Decorative Landscape Walls

Installation Guide

Angelus Since 1946 | PAVING STONES

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Introduction - How to Use this Guide

There are 5 distinct products shown in this guide; the Stonewall® II, the 12” Planter Wall, the 16” Planter Wall, the Tango™ Project Block and the Rustic Wall Stone. Using each product will require knowledge of the advantages and limitations of each system.

The Stonewall® II system is designed for use in free standing walls, bench walls and earth retaining walls. It can be constructed as a gravity wall for heights up to 3 feet tall, assuming level soil at the base of the wall and top of the wall. A qualified professional should be consulted where special loadings or different geometries are used, where heights are greater than 3 feet, or where recommended in this guide.

The 12” and 16” Planter Wall units can be used for low retaining walls, planters, tree rings and lawn edgers. The Planter Wall is limited to 2’ high for the 12” Planter Wall and 3’ high for the 16” Planter Wall, assuming level soil at the base of the wall and top of the wall.

The Tango™ Project Block is remarkably versatile and easy to install. It can be used to create columns, seat walls, freestanding walls up to 2’, battered retaining walls up to 2’, vertical retaining walls up to 1’4”, planters and edgers.

The Rustic Wall Stone is strictly a decorative unit and not intended for use as a retaining wall. It is used for free standing walls up to 2’ and columns up to 3’. It can also be used for barbecues, bar tables, lawn edgers, seating walls, mailboxes and columns.

This manual is an overview of the design and construction methods. The site conditions may vary from the assumptions made in this document. Actual design should always be performed or reviewed by a qualified professional engineer. The design should conform to the local building codes.

Before Starting - Tools

Advance planning, preparation and layout are important to the success of your project. The list below will help in establishing project goals.

1. Review all plans and diagrams to confirm the location of property lines, wall locations, wall length and wall height.

2. Understand the soils; refer to the soils and engineering reports to verify that the soils used for construction are the same soils required by the engineer designing the wall. Soils with organics, roots, or trash are not suitable backfill materials. Sandy soils or gravelly soils provide good drainage and should be used for wall backfill soils.

3. Confirm the location of all underground utilities. You may call Underground Service Alert at 811 or 1-800-227-2600.

4. Verify that all necessary and proper building permits are obtained.

5. Check all materials delivered to the job site, verifying proper block type and color. If required, confirm that the geosynthetic (geogrid) is from the correct manufacturer, and is the correct strength.

6. Be sure to use the correct tools for the job:

- **Hammer-Rubber Mallet**
- **4 foot Level**
- **Torpedo Level**
- **Shovel**
- **Vibratory Plate Compactor**
- **Hand Tamper**
- **String-Line**
- **Broom**
- **Tape Measure**
- **Caulking Gun**
- **Layout/Survey Stakes**
- **Safety Protective Equipment- Ear Plugs, Dust Mask, Protective Boots, Gloves, Glasses/Goggles**
  Optional Tools: Circular saw, masonry blade, respirator

7. Always wear proper protective equipment and operate the tools as prescribed by the manufacturer.

Retaining Wall Basics

Segmental Retaining Walls are classified in two ways: Conventional or Gravity, and Soil Reinforced.

Conventional or Gravity Walls

A conventional or gravity wall does not require soil reinforcement; rather it relies on the weight of the block, batter, setback and proper soils to resist the earth pressure applied. The primary advantage of a gravity wall is that the wall structure is narrow, allowing minimal excavation. The maximum height of a gravity wall is generally 2 to 3 times the block depth (length from front to back). Taller walls, should be designed by a qualified professional engineer and will require reinforcement as shown below.

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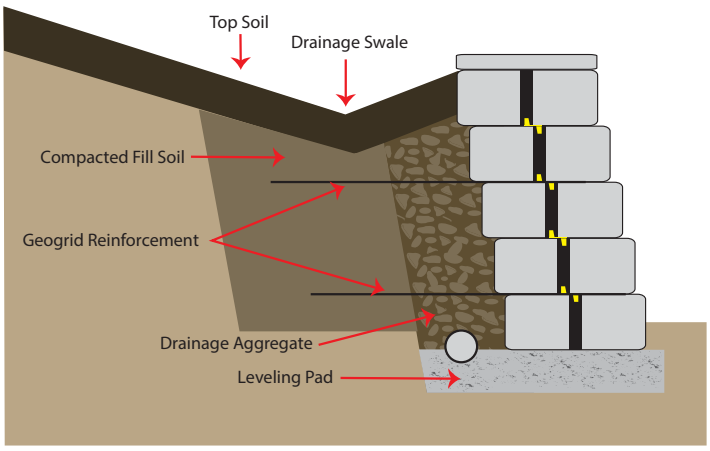
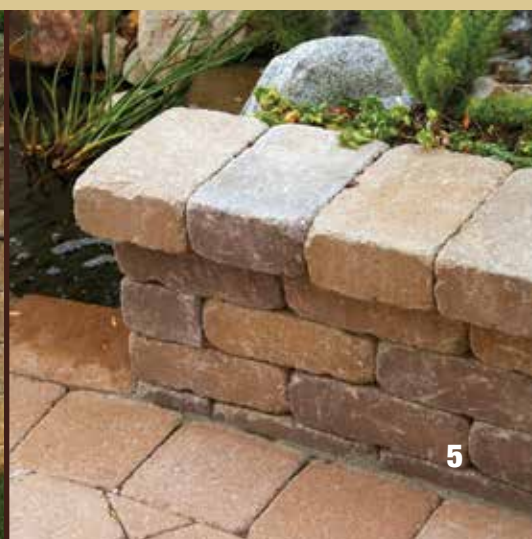
Soil Reinforced Walls

A soil reinforced, or mechanically stabilized embankment (MSE) wall is a durable and cost-effective method of constructing taller walls. Soil reinforced walls typically require increased work area behind the wall, have soils capable of performing properly with reinforcement, and are designed by a qualified professional engineer. A soil reinforced wall stabilizes the block face with the soil mass behind the block by integrating layers of geosynthetic reinforcement. The layers of reinforcement connect to the block faces and extend horizontally into the soil; the large stabilized soil mass created is referred to as the reinforced zone. The greater the reinforced soil mass, the larger or taller the soil embankment that can be retained or held back. The minimum length of soil reinforcement is 60% of the wall height, and may be larger with sloping backfills, toe slopes below the wall, or poor soil conditions.





StoneWall® II - Features and Benefits

The StoneWall® II Retaining Wall system provides ease in creating elegant, naturally beautiful, and durable walls reminiscent of handcrafted stone walls. With a product and system capable of a variety of design and build options, it is possible to create a backyard retreat that will be the envy of the neighborhood.

StoneWall® II is shipped in quantities of 17 and 33 square feet of wall face per pallet. The designs shown within were created to efficiently utilize the units in creating planter units, curved and concave retaining walls, freestanding walls, seat walls, fire pits, barbecues and columns. Contact the landscape sales professional at your local Angelus Block distributor to calculate the number of pallets and caps you will need for your project, or visit our website at www.angeluspavingstones.com

Square Sided

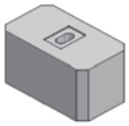
Units are textured on all four sides. They should be stacked adjacent each other and are used separately for corners and columns.

12w x 10.5d x 6h
6 Per Pallet
(52 lbs. Per Unit)

A

9w x 10.5d x 6h
12 Per Pallet
(40 lbs. Per Unit)

B



6w x 10.5d x 6h
12 Per Pallet
(27 lbs. Per Unit)

C

Transition

Units are textured on faces only. Stack them between the Trapezoid and Square Sided units.

9/10w x 10.5d x 6h
12 Per Pallet
(42 lbs. Per Unit)

D

Trapezoid

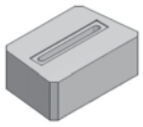
Units are textured on faces only. They should be stacked adjacent each other and are used as the primary wall units.

4/6w x 10.5d x 6h
12 Per Pallet
(30 lbs. Per Unit)

E

10/12w x 10.5d x 6h
12 Per Pallet
(51 lbs. Per Unit)

F



14/16w x 10.5d x 6h
12 Per Pallet
(69 lbs. Per Unit)

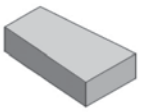
G

Caps

Stack caps in sequence, reverse faces and abut sidewalls.
Note: H cap is textured on all four sides.

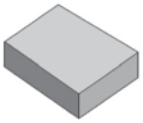
12.5w x 12.5d x 3h
18 Per Pallet
(37 lbs. Per Unit)

H



5/7w x 12.5d x 3h
18 Per Pallet
(17 lbs. Per Unit)

I



9/10w x 12.5d x 3h
36 Per Pallet
(28 lbs. Per Unit)

J

StoneWall® II Installation instructions

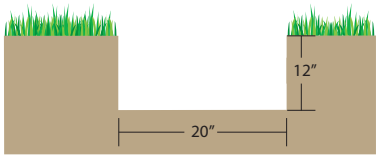
Successful installation begins with proper site evaluation and planning. Site soil, groundwater, horizontal/vertical layout, structural design, wall loadings, observation, testing, and construction assurance are all vital to a successful wall project. If your wall is taller than three feet, has a steep slope on top or in front, will support heavy foot traffic or vehicle loads then consult a professional engineer before installation as part of project planning.

