Hanover® Architectural Products has been manufacturing high quality concrete products for over 48 years, participating in the development of unit paver systems as they became an integral part of architectural design. Hanover’s extensive knowledge acquired through the development of unit pavers has been applied to vertical wall units. From Reconstructed Stone™ Masonry units for building facades to Chapel Stone® Garden Wall units used to create seat walls and pillars, Hanover® can provide a range of products for vertical wall applications – commercial and residential alike.
Stone, the first building material, has long been treasured for its architectural representation. Unfortunately, cost and availability limit the use of natural stone. During the manufacturing process, Hanover® applies a million pounds of pressure to each unit, fusing the stones together. This unique process ensures a product which is stronger and more durable than a cast or lightweight product. Hanover’s test results show high compressive strength, density and low water absorption qualities. Using cement as a binder, each product truly becomes Reconstructed Stone™.
SECTION 1: RECONSTRUCTED STONE™

6-10 Reconstructed Stone™ RockCurb®
  6 Straight Sections
  7 Radius Sections
  8 Transition Sections
  9 Roof Applications
  10 Colors & Installation Guidelines

11-21 Reconstructed Stone™ Wall Units
  11 Reconstructed Stone™ Masonry
  13 Keystones
  13 Masonry Colors
  14 Reconstructed Stone™ Wall Panels
  16 Wall Panel Colors
  18 Sills, Profile Returns & Watertables
  20 Custom & Profile Cutting
  21 Strengths & Test Results
Installed alone or with Radius or Transition sections, Hanover’s Straight sections are the most widely used type of RockCurb®. RockCurb® Straight sections are 36” long and 6” thick with a 12” or 18” height. Both heights are available in both the Battered and Bullnose Profiles.

RockCurb® units are consistent in size and many times more durable than poured in place curbing. These high density concrete units are manufactured to 1/8” tolerances simplifying the installation. An 1/8” joint is recommended to allow expansion through freeze-thaw cycles. RockCurb® can be easily reconfigured and reinstalled to accommodate changes or repairs.
RockCurb® Radius Sections can be used when the installation incorporates curves. Gentle arches or circles can be accommodated by using a combination of radii and straight sections. A complete selection of radii are available creating endless landscape and streetscape design possibilities.

Manufactured with either a 12” or 18” height, RockCurb® Radius Sections are available in two edges. The 18” RockCurb® Radius Section is available in both the Battered and Bullnose Profiles. The 12” section is available in the Battered Profile only and a limited number of external radii. Custom aggregate blending is available when quantities permit.

### 12” ROCKCURB® RADIUS SECTION LENGTH

<table>
<thead>
<tr>
<th>RADIUS TYPE</th>
<th>3’</th>
<th>5’</th>
<th>6’</th>
<th>8’</th>
<th>10’</th>
<th>15’</th>
<th>20’</th>
<th>30’</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXTERNAL</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

The 12” section is available in the Battered Profile only and a limited number of external radii.

### 18” ROCKCURB® RADIUS SECTION LENGTH

<table>
<thead>
<tr>
<th>RADIUS TYPE</th>
<th>3’</th>
<th>5’</th>
<th>6’</th>
<th>8’</th>
<th>10’</th>
<th>15’</th>
<th>20’</th>
<th>30’</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXTERNAL</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>INTERNAL</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

The 18” section is available in the Battered and Bullnose Profiles.
To allow the transition from a full height curb to the appropriate level needed for an entrance or drive, 3 special shapes are manufactured. The Left and Right Transition Sections reduce the height, while the Center Transition Section provides the opening.

Center Transitions can be used in multiples to allow any size driveway width. Straight or Radius Sections can be easily removed and replaced with Transition Sections to permit the transition to the level of the Center Transition Section.

Transition Sections are produced with the angled Battered Profile. Custom colors and aggregate blends can be ordered when quantities permit.

ROCKCurb® RETURN ENDS
To eliminate miter cuts, Hanover® can provide RockCurb® Return Ends as part of a custom order. Return Ends are available with a Bullnose Profile only.

