RIDGEROCK II
Strong+Beautiful+Versatile
R2
RIDGEROCK®

Strength & Versatility

The RidgeRock II Retaining Wall System has the added advantages of smaller block size, lower costs, and easier installation. All of this with no compromise in structural stability, appearance or longevity.

Beveled tan block allowed the entrance of this development to be constructed through a narrow easement.

RIDGEROCK II

Strong+Beautiful+Versatile

Remarkable Value & Superior Structural Integrity

RidgeRock II is lighter weight, lower cost, and easier to install than other competitive products. Its superior shear mechanism, balanced center of gravity, and open-core design provide increased stability resulting in superior structural integrity.

Integral Shear Key System

The bottom of each RidgeRock II unit features a built-in concrete shear key that creates positive block-to-block shear. The user-friendly shear mechanism eliminates the need for separate pins or clips which can be easily forgotten or misplaced during the construction process.

Flexible Wing Positioning System

First introduced in the RidgeRock System, the Flexible Wing Positioning System (FWPS) provides greater flexibility in block positioning for easier installation of curved walls. The positioning wings, located on either side of the RidgeRock II units, deliver additional shear resistance between the integral shear key and the underlying course of blocks.

Options in Appearance

RidgeRock II is available in beveled face to offer increased shadowing effects or in straight face for clean lines. A variety of color options are available at most locations and vary by geographical region. Contact your local RidgeRock supplier for available options.

Proven Product

The first choice of engineers, architects, municipalities and homeowners since 1998, RidgeRock can be found in thousands of projects across the country. Now RidgeRock II follows in its predecessor's footsteps with the added advantages of smaller block size, lower costs, and easier installation, with no compromise in structural integrity.

STRAIGHT UNIT	
Weight (empty)	Approx. 64 lbs.
Height	8 inches
Depth	9 inches
Width	18 inches
Face Coverage	1.0 square ft.
Setback per Course	1 inch

BEVELED UNIT	
Weight (empty)	Approx. 62 lbs.
Height	8 inches
Depth	9 inches
Width	18 inches
Face Coverage	1.0 square ft.
Setback per Course	1 inch

CAP UNIT	
Weight	Approx. 50 lbs.
Height	4 inches
Depth	9 inches
Width	18 inches
Face Coverage	0.5 square ft.

Weight and other dimensions may vary by location. Please contact your local RidgeRock representative for information.

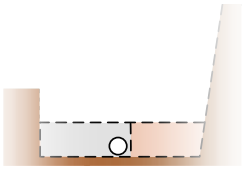
Gray beveled block was used to allow building construction without encroaching into the stormwater pond.

Installation Steps

STEP 1 - Base Course Preparation

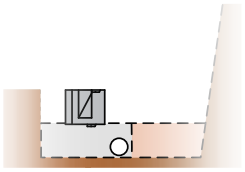
Beginning at the point of lowest elevation, excavate a trench the length of the wall that will accommodate a minimum of 6" of base material and 6" of block embedment. As a rule of thumb for level areas, 1" of block should be embedded for every 8 ft. of wall with a minimum of 6" embedded below grade. If your wall is placed on a slope, check with a local design engineer for requirements. The width of the trench should be a minimum of 21" and your trench depth will vary with wall embedment requirements.

STEP 2 - Leveling Pad Installation



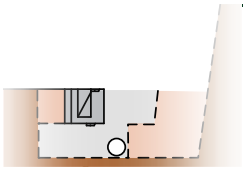
Place and compact a minimum of 6" of base material to 95% of standard proctor. Base material should consist of ¾" to 1" washed stone or crushed road base. This material will vary from region to region.

STEP 3 - Base Course Installation



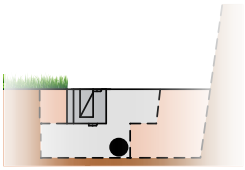
Place the base course of block end-to-end and use a string line along the back of the block to align straight walls. Center the blocks on the pad to allow a minimum of 6" of pad in front of and behind the blocks. Using a 4 ft. level, level the blocks from side-to-side and front-to-back. Level across 3 full blocks to ensure level from block-to-block. Use a rubber mallet to seat the blocks into the leveling pad rather than attempting to push small amounts of material under the blocks.