1. Lay out the wall

- Verify placement of the wall with the homeowner or project superintendent and when necessary utilize a qualified surveyor.

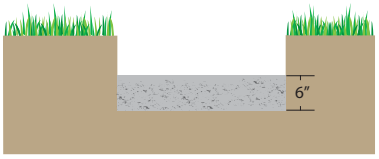
2. Excavation

- Excavate a trench for the leveling pad to the lines and grades shown on the approved plans.
- Ensure trench is at least 12 inches wider than the depth of the block and 6 inches deeper than the height of the block.
- If the grade along the wall changes elevation, then step the trench up in equal block height increments to match the change of grade. Always start at the lowest point and work upwards. (See stonewall stepped footing. Page 11)



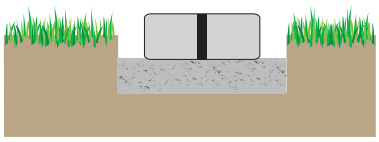
3. Leveling Pad

- Place a 3/4″ minus crushed aggregate into the excavated trench; assure the aggregate is at least 6″ deep, and extends a minimum of 6″ beyond both the front and back of the block.
- After placing the aggregate into the excavated trench, level the material and compact with at least 3 passes of vibratory compaction equipment.



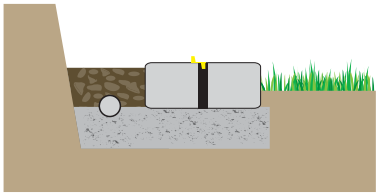
4. Base Course

- The first course is buried below grade and is the most important course in the wall.
- Place a level string line along the length of the wall at the front and back top edge of the desired location of the blocks. Assure that the string is level and at the desired height of the first course of blocks.
- Begin installing the units at the lowest point in the wall. Work upwards by placing the StoneWall® II blocks side by side and in full contact with the leveling pad.
- As the blocks are installed, use a torpedo level to ensure that the blocks are level front to back and side to side. Utilize a 4 foot level to assure that a group of blocks are level side to side.



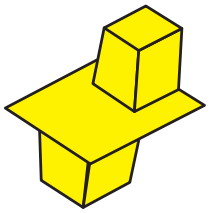
5. Wall Drainage

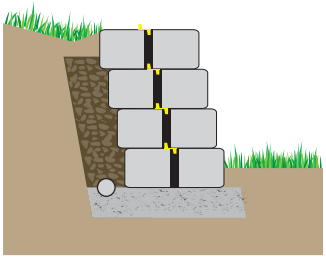
- After stacking the base course, place a 4 inch (or larger) perforated drainpipe directly behind the wall. Place the pipe so it drains to an area outside of the wall that is located at lowest side or face of the wall. Confirm that water in the pipe empties into a storm drain or to a collection area below the base of the wall.
- On long walls ensure that the drainpipe extends through the face of the wall every 50 feet and at both ends of the wall.



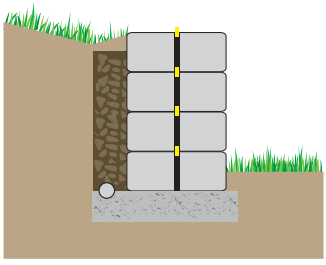
6. Placing the 3 Way Alignment Plug (3WAP)

- After stacking each course of StoneWall® II place a 3WAP into the center core of every block (the 4/6 unit is the only unit that does not receive a 3WAP). Be sure the "Top" label on the plug points up and that the flange of the plug rests within the recess that surrounds the center core of the blocks. Wall batter is established by the orientation of the 3WAP within the center core.

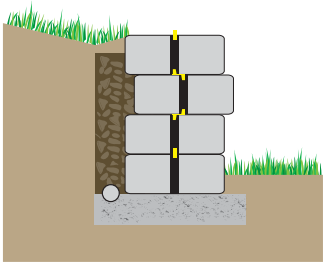




Set Back 1/2" per course: Place the upper plug body toward the back of the block.



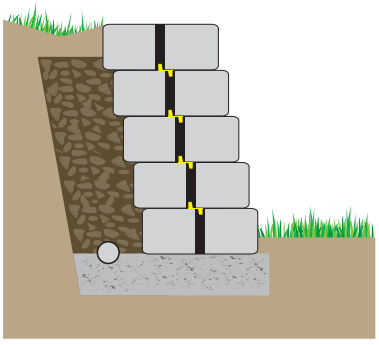
Vertical: Center the upper plug body over the core



Reveal 1/2": Place the upper plug body toward the front face of the block. Use Reveal only occasionally to highlight an individual unit

7. Stacking the Wall and Compacting Soil

- Once the base course, the 3WAP's and the drainage pipe have been installed, place a clean and angular unit fill (3/4" aggregate) between the blocks and 12 inches behind them.
- Place native soil as backfill behind the unit fill and compact the soil in 6 inch lifts.
- When constructing and compacting the wall, ensure that heavy equipment remains at least 3 feet away from the back of the wall.
- After the soil backfill is compacted sweep all debris from the top of the blocks and place the 3WAP's into the center cores of the block.
- Place the next course of block onto the course below and over the 3WAP's.
- Maintain a running bond pattern; avoid placing blocks in a "stack bond" pattern which will create a structurally weak wall.
- Pull each block forward to engage the 3WAP's and to ensure proper setback, and confirm the blocks are level side to side and front to back.
- Repeat these construction steps up to the top of the wall.

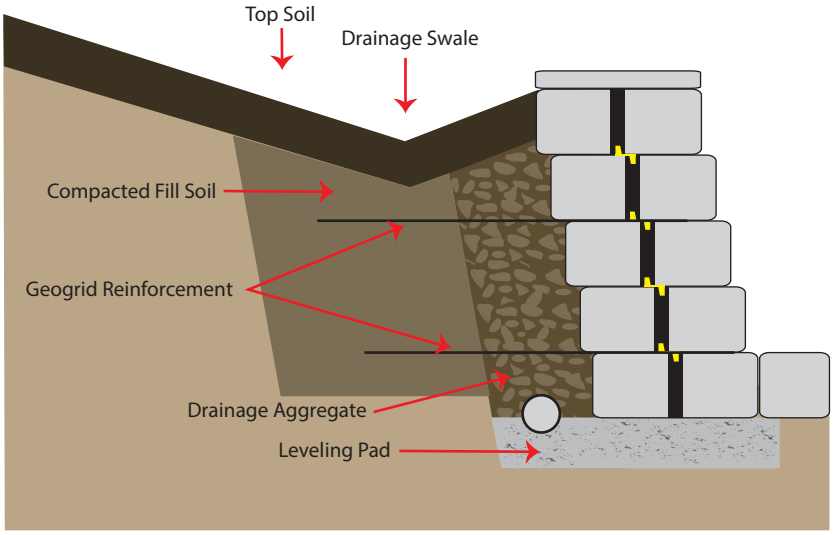


8. Geogrid Reinforcement Installation

If utilizing geogrid reinforcement with the Stonewall® II Blocks follow the specifications and installation steps as outlined by a professional engineer.

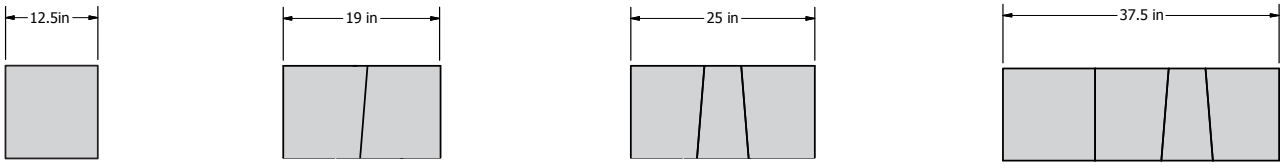
Geogrid reinforcement is required when wall heights are greater than what a gravity wall can attain. Consult a qualified professional engineer for an approved design when geogrid reinforcement is required. The final approved design must be followed exactly by the installation contractor; any changes in the installation must be reviewed and authorized by the engineer prior to construction.

- Before starting the project, acquire a set of approved construction plans. Ensure that the plans are complete and the design conforms to the local building codes. Contact the design engineer for any clarification before construction.
- Review the plans, evaluate the placement of geogrid layers, and be sure the lengths and strengths of the geogrid match the specified design.
- Cut the geogrid to length as noted on the plans.
- Ensure that the specified strength direction of the geogrid is oriented correctly and is perpendicular to the wall.
- Sweep the top of the blocks of any debris, set the geogrid 1" from the face of the block, placing it over the 3WAP alignment plugs. Do not overlap the geogrid courses.
- Pull the geogrid towards the back of the reinforced soil zone until it is taut; secure it with stakes, staples, or U-nails.
- Install the next course of blocks, pulling blocks forward to engage the 3WAP and securing the geogrid reinforcement between the two courses of block.
- Place the unit fill between the blocks and 12 inches behind them.
- Place the native soil backfill in 6" vertical lifts, confirming that the material is placed to the end of the reinforced zone.
- Compact the backfill material to 95% standard proctor.
- Keep heavy equipment 3 feet away from the face of the block; do not drive on the geogrid until a minimum of 6 inches of material has been placed over it.
- Avoid turning vehicles wheels directly upon the geogrid as sudden braking and sharp turns will move and or damage the geogrid. Consult geogrid reinforcement manufacturer recommendations for any additional information.

