

Design Standards
Hopper Ridge Townhomes
Retaining Walls Replacement

- 1) Columb Earth Pressure Methodology as per NCMA Design Manual for Segmental Retaining Walls.
- 2) Wall to utilize Pecan Blended Keystone Compac III Straight Face Block with a 1" setback per course (8 degrees) with the exception of the base course. Base course to be Standard III Straight Block.
- 3) Minimum embedment to be H/7.
- 4) Where base of wall is within the detention ponds, the base of the wall to be upon a 4' wide leveling pad of 3/4" clean #57 crushed stone wrapped in Geogrid set upon firm bearing soil.
- 5) Where wall is within the detention ponds, shall be backfilled to elevation 67.0 with clean 3/4" #57 crushed stone.
- 6) Site engineer to confirm soil bearing of 2000 PSF.
- 7) 12" behind wall to be backfilled with clean 3/4" #57 crushed stone.
- 8) The backfill within the reinforced soil zone to be sand/gravel with an internal angle of friction of 34 degrees or better and a unit weight of 120 PSF compacted to 95% standard proctor density.
- 9) Only hand operated compaction equipment to be allowed within 3 feet of the rear of the wall.
- 10) Backfilled graded slope atop wall not to exceed 3H:1V.
- 11) Design surcharge load at top of slope is 50 PSF.
- 12) Minimum Geogrid length is .6H.
- 13) Minimum radius of curvature is 10'.
- 14) Factors of safety as follows:

Base Sliding FS = 1.5

Overturning FS = 2.0

Internal Sliding FS = 1.5

Tensile Overstress FS = 1.5

Pullout FS = 1.5

Connection FS = 1.5

Internal Stability FS = 1.5

Bearing FS = 2.0