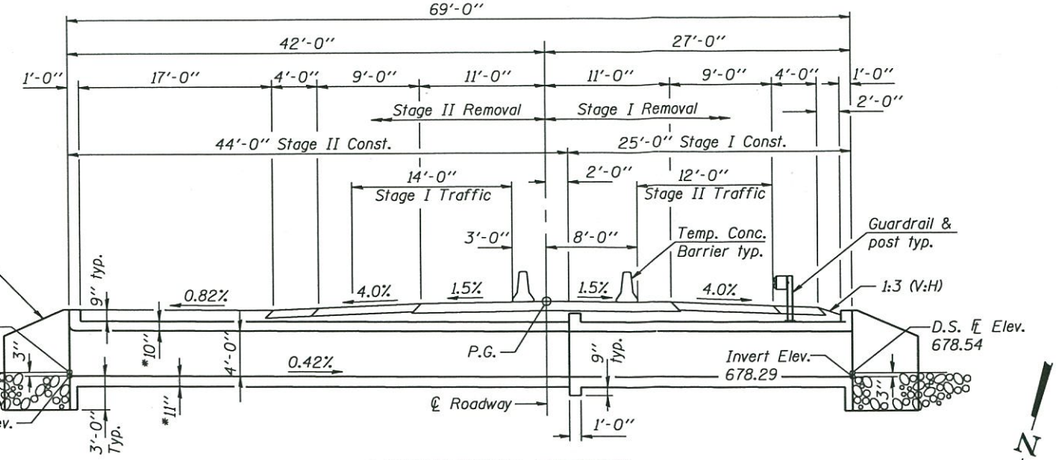
Bench Mark: BM#49 - Chiseled "□" on West end of South headwall.
Station 363+44.20, 21.6' Lt., Elev. 683.826

Existing Structure: Structure No. 011-7039 is an 8' x 4' R.C. Box Culvert 41.5' in length. It was constructed in 1923 as SBI Rte. 16, Section 16 ⊕ Sta. 363+41 and was extended in 1956 as Section (15,16X,16)I. Traffic during construction to be maintained utilizing stage construction.

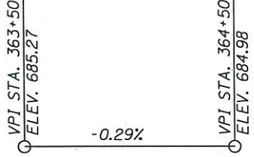
No salvage

Precast alternative is not allowed.



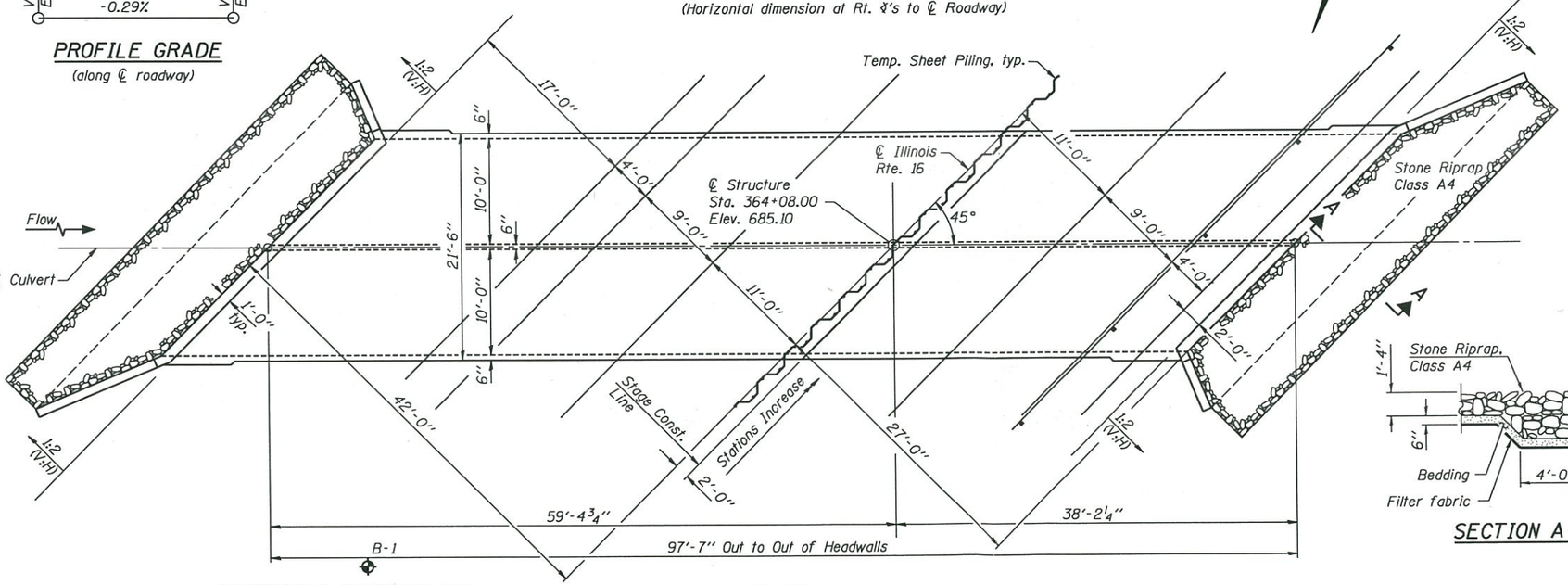
LONGITUDINAL SECTION

(Horizontal dimension at Rt. ∡'s to ℄ Roadway)

