

Fig. 11-1 Common uses of retaining walls: (a) hillside roads; (b) elevated depressed roads; (c) landscaping; (d) canals and locks; (e) erosion protection; (f) flood walls; (g) bridge abutment.

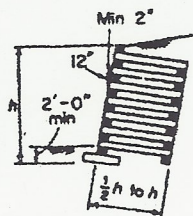
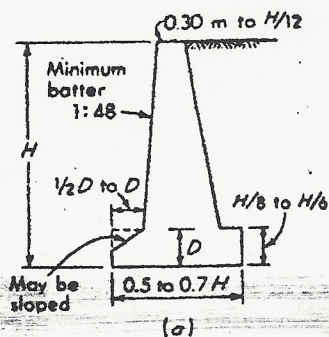


Fig. 11-5 Common proportions of crib walls.



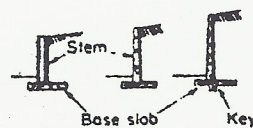
Gravity Walls

Plain concrete or rubble, no tensile stress in any portion of wall. Rugged construction is conservative but not economical for high walls.



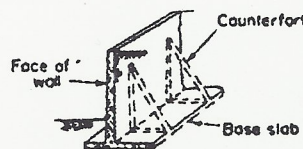
Semigravity Walls

A small amount of reinforcing steel is used for reducing the mass of concrete.



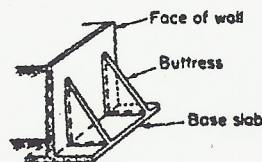
Cantilever Walls

In the form of an inverted T, each projecting portion acts as a cantilever. Generally made of reinforced concrete. For small walls, reinforced concrete blocks may be used. This type is economical for walls of small to moderate height. (about 20-25 ft)



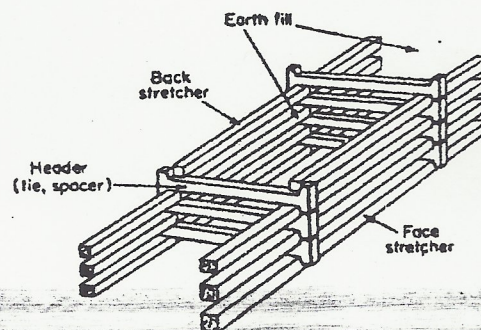
Counterfort Walls

Both base slab and face of wall span horizontally between vertical brackets known as counterforts. This type is suitable for high retaining walls, greater than about 20 ft.



Buttressed Walls

Similar to counterfort wall except that the backfill is on the opposite side of vertical brackets (known as buttresses). Not commonly used because of the exposed buttresses.



Crib Walls

Formed by timber, precast concrete or prefabricated steel members, and filled with granular soil.

This type is suitable for walls of small to moderate height (abt 21' max) subjected to moderate earth pres.

No surcharge load except earth fill should be placed directly above crib wall.

Fig. 11-2 Principal types of retaining walls.

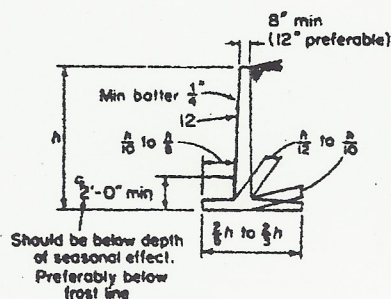


Fig. 11-3 Common proportions of cantilever retaining walls.

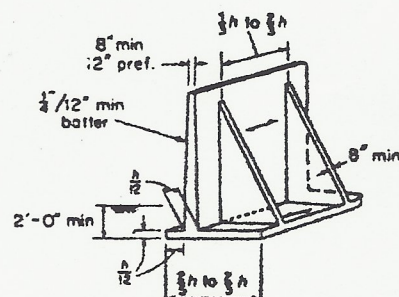


Fig. 11-4 Common proportions of counterfort retaining walls.