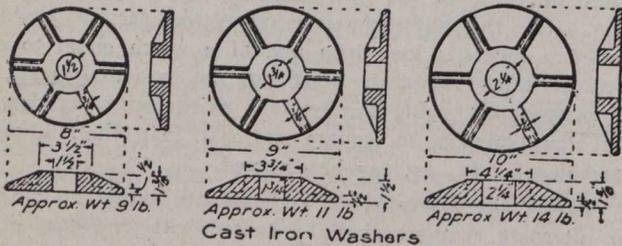
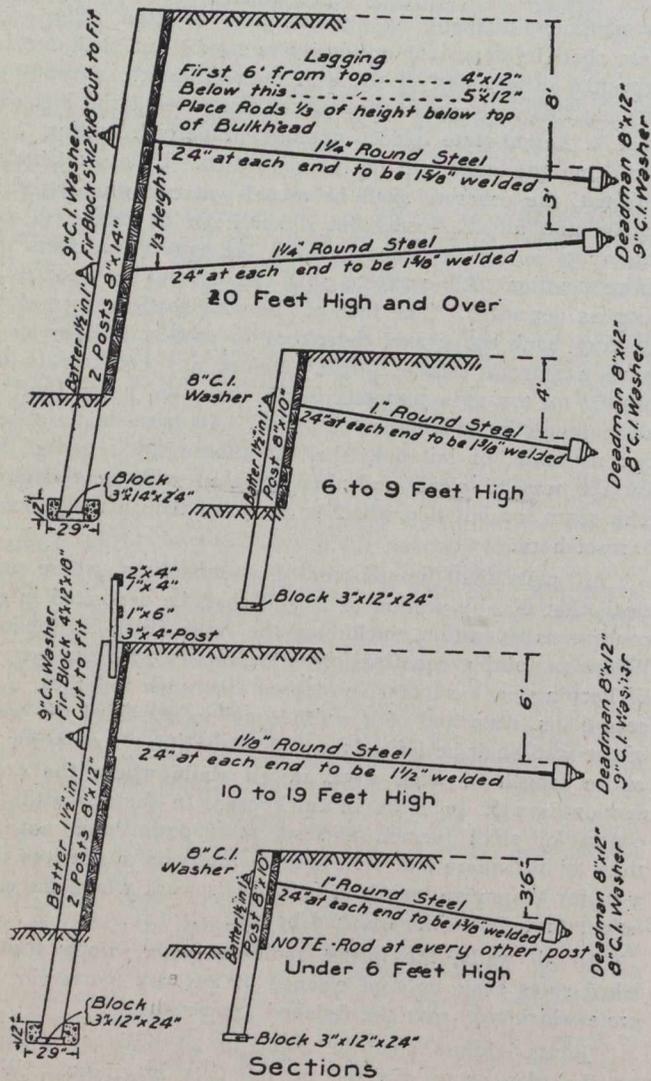


over with a chipping hammer and all projections brought down to an even surface. All wires shall be snipped to the surface of the wall and all holes or rough spots pointed up with a mortar of sand and cement of the same proportions used in the concrete.

The wall shall then be floated with a mortar of 1 part cement to 2 parts fine sifted sand. The mortar may be applied with a steel trowel but the final finish shall be made with a cork float, all mortar other than just sufficient to fill a and true the face of the wall being rubbed off.



Figs. 31 and 32.—Details of Wood Bulkhead.