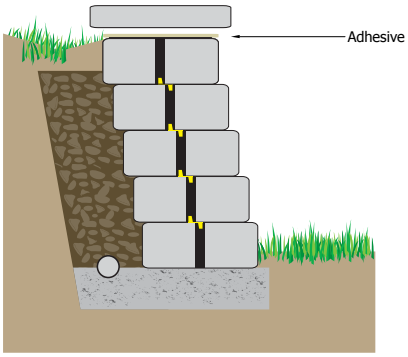


9. Capping the StoneWall® II

There are three Stonewall® II cap shapes - Square, Transition and Trapezoid. The square can be used in conjunction with the trapezoid and transition or separately on columns. The trapezoid and transition are used to form straight walls or can be used on convex and concave walls.



- Always cap a wall by starting from the lowest point.
- Sweep all debris from the top course of the StoneWall® II units.
- Lay out all the caps onto the wall prior to adhering them to the blocks.
- Place the caps either vertically aligned with the wall face, or with a slight 1”-2” overhang, creating a shadow effect.
- Make sure the blocks are completely dry and free of loose dirt. Place a bead of concrete construction adhesive onto the top course of block at the front and back of the block and along the entire length of the wall.
- Place the caps onto the adhesive and into the desired position



10. Final Grade

- It is important to minimize the infiltration of water into the backfill soil located behind the wall, especially when geogrid reinforcement is utilized.
- The reinforced zone and backfill should be capped with a low permeable material. Properly constructed, this process will minimize the infiltration of water into the wall zone.
- Slope the soil away from the wall face and reinforced zone, directing it toward the ends of the wall.

11. Finishing the Project

- Sweep the top of the caps and clean up the construction area of debris.
- Notify the project superintendent or homeowner that the project is ready for final inspection.

Special Applications

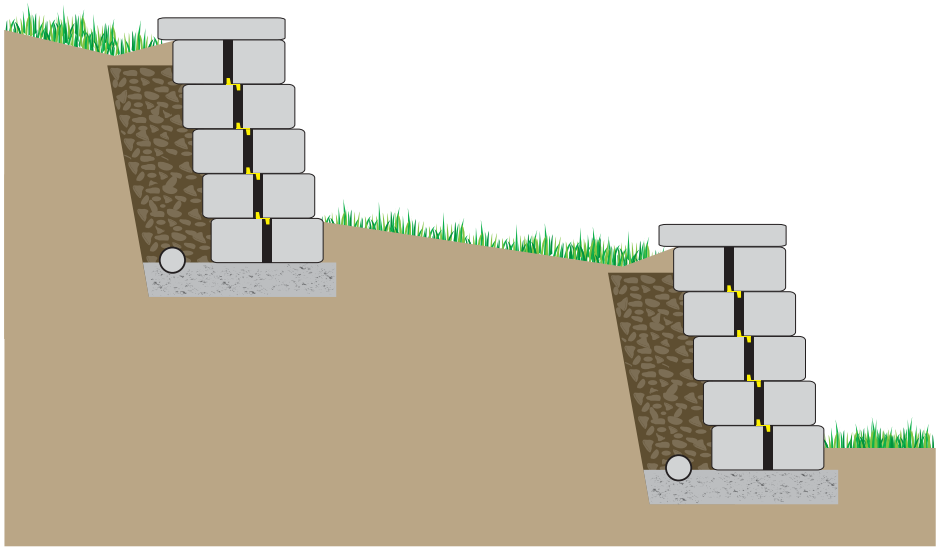
Parapets

- A Parapet is a wall section rising above grade and stacked upon the retaining wall.
- A Parapet is constructed by continuing the block courses above grade rather than terminating at the top of the retaining wall with a cap block.
- Parapet heights are typically 27”, (4 courses plus a cap.)
- Parapets serve as a barrier or bench.
- Once the desired height of the Parapet is reached, place a cap onto the top course.

Terraced StoneWall® II Installation

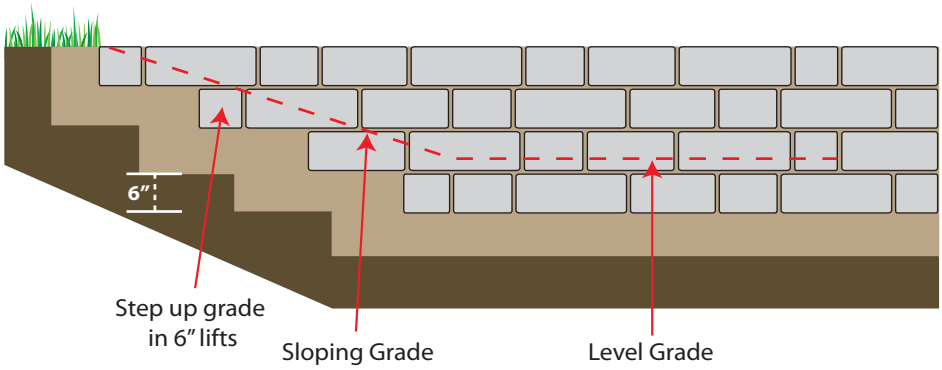
Independent Terraced Walls - When an upper wall does not place a surcharge load onto a lower wall, the walls are considered to be independent terraced walls. For walls to be independent of each other they must be built with a setback to height ratio of 2H:1V or greater. This means the upper wall must be located behind the lower wall by a minimum distance of twice the height of the lower wall. For proper drainage, it is important that the upper wall's drain pipe does not outlet onto the lower wall.

Dependent Terraced Walls - When the upper wall does place a surcharge on the lower wall, the front and back walls are "dependent terraced walls." For walls to be dependent upon each other they must be built with a setback to height ratio less than 2H:1V. This means that the upper wall is located behind the lower wall by a distance less than twice the height of the lower wall. In this case it is important to seek out the help of a qualified professional engineer so that a detailed engineering analysis includes a global stability analysis.



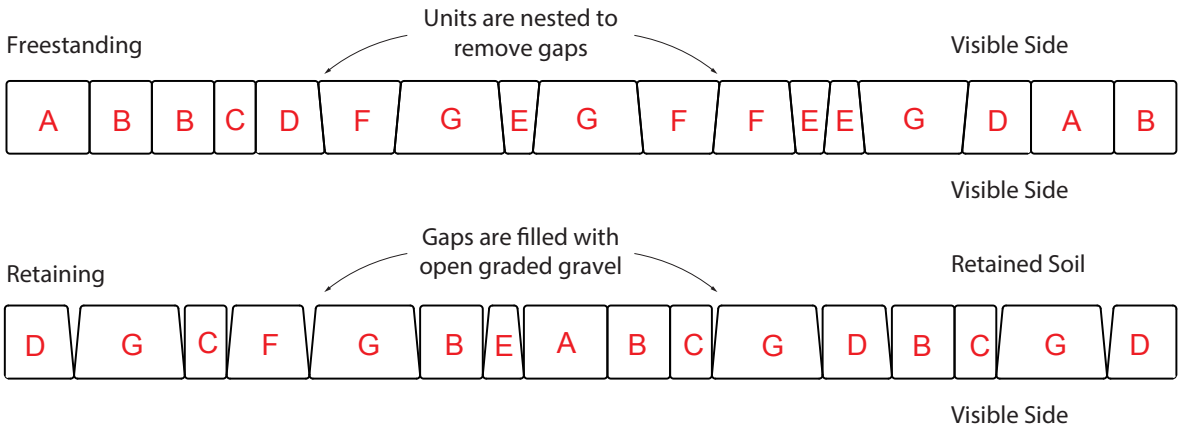
StoneWall® II Stepped Footing

To create a stepped footing, begin at the lowest elevation and build steps in the leveling pad matching the 6" height of the Stonewall® II units. Make sure that there is a minimum of one unit of base course buried below grade. Whether you use crushed base material or a concrete base, it is important to make sure that the level of the steps in the footing match the height of the Stonewall® II units.



StoneWall® II Freestanding vs. Retaining

- Determine if you will be building a freestanding wall (visible on both sides) or a retaining wall (visible on just 1 side). Building a freestanding wall will net in less square footage from the pallet due to units being nested.



NOTE: Diagram shown is for demonstration of nested units vs. gapped units and is not an exact pattern.

StoneWall® II Square and Radius Corners

- Determine if you will be building a square or radius corner. It is best to remove the units required to build your option from the pallet and set them aside until needed.

