EVERGREEN®

EVERGREEN WALLS, INC.

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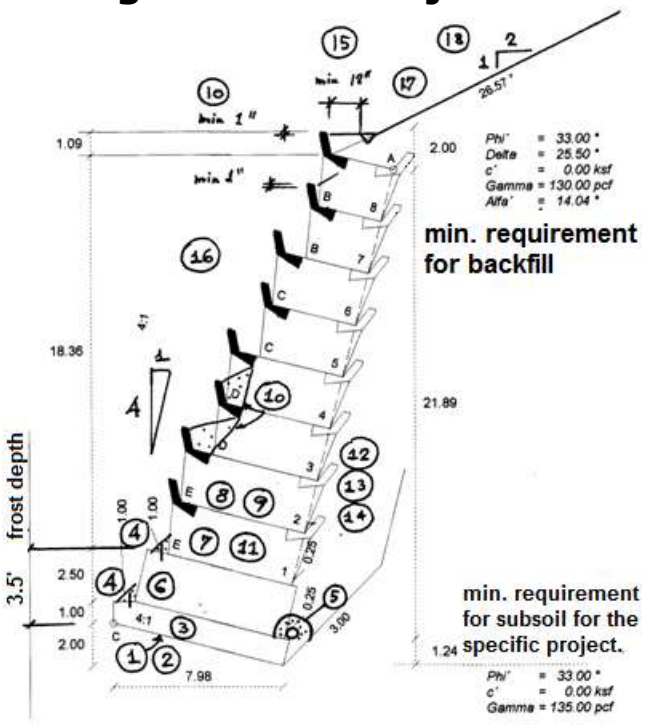
Typical Section Evergreen Wall Project



NOTES

1. Foundation excavation must reach well bearing soil. Excavate deeper as needed and as approved by the engineer as noted in the specs.

2. Any soft, wet, or organic, or otherwise unsuited material encountered in the footing area shall be removed and replaced with a minimum of 2 ft., 0.6m of clean gravel placed and compacted in 12 in., 0.3m lifts.
   Minimum requirement material beneath foundation depends on project design as shown in the typical drawing (friction angle phi = 33°, cohesion c' = 0, gamma moist = 135 pcf). The sub grade level of the wall and embankment shall be proof rolled prior to backfill of wall locations.
   Unstable areas discovered during proof rolling shall be compacted to suitable state or undercut and replaced with compacted granular fill as directed by the Engineer.

3. Provide concrete foundation min. 3000 psi, BN 21 or 210kg/cm2 standard compressive strength and grade 60, 422 kPa rebars.
   Place reinforcing bars as specified and cast concrete directly against excavation with finished top to ensure proper grade and elevation. Tolerance is zero plus, to minus 1 in., -25mm.

4. Add one stirrup with two #5, 16mm bars in front of each pier and in pier in front of each leg, covered with concrete after erection of unit to increase safety of lowest units against sliding.

5. Use continuous foundation drain min. 4 in., 100mm pipe PVC, schedule 80 or approved equal with longitudinal grade min. 0.5% and add min. of 12 in., 0.30m of free draining material covered by a geotextile.

6. Start erection of each wall at lowest foundation elevation and with units directly adjacent to any cast in place structure for adjustment.

7. Lowest Evergreen units shall be adjusted with small wooden wedges using engineer's level and a wooden triangle to set front level and legs at slant for proper wall batter 4:1 within 1/8 in., 3mm tolerance.
   Plastic or metal or plastic shims or any other (slippery) material are not allowed to avoid cracking of spalling in concrete bearing areas. Place first unit on dry pack fast set mortar.
   If foundation level was built within tolerance of plus zero, minus ¼ inch, then use wooden wedges and thin mortar beds.

8. Upper units shall be placed on thin mortar beds on the full contact surface.
   Use wooden wedges as needed for adjustments.
   Upper units, less than 10 ft., 3m from the top do not need mortar beds for erection.

9. Use geotextile pieces to bridge the joints and gaps to prevent erosion.
   Consult the erection instructions for further details.

10. Fill front pockets of L-shaped trays with min. of 10 in., 0.25m plantable top soil, min. 1 in., 25mm of tray rim freeboard; fill and grade topsoil as wall goes up; seed for erosion protection.

11. Fill material inside of precast units: use specified material with friction angle of compacted material min. phi = 32° for not exceeding limits for silo pressures inside of units.
   Compact to min. moist density of 118 pcf, 18 kN/m3 at max. $\pm$ 2% off optimum water content. No longer use Proctor density or relative density as a guideline, since this is inside a cell and not a roadbase, thus realative desity is not applicable.
   Do not over compact to avoid over stress on units. It is utmost important to reach the required fill density of 118 pcf, 18 kN/m3 measured near the center of units or on mountain side. Fill material shall have max 10 to 15% fines passing sieve #200; Fill and compact each unit in lifts not exceeding 15 inches.

12. The Evergreen wall and the backfill shall be built up simultaneously.
   The elevation of the fill behind the wall shall be not less than 30 in. at any time.
   Always fill first, then backfill, to prevent elements from sliding.

13. Backfill behind wall: remove debris and topsoil before backfilling. Add finger drains of min. 1 x 1 ft. or geotextile or drainage sheet behind wall to intercept mountain side seepage water.
   Add more drains at wet spots.

14. General Backfill requirements: Do not use heavy equipment within 3 ft. of back of wall.
   Further away compact with heavy equipment to min. 95%, max. 98% relative density.
   Soil properties of backfill must conform to minimum requirements of design.

15. Add safety berm at top of wall min. 12 in. wide; do not exceed slope angle at top of wall; seed and place hay mulch for erosion control as soon as possible.

16. Use Joint Units at joints with two unequal Evergreen units and place End Shelves, i.e. SB, SC, and SD, on exposed ends of Evergreen units.

17. Intercept surface water runoff with a ditch or drainage channel with a grade of min. 0.5% away from wall.

18. The contractor shall consult and follow the 'Erection Instructions for Evergreen Walls' and Specifications as provided by the manufacturer.

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