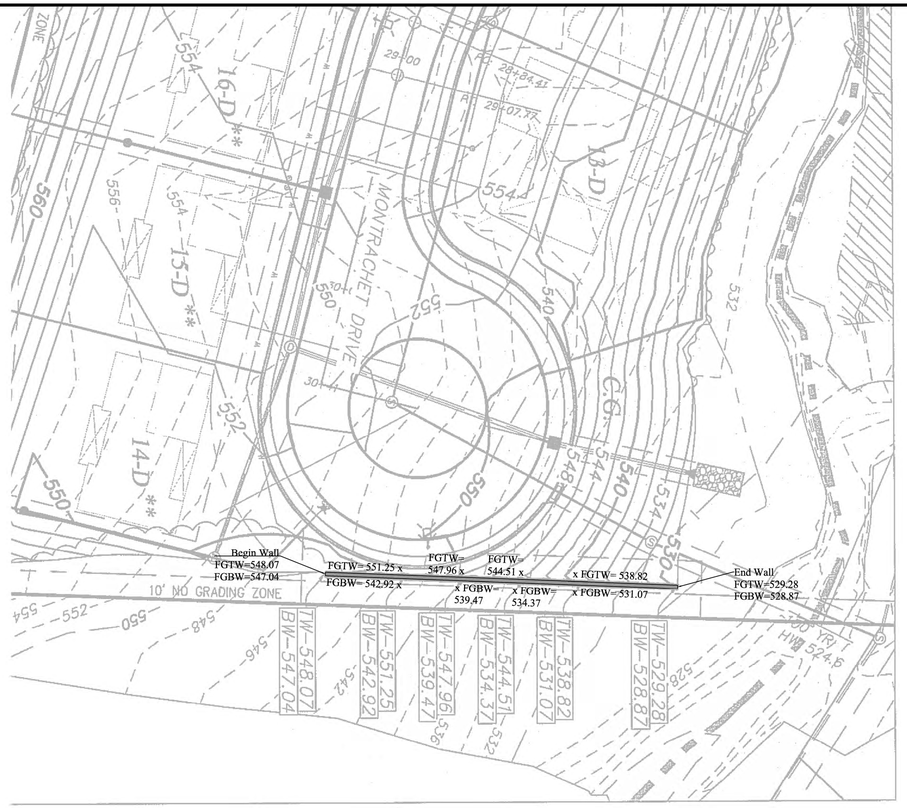
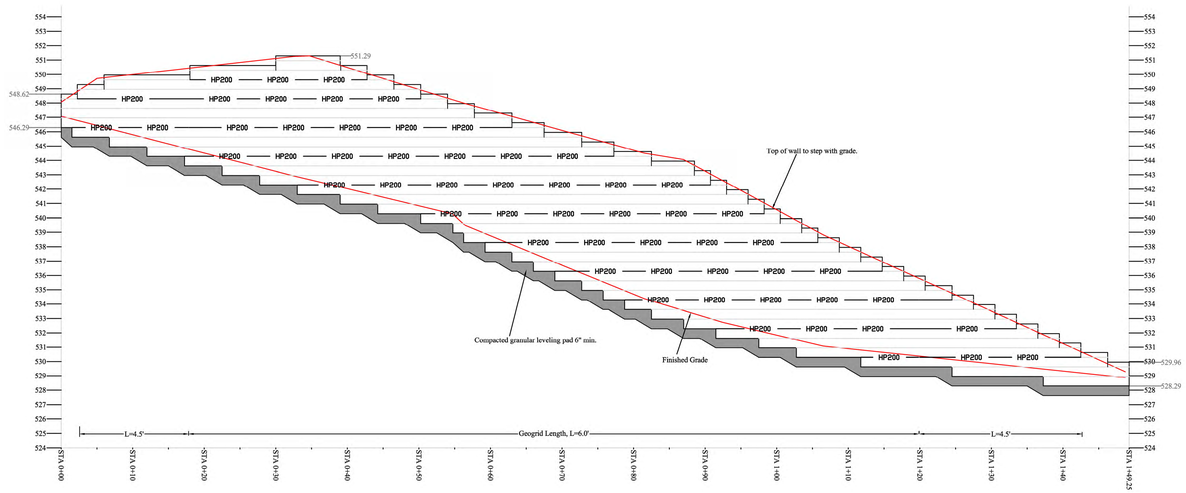



SITE PLAN
SCALE: 1"=30'-0"




WALL PROFILE
SCALE: 1"=5' vert.
1"=10' horiz.

**General**
The contractor shall protect all existing utilities, and shall be responsible for all worker and public safety at the retaining wall site. All proposed utilities and/or utility relocations shall be underground. 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 a minimum of 95% Standard Proctor.