Decorative Paving, Franklin, OH; Design/Builder: Decorative Paving Company; Size & Color: Battered RockCurb®, Various Sizes, Limestone Gray; Finish: Tudor®

Large & Above Photos: LPS Pavement Corporate Headquarters, Oswego IL; Design/Builder: LPS Pavement; Size & Color: RockCurb® 12” x 36” x 6”, Antietam; Finish: Tudor®

TRANSITION SECTIONS
Hanover® RockCurb® for roof applications has become an integral part of green building projects, helping to earn SS (Sustainable Sites) Credits and achieve LEED (Leadership in Energy and Environmental Design) points. Working hand in hand with green roof assemblies to provide environmental benefits and aesthetically appealing rooftop gardens, RockCurb® can be used to separate green areas from hardscaped areas. RockCurb® can be installed over the waterproofing system based on waterproof manufacturers recommendations.

Hanover® can provide a range of products that yield reflectance and emittance values. These values are a critical element in the roof’s ability to reduce heat consumption into the structure below. RockCurb® can be used with Prest® Pavers in Hanover’s Glacier White color for maximum values, helping to earn SS Credits and achieve LEED points.
RockCurb® is stocked in Limestone Gray with a Tudor® finish but can be produced in any of the colors shown. These blends were developed by Hanover’s efforts to respond to particular project requirements. Additional custom blending is available on special order when quantities permit. Prest® Pavers and Prest® Brick are also available in the same colors providing the opportunity to blend or contrast the curb with the project’s hardscape or landscape.

Reconstructed Stone™ | ROCKCURB® COLORS WITH TUDOR® FINISH

Reconstructed Stone™ | ROCKCURB® INSTALLATION GUIDELINE

The detail shown below is an example of a typical RockCurb® installation based on a unit paver to road surface condition. Each project is unique and requires examination of the project requirements. Base preparation, edge restraint and their specifications are important and must be given consideration. An architect, landscape architect and/or structural engineer should be consulted to develop a specification for the individual project.
Reconstructed Stone™ Masonry is made from high density concrete for vertical applications. Available in a variety of sizes and a range of thicknesses, they are normally installed with mortar as walls or included with other building material as an accent band. They provide a natural appearance to the building facade. Test results of the products show relative strengths comparative to natural stone with high compressive strengths, extreme density, and low water absorption. The units can be cleaned as necessary with masonry acidic cleaners and can be installed above or below grade. Reconstructed Stone™ Masonry units are made 3 5/8” thick and are available in five sizes as shown to the right.
• Walls
• Accent Banding
• Window and Door Details
• Architectural Entrances
• Keystones
Reconstructed Stone™ | MASONRY

Reconstructed Stone™ Keystones are manufactured in the two heights shown and two colors, Glacier White and a beige tone color. Glacier White is shown above. Contact Hanover® for more information.

Reconstructed Stone™ | MASONRY COLORS WITH TUDOR® FINISH

The colors shown were developed by Hanover’s efforts to respond to particular project requirements. Hanover’s Tudor® finish is a specialized texture designed to reveal the aggregates naturally, giving the surface of the masonry unit a granite-like appearance.
Hanover’s line of wall panels bridges the gap between concrete and natural stone. Unique manufacturing methods truly reconstruct stone pieces into beautiful building panels. A wide range of sizes and thicknesses are available. The units can be prepared with either slots or grooves which will accommodate many styles of anchoring or clip systems. Hanover® can also provide custom aggregate blending services in order to meet the needs of any project. Colors are shown on pages 16 and 17.
### WALL PANEL SIZES

<table>
<thead>
<tr>
<th>ACTUAL SIZE</th>
<th>1 1/2&quot;</th>
<th>2&quot;</th>
<th>2 1/4&quot;</th>
<th>2 1/2&quot;</th>
<th>3&quot;</th>
<th>4&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>11 3/4&quot; x 11 3/4&quot;</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>11 15/16&quot; x 11 15/16&quot;</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>14 7/8&quot; x 14 7/8&quot;</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>11 3/4&quot; x 17 5/8&quot;</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>11 3/4&quot; x 23 1/2&quot;</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>17 5/8&quot; x 17 5/8&quot;</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>17 5/8&quot; x 23 1/2&quot;</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>23 1/2&quot; x 23 1/2&quot;</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>23 1/2&quot; x 23 1/2&quot;</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>23 1/2&quot; x 29 3/4&quot;</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>23 1/2&quot; x 35 3/4&quot;</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>35 3/4&quot; x 35 3/4&quot;</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

= Standard Thickness  2" Thickness = 25 lbs/sf  *Note increased thickness and weight for this panel.