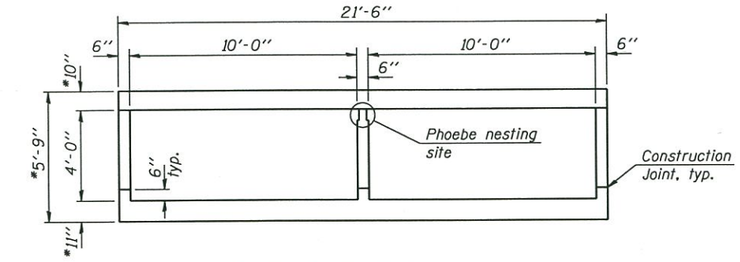


PROFILE GRADE

(along ℄ roadway)

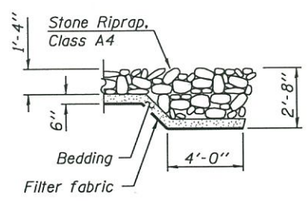


PLAN



SECTION THRU BARREL

* Slab thickness may be refined in final design



SECTION A-A

HIGHWAY CLASSIFICATION

F.A.P. Rte. 325 - Illinois Rte. 16
Functional Class: Other Principal Arterial
ADT: 1550 (2011); 1650 (2032)
ADTT: 171 (2011); 182 (2032)
DHV: 83
Design Speed: 60 m.p.h.
Posted Speed: 55 m.p.h.
Two Way Traffic
Directional Distribution: 50:50

DESIGN SPECIFICATIONS

2014 AASHTO LRFD Bridge Design Specifications, 7th Edition

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)

LOADING HL-93

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

WATERWAY INFORMATION

Trib. to So. Fork Sangamon River
Drainage Area = 0.21 sq. mi.

Existing Overtopping Elevation = 684.70 ft. ⊕ Sta. 364+69
Proposed Overtopping Elevation = 684.90 ft. ⊕ Sta. 364+69

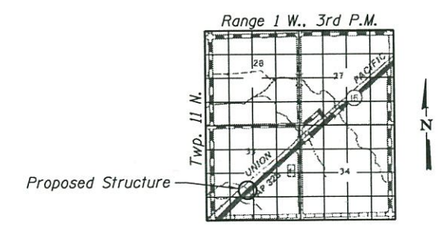
Flood	Freq. Year	'Q' C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Natural H.W.E.	Head (ft.) Exist.	Head (ft.) Prop.	Headwater Elev. (ft.) Exist.	Headwater Elev. (ft.) Prop.
	10	190	32	80	683.44	0.6	0	684.01	683.36
Design	50	330	32/70	80	684.25	0.7	0	684.97	684.28
Base	100	390	32/90	80	684.44	0.6	0.2	685.04	684.67
Overtopping (Exist.)	20	230	Culv./Weir	Culv./Weir					
Overtopping (Prop.)	140	430							
Max. Calc.	500	550	32/170	80/160	684.90	0.4	0.3	685.25	685.22

Datum: NAVD 88
All-Time H.W.E. & Date: 684.65 2009
850' West of culvert

10 yr. velocity thru existing Strucrure = 5.88 fps
10 yr. velocity thru proposed structure = 2.51 fps

⊕ Indicates Boring Location

APPROVED
JUL 01 2015
AS A BASIS FOR
PREPARATION OF DETAILED PLANS



LOCATION SKETCH

GENERAL PLAN
ILLINOIS RTE. 16 OVER
TRIBUTARY TO SOUTH FORK SANGAMON RIVER
F.A.P. RTE. 325 - SEC. 18(B-2, B-3)
CHRISTIAN COUNTY
STATION 364+08.00
STRUCTURE NO. 011-2513

HANSON

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USER NAME = hansn00110	DESIGNED - TEH	REVISED -	
	CHECKED - MNM	REVISED -	
PLOT SCALE =	DRAWN - DAP	REVISED -	
PLOT DATE = 6/23/2015	CHECKED - TEH	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STRUCTURE NO. 011-2513

SHEET NO. 1 OF 1 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	8(B-2, B-3)	CHRISTIAN		
		CONTRACT NO. 72984		
		ILLINOIS FED. AID PROJECT		

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