Basalite offers the GEOWALL™, Westblock Systems Encore, and the Tensar® Mesa® Retaining Wall Systems. These systems are an excellent solution for a variety of wall applications, ranging from simple landscaping projects to critical structures. Available in four face styles and attractive earth-tone colors, these walls will meet your structural requirements while providing lasting beauty that will complement your design for years to come.
Basalite is committed to the advancement of sustainable construction practices. The Basalite GEOWALL™ System is locally produced from natural materials (products using recycled content are available) and offers excellent durability. The wall units are dry stacked, and can be removed and redeployed if the structure is no longer needed. Concrete products can also be crushed and reused as clean fill. As a result of these benefits, Basalite Walls may contribute to the attainment of LEED® Credits under the U.S. Green Building Council’s LEED® Green Building Rating System™, as summarized below:

<table>
<thead>
<tr>
<th>LEED Credit</th>
<th>Description</th>
<th>Points</th>
<th>Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sustainable Sites</td>
<td>SS Prerequisite 1</td>
<td>Required</td>
<td>Use of retaining walls to prevent erosion of site soils may assist to meet this prerequisite.</td>
</tr>
<tr>
<td>Sustainable Sites</td>
<td>SS Credit 1</td>
<td>1</td>
<td>Segmental retaining walls can minimize the footprint of the developed portion of a site, and help allow preservation of wetlands and other sensitive areas on a site.</td>
</tr>
<tr>
<td>Sustainable Sites</td>
<td>SS Credit 2</td>
<td>1</td>
<td>Segmental retaining walls facilitate development of sites in dense urban areas by maximizing usable area in hilly terrain.</td>
</tr>
<tr>
<td>Sustainable Sites</td>
<td>SS Credit 5.2</td>
<td>1</td>
<td>Use segmental retaining walls to preserve and protect open space.</td>
</tr>
<tr>
<td>Materials &amp; Resources</td>
<td>MR Credit 2.1</td>
<td>1</td>
<td>Unused concrete masonry products can be redirected to the manufacturing process either for reuse or recycling. Waste masonry or concrete products also can be used as clean fill at the construction site, or crushed into aggregates for use as backfill or base material.</td>
</tr>
<tr>
<td>Materials &amp; Resources</td>
<td>MR Credit 2.2</td>
<td>1</td>
<td>Concrete products can be manufactured with recycled materials. Check with Basalite for recycled content product options.</td>
</tr>
<tr>
<td>Materials &amp; Resources</td>
<td>MR Credit 5.1</td>
<td>1</td>
<td>Most concrete products are made by local production facilities using sand, aggregates, water and cement from local sources. Basalite can confirm the percentage of local origin of its products.</td>
</tr>
</tbody>
</table>

PRODUCT FEATURES

- Multiple face styles and colors.
- Easy construction of curves and corners (specialty corner units are available).
- Two setback positions offer choice of near vertical or battered wall construction.
- Pin connection system for easy alignment and proper geogrid installation.
- Open cores allow core-fill interlock for greater drainage, shear resistance and geogrid connection strength.
- Matching cap units are available to finish the wall beautifully.

Above: Geowall™ Straight Bevel in Custom Color
**SPECIFICATIONS**

Blocks are made to a compressive strength of 4,000 psi, which meets the specifications for WSDOT and ODOT projects. Reference Standard: ASTM 1372. Products conforming to AASHTO specification requirements are available upon request. Check with your local manufacturer.

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**GEOWALL™ PRO**

The GEOWALL™ Pro Unit is a great choice for building gravity or reinforced retaining wall applications that do not require the GEOWALL™ Max. The GEOWALL™ Pro is easy to handle due to its light weight and lifting handle tail design.

- **Face:** Tri-Plane
- **Weight:** 75 lbs
- **Face area/unit:** 1 sf
- **Units/pallet:** 45

- **Face:** Straight
- **Weight:** 81 lbs
- **Face area/unit:** 1 sf
- **Units/pallet:** 45

- **Face:** Straight Bevel
- **Weight:** 81 lbs
- **Face area/unit:** 1 sf
- **Units/pallet:** 45

---

**GEOWALL™ MAX II**

The GEOWALL™ Max II Unit offers 18” embedment length for stability during construction and better performance for gravity walls.