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**HANOVER® MEETS FEDERAL METRIC CONSTRUCTION GUIDELINES.**

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All Photos: Office Building, Durham, NC; Architect: Little and Associates, Durham, NC; Size & Color: 3 1/4" x 23 3/4" x 3 1/4", 3 1/4" x 23 3/4" x 3 1/4", 24" x 36" x 2"; #M1930, #M115; Finish: Tudor®
The eight standard colors shown are available in a wide range of sizes and thicknesses. Custom color blending can be accommodated, as well as custom aggregate blending. Hanover’s Tudor® finish is a specialized texture which reveals the aggregates naturally giving the surface a stone-like appearance. It is a surface equally suited to urban and municipal projects.

Quarry Red  Charcoal  Natural  Red 15  Tan  Brown  Cream  Limestone Gray

Texture is as important to the appearance of the installation as color and pattern. Hanover’s Ground Finish provides a smooth surface revealing the aggregates beneath. Custom color and aggregate blending is available when quantities permit.

Super Black  Matrix #1111  Matrix #1171  Matrix #1049  Matrix #1185  Matrix #1109  Matrix #1151  Matrix #1240

Hanover® Wall Panels are also produced in a Tudor® #13 finish which gives a delicate sandstone-like texture. A few available colors are shown to the right. Other custom colors can be ordered when quantities permit.

Matrix #1428  Matrix #1775  Matrix #2127  Matrix #1914
The colors shown below were developed by Hanover’s efforts to respond to particular project requirements. Hanover’s Tudor® finish is a specialized texture designed to reveal the aggregates naturally, giving the surface of the wall panel a granite-like appearance.

**PLEASE NOTE:** Additional custom blending is available on special order when quantities permit. The color photos shown in this catalog were prepared with great concern for accuracy. However, it is suggested that actual samples be requested before specifying. Due to the natural variance of the raw materials used, panels can be expected to differ slightly from sample to actual product. It is recommended that the panels be cleaned after the installation is finished. Please contact our representatives for product suggestions.

* Colors are available with a Heavy Tudor®, Ground or Ground Tudor® finish only.
Hanover® is able to provide profiled edges for window details and sills. They can be accommodated with or without a continuous drip edge. Pieces are manufactured with beautiful stone-like finishes and will add attractive detailing to any project. Several styles and custom designs are available when quantities permit.

The sill profiles that Hanover® is able to provide are shown above right. The sills have a length of 23 5/8" and 35 5/8". The 35 5/8" length is available in heights of 3 5/8" to 5 5/8". Custom heights and lengths are available.

- Sills shown have a length of 23 5/8" with a height of 3 5/8".
- Sills with a length of 35 5/8" are available in heights ranging from 3 5/8" - 5 5/8".
- Range of depths
- Optional Drip Edge
- Same colors as Reconstructed Stone™ Masonry and Wall Panels.
- Profile Returns create seamless corners and eliminate miter cutting.
Hanover® Architectural Products is pleased to announce the addition of Profile Returns to its Reconstructed Stone™ Masonry product line. The addition of Profile Returns eliminates miter cutting corner pieces. Available in a variety of sizes and a range of thicknesses, they are available in the same colors as Hanover’s Masonry and Wall Panel units.

Reconstructed Stone™ | PROFILE RETURNS

Reconstructed Stone™ | WATERTABLES

Shown to the right are the watertable profiles that Hanover® is able to provide. The watertables have a length of 23 5/8” and 35 5/8”. The 35 5/8” length is available in depths of 3 5/8” to 5 5/8”. Available in the same colors as Masonry and Wall Panels, custom heights and lengths are available.

- Watertables shown have a length of 23 5/8” with a depth of 3 5/8”.
- Lengths of 35 5/8” are available in depths ranging from 3 5/8” to 5 5/8”.
- Range of heights

PLEASE NOTE:
Units can be cleaned, as necessary, with masonry acidic cleaners and can be installed above or below grade.
To truly finish the effect of a project, masonry details at windows, doorways, arches and cornices can make an incredible difference. Installations become very distinctive and unique. Hanover® can produce sections using the same aggregates and colors as the Reconstructed Stone™ Masonry or custom manufacture accenting pieces on special order. Profiles can be created from Hanover® designs or customer drawings. Technical assistance is available to develop the shapes required for the project.

