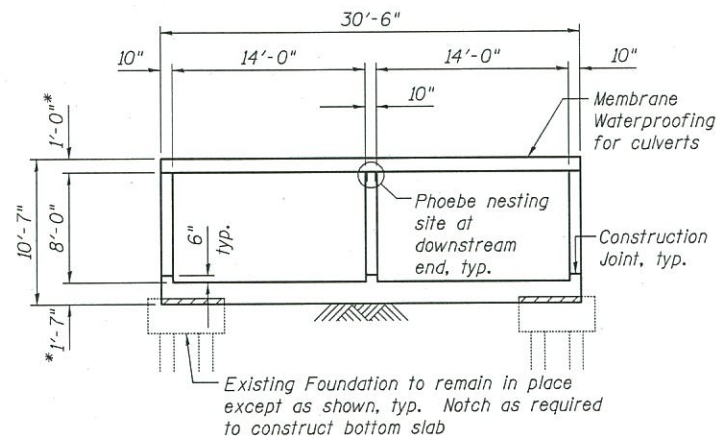
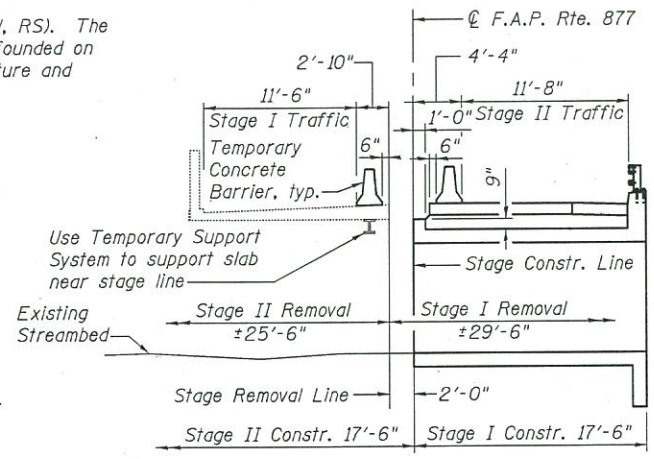
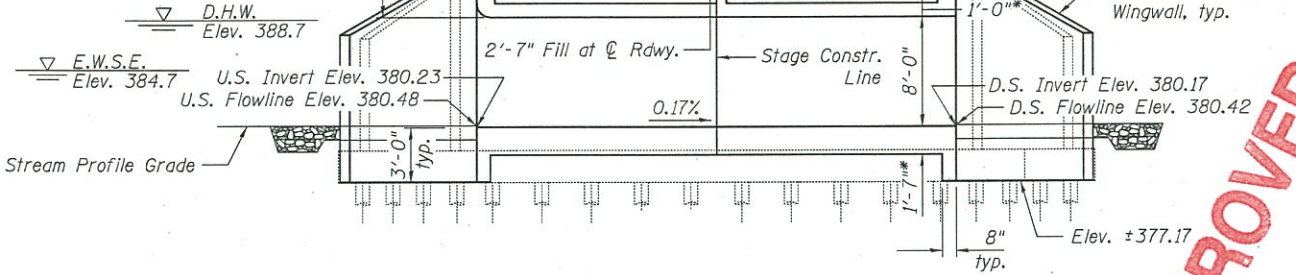
Existing Structure: SN 097-0029 was originally built in 1933 as SBI Route 141 (Section A-101) and resurfaced in 1970 as SBI Route 141 (Section 101W, RS). The existing structure is a 28 foot (back to back abutments) single span reinforced concrete slab bridge. The substructure consists of closed abutments founded on footings on timber piles. The deck measures 32'-8" between curbs and the overall out to out width of the bridge is 36'-2". The existing superstructure and abutment walls are to be removed and replaced. The existing foundation is to remain in place except as noted.

Traffic to be maintained utilizing stage construction.

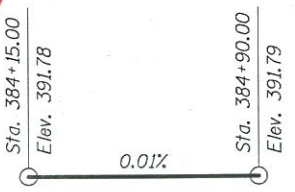
Excavation behind existing abutment walls shall be performed to balance front and back soil pressure before removing the existing superstructure. The Contractor shall sawcut the upper portion of the existing abutment at the stage removal line before Stage I removal to ensure the remaining portion will not be prematurely damaged.