STEP 4 - Core and Drainage Fill



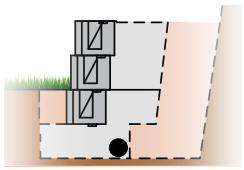
Place ¾" to 1" clean aggregate within the cores (the area between blocks) and a minimum of 12" behind the back of the blocks. Fill 1 block course at a time as wall construction proceeds.

STEP 5 - Geogrid Placement



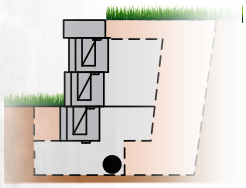
Level the drainage stone with the top of the block and ensure fill dirt has been placed and compacted to this same elevation. Clean all debris from the top of the block course. Cut the proper geogrid to the correct length and install with the strength direction of the geogrid perpendicular to the wall face. The strength direction is normally the roll direction, but check with the geogrid manufacturer for clarification. Extend geogrid to the front of the block. Place next course of RidgeRock II on wall in a running bond configuration to hold geogrid in place. Pull geogrid taut from the back, removing any wrinkles. Pin or stake to hold in place while placing fill. Place and compact backfill soils leaving 12" behind blocks for drainage fill. Place and compact drainage fill inside and 12" behind blocks.

STEP 6 - Successive Course Installation



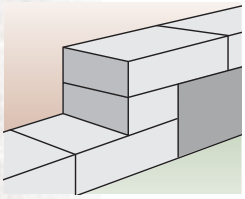
Prior to adding successive courses, the block should be swept free of debris. Starting in the center of the wall, center the block in a running bond pattern and pull it forward until the Shear Key engages the positioning wings. Place backfill material in maximum 12" loose lifts and compact to 95% of standard proctor leaving 12" of space behind the block for drainage fill. Place drainage fill behind and in blocks one course at a time and compact. Only hand operated compaction equipment such as a vibrating plate compactor should be used within 3 ft. of the back of the block. Continue with successive courses placing geogrid as required by design until full height is reached.

STEP 7 - Capping the Wall



Top caps are generally 4" in height and should be placed with the split edge forward. Adhere top caps with construction adhesive specifically manufactured for masonry use. Cap styles may vary by region. Check with your local representative for options.

STEP 8 - Top of Wall Stepping



Where steps must occur in the top of the wall to follow finished grades, double capping at each step can be used to provide a finished appearance.

Installation Notes

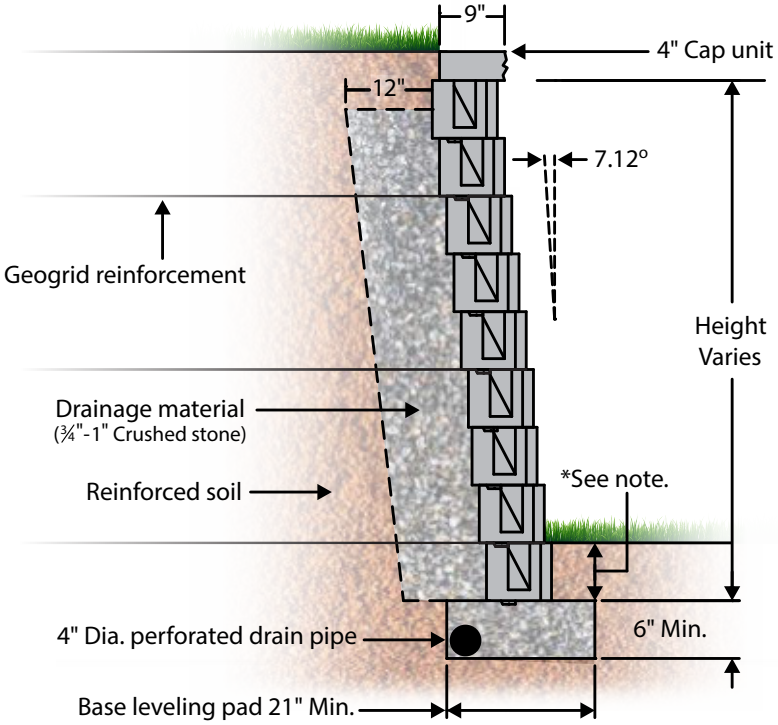
These installation steps are applicable to most situations. However, special design considerations must be given in some instances to ensure hydrostatic forces do not develop and that conditions behind of and in front of the wall are handled correctly. These instances include but are not limited to ponding water, sloping grades, surcharge conditions, fences and guardrails, tiered walls, driveways and roads, groundwater, culverts, bridges, drainage structures and streams or creeks.

