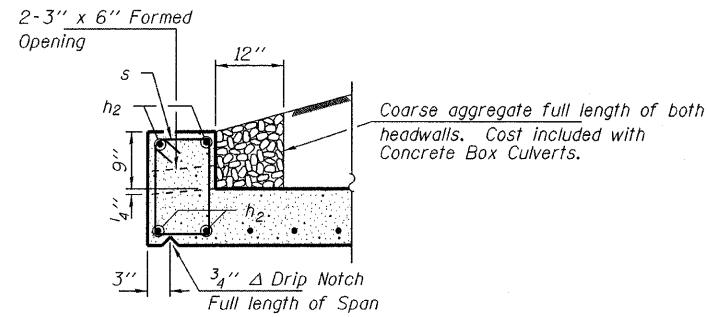
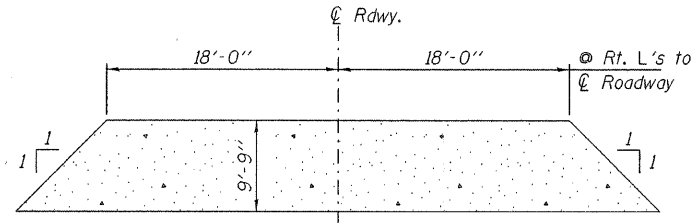


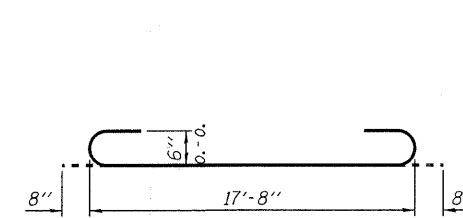
UPSTREAM END



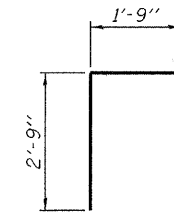
DOWNSTREAM END



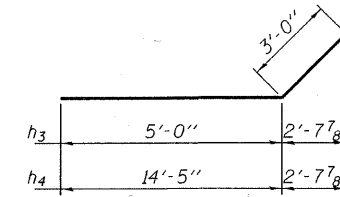
LENGTH OF POROUS GRANULAR EMBANKMENT



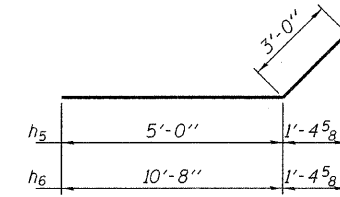
BAR a



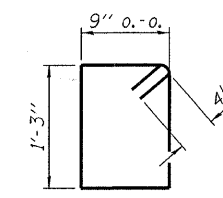
BAR d



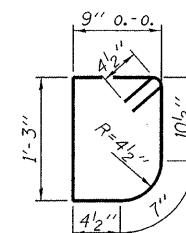
BARS h3 & h4



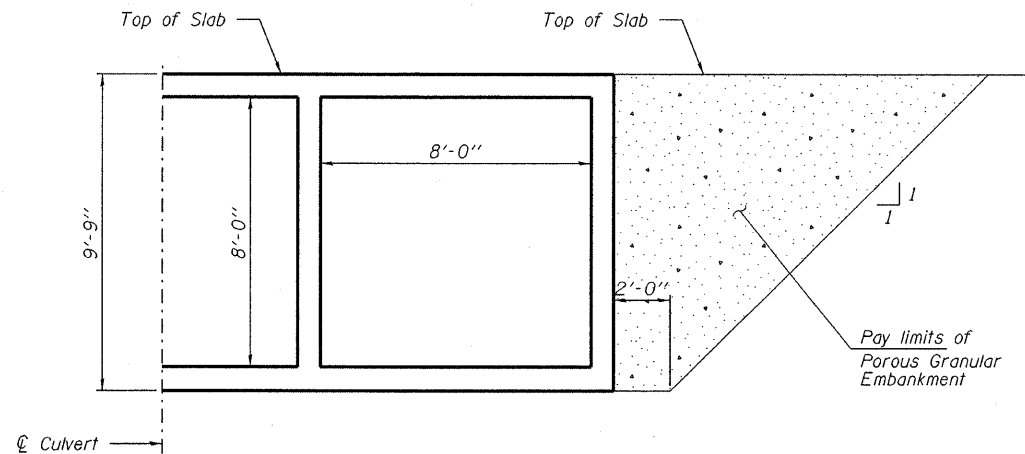
BARS h5 & h6



BAR s



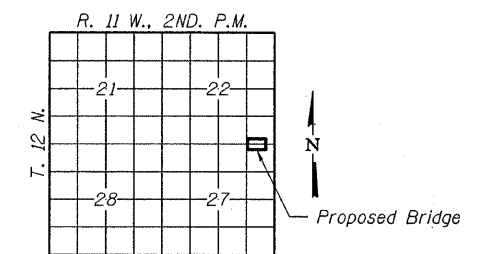
BAR s1



POROUS GRANULAR EMBANKMENT DETAILS

HAWKS CREEK
BUILT 20 BY
CLARK COUNTY
SEC. 09-00268-00-DR
C.H. 12
STR. NO. 012-5008
LOADING HS20

NAME PLATE
See Std. 515001



LOCATION SKETCH

WATERWAY INFORMATION


Existing Low Grade Elev. 580.51 @ Sta. 21+00
Drainage Area = 1.73 Sq. Mi. Proposed Low Grade Elev. 580.51 @ Sta. 21+00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Natural Head - Ft.		Headwater El.		
			Exist.	Prop.	Exist.	Prop.	Exist.	Prop.	
Design	20	730	34	109	564.82	3.25	0.16	568.07	564.98
Base	100	1120	46	132	566.92	6.60	0.26	573.52	567.18
Max. Calc.	500	1530	54	147	567.87	11.48	1.78	579.35	569.65

10 Year Velocity through Existing Bridge = 20.3 fps 10 Year Velocity through Proposed Bridge = 5.9 fps

DESIGNED - V.J.H.
CHECKED - M.G.B.
DRAWN - D.A.B.
CHECKED - M.G.B.

CULVERT DETAILS
STRUCTURE NO. 012-5008

 HAMPTON, LENZINI AND RENWICK, INC. CIVIL ENGINEERS - STRUCTURAL ENGINEERS - LAND SURVEYORS 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 217.546.3400 www.hirengineering.com <small>184.000959 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORPORATION</small>	C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	12	09-00268-00-DR	CLARK	20	19
EAST CULVERT			CONTRACT NO. 95612		
PROJECT NUMBER: 09.0131.130		DATE: 11/03/09			
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT			