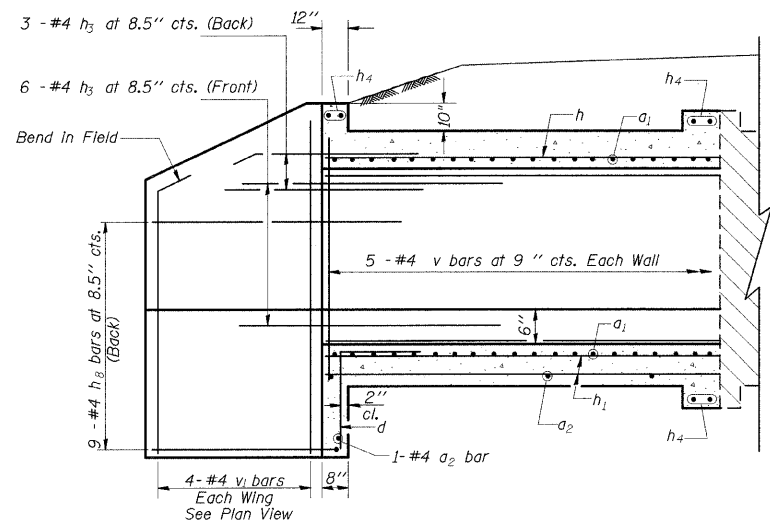


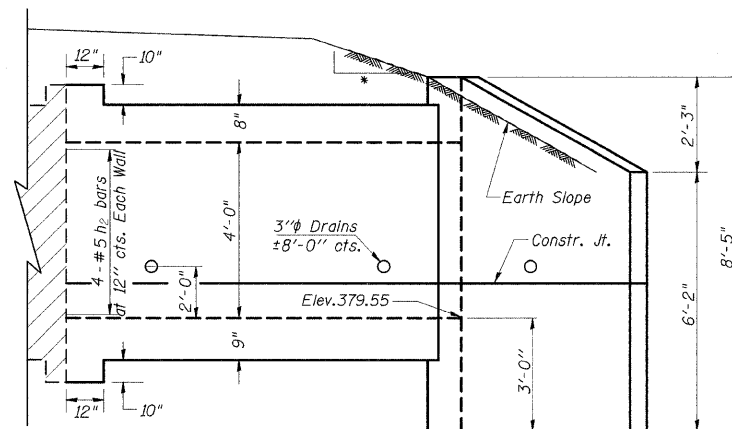
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.S. RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
932	(8,9,11)W,RS-1	•	401	179
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

• JOHNSON/POPE

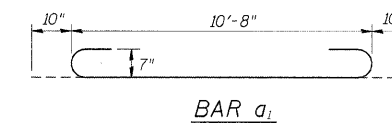
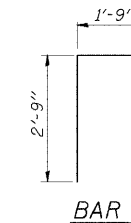
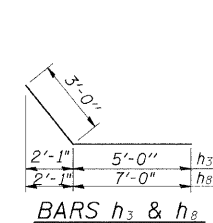


HALF LONG SECTION



HALF ELEVATION

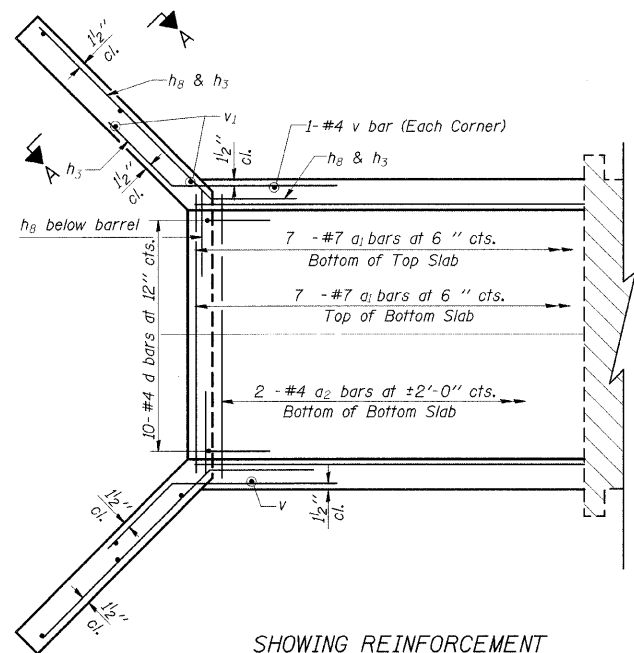
* 4:1 TO CLEAR ZONE
3:1 AFTER CLEAR ZONE