Hanover® can prepare intricate sections for building details. Many designs are available and custom profiles can also be accommodated. Contact a Hanover® representative for technical details and a complete listing of designs.

- Maximum section size is 23 5/8” x 35 5/8”.
- Maximum depth is 7 5/8”.

Sill
Keystone
Segmental Header
Semi Circular Header
Quoin Corner
Corner
Hanover® Reconstructed Stone™ Masonry and Wall Panels are manufactured by unique methods which duplicate the qualities of natural stone. Hanover® applies over a million pounds of pressure to each unit, fusing the aggregates and stones together. This unique process ensures a panel which is stronger and many times more durable than a cast or lightweight product. Hanover’s test results show high compressive strength, density, and low water absorption qualities comparable to natural stone.

<table>
<thead>
<tr>
<th>MINIMUM COMPRRESSIVE STRENGTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>This test measures the minimum compressive strength of Hanover’s products. The products are tested in accordance with the standards set forth by ASTM C936 which reference the use of test procedure C 140. Panels are subjected to pressure and monitored until the point of failure.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>RESULTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum Compressive Strength = 8,000 psi average</td>
</tr>
<tr>
<td>10,000 to 12,000 psi, depending on aggregate used</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ABSORPTION OF WATER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Products are immersed in water for 24 hours and then removed and weighed. The products are dried for no less than 24 hours in a ventilated oven and weighed again. The resulting difference yields the percent of absorption.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>RESULTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average % Absorption = 5% maximum (ASTM C936)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DENSITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Density is the mass per unit volume of a substance at a specified pressure and temperature.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>RESULTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Density = 150 lbs/ft³</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MODULES OF RUPTURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Products are tested in a supportive condition with a load applied to the mid-span between support. The load distribution is calculated in relationship to the product size and thickness. The products are subject to continual pressure until the point of failure. The result is the modules of rupture.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>RESULTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Modules of Rupture = 1,100 (ASTM C936)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DIMENSIONAL TOLERANCES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hanover’s products are manufactured not to differ by more than plus or minus 1/8” in depth and 1/16” in length and/or height.</td>
</tr>
</tbody>
</table>

**PLEASE NOTE:** Unique manufacturing methods provide relative strengths comparative to natural stone. Some mix designs may test lower than shown above due to softer aggregates used for custom blending.
Hanover® manufactures two styles of garden and landscape walls – Chapel Stone® Garden Walling and Ammon’s Wall®. Both styles of walls add beauty, charm and value to your landscaping. Chapel Stone® Garden Walling and Ammon’s Wall® are great alternatives to natural stone. Manufactured from high density concrete to obtain compressive strengths equal to natural stone, Hanover’s walls have low water absorption to ensure a long lasting installation.

Hanover’s Garden and Landscape Walls offer the versatility to create anything from planter walls and seat walls to free standing walls and pillars. Hanover’s walls are produced in a range of colors to complement or contrast Hanover’s other paving products.
SECTION 2: GARDEN & LANDSCAPE WALLS

24-27 Ammon’s Wall®

24 Ammon’s Wall®
26 Stocked Colors & Packaging Information
27 Installation Guidelines

28-34 Chapel Stone®

28 Chapel Stone® Garden Walling
30 Chapel Stone® Radius
31 Pillar Cap
32 Step Block
32 Chapel Stone® Paver
33 Standard Colors & Packaging Information
34 Garden Walling Installation Guidelines
**AMMON’S WALL®**

Sized at 8” x 12” x 4”, Ammon’s Wall® is a very versatile wall block. Blocks can be laid in any direction to create a natural random pattern. Building patterns are endless creating a unique wall with every installation.

Ammon’s Wall® can be used to create decorative pillars, steps, and garden or planter walls. Lights can easily be added on top of pillars or columns built with Ammon’s Wall® as voids are created in the center of the pillar allowing electrical cords to be protected and hidden from view.