No salvage.

Precast alternate is not allowed.



*Slab thickness is subject to refinement during Final Design.



HIGHWAY CLASSIFICATION
 F.A.P. Rte. 877 (IL Rte. 141)
 Functional Class: Minor Arterial (Non-Urban)
 ADT: 2050 (2009); 2630 (2034)
 DHV: 265
 ADTT: SU = 3.4% MU = 9.8%
 Design Speed: 55 m.p.h.
 Posted Speed: 55 m.p.h.
 Two-Way Traffic
 Directional Distribution: 50/50

LOADING HL-93
 Allow 50#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS
 2014 AASHTO LRFD Bridge Design Specifications,
 7th Edition with 2015 and 2016 Interims

DESIGN STRESSES
FIELD UNITS
 $f'_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinforcement)

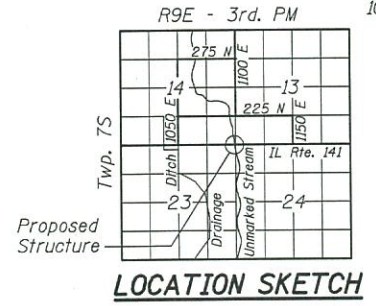
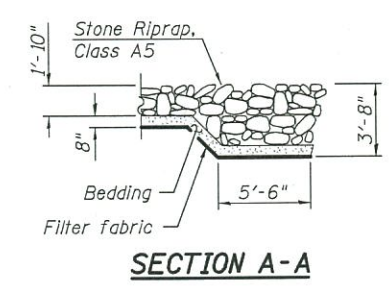
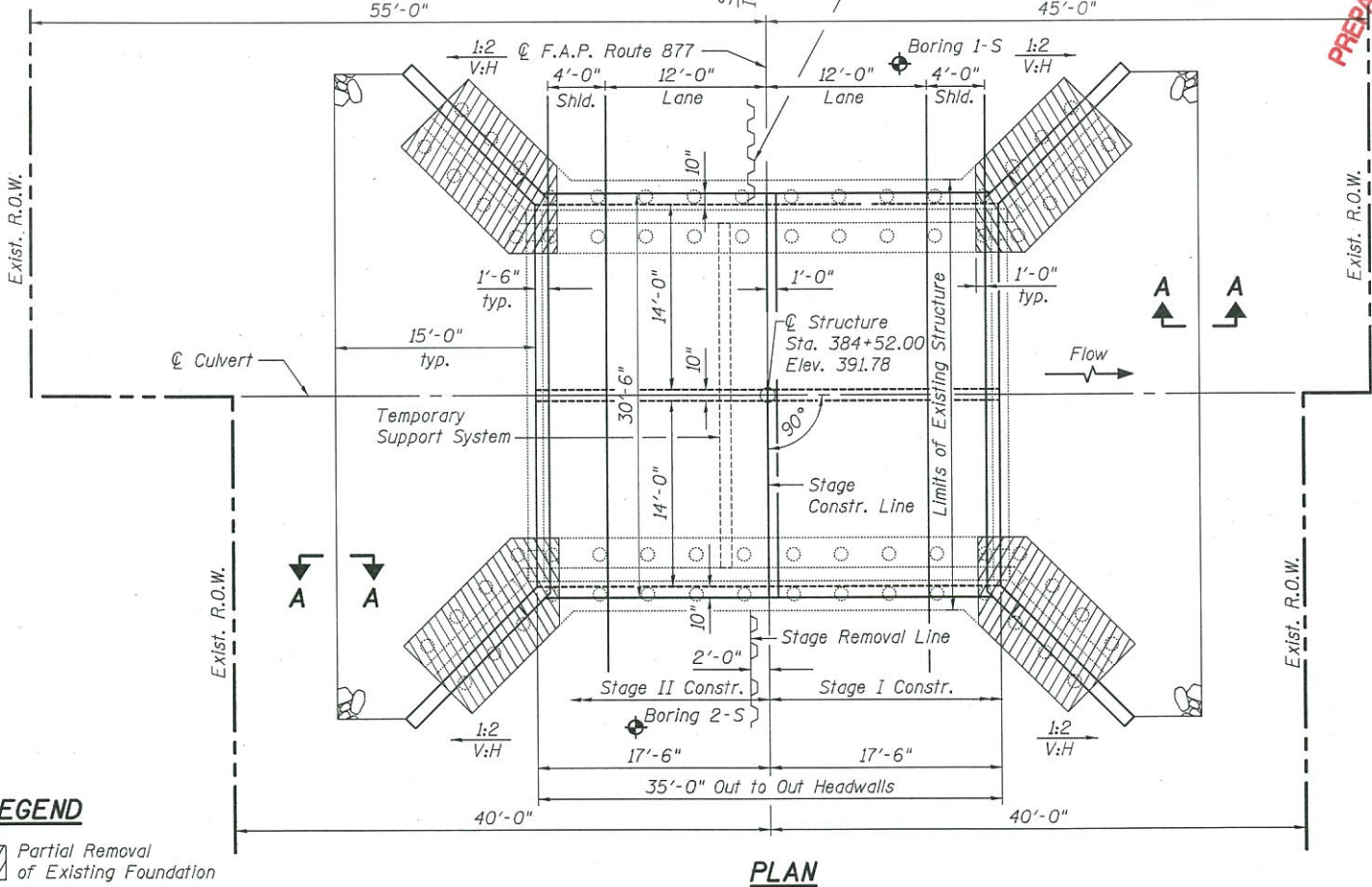
WATERWAY INFORMATION

