GRAVITY STONE RETAINING WALL

NO SCALE

DESIGN, SPECIFICATIONS, AND GENERAL NOTES

Geotechnical Information:
This retaining wall design is based on geotechnical information taken from: **USDA Soil Survey - Rockwall County.**
The decision whether to obtain a site specific geotechnical report and the choice of retaining wall design is made by the builder and its client, based upon economic considerations balanced against acceptable risk, soil type, retaining wall geometry, structural loadings, etc. It should be noted that the risk of soil settlement and/or heaving is associated with all types of retaining walls and there is no such thing as a zero risk retaining wall design. A global stability analysis of the overall slope has not been performed during this design. It is recommended that the global stability of the slope be confirmed by a geotechnical engineer.

Design is in compliance with IBC section 1610

Material Strengths and Properties:
Backfill Equivalent Fluid Pressure: 45 lbs/ft³
Bearing Pressure: Q_{allow} = 1500 lbs/ft²
Mortar: Type S (f 'c = 1800 psi)

Existing Utilities:
Locating all existing utilities was outside the scope of our firm's services for this project. The contractor should call 1-800-dig-tess before construction commences to verify the location of existing utilities. Contact this Engineer if the location(s) of any existing utilities will coincide and / or conflict with any excavations and / or specifications by this engineer.

Site Conditions:
This retaining wall plan is based on site conditions as reported by the client and from any field inspections that have been made by this engineering firm. **If any structures or excavations occur within 1-1/2 times the height of the retaining wall, notify this Engineer for recommendations.**

Temporary Slopes:
Temporary slope by contractor or developer, as required for safety. Temporary slopes in fill or native soil shall be constructed per civil Engineer's specifications.

Drain:
On retaining walls 3 ft. high or less, the 4" diameter N 12 ADS perforated pipe may be omitted, but the porous drain area must still be wrapped with Mirafi 140 N geosynthetic (or equal) and the 2" (or 4") thru face drain pipe provided.

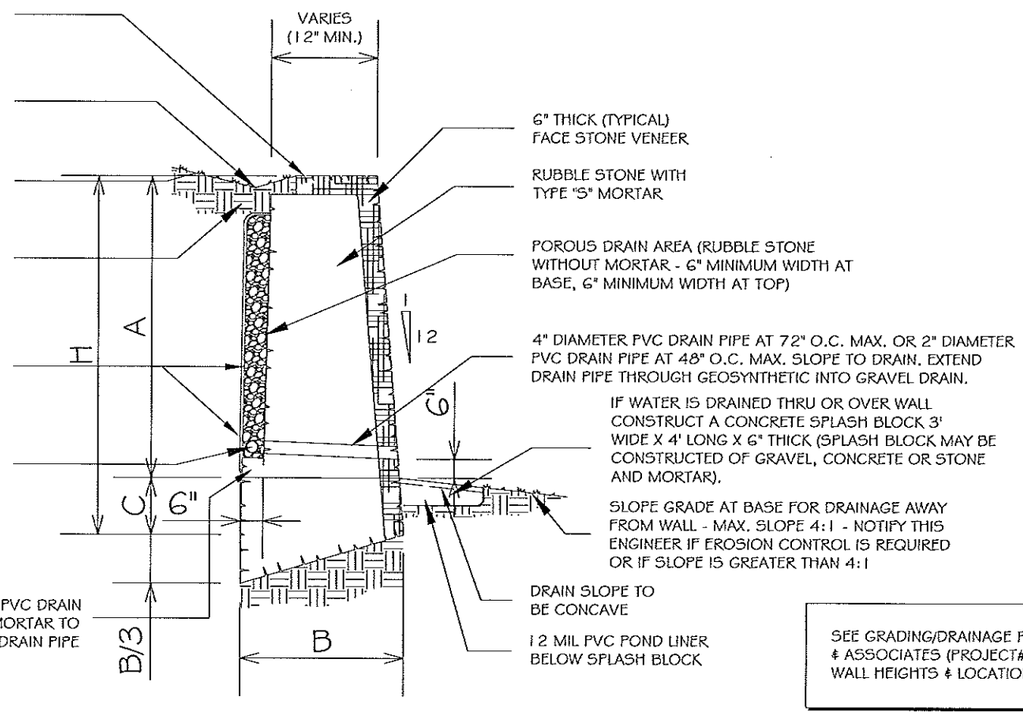
Fill:
All fill behind geosynthetic filter drain to be native soil free of organics and deleterious materials, compacted in lifts not exceeding 12 inches to minimum 90% standard proctor at (+/-) 3% of optimum moisture content. Compaction tests by others. No rock greater than 6" maximum dimension. disperse smaller rock to avoid nesting

Control Joints:
Construction / temperature joints are recommended at 25' o.c. (max.)

