

STONE MASONRY

Rubble Masonry

- Rubble masonry: is formed of stones of irregular shapes which are laid in regular courses or at random with mortar joints.

Mortar

- The mortar used for setting stones may be similar to that used for brick masonry.
- The quantity of mortar required for joints will vary considerably with the type of bond, the thickness of the joints, and the size of stones used.

Quantities of mortar

- Quantities of mortar required per cubic meter for coursed rubble is between 0.24m^3 – 0.32m^3 , and for random rubble are between 0.28m^3 – 0.36m^3

The cost of stone

- Varies with the kind of stone, extent of cutting done at quarry, and location of use.
- Accurate pricing only can be made after obtaining current prices for the particular stone.
- The cost of transportation must be added to the cost at the source to determine the cost at the job.

Stones

- Stones may be purchased at a quarry in large rough-cut blocks, hauled to the job, and then cut to the desired sizes and shapes.

Labor-hours required to handle and set stone required

TABLE 10-10
Labor-hours required to handle and set stone masonry

Operation	Labor-hours required			
	Per yd ³		Per ft ³	
	Skilled	Helper	Skilled	Helper
Unloading stones from truck	0.2-0.4	0.8-1.6	0.01-0.02	0.03-0.06
Rough squaring	4.0-10.0	—	0.15-0.37	
Smoothing beds	6.0-12.0	—	0.22-0.45	
Setting stone by hand:				
Rubble	2.0-4.0	3.0-6.0	0.08-0.15	0.11-0.22
Rough squared	3.0-6.0	4.0-9.0	0.11-0.22	0.15-0.33
Ashlar, 4- to 6-in veneer	10.0-15.0	10.0-15.0	0.37-0.55	0.37-0.55
Setting stones by using a hand derrick:				
Heavy cut stone, ashlar, cornices, copings, etc.	2.0-3.0	12.0-18.0	0.08-0.11	0.45-0.67
Light cut stone, ashlar, sills, lintels, cornices, etc.	2.5-4.0	12.5-20.0	0.09-0.15	0.46-0.75
Setting stones by using a power crane:				
Heavy cut stone:				
Crane operator	1.0-2.0	—	0.04-0.08	
Stone setter	1.0-2.0	—	0.04-0.08	
Helpers	—	7.0-14.0	—	0.26-0.52
Medium cut stone:				
Crane operator	1.5-3.0	—	0.06-0.11	
Stone setter	1.5-3.0	—	0.06-0.11	
Helpers	—	9.0-18.0	—	0.33-0.67
Pointing cut stone:				
Heavy stone	0.5-0.8	0.2-0.4	0.02-0.03	0.01-0.02
Veneer, 4 to 6 in thick	1.0-1.5	0.2-0.8	0.04-0.06	0.02-0.03
Cleaning stone:				
Stone setter, 1.5 h/100 ft ²				
Helper, 0.75 h/100 ft ²				

Labor-hours table (cont'd)

- The lower rates should be used for large straight walls, with plain surfaces, and the higher rates for walls with irregular surfaces.
- The rates for hoisting will vary with the sizes of stones, heights hoisted and equipment used.

Exercise 1

- Refer to the Excel