Produced and textured to capture the look and durability of natural stone, Ammon’s Wall® is available in five earth-toned color blends as shown on page 26. With only one size block, installation is quick and easy. When building an 8” or 12” wall, the block can also be used as a cap.
AMMON’S WALL® MIXED
Ammon’s Wall® Mixed consists of 3 sizes - 8” x 12”, 8” x 8” and 4” x 8” with a 4” depth. All sizes are installed together to create a more natural, random appearance. Blocks can be laid in any direction. Ammon’s Wall® Mixed units can be used alone or combined with the additional 8” x 12” x 4” Ammon’s Wall® units.

AMMON’S WALL® RADIUS
Sized at 8” x 12, Ammon’s Wall® Radius is a wedge shaped unit designed to allow the wall to bend and curve with the landscaping and architecture while maintaining closer joints between units. Garden Walls often need curves and bends as they work around trees and planting beds. Gentle arcs and radii can be more easily be achieved with these radius units. Ammon’s Wall® Radius units can be used alone or combined with the original Ammon’s Wall® units.
Ammon’s Wall®, Ammon’s Wall® Radius and Ammon’s Wall® Mixed are stocked in the five earth-toned color blends shown below. Custom colors are available upon special order and when quantities permit.

PLEASE NOTE: Hanover’s blended colors consist of several shades and will include some solid and some blended pieces.

### Garden & Landscape Walls | AMMON’S WALL® SIZE & PACKAGING INFORMATION

<table>
<thead>
<tr>
<th>UNIT SIZE</th>
<th>UNIT SIZE</th>
<th>FACE FT./CUBE</th>
<th>PCS./FACE FT.</th>
<th>PCS./CUBE</th>
<th>PCS./STRAP</th>
<th>LBS./CUBE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ammon’s Wall®</td>
<td>8” x 12” x 4”</td>
<td>32 (8”) - 21.3 (12”)*</td>
<td>3 (8”) - 4.5 (12”)</td>
<td>96</td>
<td>24</td>
<td>2892.48</td>
</tr>
<tr>
<td>Ammon’s Wall® Radius</td>
<td>8” x 12” x 4”</td>
<td>30</td>
<td>–</td>
<td>108</td>
<td>–</td>
<td>2735</td>
</tr>
<tr>
<td>Ammon’s Wall® Mixed</td>
<td>8” x 12” x 4”</td>
<td>32 (8”)</td>
<td>–</td>
<td>144</td>
<td>–</td>
<td>2850</td>
</tr>
</tbody>
</table>

*For Ammon’s Wall® only:  
21.3 face feet/cube is based on creating a 12” solid wall and 32 face feet/cube is based on creating an 8” solid wall. Use the formula shown on page 27 to determine the number of pieces needed before ordering.

PLEASE NOTE: Ammon’s Wall® is sold by the full cube only.
1. Determine the length (L), height (H) and depth of your wall. Will you be constructing a wall with a depth 8" or 12"?

2. Calculate wall materials needed.
   For an 8" wall:
   \[ \text{(L)} \times \text{(H)} = \text{x} \times 3 = \text{pcs. needed} \]
   For an 12" wall:
   \[ \text{(L)} \times \text{(H)} = \text{x} \times 4.5 = \text{pcs. needed} \]

3. Prepare the footing. Dig a trench 16" wide and 3" - 6" below grade. The height of the wall will determine the number of units to bury. As a rule of thumb, you will bury 1" of block for every 8" of exposed wall height. Add 4" for the depth of the base material. Make sure the soil is well compacted to prevent settling.

4. Construct the base. A level compacted base is crucial for wall stability. Consisting of 2 A modified stone or concrete footer, the base should be 4" deep with 8" behind and 8" in front of the wall.

5. Install additional courses. Attempt to offset joints of units for maximum design strength. Ammon's Wall® should be installed in a random pattern. When constructing seat walls, columns or free standing walls, be sure to adhere each course with a concrete adhesive. When constructing a low garden wall, bonding is not necessary but is suggested. Shims may be occasionally needed for leveling blocks. Assuming normal conditions, maximum wall height for Ammon's Wall® with a 12" depth when used as a garden wall is 36". Maximum wall height for Ammon's Wall® with an 8" depth is 28 - 32". Higher elevations require engineering design. Certain conditions might reduce the maximum wall height such as soil that does not drain well, a slope behind the wall or a nearby structure. To complete the installation, adhere the top course with concrete adhesive.

**PLEASE NOTE:**

When constructing seat walls, columns or free standing walls, be sure to adhere each course with a concrete adhesive. When constructing a low garden wall, bonding is not necessary but is suggested.