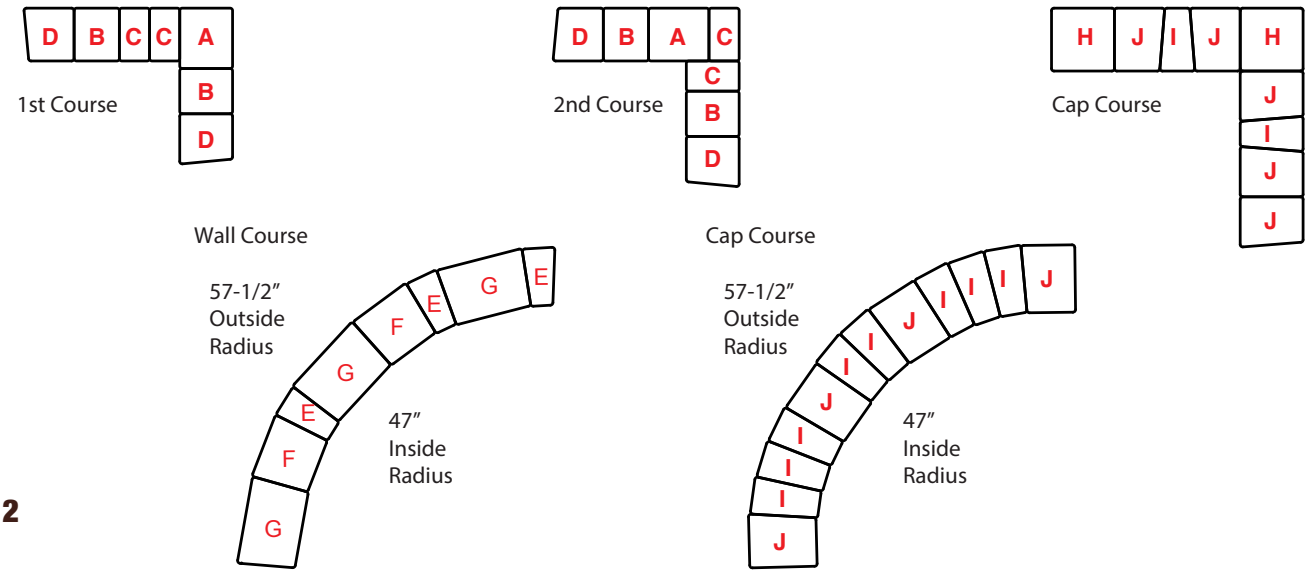
  NOTE: Because the Stonewall® II units are shipped mixed on a pallet, utilizing limited shapes may result in leftover/unused units.

- When building a square or radius corner it is best to have the 3WAP in the vertical position. If using the setback position keep in mind each additional course will decrease the corner or radius by 1/2" and may require cutting/grinding of units to accommodate the smaller dimension.

- Building a square corner uses the A, B, & C units. The use of the D unit is necessary when building a freestanding wall to continue nesting units together as the wall continues from the corner.

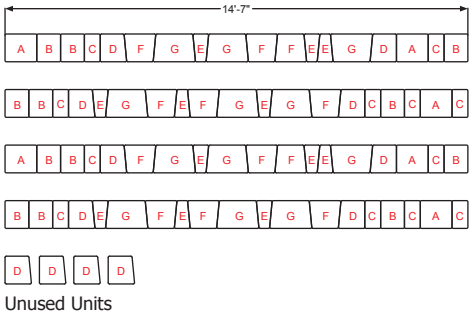
- Building a radius with the E, F & G units will construct an approximate 47" inside radius, a 57 ½" outside radius and makes a 90 degree turn. This is the best option for a freestanding wall as the units will nest together. Other radii can be achieved but may require cutting/grinding of units or might utilize too many of any one or more units.

- Capping options shown allow for minimal cutting/grinding of units in both the square and radius corner.

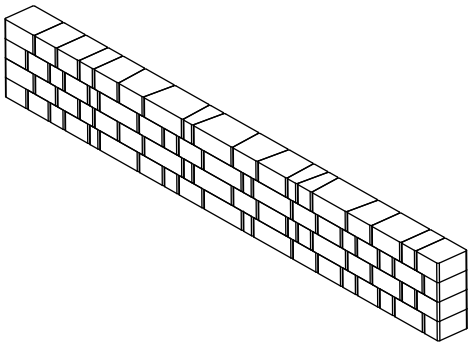


StoneWall® II Freestanding and Column Walls

- Building a 2′ tall freestanding wall panel with 1 pallet of material will result in a 175″ long wall and will have leftover/unused units.



Unused Units

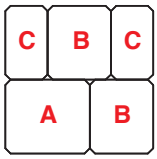


- Columns can be built with Stonewall® II units and like the square corner they use the A, B, and C units only to build a 21″ square column. A full pallet of Stonewall® II has the correct amount of A, B, and C units to build a 3′ tall column.

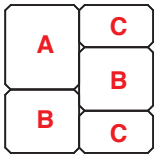
- Capping the column can be done using four H cap units or can be done with a precast cap or natural stone (Precast and/or Natural stone are not available from Angelus).

NOTE: The remaining wall units can be used to build a 2′ tall wall that is approximately 108″ long and will have leftover/unused units. Remaining cap units from a ½ pallet will cap this wall with leftover/unused cap units.

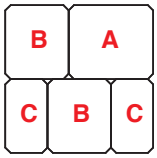
Column



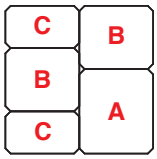
Course 1 & 5



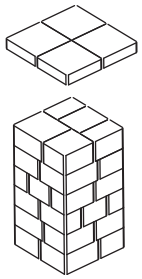
Course 2 & 6



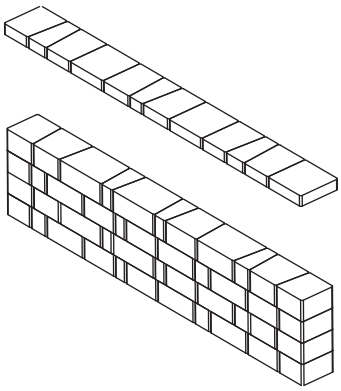
Course 3

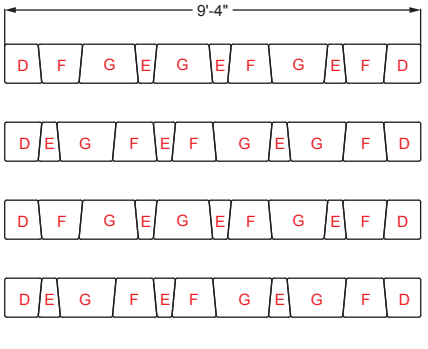


Course 4



Wall

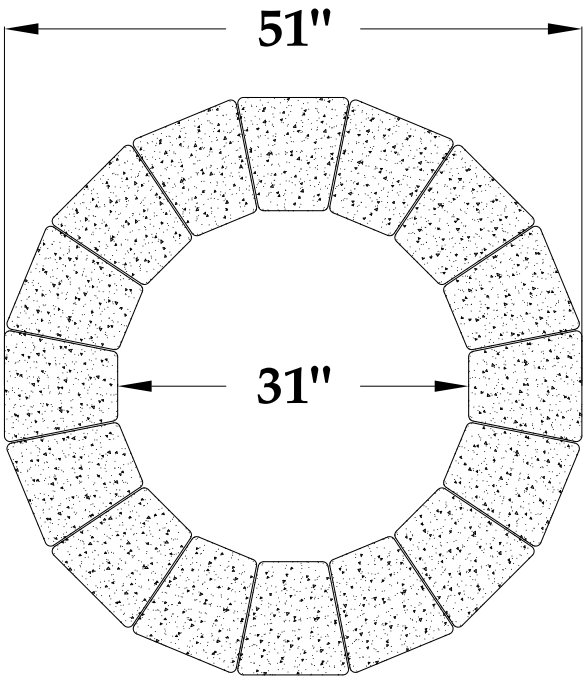


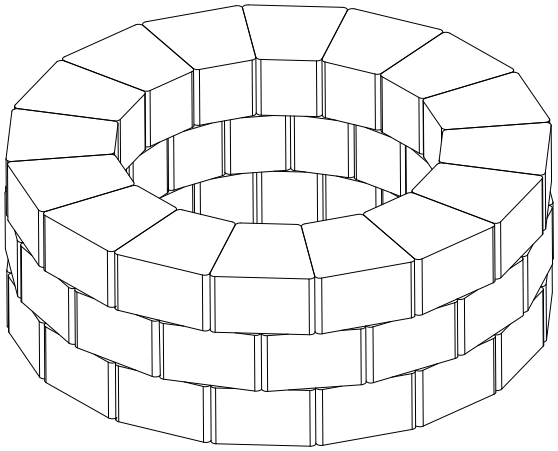


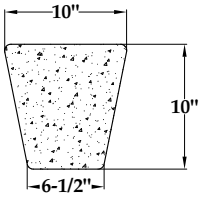
Unused Units

StoneWall® II Fire Ring

- Sold as a package of 48 pieces per pallet.
- Fire Ring will be 18" in height which is three courses. 16 units complete one course.
- Fire ring will have approx. 31" inside diameter an approx. 51" outside diameter.







A 31" Diameter Steel Ring is sold seperately for use when planning to burn wood.

StoneWall® II Standard Barbecue / L-Shaped Barbecue

Stonewall® II can also be used to easily build barbecues. The large block size creates a stable structure for the barbecue and countertop and the textured finish gives it a warm, natural appeal. Combined, those two elements make for a fast, attractive barbecue installation and an outdoor entertainment area that will last for years.

- Create a level surface as shown on page 7. Stonewall® II barbecue islands can also be installed over existing concrete or pavers provided the surface is level.

- The barbecue islands shown in the drawings on pages 16-17, can store a standard sized Propane gas bottle behind the access door. Another option is to install a natural gas line using proper permits and installation methods. A third option is to purchase a charcoal burning barbecue.

- Many barbecue manufacturers recommend vents be provided in barbecue islands for optimum performance. The small spaces that naturally occur between the Stonewall blocks are sufficient for proper airflow, so vents should not be necessary.