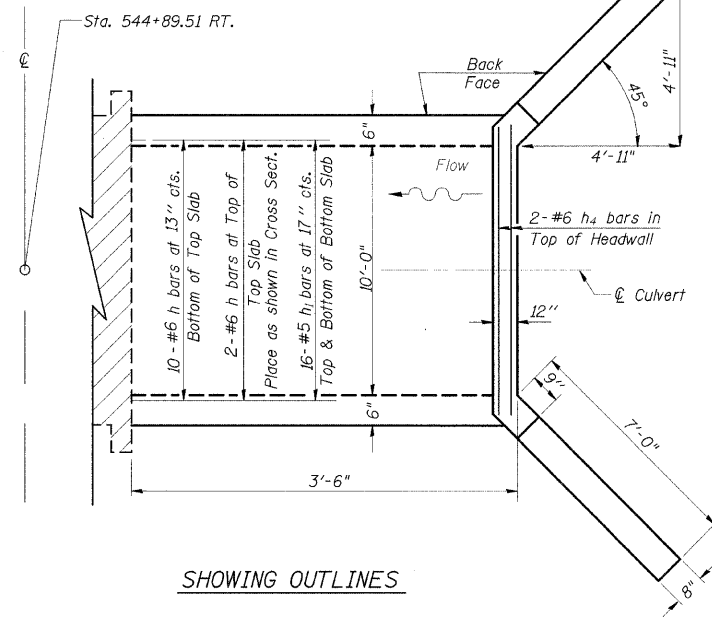
DESIGN STRESSES

$f_y = 60,000$ psi
 $f'_c = 3,500$ psi

LOADING HS 20-44 & ALT.



SHOWING REINFORCEMENT

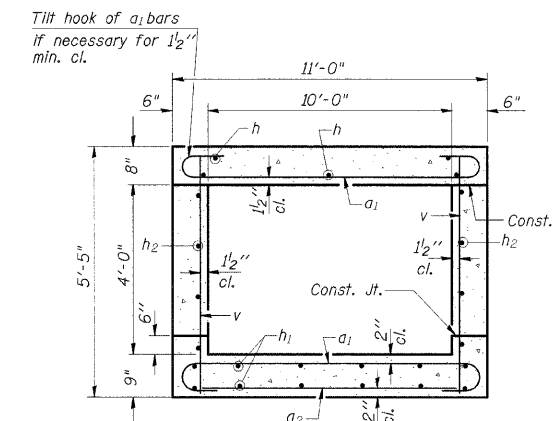


SHOWING OUTLINES

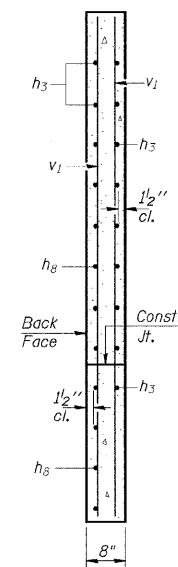
PLAN

NOTES

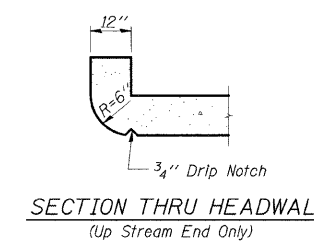
A distance of half the length of the wingwall but not less than six feet of the barrel shall be poured monolithically with the wingwalls.
Reinforcement Bars shall conform to the requirements of AASHTO M-31, M-42 or M-53, Grade 60.
Bars indicated thus 12 x 4-#5 etc. indicates 12 lines of bars with 4 lengths per line.
All construction joints shall be bonded.



SECTION THRU BARREL



SECTION A-A



SECTION THRU HEADWALL
(Up Stream End Only)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a_1	14	#7	12'-4"	
a_2	3	#4	10'-3"	
d	10	#4	4'-6"	
h	12	#6	3'-3"	
h_1	16	#5	3'-3"	
h_2	8	#5	3'-3"	
h_3	9	#4	8'-0"	
h_4	6	#6	10'-9"	
h_8	9	#4	9'-1"	
v	12	#4	5'-1"	
v_1	8	#4	6'-4"	
Expansion Bolts	3/4"	Each	20	
Concrete Box Culverts		Cu. Yd.	5.9	
Reinforcement Bars		Pound	820	

PRECAST OPTION NOT ALLOWED

ILLINOIS DEPARTMENT OF TRANSPORTATION
BOX CULVERT EXTENSION
STATION 544+89.51 RT.
10' X 4', SKEW 0°
EXTEND 3'-6"