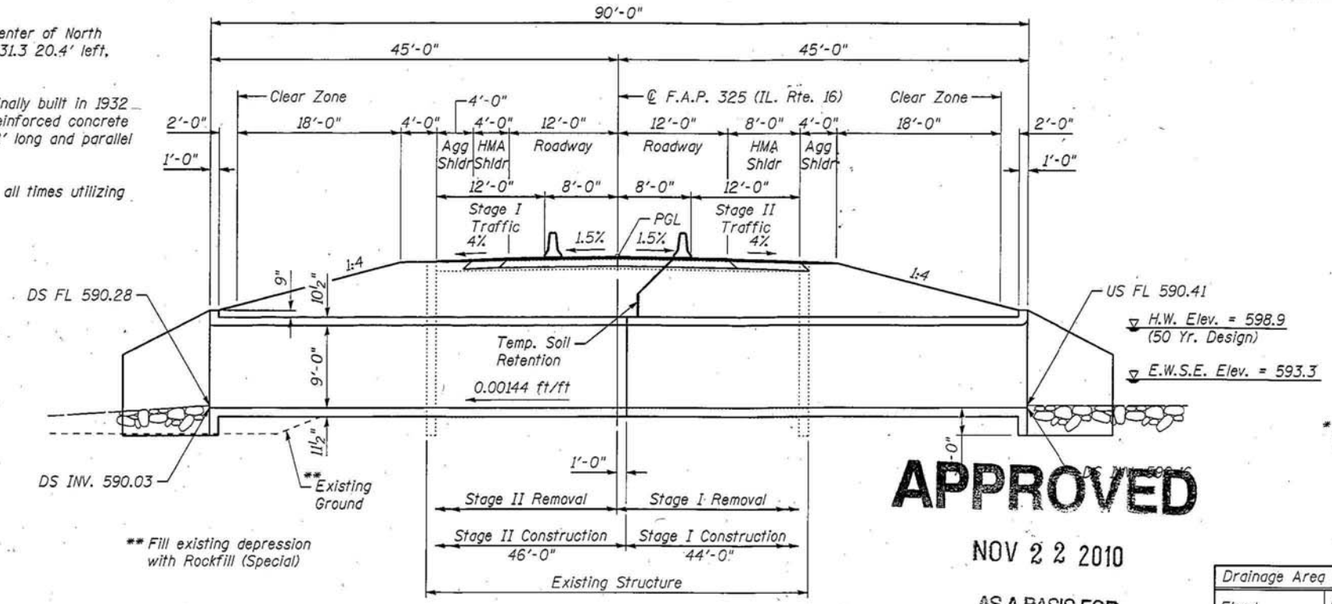
Benchmark: BM 302 - Chiseled square on center of North headwall of 12'x12' box culvert Sta. 695+31.3 20.4' left, NAVD 1988 Elev. 606.41

Existing Structure: S.N. 059-7039 was originally built in 1932 as SBI 110, Sec. 114, it is a single cell reinforced concrete box culvert with 12' span x 12' rise x 42' long and parallel wingwalls at 0° skew. ℄ Sta. 695+30.75.

One lane of traffic shall be maintained at all times utilizing stage construction.

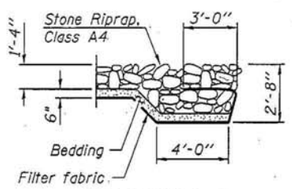
No salvage.



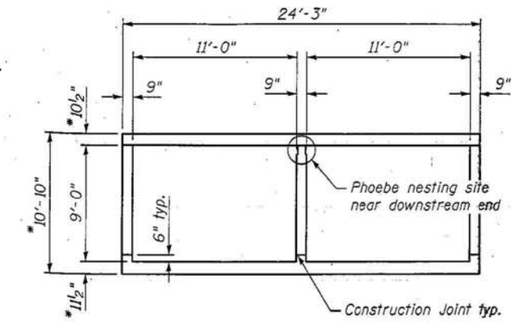
** Fill existing depression with Rockfill (Special)

LONGITUDINAL SECTION

(Dim at right L's to ℄ Roadway)



SECTION A-A



SECTION THRU BARREL

* Slab thickness may be refined in final design

APPROVED

NOV 22 2010

AS A BASIS FOR PREPARATION OF DETAILED PLANS

WATERWAY INFORMATION

Max. Rec. H.W.E. = 596.1 ft.

Drainage Area = 1.8 Sq. Mi.					Low Grade Elev. 605.9 ft. @ Sta. 699+05				
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
Min. Calc.	10	610	80	150	597.3	1.3	0.3	598.5	597.6
Design	50	990	100	190	598.9	2.3	0.7	601.2	599.6
Base	100	1160	110	200	599.4	2.8	0.9	602.3	600.3
Overtopping									
Max. Calc.	500	1580	120	200	600.6	4.1	1.7	604.8	602.3

10 year velocity thru Ex. Structure = 7.4 fps
10 year velocity thru Pr. Structure = 4.1 fps

HORIZONTAL CURVE DATA

Existing Curve 200
Δ = 1° 20' 52" (Rt.)
D = 0° 07' 47"
T = 519.10 Ft.
L = 1038.15 Ft.
E = 3.05 Ft.
R = 44,132.99 Ft.
S.E. = None
P.C. = Sta. 689+78.95
P.T. = Sta. 700+17.10
P.I. = Sta. 694+98.05

HIGHWAY CLASSIFICATION

F.A.P. Rte. 325 (IL. Rte. 16)
Functional Class: Other Principal Arterial
ADT: 2750 (2007); 4050 (2019)
DHV: 405 (2019)
ADTT: 15% (2019)
Design Speed: 55 m.p.h.
Posted Speed: 55 m.p.h.
Directional Distribution 50:50

DESIGN SPECIFICATIONS

2002 AASHTO

LOADING HS20-44

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

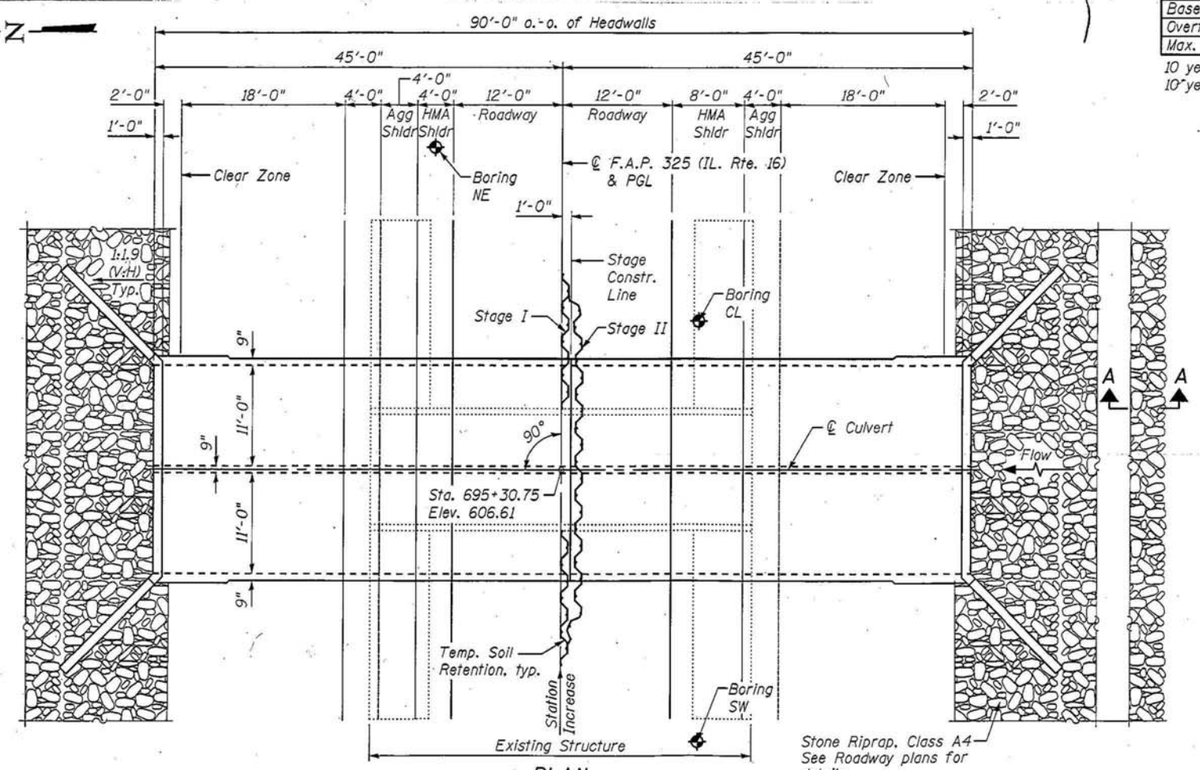
DESIGN STRESSES

FIELD UNITS

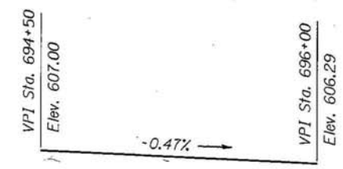
f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	Upstream	Downstream
	486.16	486.03

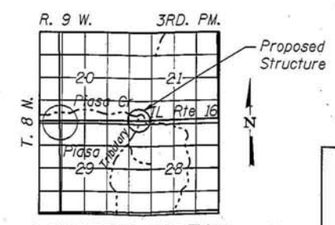


PLAN



PROFILE GRADE

(along ℄ Il Rte. 16)



LOCATION SKETCH

GENERAL PLAN
IL. RTE. 16 OVER
TRIBUTARY TO PIASA CREEK
FAP 325, SECTION 114B-3
MACOUPIN COUNTY
STATION 695+30.75
STRUCTURE NO. 059-7103

FILE NAME = ...\0597103-001-tsl.dgn	USER NAME = MML	DESIGNED GLS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
		CHECKED -	REVISED -	
	PLOT SCALE = 16:0.000000 '/ IN.	DRAWN CFC	REVISED -	
CB PROJECT NO. 07048-13	PLOT DATE = 11/9/2010	CHECKED GLS/MCB	REVISED -	

SHEET NO. 1 OF 1 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325	114B-3	MACOUPIN		
		CONTRACT NO. 72B64		
		ILLINOIS FED. AID PROJECT		