- **Face:** Tri-Plane
- **Weight:** 113 lbs
- **Face area/unit:** 1 sf
- **Units/pallet:** 30

- **Face:** Straight
- **Weight:** 122 lbs
- **Face area/unit:** 1 sf
- **Units/pallet:** 30

- **Face:** Ashlar
- **Weight:** 70 lbs
- **Face area/unit:** 1 sf
- **Units/pallet:** 36
  (18 Ashlar Face & 18 Straight Face)

---

**GEOWALL™ POSITIVE CONNECTION SYSTEMS**

GEOWALL™ Pro and Max units use pultruded fiberglass pins for connection and alignment. The pins control the amount of setback in the wall and attach the geogrid to the blocks.

- **Dimensions:** 5-1/4” x 1/2”
- **Flexural Strength:** Minimum 125,000 psi
- **Short Beam Shear Strength:** Minimum 6400 psi
- **Reference Standards:** ASTM D-4475, ASTM D-4476

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**GEOWALL™ MAX**

The GEOWALL™ Max Unit is for taller gravity and reinforced wall structures. Its 21.5 inch embedment length is stable during construction, encouraging greater productivity. A superb choice for a durable, structurally sound wall system for critical applications.

- **Face:** Tri-Plane
- **Weight:** 103 lbs
- **Face area/unit:** 1 sf
- **Units/pallet:** 30

- **Face:** Straight
- **Weight:** 103 lbs
- **Face area/unit:** 1 sf
- **Units/pallet:** 30

---

**ENCORE**

The Encore Unit offers ease of construction and simplicity due to its pinless design. Units are aligned via tabs. Encore is easy to handle due to its light weight and lifting handle tail design.

- **Face:** Tri-Plane
- **Weight:** 90 lbs
- **Face area/unit:** 1 sf
- **Units/pallet:** 45

- **Face:** Straight
- **Weight:** 90 lbs
- **Face area/unit:** 1 sf
- **Units/pallet:** 45

- **Face:** Tri-Plane
- **Weight:** 75 lbs
- **Face area/unit:** 1 sf
- **Units/pallet:** 36
  (18 Ashlar Face & 18 Straight Face)

---

**TENSAR® MESA®**

The Tensar® Mesa® Standard Unit from Tensar International offers a mechanical connection to geogrids that is approved for highway walls by many jurisdictions.

- **Face:** Tri-Plane
- **Weight:** 75 lbs
- **Face area/unit:** 1 sf
- **Units/pallet:** 36

- **Face:** Straight
- **Weight:** 75 lbs
- **Face area/unit:** 1 sf
- **Units/pallet:** 36

- **Face:** Tri-Plane
- **Weight:** 75 lbs
- **Face area/unit:** 1 sf
- **Units/pallet:** 36

---

**MESA CONNECTORS**

Unique, locking connectors that are designed to mechanically connect the Tensar Geogrid to the Mesa Units. Also, allows walls to be built with a near vertical or 5/8” setback.
AESTHETIC OPTIONS

STRAIGHT FACE - CLASSIC APPEARANCE

TRI-PLANE SPLIT - DRAMATIC SHADOWS

STRAIGHT BEVEL - UNDERSTATED ELEGANCE

ASHLAR - RANDOM STONE APPEARANCE*

COLORS

Tan (Stock)

Natural (Stock)

Pacifica (Special Order)

Carmel (Special Order)

Sienna (Special Order)

*Available in Geowall Pro

*Available in Encore only

NOTE: Colors shown in this brochure may vary from actual product colors. We recommend that color selection is made from actual product samples.

Colors and face styles shown are available in the Washington markets and availability will vary elsewhere. Contact your local manufacturer for availability.
CHOOSING THE RIGHT WALL SYSTEM FOR YOUR PROJECT

Basalite Wall Systems provide solutions for a variety of wall applications, ranging from simple landscaping projects to critical tall structures. GEOWALL™ units are made of high-strength concrete and use pultruded fiberglass pins for alignment and inter-unit connection. GEOWALL™ is designed to optimize construction of both gravity walls and mechanically stabilized wall structures using geogrid reinforcement. GEOWALL™ units feature two setback options (either near vertical or 1 inch setback per unit) for design and construction flexibility. The Tensar® Mesa® Standard Unit is an excellent choice for reinforced walls where a positive mechanical connection is specified.