- The drawings on pages 16-17 show rough openings to fit a specific model barbecue and door (Fire Magic Aurora model A540i with a side door that fits a rough opening 30" wide by 15" high) without making any cuts of the Stonewall® II blocks. If you select a barbecue model with different dimensions, it will be necessary to use a concrete saw with a masonry blade and proper safety equipment to cut the blocks to the right size at the rough openings. Flanges on the barbecue and door assembly will cover the cut edge.

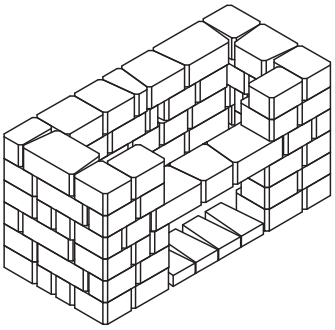
- Layout the Stonewall® II units precisely as indicated on pages 16-17 (using the letter legend on page 6) to make sure that the right size unit is placed in the exact position shown. Failure to do this will mean having to make cuts to make the units fit together properly. It is recommended that the blocks be dry stacked to make sure the layout is correct and that the barbecue unit and door fit properly, then disassembled and re-installed using concrete adhesive to permanently bond the blocks in place.

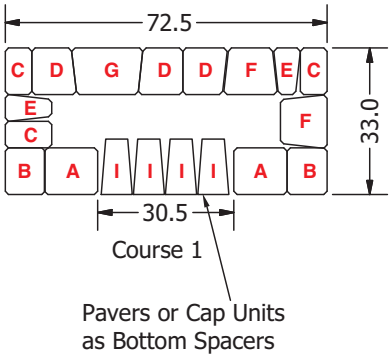
- The drawings on pages 16-17 indicate you should use the same countertop material at the base of the barbecue model (just above the fourth course of Stonewall® II) as well as around the working area of the barbecue. The countertop material can be any non-combustible material of your choosing and is not provided by Angelus Paving Stones.

StoneWall® II Standard Barbecue

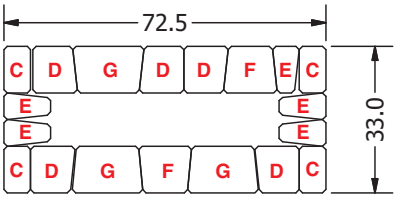
Material used:

1 1/2 - pallets of Stonewall II block
4 - pieces of Stonewall Cap
Concrete adhesive (approximately eight 10.2oz tubes)
Framing material (steel studs) to support the blocks over the access door (not provided)
Barbecue unit (not provided)
Barbecue door (not provided)
Countertop (not provided)

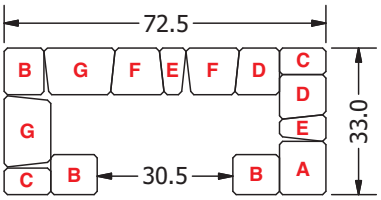




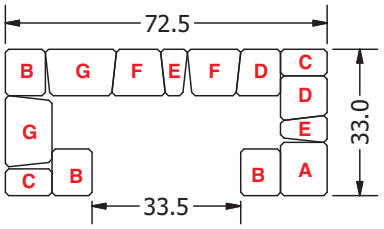
Course 1



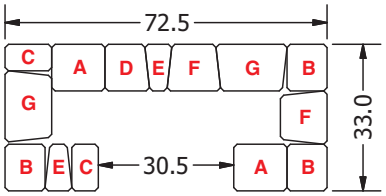
Course 4



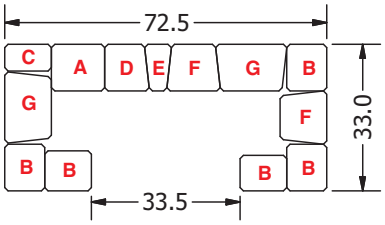
Course 2



Course 5



Course 3

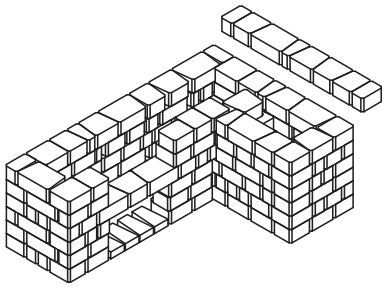


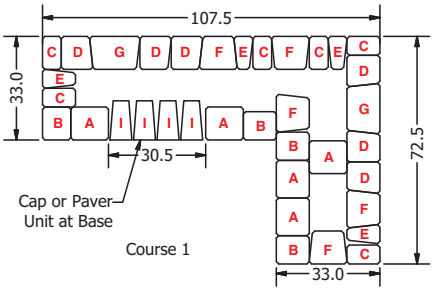
Course 6

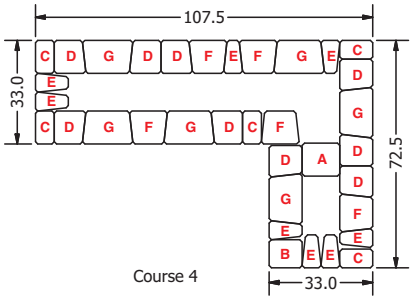
StoneWall® II L-Shaped Barbecue

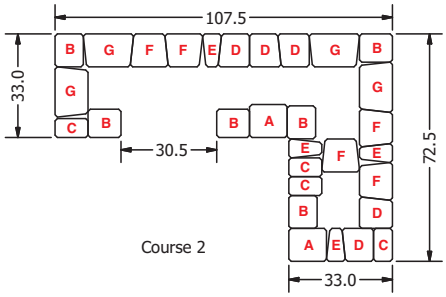
Material used:

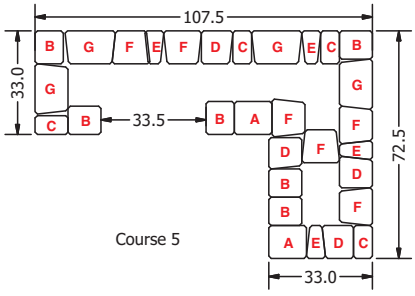
3 - pallets of Stonewall II block
4 - pieces of Stonewall Cap
Concrete adhesive (approximately fourteen 10.2oz tubes)
Framing material (steel studs) to support the blocks over the access door (not provided)
Barbecue unit (not provided by Angelus)
Barbecue door (not provided by Angelus)
Countertop (not provided by Angelus)

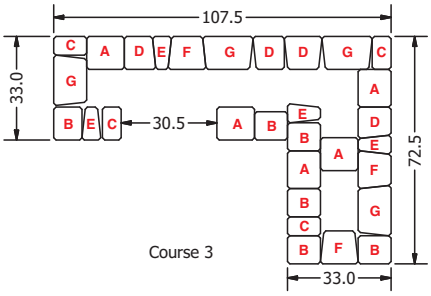


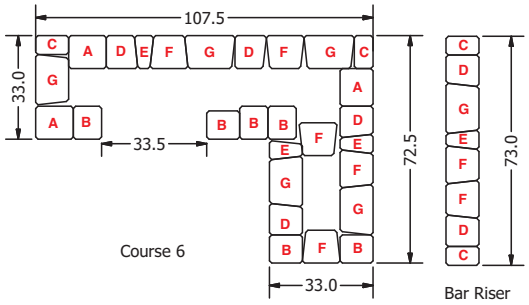












Angelus Rustic Wall Stone

- Unit dimensions: 4″ H x 8″W x 12″D.
- Each Rustic Wall Stone unit weighs 28 lbs making it fast and easy to install by yourself.
- The unit appears the same from any side. The uniform appearance means that it has many potential applications.

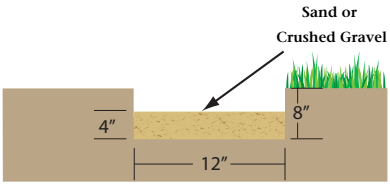
Use this guide for estimating the number of Angelus Rustic Wall Stone required.

	WALL LENGTH					
WALL HEIGHT*	10'	25'	40'	50'	100'	200
1'	40	100	160	200	400	800
2'	70	175	280	350	700	1400

Installation Steps

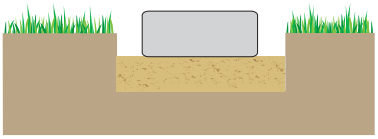
1. Prepare the Site

For freestanding walls up to a maximum 2' high, dig a shallow trench 8" deep and 16" wide. Compact and level the soil in the trench. Installing a geotextile fabric between the soil and the base rock can help prevent the soil from migrating into the base. Add 4" of crushed rock for the base. Then compact and level the base.



2. Set the Base Course

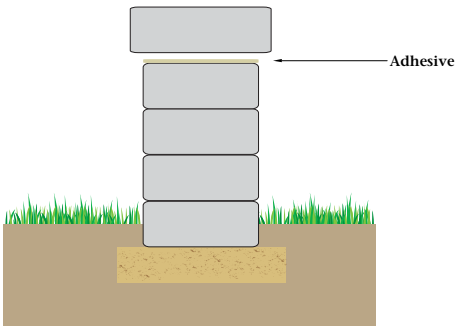
Place and level all units in the base course. Units should be level front to back and side to side. The base course should be level with finished grade. Using a stringline along the front of the units can keep the units running in a straight line during installation. Check to make sure the base course is straight and level before laying additional courses.