Straight face tan block gave the architect the look he desired for this common area focalpoint.

Beveled face natural gray was chosen to increase the usable space for apartment buildings.

Details & Charts

Reinforced Wall Detail

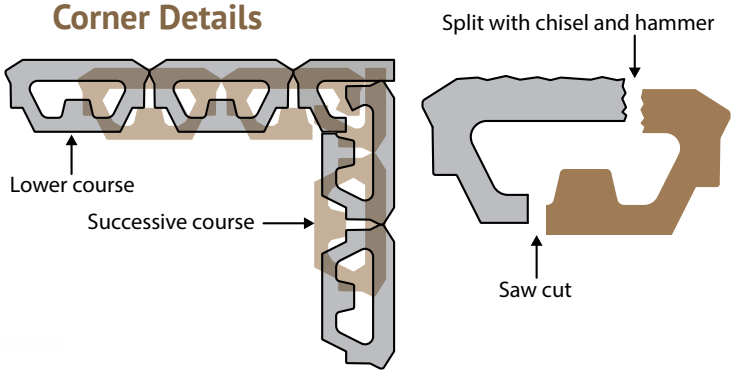


*Embedment below grade varies with condition in front of wall with a 6" minimum.

Gravity Walls

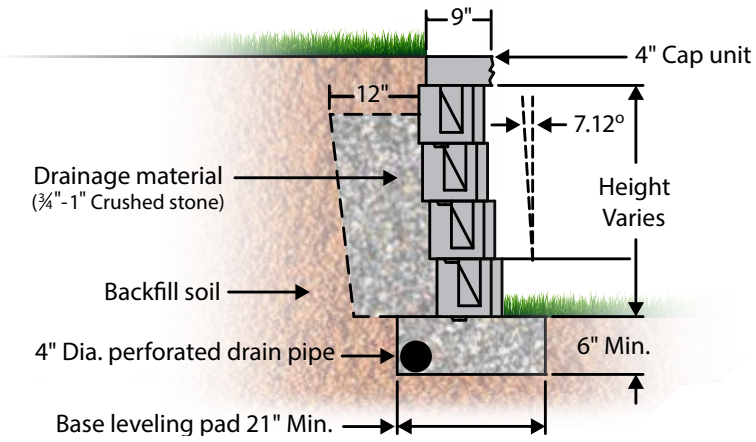
Maximum Unreinforced Wall Height 7.12° Batter		
Soil Type	**Level fill**	**3H:1V Slope**
Sand/Gravel* Φ=34°	2'-8" (4 block courses)	2'-0" (3 block courses)
*See design assumption notes		

Corner Details

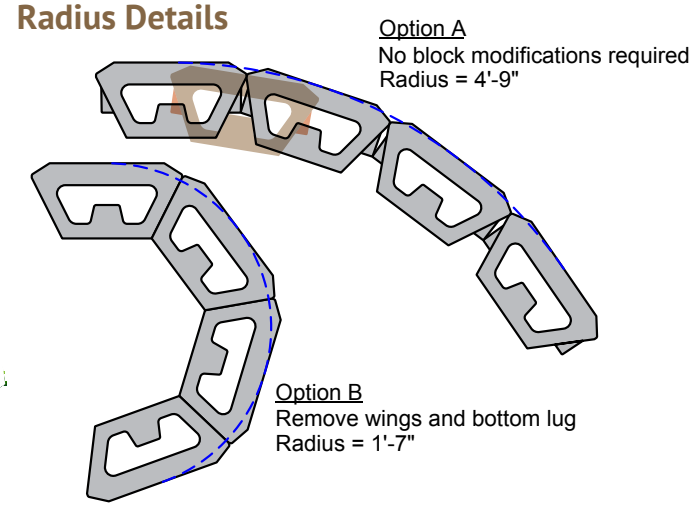


Note: Prefabricated corner units may also be available in some locations.

