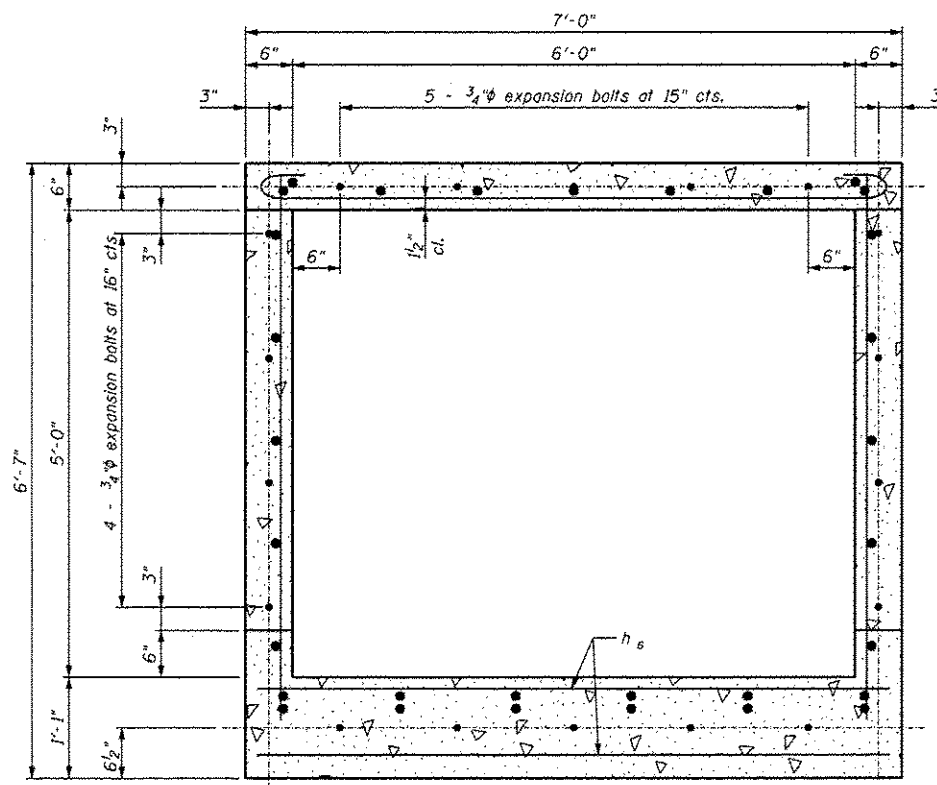
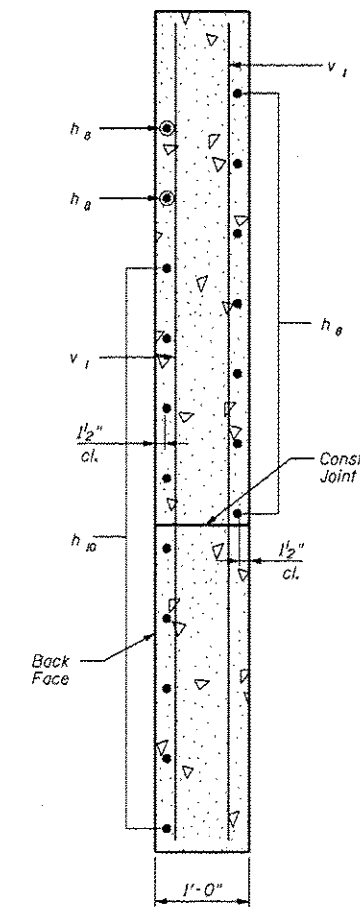


SECTION THRU BARREL

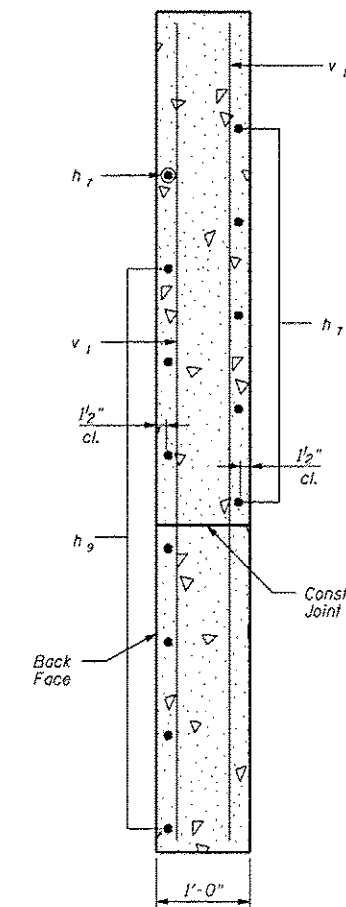


SECTION C-C

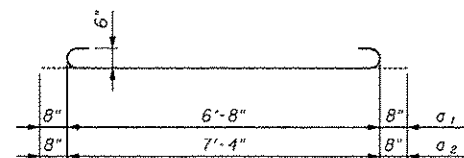
Expansion Bolt Locations
Section Shown Without Skew



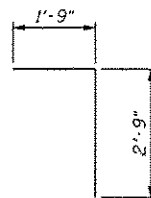
SECTION A-A
Long Wing Wall



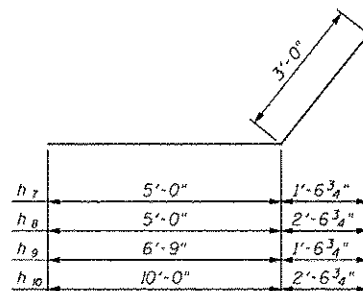
SECTION B-B
Short Wing Wall



a BARS



d BAR



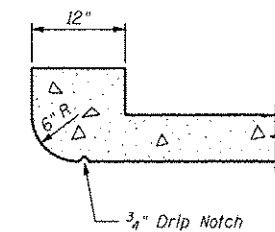
h BARS

BAR BEND DETAILS

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a ₁	126	6	8'-0"	
a ₂	50	6	8'-8"	
a ₃	18	4	6'-6"	
a ₄	8	4	7'-2"	
d	14	4	4'-6"	
* h	9	5	30'-10"	
* h ₁	9	5	30'-5"	
h ₂	12	4	25'-2"	
h ₃	12	4	26'-1"	
h ₄	10	5	25'-2"	
h ₅	10	5	26'-1"	
h ₆	20	6	7'-7"	
h ₇	12	4	8'-0"	
h ₈	18	6	8'-0"	
h ₉	14	4	9'-9"	
h ₁₀	18	6	13'-0"	
v	142	4	5'-9"	
v ₁	16	4	8'-9"	
3/4" Expansion Bolts		Each	18	
Concrete Box Culverts		Cu. Yd.	38.5	
Reinforcement Bars		Pound	5,450	
Granular Culvert Backfill		Cu. Yd.	18.8	

*Cut to fit in field.



SECTION THRU HEADWALL
(UPSTREAM END ONLY)

DESIGN STRESSES

F_y = 60,000 psi
F'_c = 3,500 psi

LOADING HS 20-44 & ALT.