

WALLSTONE

How to Build A Dry Retaining Wall

The Advantages of a Dry Retaining Wall

A dry retaining wall is built without mortar along the base slope. The arrangement of stones set in dirt, rather than in mortar, must be sturdy enough to stand up against the pressure of the earth and the water behind it. The wall's stability depends on the weight and friction of one stone on another. Because the stones are not bonded together by mortar, they will rise and fall with the frost, without any damage to your wall. The techniques for building a dry retaining wall are also used for building a mortared stone wall.

Tools and Materials Checklist

- Heavy hammer or stone hammer
- Pick and shovel
- Folding ruler or measuring tape
- String line
- Carpenter's level
- Stone

How to Determine How Much Stone You Need

1. Determine the length and the height of your wall in feet.

If the wall is no more than 3 feet high, you can use an irregular or pre-split stone to make your wall an average of 8 inches wide. Higher walls may need a thicker construction.

2. Determine the number of cubic feet of the wall by this formula:

Length of the wall x height of the wall x width of the wall = number of cubic feet of the wall

Insert your dimensions here:

_____ feet x _____ feet x _____ feet = _____ cubic feet

3. Select your wallstone.

Since wallstone varies in thickness and density, the number of cubic feet per ton varies. Based on your stone choice, a sales person at Lang Stone can use your wall dimensions and cubic feet to determine the amount of material you need. Stone will average 145-170 lbs. per cubic foot.

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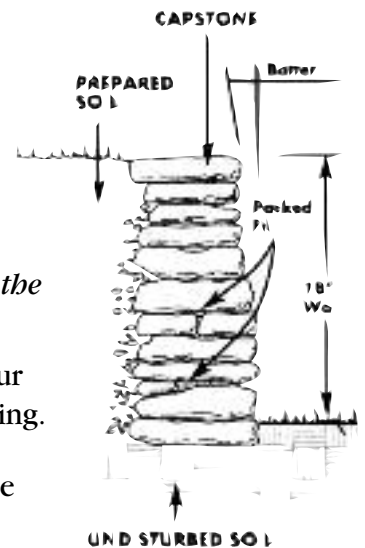
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How to Construct Your Wall

1. Begin by digging a trench where the base of the wall will go, about 6" deep and 15" to 18" wide. Make sure the topsoil and vegetation is completely removed, and you are down to the sub-soil.
2. Use your largest stones to cover the bottom of the trench. Use your backfill gravel, stone chips or clean dirt to stabilize and level the first course.

Note: When selecting your first course, it is a good idea to also set the broadest, flattest stone aside to use as capstones.

3. After you have finished the first course, fill the remaining space with your backfill gravel or clean dirt. He sure to firmly pack all voids to avoid settling.

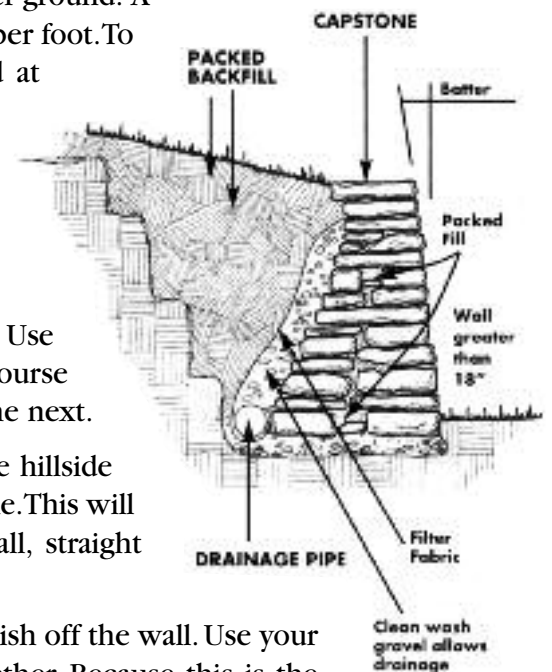


4. As you stack your wall, working from one end to the other, you need to do three things:

a) Slope the wall back toward the higher ground. A good rule of thumb is 1 to 2 inches per foot. To check this, place your level on end at the base and measure back to the face of the wall.

b) Stagger the vertical joints to ensure strength. Also, cut off small points to increase contact between stones.

c) Continue to firmly backfill the wall. Use chips to shim as needed. Each course should be stable before beginning the next.



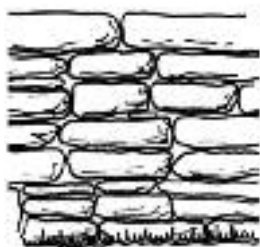
5. Occasionally, turn a long stone into the hillside or bed to act as an anchor or bond stone. This will improve the stability, especially on tall, straight walls.
6. Use the stones set aside in Step 2 to finish off the wall. Use your stone hammer to fit these tightly together. Because this is the most visible portion of the wall, spending a bit more time here will give the wall a very finished look.

Good Example



Staggered vertical joints mix of thicknesses breaks up horizontal joints.

Poor Example



Stacked joints weakens structure.

Cutting and Shaping Stone

Techniques will vary depending on the variety of stone used.

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