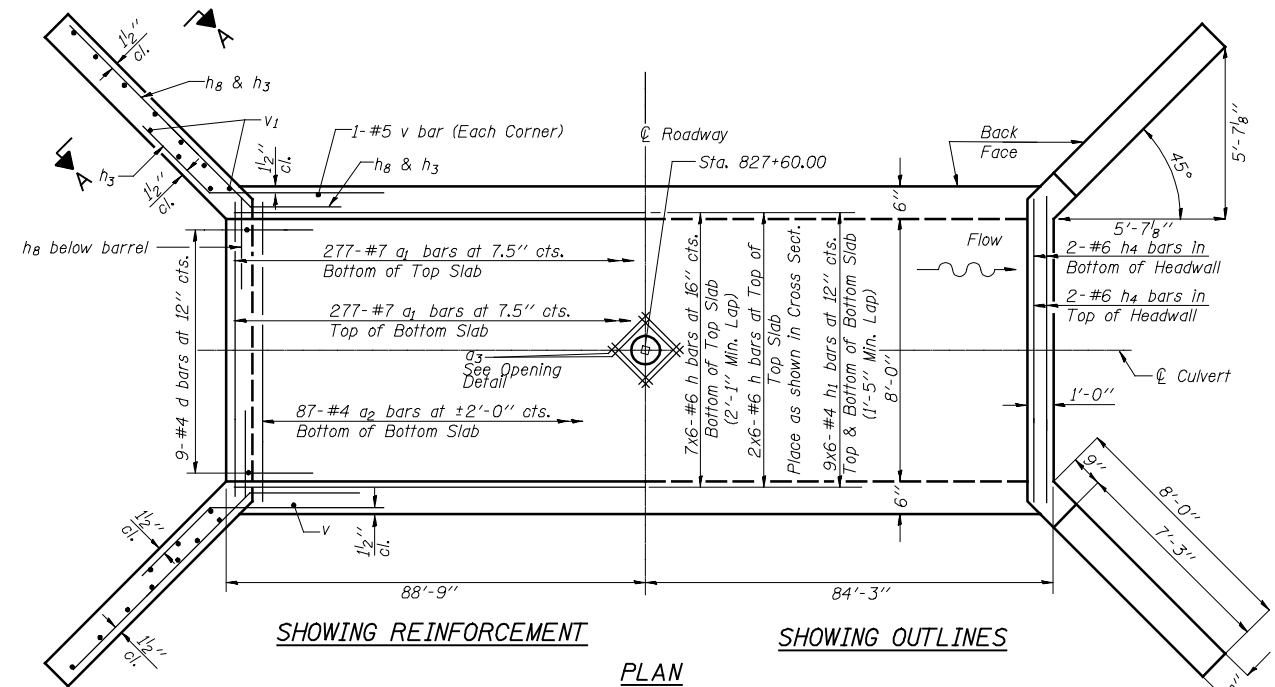


HALF LONG. SECTION

HALF ELEVATION



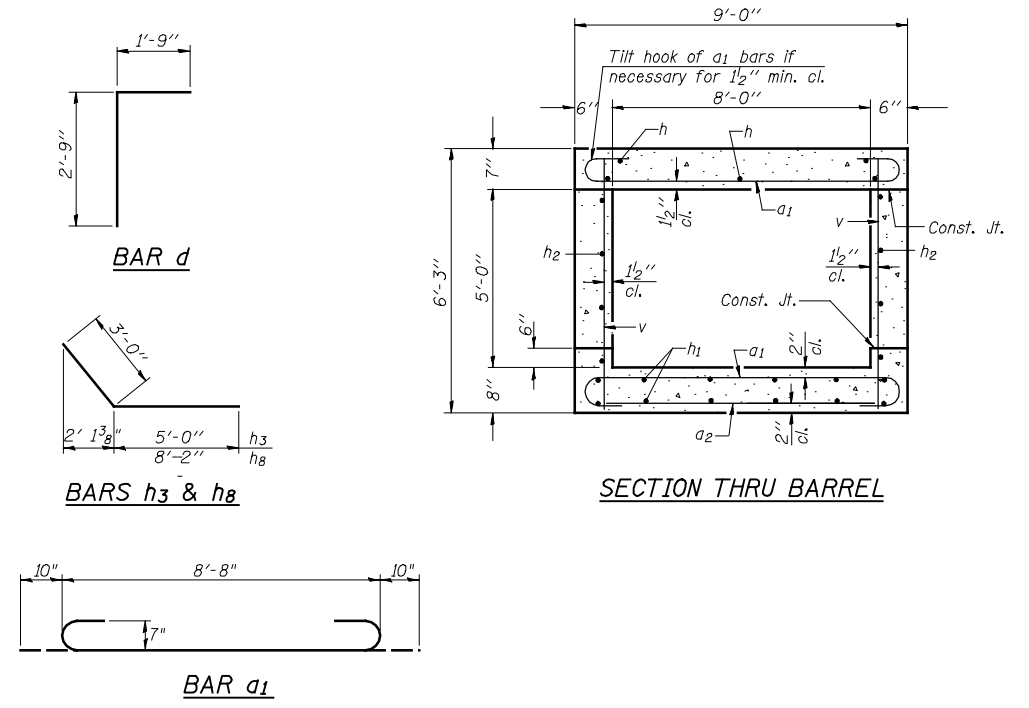
SHOWING REINFORCEMENT

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.  
 Bars indicated thus 12 x 4-#5 etc. indicates 12 lines of bars with 4 lengths per line.

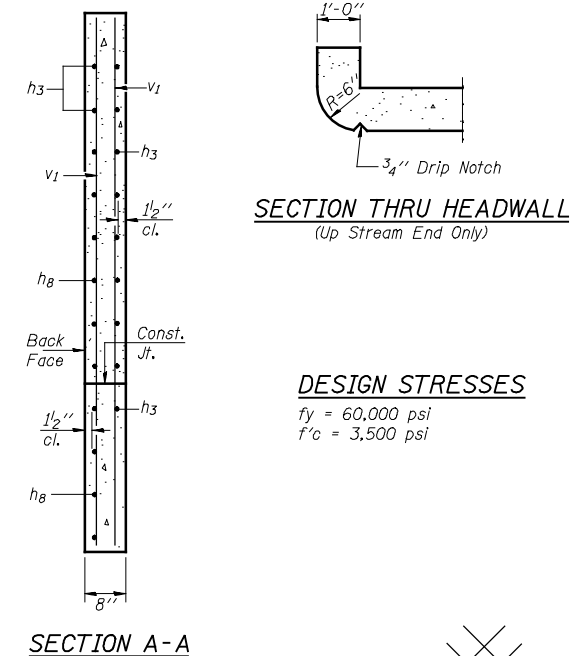


BAR d

BARS h3 & h8

BAR a1

SECTION THRU BARREL



SECTION THRU HEADWALL  
(Up Stream End Only)

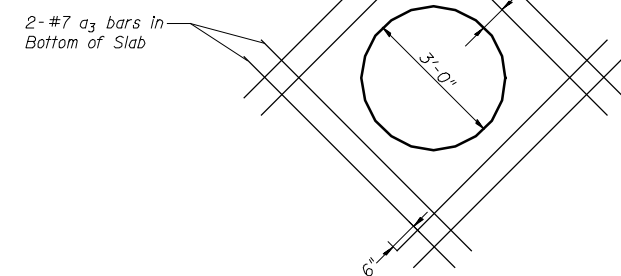
DESIGN STRESSES

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

SECTION A-A

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a1	554	#7	10'-4"	U
a2	89	#4	8'-3"	—
a3	8	#7	5'-2"	—
d	18	#4	4'-6"	U
h	54	#6	30'-7"	—
h1	108	#4	30'-0"	—
h2	72	#5	30'-4"	—
h3	52	#6	8'-0"	—
h4	8	#6	8'-8"	—
h8	44	#6	11'-2"	—
v	420	#5	5'-11"	—
v1	40	#5	8'-11"	—
Concrete Box Culverts			Cu. Yd.	112
Reinforcement Bars			Pound	24,120



OPENING DETAIL

(Cut reinforcement to miss opening)  
 Note: Bars to be attached to top of bottom reinforcement.  
 To be placed at 45° to principal reinforcement as shown.

SSB-H-0 7-1-10