

Bench Mark: BM 108 - Chiseled square in southwest wingwall of SN 097-0064, Elev. 391.31.

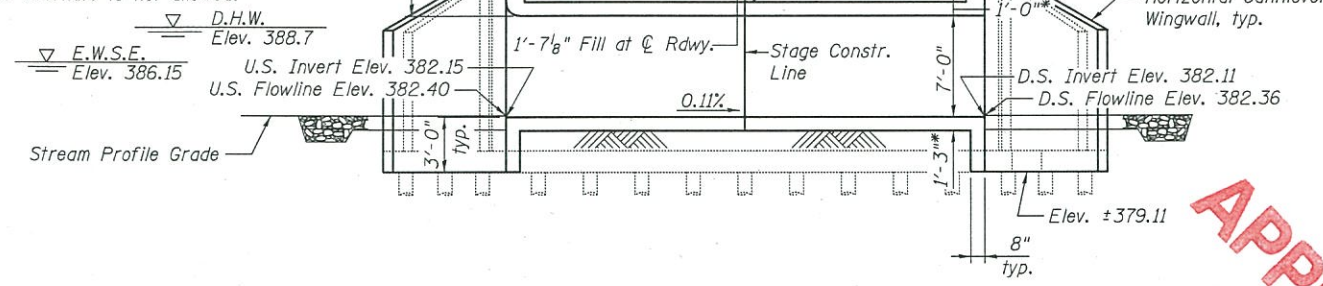
Existing Structure: SN 097-0064 was originally built in 1933 as SBI Route 141 (Section A-101) and resurfaced in 1970 as SBI Route 141 (Section 101W, RS). The existing structure is a 22 foot (back to back abutments) single span reinforced concrete slab bridge. The substructure consists of closed abutments 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.



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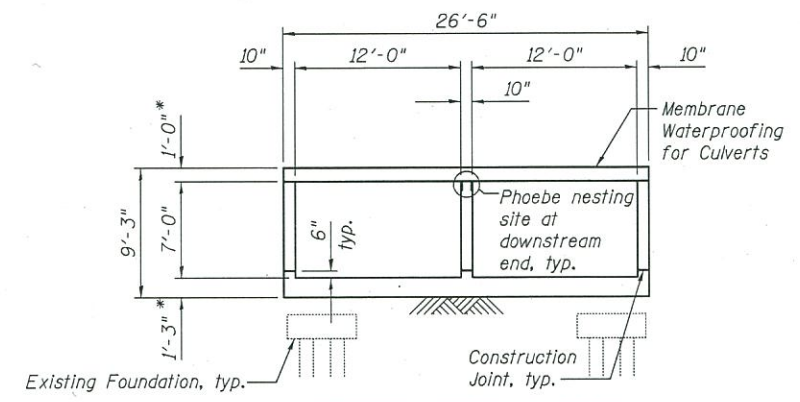
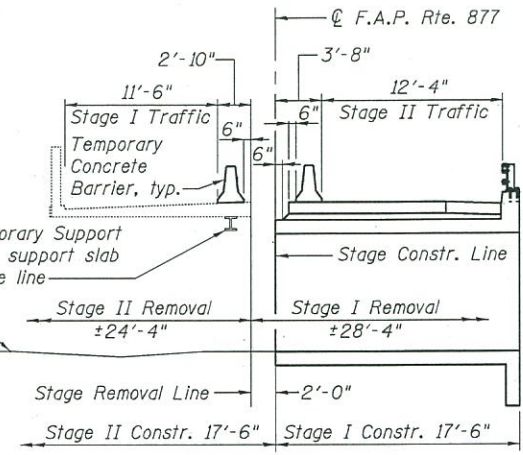
DEC 15 2016

AS A BASIS FOR PREPARATION OF DETAILED PLANS

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*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
 fy = 60,000 psi (Reinforcement)