3. Additional Courses & Caps

Lay the next course of block in a running bond. Use a concrete adhesive to glue the units together. Lay each course completely before proceeding to the next course. Half block will need to be cut every other course at the ends of the wall to maintain the running bond. Block can be cut with a masonry saw or with a chisel and hammer.

Caps: You can use Rustic Wall Stones laid perpendicular to the wall to finish the wall. Apply concrete adhesive to secure the units to the rest of the wall.

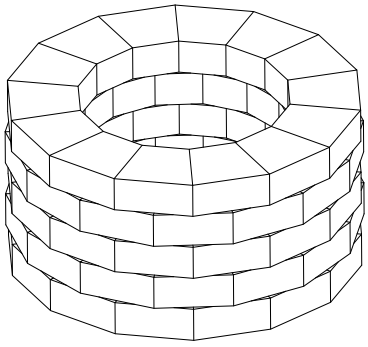


*Please note:
Rustic Wall Stones are decorative units and not meant for structural applications. Maximum height for free standing walls is 2'. Properly constructed columns may go up to 3' from the base. It is the installer's responsibility to determine the suitability of the product for the intended use.

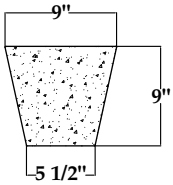
Rustic Wall Stone Fire Ring

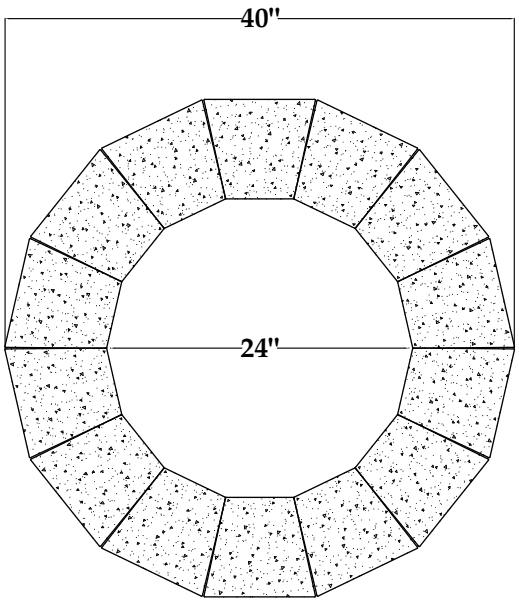
Material used:

- 70 - Rustic Wall Stone Pieces
- Fire Ring will be 20″ high which is five courses. 14 units complete one course.
- Fire ring will have approx. 24″ inside diameter and an approx. 40″ outside diameter.



A 24″ Diameter Steel Ring is sold seperately for use when planning to burn wood.





Angelus Rustic Wall Stone Standard Barbecue / L-Shape Barbecue

Rustic Wall Stone can also be used to easily build barbecues. The large block size creates a stable structure for the barbecue and countertop and the textured finish gives it a warm, natural appeal.

- The barbecue islands shown in the drawings on pages 20-21, can store a standard sized Propane gas bottle behind the access door. Another option is to install a natural gas line using proper permits and installation methods. A third option is to purchase a charcoal burning barbecue.

- Many barbecue manufacturers recommend vents be provided in barbecue islands for optimum performance. The small spaces that naturally occur between the Rustic Stone Wall blocks are sufficient for proper airflow, so vents should not be necessary.

- The drawings on pages 20-21 show rough openings to fit a specific model barbecue and door (Fire Magic Aurora model A540i with a side door that fits a rough opening 16″ wide by 24″ high). If you select a barbecue model with different dimensions, it will be necessary to make adjustments to the rough openings. The drawings show some units that are field cut to the fit the rough openings. Use a concrete saw with a masonry blade and proper safety equipment to cut the blocks to the right size at the rough openings. Flanges on the barbecue and door assembly will cover the cut edge. It will be necessary to use steel studs or a steel bar to support the blocks over the access door.

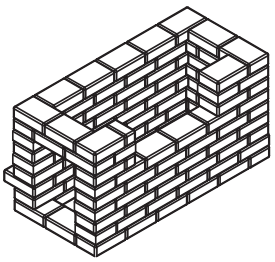
- It is recommended that the blocks be dry stacked to make sure the layout is correct and that the barbecue unit and door fit properly, then disassembled and re-installed using concrete adhesive to permanently bond the units in place. Two parallel 1/4″ beads of adhesive are recommended on every course.

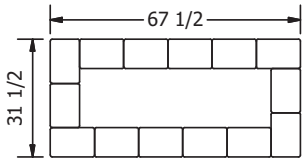
- The drawings indicate that you should use the same countertop material at the base of the barbecue model (just above the 6th course of Rustic Wall Stone) as well as around the working area of the barbecue. The countertop material can be any non-combustible material of your choosing and is not provided by Angelus Paving Stones.

Rustic Wall Stone Standard Barbecue

Material used:

120 - Rustic Wall Stone
Concrete adhesive (approximately ten tubes using two 1/4″ beads of glue per coarse)
Framing material (steel studs) to support the blocks over the access door (not provided)
Barbecue unit (not provided)
Barbecue door (not provided)
Countertop (not provided)





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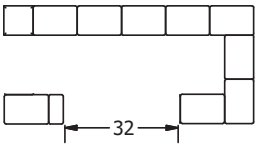

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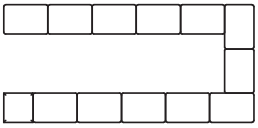
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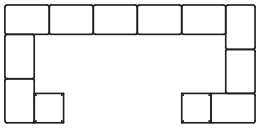
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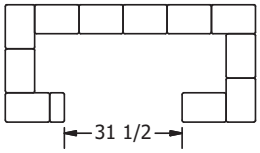

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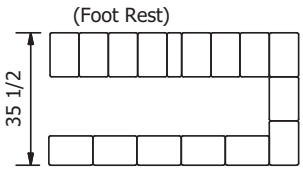

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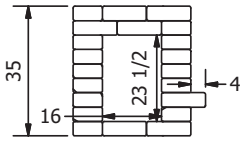
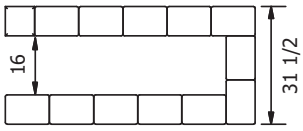


Storage Opening



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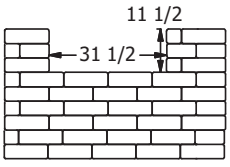
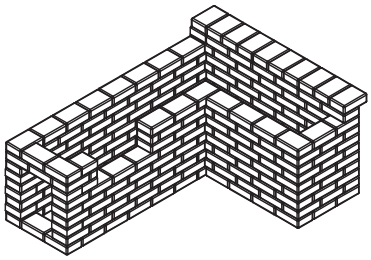


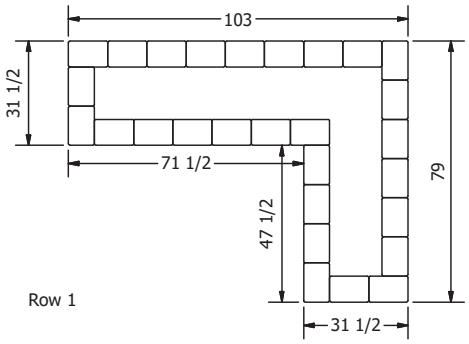
Grill Opening

Rustic Wall Stone L-Shaped Barbecue with Optional Bar Riser

Material used:

245 - Rustic Wall Stone (260 - for optional bar)
Concrete adhesive (approximately seventeen tubes using two 1/4" beads of glue per coarse)
Framing material (steel studs) to support the blocks over the access door (not provided)
Barbecue unit (not provided)
Barbecue door (not provided)
Countertop (not provided)





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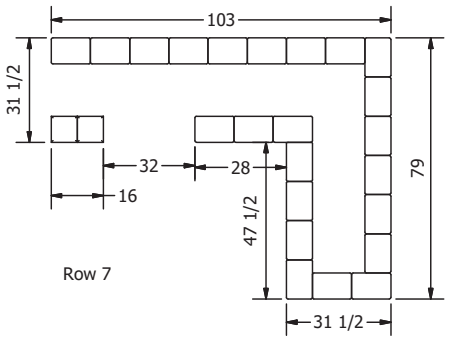

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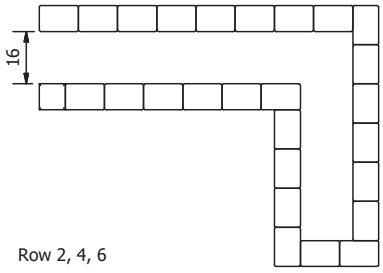

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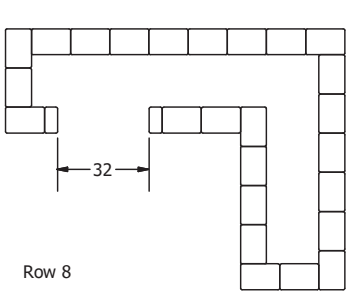

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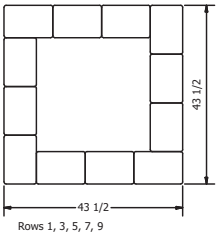

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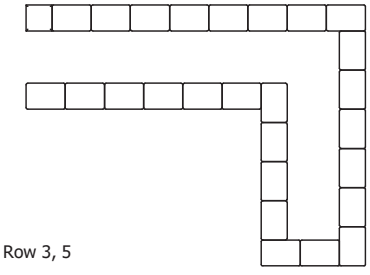
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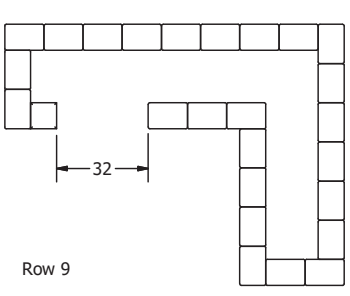
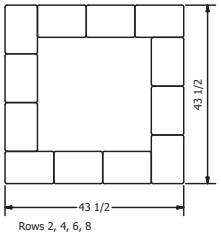


Row 9


Row 11

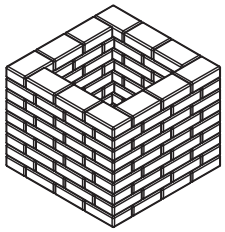


Rows 2, 4, 6, 8

Bar Table

Material used:

108 blocks of Rustic Wall Stone
Concrete adhesive (Approximately nine tubes using two 1/4" beads of glue per course)



12” Angelus Planter Wall for Retaining Walls - 2’ High

- Unit dimensions 12"L x 4"H x 9"W
- Each Angelus 12" Planter Wall unit weighs 28 lbs making it fast and easy to install yourself.
- Each unit has a face area of 1/3 square foot; 3 units equal 1 square foot face area.

