



1. Design Building Code

International Building Code, 2012 Edition

2. Geotechnical Report

Firm: Alpha Testing, Inc.

Report No. G140555 Dated: January 27, 2015

Allowable Bearing Capacity 2500 psf

All of the above noted bearing capacities are anticipated throughout the site. Each wall section has a design for multiple bearing capacity options. It will be field verified which bearing condition to use based on the conditions of the soil at the base of the wall during excavation. If the bearing capacity changes along the length of the retaining wall it is permitted to change bearing capacity designs as needed.

3. Geotechnical Criteria

Bearing on Stiff Natural Undisturbed Clayey Soils or Compacted and Tested Soils

Allowable Bearing = 2500 psf, min.

Friction Angle between Base of Wall and Soil - 19 deg

Backfill Soil Parameters:
Backfill Soil - Natural Clays or Fill Soils
Backfill Angle of Internal Friction PHI = 28 deg

Base Soil Parameters:
Soil at Toe - Natural, Undisturbed or Fill So

Soil at Toe - Natural, Undisturbed or Fill Soils Angle of Internal Friction PHI = 28 deg

Backfill soils may be onsite clayey soils and shall be compacted to a minimum of between 92 to 98 percent of maximum dry density, as determined by ASTM D698, "Standard Proctor" at minimum + 3 percentage points of optimum. However, in cases where the backfill soils will be used for support of buildings, roadways, or other structures the requirements of the geotechnical report control.

Locate base of walls on undisturbed or properly compacted soil.

Walls have been designed for a minimum factor of safety against sliding and overturning of 2.0. Walls have been analyzed for global stability considerations and has a minimum longterm factor of safety of 1.5.

4. Materials:

MORTAR

All mortar used for stone veneer application shall be Portland Cement Lime mortar Type "N" Conforming to ASTM C 270. Retempering of the mortar for the veneer is allowed.

CONCRETE

All concrete shall have a minimum compressive strength of fc = 4000 psi (Min. 6.5 Sack Mix) at 28 days.

The use of workability admixtures and air entrainment in the concrete mix designs is permitted and encouraged.

The use of calcium chloride admixtures in the concrete is not permitted.

Adding water to the concrete at the site is not permitted.

Hard rock aggregate of 1" to 2" shall be used in concrete.

Provide the concrete mix designs for the retaining walls to Falkofske Engineering, Inc. for review prior to construction. Also provide recent (within the last 6 months) compressive test results of the mix designs for review by Falkofske Engineering, Inc.

Provide concrete test cylinders for every 50 yards of concrete placed, or for any concrete placed on any given day. Make 5 test cylinders, test one at 7 days, one at 14 days, two at 28 days, and hold the 5th cylinder in reserve for 56 days if necessary. Provide all concrete compressive test results to Falkofske Engineering, Inc. for final review.

Provide chair support for all rebar 4'-0" max spacing.

CONCRETE REINFORCEMENT:

All concrete steel reinforcement shall be new billet steel conforming to ASTM A-615, Grade 60 with fy = 60 ksi. All reinforcement shall be free of rust and deleterious materials.

DRAINAGE MATERIAL:

Free draining gravel for drainage zone shall be no. 57 stone or approved equal.

Filter fabric shall be Mirafi 140N or approved equal.

5. Construction Reviews

Falkofske Engineering, Inc. shall be called for construction review of retaining walls.

The contractor shall coordinate with the City Building Department to determine the required and appropriate inspections for the City.

6. Retaining Wall Design Constraints

Retaining walls should not have solid fence placed on top of wall other than that shown on these plans.

Retaining walls shall not have additional surcharge placed above wall other than that shown on these plans.

Retaining walls shall not have slope at base or top of wall that exceed that which is shown on these plans.

The retaining walls noted above require special design.

Minor variations in the construction of the retaining walls from these documents may be accepted at the discretion of the design engineer.

AARON M. BERKES 107 16

SNB, LL 7, SUITE

DEVEI ALLAS

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JOB NO. 135.15

RW1

3 RW1 WALL 1 - ELEVATION

SCALE 1" = 5'-0"