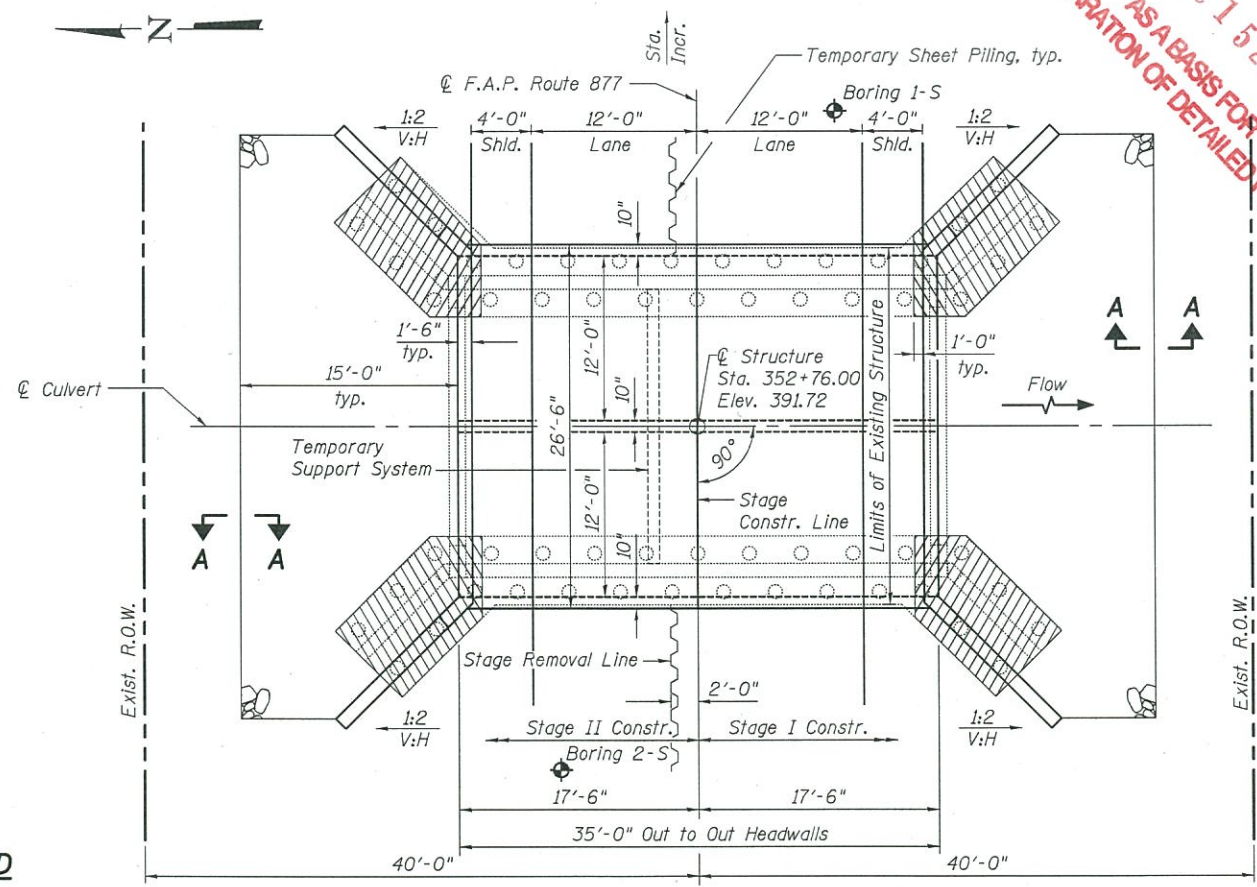
WATERWAY INFORMATION

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
10	Main Channel	1119	1145	136	2.17	390.4	390.0
	Relief Structure	779	753	110	1.41	388.3	2.1
	Total	1898	1898	246	3.58	390.4	390.0
OVT (E)	Main Channel	1221	1480	142	2.17	391.3	391.3
	Relief Structure	862	1100	115	1.47	388.5	2.8
	Total	2083	2580	257	3.64	391.3	391.3
OVT (P)	Main Channel	1146	1480	143	2.17	391.4	391.2
	Relief Structure	808	1096	116	1.48	388.6	2.8
	Total	1954	2576	259	3.65	391.4	391.2
50	Main Channel	955	1260	146	2.17	391.4	391.4
	Relief Structure	674	950	118	1.51	388.7	2.8
	Total	1629	2210	264	3.68	391.4	391.4
100	Main Channel	631	918	150	2.17	391.6	391.5
	Relief Structure	434	672	121	1.54	388.8	2.8
	Total	1065	1590	271	3.71	391.6	391.5

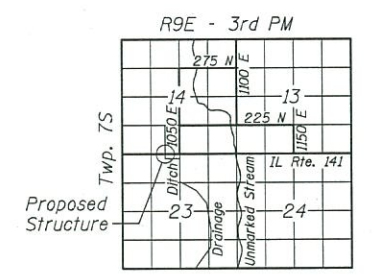
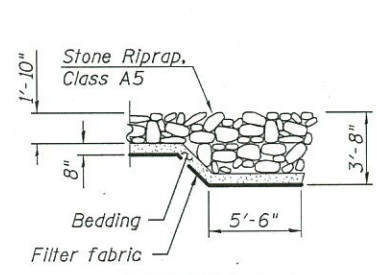
Note: SN 097-2016 is the relief structure.

10 year velocity through existing bridge = 5.48 ft/s
 10 year velocity through proposed bridge = 4.65 ft/s



LEGEND

Partial Removal of Existing Foundation



GENERAL PLAN AND ELEVATION
ILLINOIS ROUTE 141 OVER
DRAINAGE DITCH
F.A.P. ROUTE 877 - SEC. 101B-3
WHITE COUNTY
STATION 352+76.00
STRUCTURE NO. 097-2016



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

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
 STRUCTURE NO. 097-2016
 SHEET NO. 1 OF 1 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
877	101B-3	WHITE	1	1
CONTRACT NO. 78264				
ILLINOIS FED. AID PROJECT				