Assuming normal conditions, maximum wall height for Ammon's Wall® with a 12" depth when used as a garden wall is 36". Maximum wall height for Ammon's Wall® with an 8" depth is 28 - 32".
Chapel Stone® Garden Walling is a versatile and interesting addition to our paving product lines. It is available in four naturally blended colors – Gray Blend, Tan Blend, Canyon Blend and Russet Blend. Garden Walling is manufactured in random lengths and two heights – 2 13/16” and 5 5/8”. Colors and heights can be used separately or mixed together. The natural stone characteristics of the walling lend it to a large variety of uses — surrounding a patio, raising a flower bed, creating a low retaining wall, or building steps, walkways and paths. Walling can add so much to the landscaping theme. It adds detail and interest to the project, as well as, plant and bedding areas. The entire landscape seems to come together!

Each stone has been faced (or textured) with half of the pieces faced on both sides. The double faced pieces can be used for free standing walls or installed mixed with those without facing for a natural effect. Though not all units are textured on both sides, it can be requested as part of a custom order. Three of the four lengths also have return ends for corners. Because the pieces are consistent in shape, they will lay neatly creating dimensional stability and saving installation time. Both homeowners and professional masons will appreciate the ease of wall construction.
Chapel Stone® Garden Walling can be laid as a dry wall with no mortar or as a mortared wall with mortar joints. If a mortared system is used, weep holes along the bottom of the wall are required. Chapel Stone® Garden Walling can be laid up to 3 feet high. Elevations beyond 3 feet require engineering design. Chapel Stone® is not meant as a highway retaining wall. Both systems require a crushed stone backing between walling and soil. See pages 34 and 35 for installation guidelines. Chapel Stone® Garden Walling may be cleaned with masonry cleaners as necessary.

Chapel Stone® Wall Caps, complete the installation. Sized at 11 3/4" x 11 3/4" x 3", they are produced in the same blends as Garden Walling – Gray, Tan, Canyon and Russet Blends.
Chapel Stone® Radius pieces allow the walling to blend and curve with the landscaping and architecture. Gentle arcs can be accomplished without the radius pieces, however, a tighter joint can be maintained using these wedge shaped stones.

Radius pieces are available in four colors - Gray Blend, Tan Blend, Canyon Blend and Russet Blend. Two heights, 2 13/16" and 5 5/8", are available. Each height is packaged separately with a random mix of the four angled shapes.
Sized at 30” x 30” x 2 1/2”, Chapel Stone® Pillar Caps are available for use with Chapel Stone® Garden Wall. They are perfect for use on top of columns, as stair treads or outdoor table tops. Pillar Caps can be used alone or in conjunction with Hanover’s other Wall Caps.

They are available in three colors - Chocolate, Gray and Sand. All three colors compliment Hanover's Chapel Stone® Garden Walls. The Pillar Cap can also be special ordered in a 3” thickness when quantities permit.
PLEASE NOTE: Although Chapel Stone® Pavers offer an undulant, irregular top surface to the pavement, these pavers do not meet ADA requirements.
Hanover® Chapel Stone® Garden Walling is stocked in the four color blends shown below. Custom colors and aggregates are available upon special order and when quantities permit. Chapel Stone® lengths are mixed within a cube to ensure a natural looking, random installation. Each color and height is cubed separately. Garden Walling can be installed using either height or mixing the two together.

PLEASE NOTE: Hanover’s blended colors consist of several shades and will include some solid and some blended pieces.

### Garden Walling Sizes

<table>
<thead>
<tr>
<th>Height</th>
<th>Length</th>
<th>Depth</th>
<th>Packaging Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 13/16”</td>
<td>6”</td>
<td>9”</td>
<td>30 sf/cube, 420 sf/truck</td>
</tr>
<tr>
<td>5 5/8”</td>
<td>12”</td>
<td>9”</td>
<td>310 lbs/cube, 14 cubes/truck</td>
</tr>
<tr>
<td></td>
<td>18”</td>
<td>9”</td>
<td></td>
</tr>
<tr>
<td></td>
<td>24”</td>
<td>9”</td>
<td></td>
</tr>
</tbody>
</table>

PLEASE NOTE: Garden Walling is packaged with randomly sized lengths (6”, 12”, 18” and 24”). Each height and color blend is packaged separately. Pieces are made with return ends for corners on 6”, 12”, and 18” lengths. This product is for garden walls and should be limited to 3’ in height. Refer to pages 32 & 33 for installation guidelines.

