

General

This plan is for structural/geotechnical design only. All layout shall be per the approved site plan by Bax Engineering. The contractor shall protect all existing utilities, and shall be responsible for all worker and public safety at the retaining wall site. All installation shall be per the retaining wall manufacturer's construction recommendations and/or as noted herein.

Materials

The **Leveling Pad** shall be constructed 1" minus crushed limestone compacted to 95% standard or 90% modified and shall have minimum dimensions of 6" thick and 24" wide.

Retaining Wall Units shall be Rockwood Classic. Units must be 12" deep. Concrete wall units shall meet the requirements of ASTM C90-90 and compressive strength shall be a minimum of 3000 psi. The maximum water adsorption shall be limited to 8.0 percent. The concrete shall have adequate freeze thaw resistance in accordance with ASTM 666-90.

The **reinforced wall backfill** material shall be 1"-2" clean crushed limestone.

Geogrid shall be Carthage Mills GX as indicated on the plan, or approved equivalent.

Filter Fabric shall be Carthage Mills FX35HS or approved equivalent.

Drain Tile shall be 4" HDPE perforated, wrapped in fabric & extended to daylight.

The **Soil Cap** shall consist of compacted low plastic impervious soil above the granular backfill in areas not to be paved.

A **Geotechnical Engineer** shall approve the subgrade prior to wall construction. They shall also monitor compaction of the wall leveling pad, reinforcing zone material & subgrade remediation, if necessary. Copies of these reports shall be submitted to the City of O'Fallon Construction Division in a timely manor.

Wall Foundation Excavation

Foundation soil shall be excavated as required for the leveling pads and the reinforcing zone. We recommend the exposed soils be observed by a qualified geotechnical engineer to confirm the materials are consistent with the design assumptions. Any soils that are soft, plastic (LL > 50%), frozen, or wet and untested fills shall be removed and recompacted to 95% modified Proctor under the direction of the geotechnical engineer.

Wall Construction

Install toe first course of units on the leveling pad. Install the next course in a running bond stack. Adjust for setback per course. Backfill, install reinforcement as shown and continue construction. Filter fabric shall separate the granular backfill & the soil cap from the block. Filter fabric shall not cover the foundation materials.

Geogrid Reinforcing

The geogrids shall be cut to the design lengths "L" and placed between the blocks at the elevations shown on the plans. Wall heights between the design section heights shall be reinforced in accordance with the next higher design section. The geogrid's primary strength direction shall be perpendicular to the wall face (into the fill). The geogrid shall be placed horizontally and laid flat on the reinforcing fill material. The geogrid shall be placed so that a minimum of 10" of grid is between the block layers. Slack in the geogrid shall be removed prior to placing backfill.

Wall Backfill

Backfill material shall be placed in maximum 24" lifts and settled by at least 2 passes of a vibratory place compactor. Backfill shall be placed, spread and compacted in such a manner that minimizes wrinkles and movement of the geogrid. During backfill placement only hand operated equipment shall be used in the 4' zone directly behind the wall. The front of the wall shall be backfilled and compacted to finished grade.

