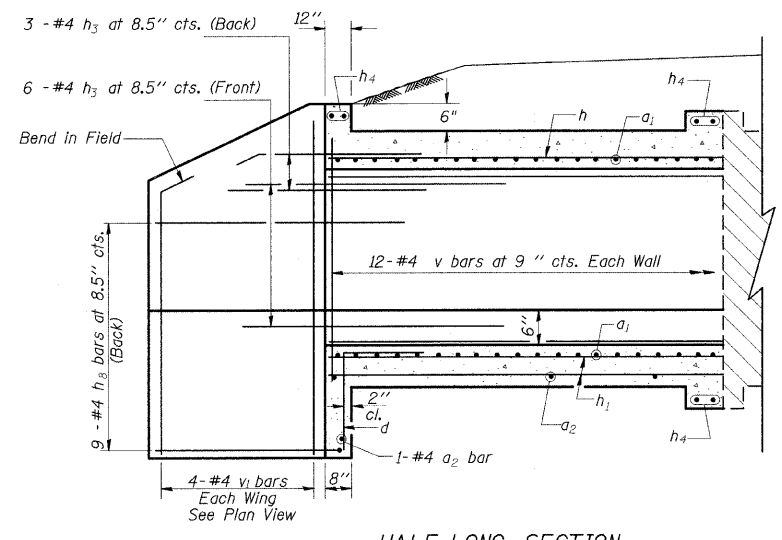


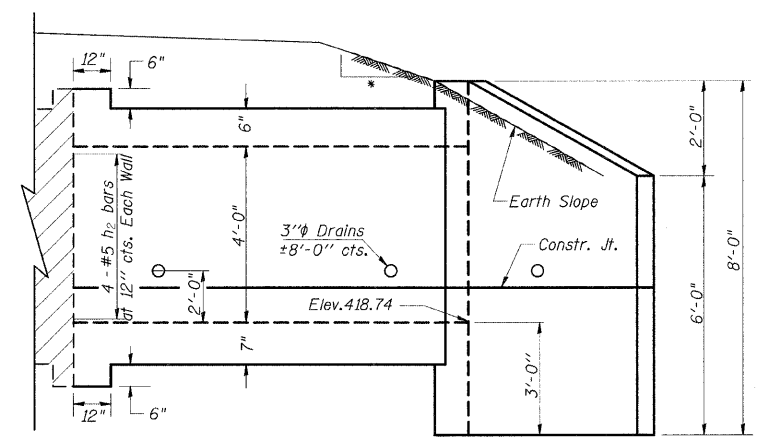
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

F.A.S. RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
932	(8,9,11)W,RS-1	*	401	185
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

• JOHNSON/POPE

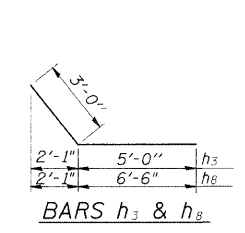


HALF LONG SECTION

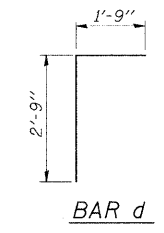


HALF ELEVATION

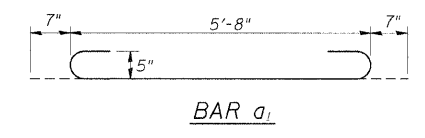
• 4:1 TO CLEAR ZONE  
3:1 AFTER CLEAR ZONE



