

How to Build a Dry Stacked Stone Wall

1. Tools and Materials

- ◆ Heavy Hammer
- ◆ Pick & Shovel
- ◆ Tape Measure
- ◆ String Line & Stakes
- ◆ Carpenters Level
- ◆ Selected Stone

2. How to Figure Amount of Stone Required

We first need the volume of stone in the wall in cubic feet. To do this, determine the length and the height of the wall in feet. Then determine the thickness of the wall. The general rule of thumb for a retaining wall is that the thickness of the wall at any point should be half of the height of the wall above it. For a 4' high retaining wall, the base should be about 2' thick. The wall should then taper uniformly as it rises. If you are constructing a free-standing wall, the thickness is governed by aesthetics. The shorter the wall, the narrower it can be. For most wall stones, the minimum thickness is about 1'. For a 4' high retaining wall, the average thickness would be: $(2' \text{ (at base)} + 1' \text{ (at top)})/2 = 1'-6"$

If your wall is going to be 20' long and 4' high, the the calculation is as follows:

- ◆ $20' \times 4' \times 1'-6" = 120$ Cubic Feet
- ◆ Most stone yields about 15 Cubic Feet per ton, so:
- ◆ 120 Cubic Feet = 8 Tons
- ◆ 15 CF/Ton

Coverage may be somewhat more or less depending on how much trimming and fitting you do.

3. How to Construct Your Wall

Next, using the stakes & string, outline the shape of your wall. Then dig out the soil to the width and length of your wall. The depth will vary. At a minimum, go down 8", but you must also remove all of the loamy topsoil down to a firm base. Fill in the trench with crushed stone to about 4" from the top of your trench. Before you start building make a pile of the flattest stone to use to cap the wall (if you are going to use a coping to finish off the top of the wall, you can skip this step). Then, make another pile with pieces that you can use for corners. Now you are ready to start with the stone. First, build up the corners of the wall with the material you have saved out for that purpose. You don't have to build the corners to the full height of the wall now, but the corners should always be higher than the middle until you reach the top. Now you can fill in the middle between the corners of the wall. The general rules of laying stone are:

1. Lay a stone as it would rest naturally on the ground (Don't stand them on end).
2. Avoid long horizontal joints.
3. Break all vertical joints.
4. As often as practical, lay a stone the full width of the wall (bond stone).
If it is a retaining wall, this stone should go into the hill as far as possible.

- ◆ **For a free-standing wall**, build up both faces at the same time.
- ◆ **For a retaining wall**, fill in behind the wall as you go with a material that will drain well.
- ◆ Finally, cap the wall with the stone you have saved for that purpose.

As an alternate method of installation, replace the crushed stone base with concrete and then put some mortar between each stone while still keeping the mortar back from the face of the stone. This will still give you the "dry wall" look, but give the wall more stability. This installation method is especially useful for a novice.