Here are some general guidelines for selecting which product may be the best choice for your project:

<table>
<thead>
<tr>
<th>Product</th>
<th>Maximum Height*</th>
<th>Key Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOWALL™ Max</td>
<td>Gravity Walls to approximately 6'; Reinforced walls to 40’ or more in height</td>
<td>Allows greater spacing between geogrid layers. More stable during construction - improves installation productivity. Best choice for taller gravity walls. Available with Straight and Tri-Plane faces.</td>
</tr>
<tr>
<td>8”h x 18”w x 21.5”d</td>
<td>with proper design.</td>
<td></td>
</tr>
<tr>
<td>GEOWALL™ Max II</td>
<td>Gravity Walls to approximately 3.5’; Reinforced walls to 35’ or more in height</td>
<td>Cost effective for many walls. Lighter weight and tail design make handling easier. Versatile all-around performance. Available with Straight, Tri-Plane, and Straight Bevel face styles.</td>
</tr>
<tr>
<td>8”h x 18”w x 18”d</td>
<td>with proper design.</td>
<td></td>
</tr>
<tr>
<td>GEOWALL Max Pro</td>
<td>Gravity Walls to approximately 3.5’; Reinforced walls to 35’ or more in height</td>
<td>Mechanical connection to geogrids has been approved for use by many public authorities. Tri-Plane and Straight face styles.</td>
</tr>
<tr>
<td>8”h x 18”w x 12”d</td>
<td>with proper design.</td>
<td></td>
</tr>
<tr>
<td>MESA® Standard</td>
<td>Gravity Walls to approximately 3.5’; Reinforced walls to 35’ or more in height</td>
<td>Simple and fast construction using alignment tabs. Available with Ashlar face. Great choice for larger landscaping walls.</td>
</tr>
<tr>
<td>8”h x 18”w x 11”d</td>
<td>with proper design.</td>
<td></td>
</tr>
</tbody>
</table>

* Consult a qualified engineer regarding the maximum heights for your wall and the design requirements that are required for your particular soil conditions, loadings and wall geometry.

Above: Encore Ashlar in Tan
Gravity Walls
A gravity wall relies on the mass of the retaining wall units and their core fill to resist the pressure from the retained soil. The maximum height of a gravity wall depends on the depth, weight and setback of the retaining wall units, the type of soil retained and any additional surcharges such as road traffic or slopes above the wall. Typical maximum gravity wall heights range from about 3.5 ft. with the GEOWALL™ Pro Unit, to up to about 6 ft. with the GEOWALL™ Max unit, depending on the set back, the type of soils and whether the wall is subject to any surcharges. The Max unit is a great choice for taller gravity wall structures, due to its greater embedment depth.

Reinforced Walls
A reinforced wall typically uses geogrid to stabilize the soils behind the retaining wall units. This stabilized soil mass resists earth pressures. This type of wall is often referred to as a Mechanically Stabilized Earth (MSE) structure. The addition of geogrid reinforcement connects the entire reinforced soil mass to the retaining wall units. The reinforced soil zone and facing units perform as a mass “gravity wall”, restricting movement of the retained soil zone. MSE retaining walls allow construction of taller, critical structures.

Design Methods
Many gravity walls and all reinforced retaining walls should have engineered plans (this is required by Code in most cases). Various standardized design methods are used to design segmental walls. In the private sector, designers use the National Concrete Masonry Association (NCMA) Design Method for Segmental Retaining Walls. In the public sector, designers use the American Association of State Highway Transportation Officials (AASHTO) design methods. MESA may be designed using the LRFD design methodology for public projects. A wall designer needs the following information to begin a wall design:

- the soil strength of the wall foundation soils and retained earth
- the proposed wall geometry (height, degree of batter, tiers)
- Any surcharge conditions on the proposed structure.

Based on these factors, the design will determine whether geogrid reinforcement is required, and if so, the strength of the geogrids to be used, and the number, length and placement of geogrid layers.

Basalite GEOWALL™ Design Software
Basalite has secured extensive third-party testing of our retaining wall products. The testing provides data necessary to support design using accepted design methodologies. Reports containing this data are available to designers and can be imported into relevant design programs. Basalite offers both standard engineering for typical non-critical structures and GEOWALL™ Design Software that will assist engineers in designing our walls to industry standards. GEOWALL™ Design Software also provides materials take-offs and CAD layouts of the proposed wall design. Please contact your Basalite representative if you need assistance in locating design resources.
Visit Us Online

For more information about Basalite paving stones, retaining walls, accessories, patterns or installation instructions, visit us online at basalite.com.

Offered by:

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