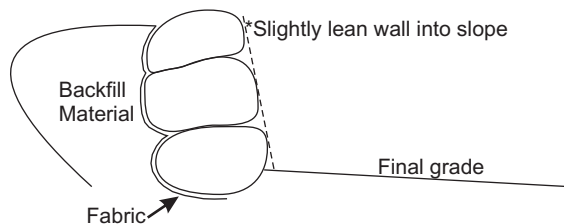


Building Rock Walls

Rock wall construction may be the most time consuming of projects, but may also be the most rewarding when completed.

Start your base row of rock slightly below your finished grade and slightly leaning into slope to stabilize your wall. Begin by placing the largest rocks as a foundation and build up.

To further stabilize your wall, place fabric behind the wall prior to backfilling. This will distribute the pressure evenly over your wall and prevent a weak spot from washing out.



Building your wall up at an even pace is very important. Try to achieve a flat surface to build on, as well as a smooth face. To do this you may have to turn a rock several times or totally discard it and try again in another area.

As each rock is set, backfill and compact your wall. Set aside smooth flat rocks to cap the top row for a clean appearance. To prevent movement of the top row, you can add a cement mixture prior to your top row and mortar in these rocks.

15 COLORADO LOCATIONS



AURORA 303-340-1440

BERTHOUD 970-532-4126

BOULDER 303-440-7625

BLACK FOREST 719-495-8858

BRIGHTON 303-288-6007

BROOMFIELD 303-465-4212

COLORADO SPRINGS 719-599-8100

FORT COLLINS 970-223-4505

GOLDEN 303-279-4748

GREELEY 970-353-7907

LITTLETON 303-791-3535

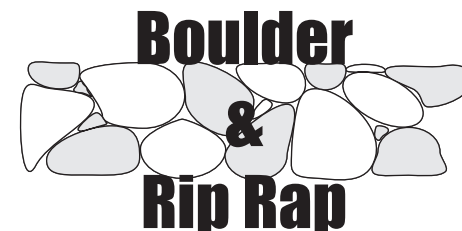
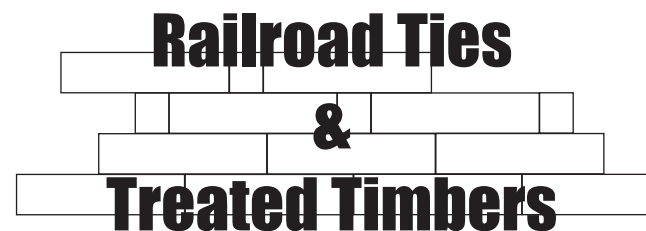
MONTROSE 970-323-6300

MONUMENT 719-487-9981

NORTHGLENN 303-252-1095

PARKER 303-841-3737

INSTALLING RETAINING WALLS



WWW.PIONEERSAND.COM

INSTALLING RETAINING WALLS

Railroad ties, pressure treated timbers or multiple colors of rock make great retaining walls. Each material has its own unique appearance from the rustic look of railroad ties to a clean professional look of pressure treated timbers or a unique colorful appearance of riprap or moss rock.

Railroad Ties / Pressure Treated Timbers

Materials Needed:

- Ties will range from 6" to 7" high and 8' to 9' long.
- Timbers will be 6" square and 8' long.

24" Rebar and 12" spikes will be used to anchor your ties or timbers.

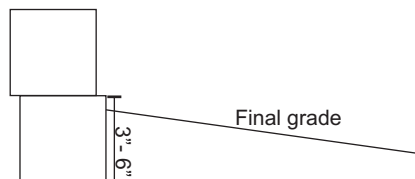
Need Help? Consult our Sales Staff.

Tools Needed:

- Level
- Sledge Hammer
- Saw
- Drill
- Miscellaneous Hand Tools

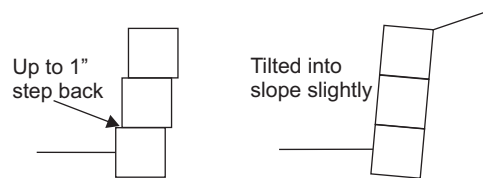
Building Your Wall*

The bottom row, or foundation, is the most time consuming, but sets the tone for the remaining rows. For any wall you must build on a compacted stable base. Excavate 3"- 4" below grade for walls up to 2 1/2' and 6" below grade for walls over 2 1/2' or 3'. This will strengthen your base and prevent it from pushing out.

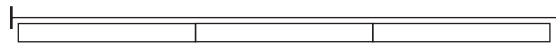


*check local building codes, Permits and design approval may be required.

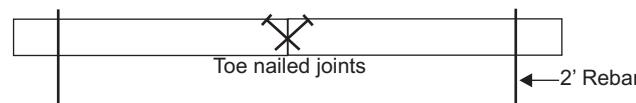
To further strengthen your wall you may step each tie back 1" on the face of your wall or, for a flush face, tilt ties back into the slope slightly. Never have ties tilting forward or away from the slope.



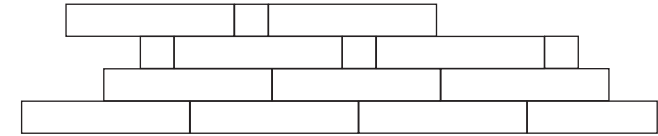
Start your construction by laying in the bottom row slightly below grade. Level ties in both directions. When you have completed placement it may be necessary to set up a string line to get your wall perfectly straight.



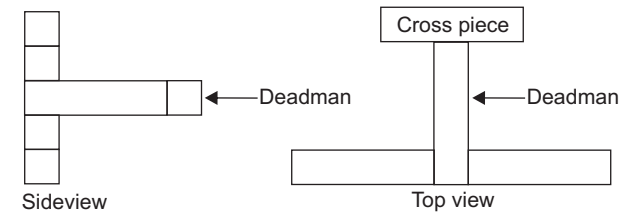
Now you are ready to anchor your bottom row. One 2' rebar approximately one foot from each end will be sufficient to stabilize your foundation. If you are using new timbers, drill a 3/8" hole through your timber and drive in rebar (Tip: when using ties, you may be able to use original spike holes to drive rebar through). To keep joints from twisting, you must toe nail the joints with 6" nails.



In constructing rows two and up, two items are very important. First, always stagger your ties over the joints to obtain maximum strength in any wall.



Second, "Deadmen" will need to be added beginning on the third row going back into the hill to hold the wall up.



For walls under 4' in height a 4' deadman should be sufficient. As walls increase in height, so should your deadmen in length.

For walls under 4', deadmen are recommended every other tie on every row. For walls higher with a lot of pressure behind them, it is recommended the deadmen be placed every tie and every row. Consult our sales staff for your particular project.*

After the bottom row has been anchored with rebar, rows 2 and up can be anchored with 12" spikes in the same manner.

Cutting Ties and Timbers

Ties and timbers can be cut with a chain saw or a 16" circular saw to get specific lengths or angles.