BARS  $h_3$  &  $h_8$



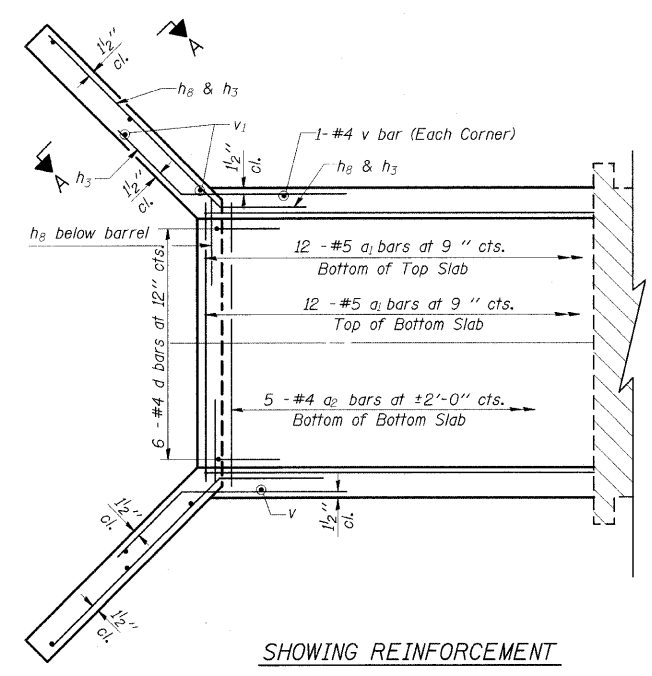
BAR d



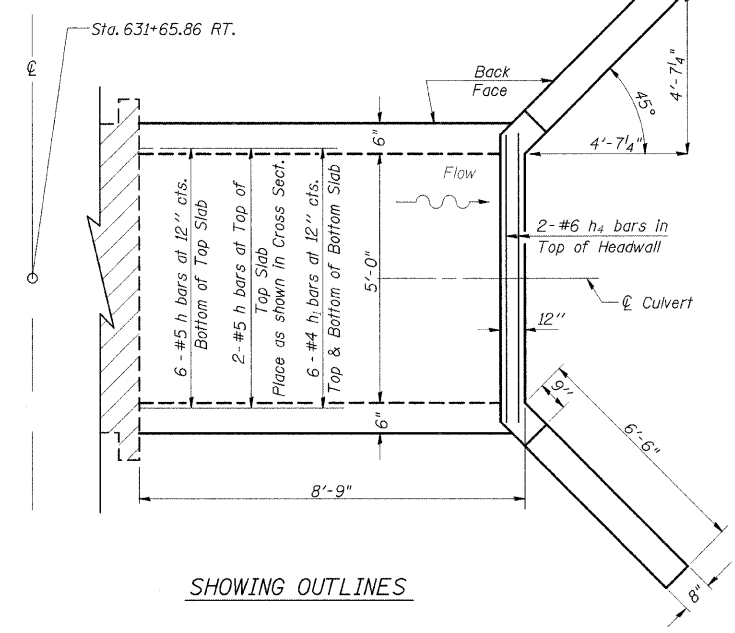
BAR  $a_1$

DESIGN STRESSES  
 $f_y = 60,000 \text{ psi}$   
 $f'_c = 3,500 \text{ psi}$

LOADING HS 20-44 & ALT.



SHOWING REINFORCEMENT

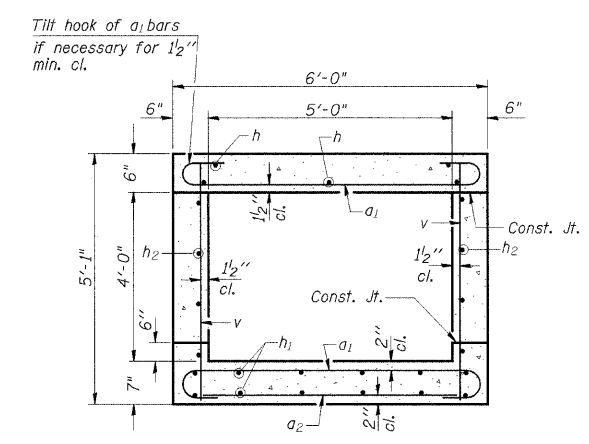


SHOWING OUTLINES

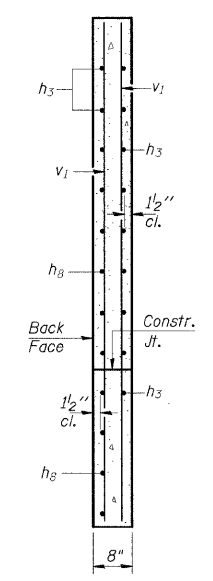
PLAN

NOTES

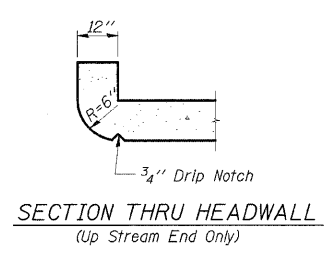
A distance of half the length of the wingwall but not less than six feet of the barrel shall be poured monolithically with the wingwalls.  
Reinforcement Bars shall conform to the requirements of AASHTO M-31, M-42 or M-53, Grade 60.  
Bars indicated thus 12 x 4-#5 etc. indicates 12 lines of bars with 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
$a_1$	24	#5	6'-10"	U
$a_2$	6	#4	5'-3"	—
d	6	#4	4'-6"	┌
h	8	#5	8'-6"	—
$h_1$	12	#4	8'-6"	—
$h_2$	8	#5	8'-6"	—
$h_3$	9	#4	8'-0"	┌
$h_4$	6	#6	5'-2"	—
$h_8$	9	#4	9'-6"	┌
v	26	#4	4'-9"	—
$v_1$	8	#4	7'-7"	—
Expansion Bolts $\frac{3}{4}$ "			Each	14
Concrete Box Culverts			Cu. Yd.	6.3
Reinforcement Bars			Pound	700

PRECAST OPTION NOT ALLOWED

ILLINOIS DEPARTMENT OF TRANSPORTATION  
BOX CULVERT EXTENSION  
STATION 631+65.86 RT.  
5' X 4', SKEW 0°  
EXTEND 8'-9"