Unreinforced Gravity Wall Detail



Radius Details



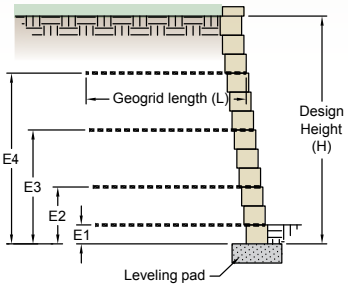
Note: Radii shown are measured at top of wall. Radii at bottom of wall will need to be increased to account for wall batter.

Interlocking back view of RidgeRock II blocks shown below.

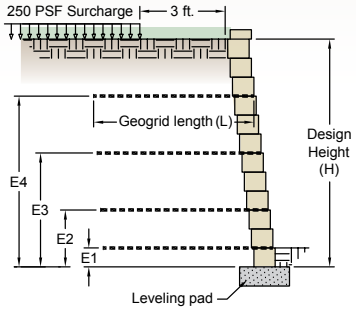
Our patented Flexible Wing Positioning System, shown in this photo, allows for quick and accurate positioning of each unit.

Geogrid Reinforced Walls

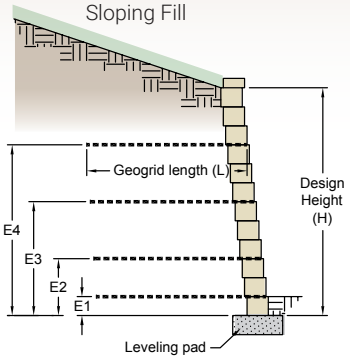
Case 1
Level Grade No Surcharge



Case 2
250 PSF Surcharge Level Grade



Case 3
Sloping Fill



Silt/Lean Clay: Φ=26° γ=120 pcf

Case 1, Level fill, No loading								
Design Height (ft.)	Geogrid length (ft.)	Geogrid Elevations (Feet above base)						
		E-1	E-2	E-3	E-4	E-5	E-6	E-7
4	4.5	2						
6	5.0	2	4					
8	6.5	2	4	6				
10	7.5	0.67	2	4	6	8		
12	9.0	0.67	2	4	6	8	10	

Case 2, Level fill, 250 psf surcharge								
Design Height (ft.)	Geogrid length (ft.)	Geogrid Elevations (Feet above base)						
		E-1	E-2	E-3	E-4	E-5	E-6	E-7
4	4.5	0.67	2					
6	6.5	2	4					
8	8.0	0.67	2	4	6			
10	9.5	0.67	2	4	6	8		
12	10.5	0.67	2	4	6	8	10	

Case 3, 3H:1V sloping fill								
Design Height (ft.)	Geogrid length (ft.)	Geogrid Elevations (Feet above base)						
		E-1	E-2	E-3	E-4	E-5	E-6	E-7
4	4.5	0.67	2.67					
6	6.5	0.67	2.67	4.67				
8	8.5	0.67	2.67	4.67	6.67			
10	10.0	0.67	2	3.33	4.67	6	8	
12	12.0	0.67	2	3.33	4.67	6	8	10

Silty Sand: Φ=30° γ=120 pcf

Case 1, Level fill, No loading							
Design Height (ft.)	Geogrid length (ft.)	Geogrid Elevations (Feet above base)					
		E-1	E-2	E-3	E-4	E-5	E-6
4	4.0	2					
6	4.5	2	4				
8	5.5	2	4	6			
10	7.0	2	4	6	8		
12	8.0	0.67	2	4	6	8	10

Case 2, Level fill, 250 psf surcharge							
Design Height (ft.)	Geogrid length (ft.)	Geogrid Elevations (Feet above base)					
		E-1	E-2	E-3	E-4	E-5	E-6
4	4.0	0.67	2				
6	5.5	2	4				
8	6.5	2	4	6			
10	8.0	0.67	2	4	6	8	
12	9.0	0.67	2	4	6	8	10

Case 3, 3H:1V sloping fill							
Design Height (ft.)	Geogrid length (ft.)	Geogrid Elevations (Feet above base)					
		E-1	E-2	E-3	E-4	E-5	E-6
4	4.0	2					
6	5.0	2	4				
8	6.5	0.67	2	4	6		
10	8.5	0.67	2	4	6	8	
12	10.0	0.67	2	4	6	8	10