**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 compacted 1" minus or screenings crushed limestone compacted to 95% Standard Proctor.
**This is a requirement of the City of O'Fallon.**
**It is this engineers opinion that the use of compacted minus in this small of a reinforcing zone is a mistake.**
**Any future issues with consolidation and/or lack of drainage through the reinforcing zone should be directed to Mr. Bob Copeland with the City of O'Fallon.**

The **drainage layer & block corefill** material shall be 1"- 2" clean crushed limestone.

**Geogrid** shall be Geostar HP200 as indicated on the plan.

**Filter Fabric** shall be Mirafi 140N.

**Drain Tile** shall be 4" HDPE, perforated, extended to daylight at the low point of the wall.

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

**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 consistant with the design assumptions. Any soils that are soft, plastic (LL > 50%), frozen, or wet and untested fills shall be removed and recompacted to 90% 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 from the retained soil and the soil cap. 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. 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 8" lifts and compacted. 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.
Upon completion of the retaining walls, the ground shall be finished graded to direct storm water away from and around the retaining wall. The ends of the wall shall be protected from scour. Storm water shall not be allowed to flow over the retaining walls. No slopes shall exceed 3 (horizontal): 1 (vertical)

**Miscellaneous**
If a fence or guardrail is be installed along the top of the wall under a seperate 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. These sleeves shall be coordinated with the fence contractor Geogrid may be cut for sleeve installation.

**General Notes**
Existing utilities are not shown. The contractor shall locate and protect all utilities. The contractor shall notify Engineering Solutions, P.C. of any utility conflict affecting this work.

**The Owner or Owner's Representative is responsible for ensuring that construction by others adjacent to the wall does not disturb the wall or place temporary construction loads on the wall that exceed design loads, including loads such as water pressure, temporary grades, or equipment loading. Heavy paving or grading equipment shall be kept a minimum of 3 feet behind the back of the wall face. Equipment with wheel loads in excess of 150 psf live load shall not be operated within 10 feet of the face of the retaining wall during construction adjacent to the wall. Care should be taken by the Owner or Owner's Representative to ensure water runoff is directed away from the wall structure until final grading and surface drainage collection systems are completed.**

Unless otherwise noted all temporary shoring is strictly the responsibility of the contractor under a separate design.

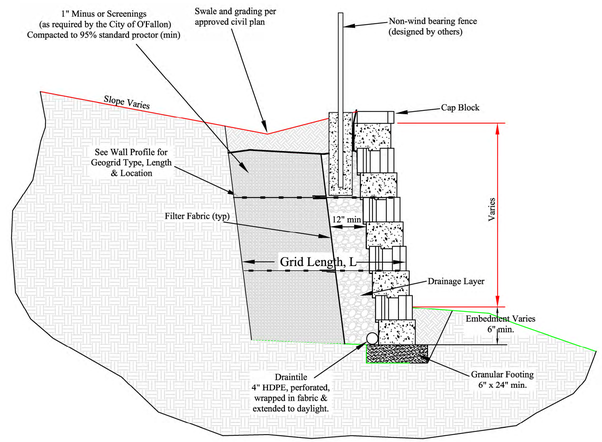
All job site worker and public safety is strictly the responsibility of the contractor. The contractor shall comply with all OSHA regulations & requirements.

Engineering Solutions, P.C. is available upon request to confirm construction compliance with this plan. Please notify Engineering Solutions, P.C. in advance of the work if field inspection is requested.

The City of O'Fallon Construction Division shall be notified at 636-379-5596 at least 48 hours before construction begins and 24 hours in advance of any required inspections.

A geotechnical engineer shall verify the compaction requirements of the leveling pad & the bearing capacity of the subgrade prior to and during the construction of the retaining walls. The City of O'Fallon Construction Inspection Division must be onsite when the tests are being performed.

A geotechnical engineer shall verify the compaction requirements of the material in the reinforcing zone and stability & bearing loads during the construction of these retaining walls.




REINFORCED BLOCK WALL
SCALE: NTS

Engineering Solutions, P.C.
5393 Old Baumgartner Rd
St Louis, Mo. 63129
Phone (314) 280-7748
Mo. State Certificate of Authority #P00565746

Retaining Wall Solutions, inc.
phone (314) 842-8200 fax (314) 842-8201
www.retainingwallsolutions.net

# Retaining Wall Plan

# The Villas at Montrachet

Date: 1/13/16

Revisions

| # | Description | Date |
|---|---|---|
| 1. | Swale added & slope corrected | 1/25/16 |

STATE OF MISSOURI
MICHAEL JAMES YOUNT
NUMBER PE-2003001121
PROFESSIONAL ENGINEER
1/25/16

Michael James Yount - Engineer
Mo# PE-2003001121

Sheet:
RW 1 of 1