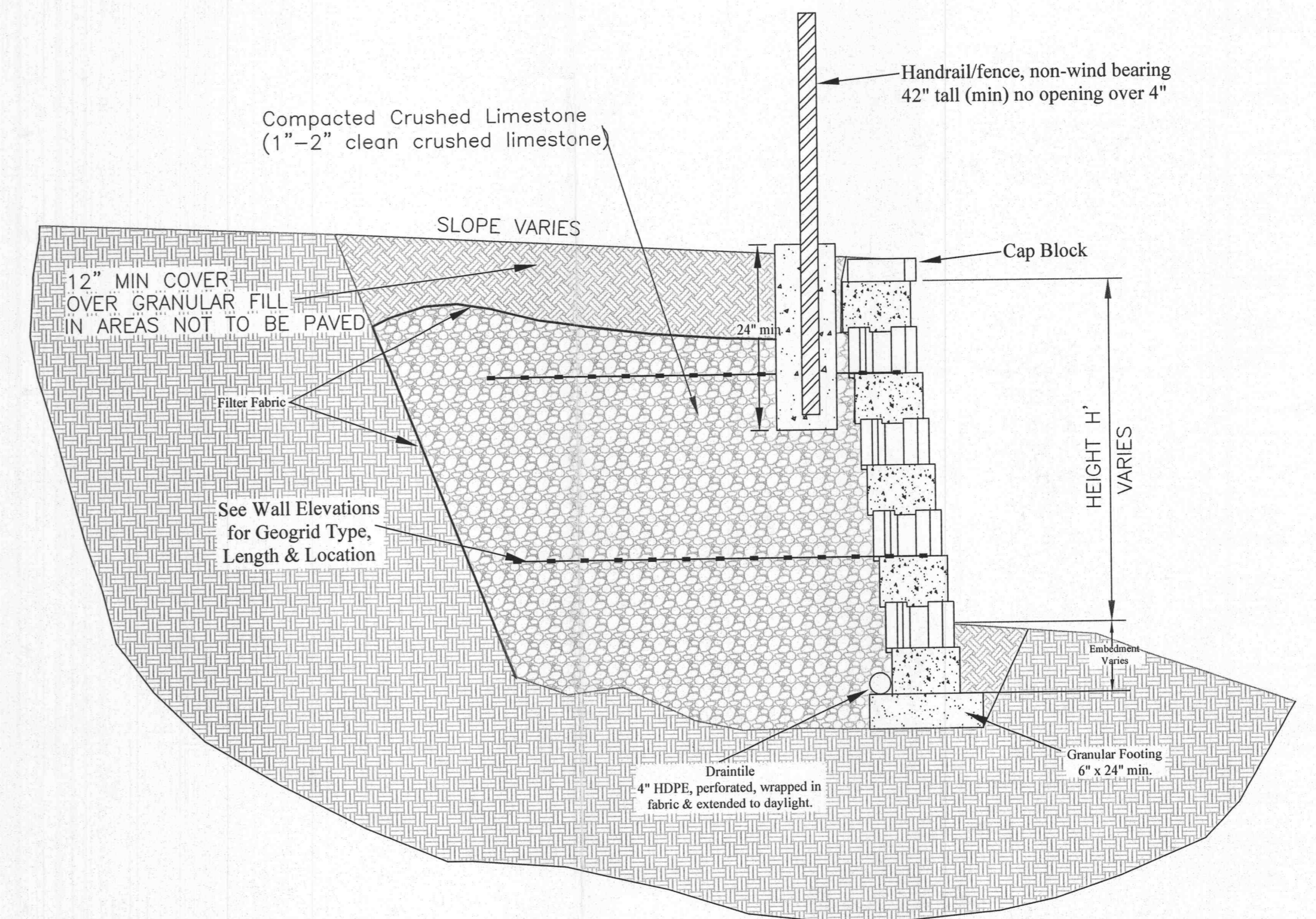
Protection of Work

The surfaces surrounding the wall shall be graded at the end of each day to provide positive drainage away from the wall. Grading shall include proper contouring of fills in adjacent areas to prevent the flow of excessive surface water toward the wall. Finish grading should be completed in accordance with the approved site development plan.

