

Gradino™ Wall Installation

INSTALLATION:

1. Wall Design Considerations

Before using Gradino™ to build a wall, the following design considerations must be made (*Diagram A*):

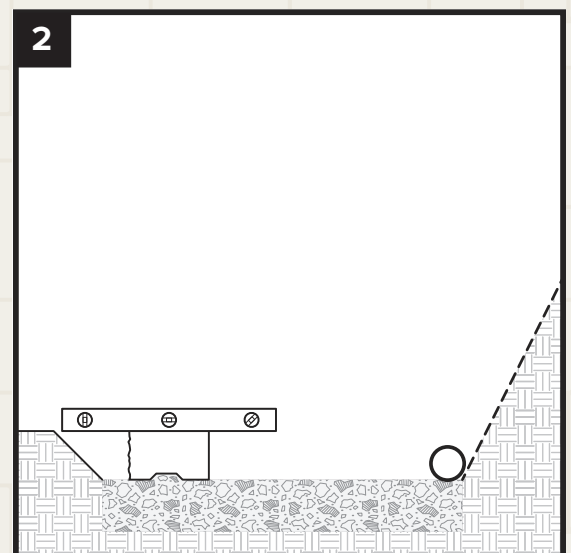
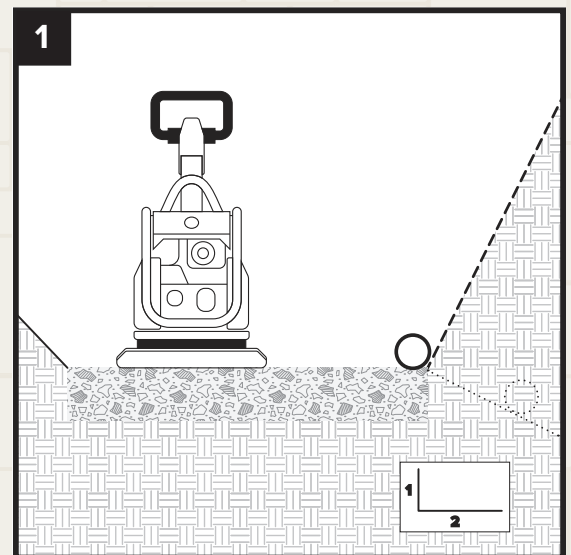
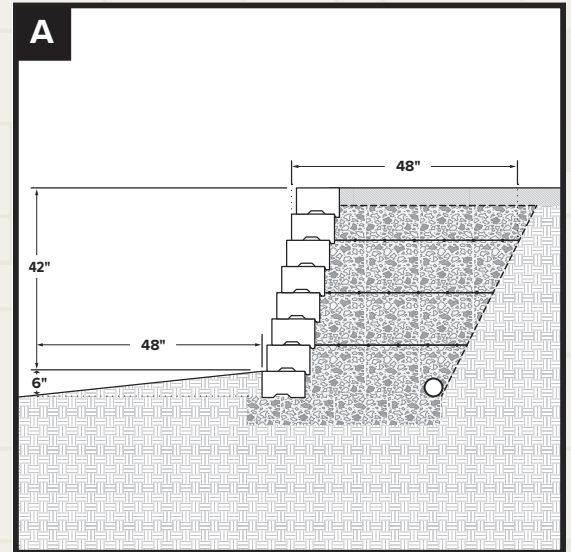
- For a typical landscape wall the total wall height must not exceed 48" (1.2 m).
- The embedment height needs to be a minimum of 6" (152mm) below the ground surface.
- If a toe slope is present, the bottom of the wall should not be above the finished grade at a distance of 48" (1.2 m) in front of the wall.
- The length of the reinforcing geogrid needs to be a minimum of 48". Geogrid length is measured from the face of the wall.

2. Excavation and Preparing the Base

Check the location of existing structures and utilities before starting the excavation. Call 811 to schedule a locate to prevent hitting any utilities. Excavate the soil in the location where the retaining wall is to be constructed, assuring at least 48" of space on the rear side of the wall for gravel backfill¹. Dig a trench for the leveling base that is at least 24" wide by 12" deep. Fill the trench with select granular fill¹ to a depth of 6" (150mm) and compact well with a plate compactor or jumping jack in 2" lifts, making sure that each layer is level. The plate compactor must weigh at least 250lbs. (*Diagram 1*) Install a minimum of a 4" perforated drain pipe in the rear of the excavation. Make sure that the drain pipe is sloped at a minimum 0.5% and empty to daylight at 50' maximum intervals, draining into a storm sewer or along a slope below the reinforced soil mass. Widen the excavation as required to maintain drain slope (*See diagram 1*).

3. Positioning the Bottom Course

Set the bottom course of block, breaking the lip off of the Gradino™ block, at the desired position on top of the prepared select granular fill¹ leveling base. Using a large rubber mallet and a level, adjust the block until it is level, end to end, front to back, and in full contact with the leveling base (*Diagram 2*). Set the adjacent blocks in the same manner, using a string line or a level to keep long runs straight and flat; ensuring



¹ Select granular fill must meet the ODOT 3/4"-0 or 5/8"-0 WSDOT specification. More details available upon request.

that there is no space between adjacent blocks.

4. Backfilling and Geogrid

Place a layer of non-woven geotextile filter (TerraTex® N06 or equivalent) against the rear wall of the excavation, starting at the top of the leveling base and extending up to the top of the excavation. Do not install the geotextile filter below the structural foundation. Make sure that there is enough filter fabric to lay over the top of the backfill to keep topsoil from filtering down. Backfill with select granular fill¹ in maximum lifts of 4". Compact thoroughly using lightweight compaction equipment that will not disrupt the stability or batter of the wall. Before setting the third course, cover the second course of blocks and the backfill gravel with geogrid (StrataGrid® SG 350 or equivalent). Pay attention to the geogrid's reinforcement direction and make sure that it is perpendicular to the wall face. The minimum reinforcing length of the geogrid is 48" (Diagram A) and must be continuous. Splicing of the geogrid in the main reinforcement direction is not permitted. Follow geogrid manufacturer's guidelines for overlap requirements.

5. Subsequent Courses

Lay the next course of blocks, making sure to wrap the geogrid slightly around the lip of the block. A running bond pattern is the preferred method of block placement. The center of the current course should align with the seam between two blocks on the lower course. For optimum strength, maintain light tension on the geogrid by using stakes or pins. Place all the remaining courses backfilling the wall every 4-6" (one block height), and placing a reinforcing geogrid as outlined in Step 4 (Diagram 4).

Finishing the Wall

Set the top course and backfill to within 3" of the top. Fold the filter fabric (GF) over the top of the backfill. Finish backfill area with topsoil to the finished grade (Diagram 5). Gradino™ requires no cap, but can be capped with Versa-Cap™ if so desired. The cap can be held in place with an approved flexible adhesive (Flex-Bond SB20 or equivalent).