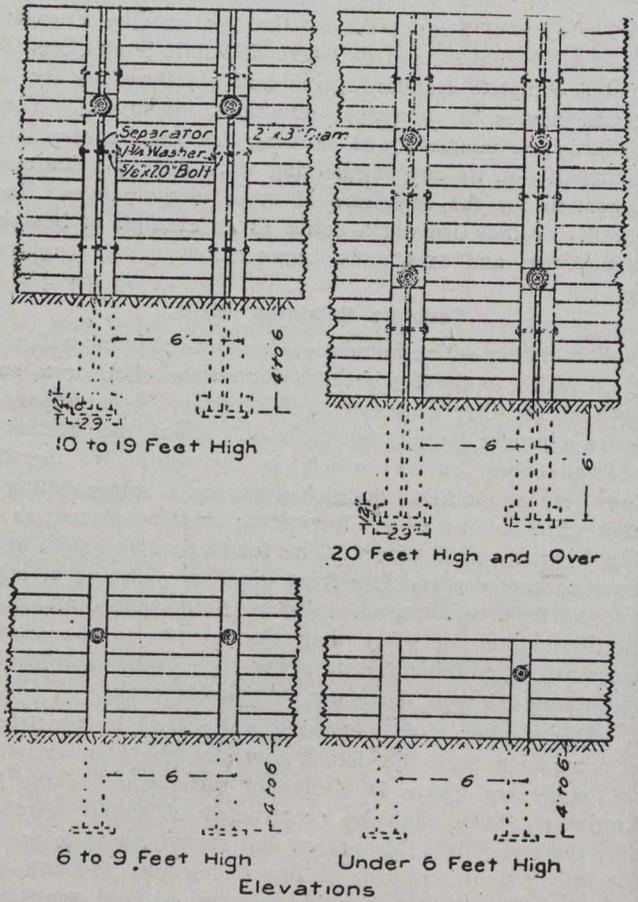
The finish shall be an extremely thin coat and uniform in appearance. A plaster finish will not be allowed. The finishing shall be done in a thorough workman-like manner giving true lines and edges to all moldings.

Waterproofing.—The back of the wall shall be coated with tar pitch, asphalt or other approved substance. Unless otherwise directed such waterproofing shall consist of two coats of the substance selected. The waterproofing shall be applied hot and only on a dry surface.

Gravel.—A layer of coarse gravel not less than 4 ins. in thickness shall be placed at the back of the wall for its entire height.

Tile Drain.—A tile drain of the size called for on the plan shall be placed at the back of the wall at the bottom and connected to the sewer where shown in the plan.

Backfilling.—The backfilling behind retaining walls shall not be made until the walls have been allowed to set two weeks or longer. The filling shall be made in layers not exceeding one foot in thickness and thoroughly rammed.



Material	Size	Wt per ft	Wt of each	Material	Size	Wt per ft	Wt of each
Rods	Inches	in Pounds	in Pounds	Nuts	Inches	in Pounds	in Pounds
	1 1/2	2.57			1 1/2	2.5	
	1 1/2	3.38			1 1/2	3.2	
	1 1/2	4.17			1 1/2	3.9	
	1 1/2	5.05			1 1/2	4.0	
	1 1/2	6.01			1 1/2	5.0	
	1 1/2	7.05			1 1/2	6.0	
Separators	2 1/2 Dia		3.7				
Bolts	3/8 x 20		2.0	Wt Washer	1 1/2		0.1

Unit Weights

Height	Ft B.M. per Ft Length	Pounds Steel per Ft Length of Rods	Height	Ft B.M. per Ft Length	Pounds Steel per Ft Length of Rods
4	33.9	6.0	15	134.2	22.2
5	40.1	6.0	15	142.4	23.0
6	46.3	12.0	15	150.1	23.9
7	52.4	12.0	15	157.8	24.8
8	58.6	12.0	15	165.4	25.6
9	64.7	12.0	15	173.6	26.7
10	70.8	18.0	15	201.7	31.5
11	76.9	18.0	22	209.8	32.9
12	83.0	18.0	23	217.9	34.5
13	89.1	19.5	24	226.0	36.0
14	95.2	21.0	25	234.1	37.5

Bill of Material

Filling in with loose earth and puddling the same will not be permitted except by express permission of the City Engineer.

Measurements.—The quantities of materials to be paid for in concrete retaining walls shall be the actual quantities in the completed work. Volumes will be determined by the prismatic formula.

Payment for plain concrete retaining walls shall include all necessary excavating, concrete, tile drain, dowel pins,