Use this guide for estimating the number of Angelus 12" Planter Wall units required.

WALL HEIGHT*		WALL LENGTH (measured at wall face including curves)					
		5'	10'	15'	20'	25'	30'
4"	(1 course)	5	10	15	20	25	30
8"	(2 courses)	10	20	30	40	50	60
12"	(3 courses)	15	30	45	60	75	90
16"	(4 courses)	20	40	60	80	100	120
20"	(5 courses)	25	50	75	100	125	150
24"	(6 courses)	30	60	90	120	150	180

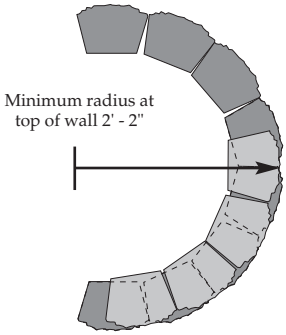
Special Considerations

Remove Edges

To remove outside lugs or edges of retaining lip, hold securely in place and hold at an angle. Strike the lug firmly with a hammer. Always wear safety glasses to protect eyes from chips.

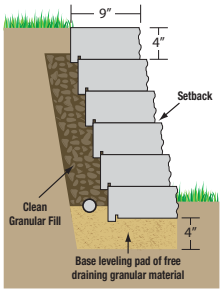
Building Curves

Curves as small as 2'-2" in radius can be built with Angelus 12" Planter Wall.



Typical Section

Use clean granular backfill such as gravel or crushed stone for draining and to prevent soil from leaching through the wall. A commercial filter fabric (stocked by most garden supply stores) may be used when more organic or silty site soils are used for backfill.



Installation Steps - 12” & 16” Planters

1. Prepare the Site

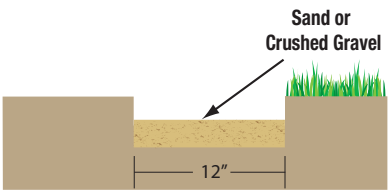
Start by digging a shallow trench 4" deep by 12" wide. Cut through and remove any sod, roots or large rocks. For organic loam soils, dig 4" deeper. Add a leveling pad of sand or crushed gravel (do not use pea rock). Compact and level the soil of leveling pad to receive the first course of Angelus Planter Wall units.

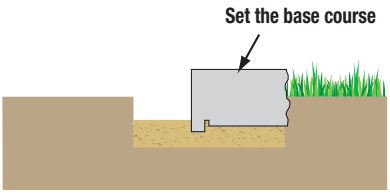
2. Set the Base Course

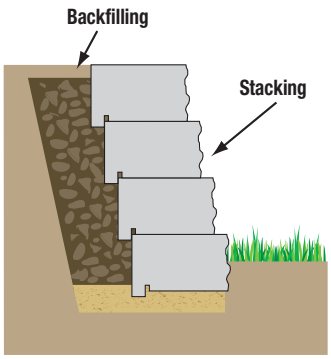
Place and level the first landscape unit a minimum of 2" below grade. Level each additional unit on the base course as you place it, making sure that the outside edges touch. If your wall contains both straight and curved areas, start with a straight area and build into the curves. Complete the base course before proceeding to the second course.

3. Stack and Fill

Starting with straight areas first, begin placing the second course. Center each landscape unit on the seams of the course below in a running bond pattern as shown. Now proceed to the next layer, backfilling as you go. For draining behind the wall, crushed stone is recommended.







*Please note: maximum wall height not to exceed 2'. This chart is based on site conditions which include a level grade, granular soil and no surcharge. Wall height is measured from top of leveling pad. The estimating chart provides for the number of units based on selected height and length of wall. For taller applications, contact your Angelus representative for product options.

16” Angelus Planter Wall Planter for Retaining Walls - 3’ High

- Unit dimensions 16"L x 6"H x 10"W
- Each Angelus 16" Planter Wall unit weighs 58 lbs making it fast and easy to install yourself.
- Each unit has a face area of 2/3 sq. ft. 1 1/2 units equal 1 square foot face area.

Use this guide for estimating the number of Angelus 16" Planter Wall units required.

WALL HEIGHT*	WALL LENGTH (measured at wall face including curves)					
	6'	12'	18'	24'	30'	36'
6"(15cm) (1 course)	5	9	14	18	23	27
12"(30cm) (2 courses)	10	18	28	36	46	54
18"(46cm) (3 courses)	15	27	42	54	69	81
24"(61cm) (4 courses)	20	36	56	72	92	108
30"(76cm) (5 courses)	25	45	70	90	115	135
36"(91cm) (6 courses)	30	54	84	104	138	162

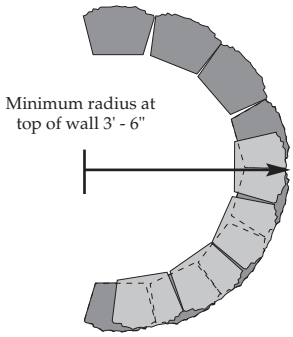
Special Considerations

Remove Edges

To remove outside lugs or edges of retaining lip, hold securely in place and hold at an angle. Strike the lug firmly with a hammer. Always wear safety glasses to protect eyes from chips.

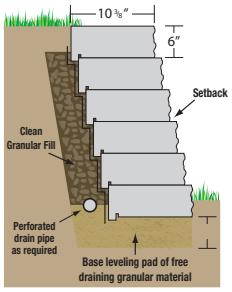
Building Curves

Curves as small as 3'-6" in radius can be built with Angelus 16" Planter Wall



Typical Section

Use clean granular backfill such as gravel or crushed stone for draining and to prevent soil from leaching through the wall. A commercial filter fabric (stocked by most garden supply stores) may be used when more organic or silty site soils are used for backfill.



*Please note: The Angelus 16" Planter Wall units were designed for unreinforced wall heights no greater than 3' high with compacted sand or gravel backfill and level grade above and below wall. Design assumes no surcharge loads. Wall height is measured from top of leveling pad. the estimating chart provides for the number of units based on selected height and length of wall. For taller wall applications, contact your Angelus representative for design, product and reinforcing options.

Tango™ Lawn-and-Garden Project Block

Create columns, seat walls, edging and more...

One block does it all and requires no cutting!

Product Overview

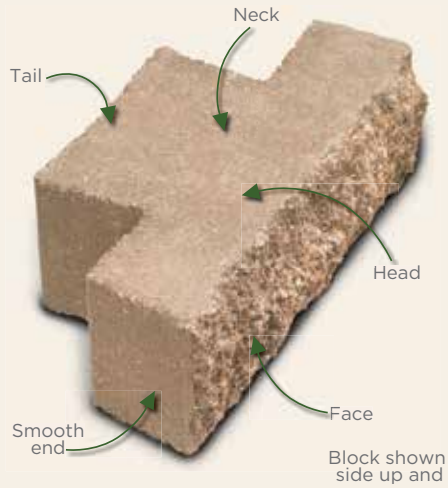
Approximate dimensions* Minimum dimensions	4″H x 12″W x 6″D 3.93″H x 11.7″W x 5.54″D
Approximate weight*	16 lbs.
Coverage**	0.31 sq. ft.
System batter (battered wall)	10.6°
System batter (vertical wall)	0°
Minimum outside radius†	7′
Minimum inside radius†	4′
Maximum retaining gravity wall height‡	Battered: 2′ Vertical: 1′4″
Maximum seat wall height‡	Curved: 2′ Straight: 2′
Maximum column height‡	4′

* Actual dimensions and weights may vary from these approximate values due to variations in manufacturing processes. The minimum dimensions are smallest possible due to these variations.

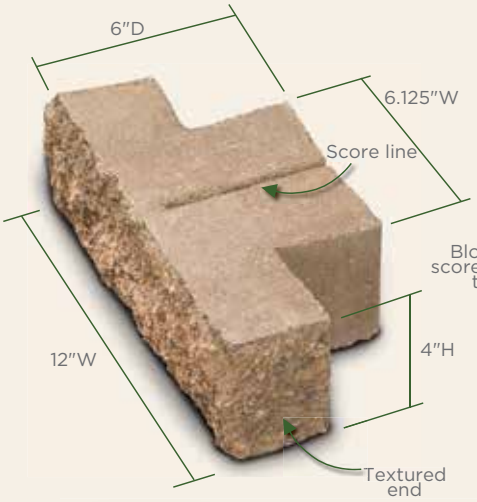
** Based on front face of block.