Design Assumptions & Notes

- Design charts are applicable only to soils possessing an angle of internal friction (PHI) of 26°, 30° and 34° and a moist unit weight of 120 lbs./cu.ft. For other soil types consult a local design engineer.
- It is assumed that wall construction is in accordance with RidgeRock specifications and industry standards. All backfill soils are assumed compacted to 95% of standard proctor and placed in maximum 8" compacted lifts.
- Gravity wall calculations assume no surcharges are located within a distance of two times the wall height behind the wall.
- Gravity wall calculations assume the use of free draining ¾" to 1" stone for the leveling pad and within a horizontal distance of one-half of the wall height behind the back of the block.
- The geogrid charts are based on a standard block unit setback of 1" per course.
- Geogrid lengths shown are measured from the face of the block to the tails of the geogrid.
- Wall heights shown in the design charts are measured from the top of the leveling pad to the top of the top-most 8" block course.
- Design charts provide geogrid requirements in 2 ft. wall height increments. Judgment will be required when interpolating between these heights.
- Geogrid charts are based on the use of GridLok 270 coated polyester geogrid with a design strength (LTDS) of 1475 lb/ft. per the *NCMA Design Manual for Segmental Retaining Walls, 3rd Edition*. Information on other specific geogrid is available through the geogrid manufacturer.
- Information provided in the design charts is for informational purposes only. A qualified engineer should be consulted for final wall design purposes. RidgeRock Retaining Walls, Inc. accepts no liability for the use of these charts or any results thereof.

Sand/Gravel: Φ=34° γ=120 pcf

Case 1, Level fill, No loading							
Design Height (ft.)	Geogrid length (ft.)	Geogrid Elevations (Feet above base)					
		E-1	E-2	E-3	E-4	E-5	E-6
4	4.0	2					
6	4.0	2	4				
8	5.5	2	4	6			
10	6.5	2	4	6	8		
12	7.5	2	4	6	8	10	

Case 2, Level fill, 250 psf surcharge							
Design Height (ft.)	Geogrid length (ft.)	Geogrid Elevations (Feet above base)					
		E-1	E-2	E-3	E-4	E-5	E-6
4	4.0	2					
6	4.5	2	4				
8	6.0	2	4	6			
10	7.0	2	4	6	8		
12	8.0	0.67	2	4	6	8	10

Case 3, 2H:1V sloping fill							
Design Height (ft.)	Geogrid length (ft.)	Geogrid Elevations (Feet above base)					
		E-1	E-2	E-3	E-4	E-5	E-6
4	4.0	2					
6	5.0	2	4				
8	6.5	2	4	6			
10	8.0	0.67	2	4	6	8	
12	10.0	0.67	2	4	6	8	10

The RidgeRock Family

RIDGEROCK®

RidgeRock II®

RidgeRock II's smaller block size features the same structural stability, design flexibility and Flexible Wing Positioning System as its larger RidgeRock predecessor. A technological breakthrough, RidgeRock II's smaller format results in lower costs and easier installation.

RidgeRock®

The RidgeRock Retaining Wall System is the premier choice in soil retention technology. The RidgeRock unit is stabilized with a user-friendly concrete shear key which is integrated into the block to avoid the need for pins or clips.

Ridgescape®

In a word...GREEN! The RidgeScape reinforced earth system is perfect for areas where level space is at a premium and a concrete or stone wall is not appropriate. Vegetated during or after construction, RidgeScape allows near-vertical construction without sacrificing a natural, eco-friendly appearance.

The Verona Collection®

Belgado®

When you are looking for something on a grander scale, look to the Belgado Retaining Wall System. This system offers a multipiece appearance with variegated colors for a prestigious and luxurious finish.

Messina®

The Messina retaining wall system is the second product in the evolving Verona Collection by RidgeRock. Introduced in 2012, Messina provides the same Old World elegant look of its Belgado predecessor while incorporating the overwhelmingly popular features of our RidgeRock II product line.

Call your local RidgeRock representative to learn more about how RidgeRock Retaining Walls can meet your most challenging site development and landscaping needs.

DISTRIBUTED BY:

RidgeRock Retaining Walls
704-504-3358 office / 704-504-3038 fax
670 Griffith Road / Charlotte, NC 28217
PO Box 241233 (28224)
Ridge-Rock.com

Patent Nos. 6,168,354 & 6,474,036. Other Patents Pending.