Maintenance and Management Letter:
Accompanying Gravity Stone Retaining Wall Maintenance and Management letter is part of these plans and specifications. Contact our office if a copy of this letter is required.

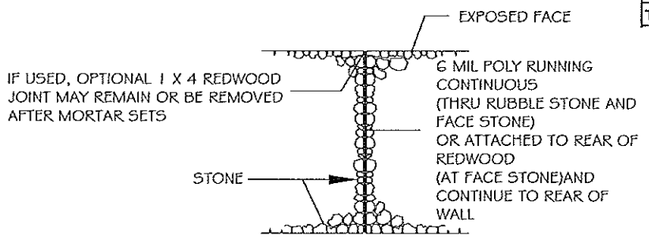
Inspection Requirements and Recommendations:
These inspections will be performed by or under the direction of the design Engineer.

1. Pre-construction site inspection to determine if any exceptional conditions exist that could affect the retaining wall design.
2. Inspection to review the sub-base, dimensions (base width and embedment depth), geosynthetic placement, ADS drain pipe and through face drainage.
3. Inspection to review the geosynthetic filter drain (including porous drain area).
4. Inspection to review final grades to establish proper drainage.
5. All walls with heights equal to or greater than 4 feet must have an inspection performed under the supervision of this engineer and must meet current code and city requirements.



SEE GRADING/DRAINAGE PLANS BY DOUPHRATE & ASSOCIATES (PROJECT# 9919-4RTWL) FOR WALL HEIGHTS & LOCATIONS.

ENGINEER INSPECTION OF WALL MAY BE REQUIRED BY LOCAL MUNICIPALITY, NOTIFY AND SCHEDULE INSPECTION WITH ENGINEER PRIOR TO COMMENCING CONSTRUCTION.



CONTROL / EXPANSION JOINT
NO SCALE

WALL DIMENSIONS TABLE AT LOTS

HEIGHT ABOVE GRADE	A	1'-0"	2'-0"	3'-0"	4'-0"	5'-0"	6'-0"	7'-0"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"	13'-0"	14'-0"	15'-0"
WIDTH OF BASE	B	1'-6"	1'-6"	2'-0"	2'-0"	2'-6"	2'-9"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	6'-9"
DEPTH BELOW GRADE*	C	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-6"	1'-6"	1'-6"	2'-0"	2'-0"
DEPTH SLOPED TOE*	B/3	6"	6"	0'-8"	0'-8"	1'-0"	1'-0"	1'-4"	1'-6"	1'-8"	1'-8"	2'-3"	2'-4"	2'-4"	2'-6"	2'-6"
TOTAL HEIGHT OF WALL**	H	2'-6"	3'-6"	4'-8"	5'-8"	7'-0"	8'-0"	9'-4"	10'-6"	11'-8"	12'-8"	14'-9"	15'-10"	16'-10"	18'-6"	19'-6"

* MINIMUM DEPTH, UNLESS ROCK IS ENCOUNTERED, UPON ENCOUNTERING ROCK - NOTIFY THIS ENGINEER

** TOTAL HEIGHT OF WALL INCLUDING HEIGHT ABOVE GRADE AND DEPTH BELOW GRADE.

WALL DIMENSIONS TABLE AT DETENTION BASIN

HEIGHT ABOVE GRADE	A	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"	13'-0"	14'-0"
WIDTH OF BASE	B	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"
DEPTH BELOW GRADE*	C	2'-0"	2'-0"	2'-0"	2'-6"	2'-6"	2'-6"	3'-0"
DEPTH SLOPED TOE*	B/3	1'-6"	1'-8"	1'-8"	2'-3"	2'-4"	2'-4"	2'-6"
TOTAL HEIGHT OF WALL**	H	11'-6"	12'-8"	13'-8"	15'-9"	16'-10"	17'-10"	19'-6"

* MINIMUM DEPTH, UNLESS ROCK IS ENCOUNTERED, UPON ENCOUNTERING ROCK - NOTIFY THIS ENGINEER

** TOTAL HEIGHT OF WALL INCLUDING HEIGHT ABOVE GRADE AND DEPTH BELOW GRADE.

RETAINING WALL
NTS

DRAWN BY:	JCR
CHECKED:	DAL
DATE:	07-06-15
SCALE:	AS NOTED
	STRUCTURAL

STATE OF TEXAS
DAVID A. LEWIS
47040
LICENSED
PROFESSIONAL ENGINEER

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY DAVID A. LEWIS, P.E. 47040 ON 09-18-15.

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NORTH LAKESHORE DRIVE

2015-0244

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