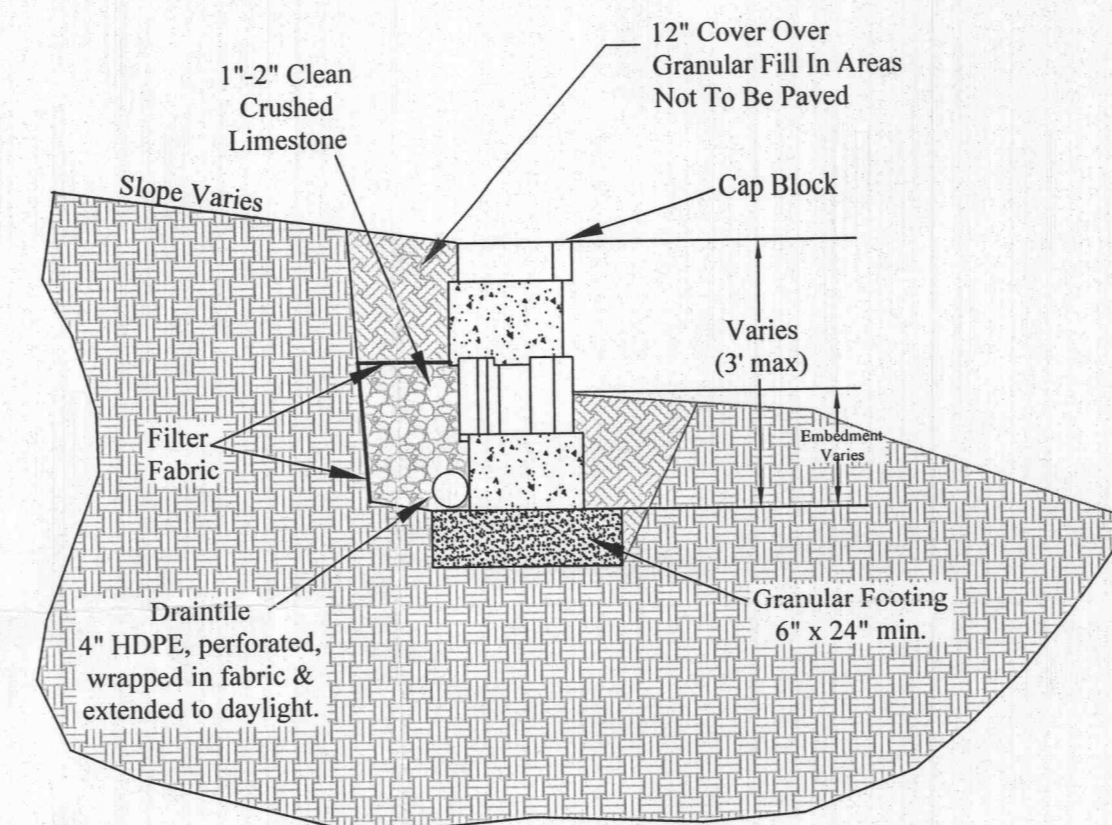
The stability of temporary excavation during wall construction is beyond the scope of this design and are the responsibility of the contractor.

Miscellaneous

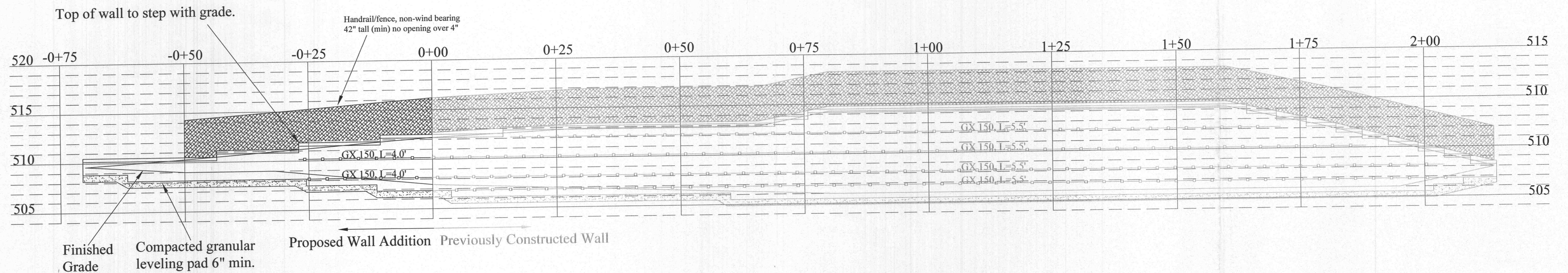
If a fence or guardrail is installed along the top of the wall under a separate plan. We recommend that PVC or sonotube sleeves be placed as the wall is being backfilled to prevent a need to excavate post holes after wall construction which could damage the geogrid.



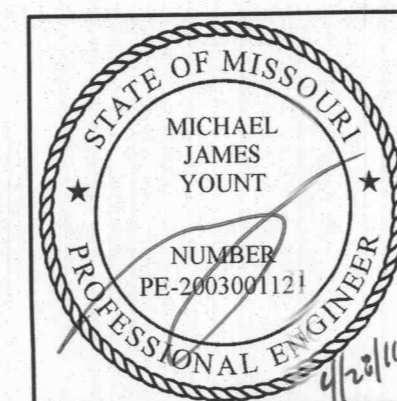
Reinforced Block Wall
(N.T.S.)



Gravity Block Wall
(N.T.S.)



Scale
1" = 5' Vert.
1" = 10' Horiz



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Date:	
Revisions	
Sheet: RW 1 of 1	

Retaining Wall Plan
Homefield Villas Lot 110D
O'Fallon, Mo.