

EPISODE #3025 FOOLS WITH BIG TOOLS

Getting Started (see fig. A)

Visit a building centre like Merkley Supply Ltd. To learn about rock types and building techniques

The wall will be approx. 1'-2' feet high and 25 feet long

We chose jumper stones, which are machine guillotined to specified sizes

- Other kinds of stones like flag stones and drywall stones are beautiful, but are huge and require hand splitting with a hammer and chisel to change the size and shape. Splitting stone is a specialized skill, and requires a lot of force. You probably want to avoid this.

Building the Wall

Start at the highest elevation (see fig. B)

Hammer in a spike at a lower elevation 8 feet away

Use a straight board (i.e. A 2x4) with a level to mark the spike

- Drop the mark 1/2 an inch for every 4 feet of length for a sloped runoff. This side is 8 feet so we marked the spike level minus 1 inch

Measure and mark for the second spike (see fig. C)

- Find a pivot point (i.e. The corner of the porch) to find a 45 degree angle for the next spike
- One person will hold a measuring tape at the first spike
- The second person will measure to the pivot point and stay there
- The first person will then walk with the measuring tape the same distance out 45 degrees from the pivot point to drive in the second spike
- Tie the string to the second spike with a line level hanging from the string, then mark spike level then drop string line 1/2 inch for every four feet for the sloped runoff.
- Plant the remainder spikes in the same way

Finalize the layout of the wall and yard (see fig. D)

- Excavation for the wall will be approximately 24 inches wide
 - 8 inches in front of the string and 16 inches behind the string
- Spray paint a guide with surveyor florescent spray paint 16 inches behind the string
 - Keep the guide lines as straight as possible



A. Picking stones.



B. Starting at the highest elevation.



C. Measuring for a spike.



D. Using spray paint to mark the layout.

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Dig out the grass along the sprayed guide about 10 inches deep (see fig. E)

- Wear good gloves, this part of the project gives blisters!
- Heavy equipment like this small excavator can be very helpful for big digging jobs (see fig. F)
 - Excavators can be rented from rental facilities like united rentals
 - They are delivered to your door, and instructions for the operation of the equipment are given by the delivery person.
 - We used the Bobcat to dig out the grass along the sprayed guideline



E. Digging out the grass.

Once the yard is dugout and leveled

- Spread a 10 inch base of crushed stones over the yard (just in the area of the wall. This forms the foundation for the wall) in three or four inch increments
 - Rake the stones using a **LANDSCAPING RAKE** (tool of the day) (see fig. G)
- Pack the crushed stone very tightly, using a compactor (or packer) available from rental facilities like united rentals
- Set a drainage tube filled with clear stone so the pipe does not get crushed under the retaining wall for extra drainage



F. Big tools!

Laying stones (see fig. H)

- Choose the more irregular stones to sit at the bottom of the wall, as they will be largely hidden from sight.
- Set stones on a bed of concrete 3 inches thick and 12 inches wide
 - Mix cement by hand in a wheelbarrow with a shovel, or rent a cement mixer
- Trowel and level the cement
 - Do these steps in small sections so the cement doesn't dry before the stones are laid
- Set the stones in place (see fig. I)
 - Keep your grade and slope in check
 - Stagger seams for a more natural look
 - Hammer stones with a rubber mallet to secure them into the cement
 - The stones should slope slightly back against the grade, so that the wall will be leaning into the hill
- Mix mortar mix
 - Spread between the rocks with your finger and brush of excess with a mortar brush before it dries
- Add top layers. Remember save the best stones for last.



G. Using the landscaping rakes.



H. Laying the first stones.

Finishing touches

- Slope clear stone behind wall toward drain for the perforated pipe to rest on
- Layout the perforated drain pipe (a.k.a. Weeping tile) in landscaping cloth