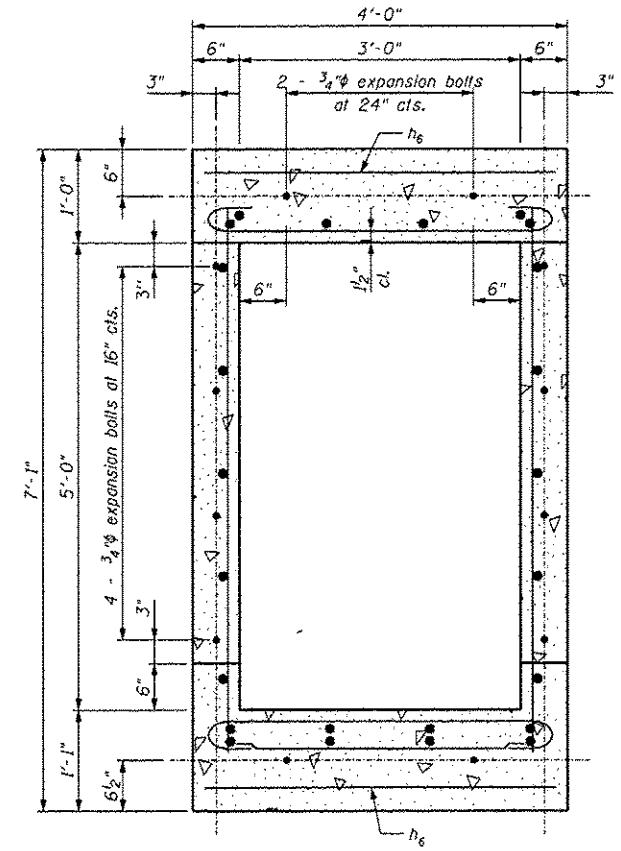
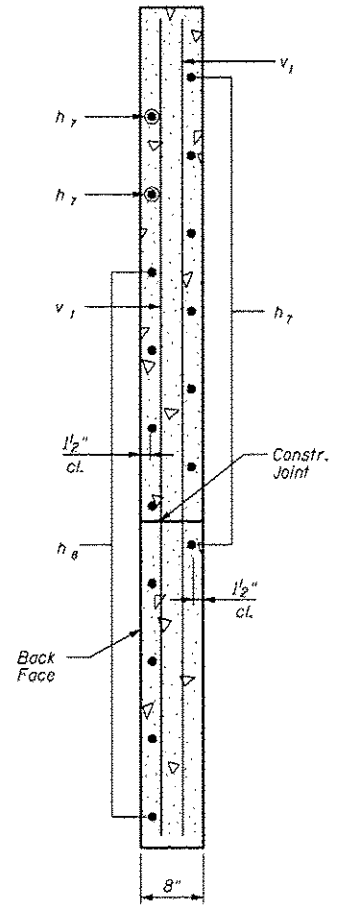


SECTION THRU BARREL



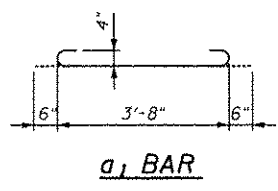
SECTION B-B

Expansion Bolt Locations  
Section Shown Without Skew

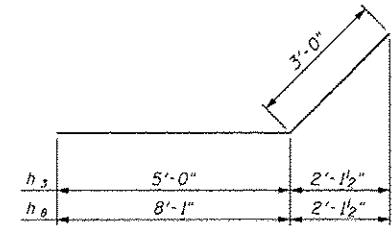


SECTION A-A

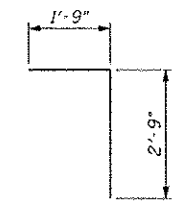
Wing Wall



a<sub>1</sub> BAR



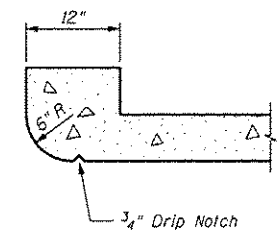
h BARS



d BAR

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a <sub>1</sub>	30	5	4'-8"	
a <sub>2</sub>	7	4	3'-4"	
d	8	4	4'-6"	
h	6	5	10'-7"	
h <sub>1</sub>	8	4	10'-7"	
h <sub>2</sub>	10	5	10'-7"	
h <sub>3</sub>	18	6	8'-0"	
h <sub>4</sub>	12	6	3'-9"	
h <sub>8</sub>	16	6	11'-1"	
v	56	4	5'-9"	
v <sub>1</sub>	16	4	8'-9"	
3/4" Expansion Bolts			Each	12
Concrete Box Culverts			Cu. Yd.	7.2
Reinforcement Bars			Pound	1290
Granular Culvert Backfill			Cu Yd	63.0



SECTION THRU HEADWALL

(UPSTREAM END ONLY)

BAR BEND DETAILS