### Radius Sizes

<table>
<thead>
<tr>
<th>Height</th>
<th>Length</th>
<th>Depth</th>
<th>Packaging Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 13/16”</td>
<td>6”</td>
<td>9”</td>
<td>30 sf/cube, 450 sf/truck</td>
</tr>
<tr>
<td>5 5/8”</td>
<td>12”</td>
<td>9”</td>
<td>2925 lbs/cube, 15 cubes/truck</td>
</tr>
<tr>
<td></td>
<td>18”</td>
<td>9”</td>
<td></td>
</tr>
</tbody>
</table>

### Step Block Sizes

<table>
<thead>
<tr>
<th>Height</th>
<th>Length</th>
<th>Depth</th>
<th>Packaging Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 5/8”</td>
<td>24”</td>
<td>18”</td>
<td>21 sf/cube, 1350 lbs/cube</td>
</tr>
<tr>
<td></td>
<td>36”</td>
<td>18”</td>
<td>31.5 sf/cube, 2042 lbs/cube</td>
</tr>
</tbody>
</table>

### Wall Cap Size

<table>
<thead>
<tr>
<th>Height</th>
<th>Width x Height</th>
<th>Packaging Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>11 3/4”</td>
<td>11 3/4” x 3”</td>
<td>96 sf/cube, 1248 sf/truck</td>
</tr>
<tr>
<td></td>
<td>3450 lbs/cube</td>
<td>13 cubes/truck</td>
</tr>
</tbody>
</table>

### Pillar Cap Size

<table>
<thead>
<tr>
<th>Height</th>
<th>Width x Height</th>
<th>Packaging Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>29 3/4”</td>
<td>29 3/4” x 2 1/2”</td>
<td>10 pcs/cube, 27.2 lbs/sf</td>
</tr>
<tr>
<td></td>
<td>6.25 sf/unit</td>
<td>1700 lbs/cube</td>
</tr>
<tr>
<td></td>
<td>62.5 sf/cube</td>
<td></td>
</tr>
</tbody>
</table>

Chapel Stone® Radius pieces are used to create arcs and curves within a wall design. Radius pieces can be used in several ways by turning them over. Follow the installation guidelines shown on page 34 for Chapel Stone® Garden Walling.
1. Calculate wall materials needed. Determine the square footage of the wall by multiplying length by the height.

2. Prepare the footing. Dig a trench 25" wide and 3 - 6' below grade. The height of the wall will determine the number of units to bury. As a rule of thumb, you will bury 1" of block for every 8" of exposed wall height. Add 4" for the depth of the base material. Be sure the soil is well compacted to prevent settling. Be sure disturbed soils are stabilized.

3. Construct the base. A level compacted base is crucial for wall stability. Consisting of 2A modified stone or concrete footer, the base should be 4" deep with 8" behind and 8" in front of the wall. Total base width would be 16" plus the 9" depth of the wall unit for a total of 25".

4. Install the base course. Position the units side by side on the prepared compacted base. Along the back of the block, level the units with a carpenter's level from front to back and side to side. Use a string line to verify straightness.

   Each course should be set back 1" from the front of the previous course and adhered with manufacturer recommended concrete adhesive. If using a concrete footer as the base, adhere the first course to the footer. Apply 1/4" bead of adhesive in an “S” shape for maximum strength. Care should be taken to insure that the adhesive is not exposed at the joints.

   As the next course and all additional courses are placed, be sure to stagger the joints. Joints between wall units on adjacent courses should not align. Each unit should span two below.

5. Backfill the wall as you go. The wall should be backfilled using clean washed ballast stone (minimum 1 1/2" in diameter). The depth of the backfill should be equal to the height of the wall and wrapped on the top, back and bottom with woven filter fabric.

6. Stabilize wall sections as you go. The use of GeoGrid reinforcement to stabilize wall sections is recommended. GeoGrid should be adhered to the wall units between courses starting 12" from the base/foundation and continuing every 12". Be sure top layer of GeoGrid is covered by a minimum of 12" of backfill stone.