Drainage Area = 4.2 sq. mi. Low Grade Elev. 391.63 @ Sta. 380+98

Flood	Discharge (cfs)	Waterway Opening (sq. ft.)		Natural H.W.E.	Head (ft.)		Headwater Elevation			
		Existing	Proposed		Existing	Proposed	Existing	Proposed		
10	Main Channel	1119	1145	136	217	388.3	2.1	1.7	390.4	390.0
	Relief Structure	779	753	110	141					
	Total	1898	1898	246	358					
OVT (E)	Main Channel	1221	1480	142	217	388.5	2.8	2.8	391.3	391.3
	Relief Structure	862	1100	115	147					
	Total	2083	2580	257	364					
OVT (P)	Main Channel	1146	1480	143	217	388.6	2.8	2.7	391.4	391.2
	Relief Structure	808	1096	116	148					
	Total	1954	2576	259	365					
50	Main Channel	955	1260	146	217	388.7	2.8	2.7	391.4	391.4
	Relief Structure	674	950	118	151					
	Total	1629	2210	264	368					
100	Main Channel	631	918	150	217	388.8	2.8	2.7	391.6	391.5
	Relief Structure	434	672	121	154					
	Total	1065	1590	271	371					

Note: SN 097-2017 is the main channel structure.
 10 year velocity through existing bridge = 6.98 ft/s
 10 year velocity through proposed bridge = 5.28 ft/s

APPROVED
 DEC 15 2016
 AS A BASIS FOR
 PREPARATION OF DETAILED PLANS



GENERAL PLAN AND ELEVATION
ILLINOIS ROUTE 141 OVER
UNMARKED STREAM
F.A.P. ROUTE 877 - SEC. 101B-4
WHITE COUNTY
STATION 384+52.00
STRUCTURE NO. 097-2017

LEGEND

Partial Removal of Existing Foundation



USER NAME =	DESIGNED - ZJB	REVISED -
PLLOT SCALE =	CHECKED - RLM	REVISED -
PLLOT DATE = 12/15/2016	DRAWN - PRC	REVISED -
	CHECKED - JMH	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
 STRUCTURE NO. 097-2017

SHEET NO. 1 OF 1 SHEETS

F.A.P. RTE. 877	SECTION 101B-4	COUNTY WHITE	TOTAL SHEETS 1	SHEET NO. 1
CONTRACT NO. 78264				
ILLINOIS FED. AID PROJECT				