**PLEASE NOTE:** Proper installation methods must be followed to ensure wall strength and stability. Freestanding walls should not exceed 3 feet in height. Retaining walls and walls with elevations beyond 3 feet must also employ proper installation methods and may require engineering design. Chapel Stone® Garden Walls can be laid as dry walls or as mortared walls. Chapel Stone® is not meant as a highway retaining wall.

**GEOGRID SOIL REINFORCEMENT NOTES:**
1. Pull GeoGrid taut and anchor prior to backfill placement over GeoGrid.
2. GeoGrid reinforcement shall be continuous throughout the embedment length. 100% coverage shall be provided at each level.
3. GeoGrid extends min. 8" over the Chapel Stone® and shall be bonded to the stone.
4. Apply adhesive to both sides of GeoGrid to insure proper bond to both courses.

**REINFORCED BACKFILL NOTES:**
1. Use ballast stone (min. 1 1/2" diameter) for backfill, or structural fill as per the geotechnical report prepared by specialized engineering, file no. 063503, dated Oct. 18, 2006.
2. Place reinforced backfill in 12" lifts.
3. Compact reinforced backfill to 95% of maximum dry density as determined by modified proctor tests, ASTM D-1557.
4. Tracked compaction equipment shall not be used directly on GeoGrid reinforcement. A min. thickness of 12" of reinforced backfill is required above GeoGrid to utilize tracked compaction equipment.
5. Only small vibratory hand operated rollers or walk behind rollers or equipment shall be allowed within 5' of the wall.
1. Stair width, length and rise should be determined prior to beginning.
2. Compact existing subgrade if area has been excavated. Be sure disturbed soils are stabilized. Place compacted gravel over compacted subgrade. Screed setting bedding sand.
3. Begin installation at bottom by installing the first step or course. Install the next layer of compacted gravel base behind the first step. Install the second step. Use a Concrete Adhesive to adhere the second step to the first. Keep proper tread depth in mind when setting this course. Continue this procedure for the desired number of steps or courses.
4. Adhere Step Blocks at each course or step. Concrete Adhesive should be applied in a 1/4" bead to the full length of the block in an “S” shape. Care should be taken to insure that the adhesive is not exposed at the joint.

*A variety of Hanover® products such as Chapel Stone® Wall Caps or Appian® 6” x 9” brick can be incorporated into the step construction. They should be bonded to the Garden Walling units which are beneath them using a concrete adhesive. Be sure to allow cure time for the units to stabilize.

Garden & Landscape Walls | CHAPEL STONE® 90º CORNER CONSTRUCTION

Overlap the corners to create a bond. Using the corner pieces provided, overlap the units to build your corner. Be sure to stagger the joints; Joints between blocks on adjacent courses should not align. Each block should span two blocks below.

PLEASE NOTE: Chapel Stone® Garden Walling requires a stable footing, compacted base and proper drainage with filter fabric. Please see Page 34 Installation Guidelines or contact a Hanover® representative for more information.
PRODUCT INSTALLATION: Each project and site conditions are unique. It is important to contact a Hanover® representative for product details and installation guidelines. An architect, landscape architect, and/or structural engineer should be consulted to develop a specification suited for the individual project. Neither this catalog, nor any of the individual product catalogs from Hanover® Architectural Products, is intended to be a design manual. The projects pictured and the installation suggestions given in this catalog are only illustrations of Hanover® products. Each application and specification for installation should have the attention of an architect, landscape architect, and/or structural engineer. As product use and site conditions are not within our control, Hanover® does not guarantee results from use of such products or other information herein: no warranty, express or implied is given. As government regulations and use conditions may change, it is the Buyers responsibility to determine the appropriateness of these products for the specific end uses.

PLEASE NOTE: The color photos shown in this catalog were prepared with great concern for accuracy. However, it is suggested that actual samples be requested before specifying. Due to the natural variance of the raw materials used, products can be expected to differ slightly from sample to actual product. It is recommended that the products be cleaned after the installation is finished. Please contact our representatives for product suggestions.

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Cover Photo: Vineland Fire Company #1, Vineland, NJ; Size & Color: 7 1/8” x 23 1/8” x 3 1/8”, 15 1/8” x 23 1/8” x 3 1/8”, #M1767; Finish: Tudor®