† Minimum radius without cutting.

‡ Maximum heights that can be safely built without geosynthetic reinforcement, including the buried course, but excluding the cap. Maximum gravity wall heights assume no slope below or above the wall; no surcharge loads (e.g., driveway, parking pad, pool); and all replaced soil is well compacted.



Block shown with smooth side up and smooth end



Block shown with score line side up and textured end

Straight Seat Wall

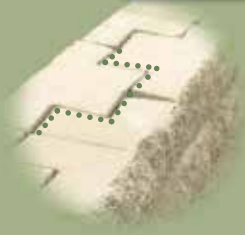
The design of the Tango™ project block allows for nested installation to surround a backyard patio, enhance a front yard courtyard, and provide seating. For nested installation example, see non-capped wall on page 26.

Design Parameters

- Wall depth: 9″ without cap
- Maximum height, including buried course but excluding the cap: 2′
- Recommended seating height: 1′7″ to 1′11″

For estimating and installation see pages 32-34.

Design Tip



The angled tail provides the strength and stability of a dove-tailed joint!

Seat Wall Corner

Projects with a 90-degree corner are a breeze. Ideal for enclosing a patio area or defining a space.

Design Parameters

- Wall depth: 9″ without cap
- Maximum height, including buried course but excluding the cap: 2′
- Recommended seating height: 1′7″ to 1′11″

Design Tip

One block does it all — just split and place.

See page 31 for instructions.

Seat Wall Finished End

Show off the clean lines at the end of a seat or freestanding wall, or abut next to a structure, such as a house or a column. This is perfect for smaller spaces.

Design Tip

Split the block in half to create wall end.

See page 31 for instructions.

Curved Seat Wall

Some landscapes lend themselves to a curved seat wall. This more sophisticated tail-to-tail design and installation project creates a softened, intimate space. Add a column or two for visual impact. For tail-to-tail installation example, see non-capped wall below.

Design Parameters

- Wall depth: 1′ without cap
- Maximum height, including buried course but excluding the cap: 2′
- Recommended seating height: 1′7″ to 1′11″

For estimating and installation see pages 32-34.

Design Tip

Curved seat walls can be abutted next to a structure, such as a house, or a standalone element flanked by column(s).

Design Tip

Remove the tail to fill void for wall end.

See page 31 for instructions.

Column

Columns make statements and add visual interest besides being functional. Build columns in just minutes to enhance an entryway or showcase potted plants; add ambience by including light fixtures.

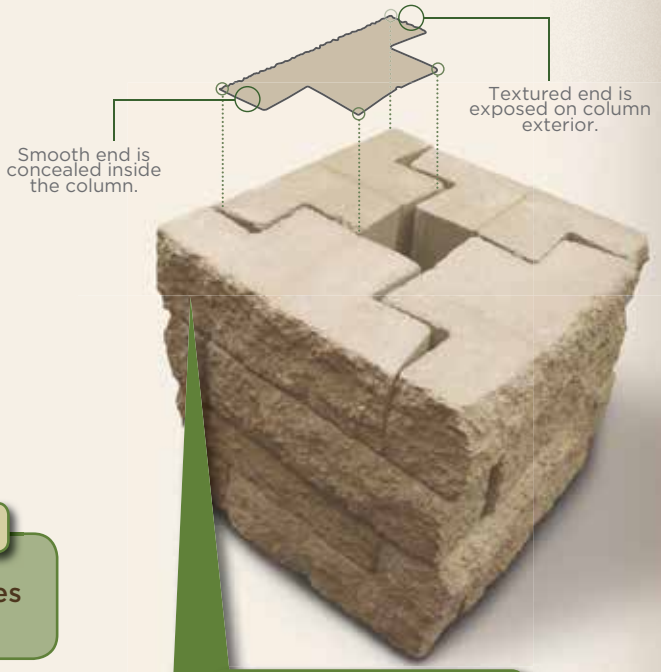
Design Parameters

- Column footprint: 1′3″ x 1′3″ without cap
- Maximum height, including buried course but excluding the cap: 4′
- Hollow core provides space for wiring electricity or mounting post: approximately 3″ x 3″

For estimating and installation see page 35.

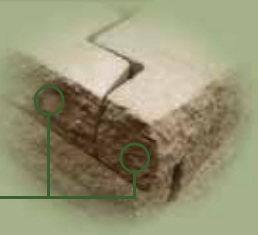
Design Tip

Build column 1-2 courses higher than wall.



Design Tip

Be sure that the face and textured end of each block face outward as shown here.



Battered Retaining Wall

A wall built to retain soil is known as a retaining wall. A battered wall has the blocks set back on each course to improve the wall stability.

Design Parameters

- Maximum battered height, including buried course but excluding the cap: 2′

For cross-section details, estimating and installation see pages 36-37.

Vertical Retaining Wall

A wall built to retain soil is known as a retaining wall. A vertical wall has the blocks stacked vertically on each course to maximize use of space for lawn, garden or other plantings.

Design Parameters

- Maximum vertical height, including buried course but excluding the cap: 1′4″

For estimating and installation, see pages 36-37.

Planter

Small vertical retaining wall projects are ideal for herb, floral or vegetable gardens.

Design Parameters

- Maximum vertical height, including buried course but excluding the cap: 1′4″

For cross-section details, estimating and installation see pages 36-37.

Edging

This versatile block can also be used in multiple ways to create garden and project edging. Edgers provide landscape detail and keep mulch, soil and weeds from entering your garden or landscape area.

For estimating, installation and design options, see pages 38-39.

Project Preparation and Tips

Advance planning and careful layout at the job site help ensure successful projects.
Read all instructions prior to installation.

1. Have utilities location(s) marked.
2. Develop a plan; confirm lot lines, project location and area.
3. Stake project location with string line or garden hose.

Tips

- Score line does not indicate top or bottom of project block. See example below, right.
- Texture irregularities are a characteristic of this block. Flip blocks as needed during installation to minimize gaps between blocks, being mindful of whether your project has exposed textured ends (e.g., columns, corners).
- Wall projects require a running bond pattern.
- Use an exterior-grade concrete adhesive. Apply a ¼-inch bead (string) of glue on the project block prior to capping, as shown below, left.
- Multiple cap options are available for each project. See chart below.

Cap Options for Tango™ Wall Projects

Project / Type	Freestanding Wall	Retaining Wall	Column
Straight Wall	Holland paver 4″ X 8″ StoneWall® II Cap Rustic Wall Stone	Holland paver 4″ X 8″ StoneWall® II Cap Rustic Wall Stone	StoneWall® II Cap Precast Cap (not sold by Angelus)
Curved Wall	Holland paver 4″ X 8″ StoneWall® II Cap Rustic Wall Stone	Holland paver 4″ X 8″ StoneWall® II Cap Rustic Wall Stone	

Cap Estimating:

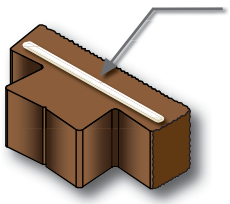
Select wall cap product; then calculate number of caps needed for project.

wall length in inches ____ (wall length (in.)) ÷ calculate linear coverage of cap ____ / cap length (in.)** (linear coverage of cap (in.)) = estimated # of caps ____ x 1.05* = ____ **minimum # of caps**

* It is recommended that you purchase 5 percent more product than estimated to account for cutting and breakage. Add an extra 10 percent for curved walls.

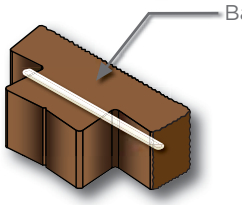
** Average if two different lengths.

Glue Placement



Apply along middle of block head for:

- Column (all courses)
- Seat/freestanding walls (top two courses)
- Vertical retaining walls (all courses)
- Capping



Apply along back of block head for:

- Battered retaining walls (all courses)

Helpful tip – Score line does not indicate top or bottom

Calculate exterior-grade concrete adhesive needed.

calculate total length of courses to glue, including cap course: ____ (wall length (in.)) x ____ (# of courses to glue) ÷ 12 (block length (in.)) = ____ length of courses to glue (lin. ft.) x use approximately 3 oz. of exterior-grade concrete adhesive per lin. ft. 3 oz. per lin. ft. = oz. of adhesive ____ ÷ 10 = ____ **minimum # of 10 oz. exterior-grade concrete adhesive tubes**

How to Split a Block in Half

Just four simple steps split a Tango™ lawn-and-garden project block into two L-shaped pieces which are used for corners and ends. Following these steps will result in cleaner splits.

1. Place the block on the grass or soft surface with the score line facing up. With a metal chisel and framing hammer, lightly tap starting from the face of the block to extend the score line. Continue tapping along the score line to the tail.
2. Stand block on its face and again lightly tap, creating a score line on the end of the block.
3. Flip the block over and continue lightly tapping, creating another centered score line from the tail to the face of the block.
4. Repeat process with solid force as needed until the block splits in half.

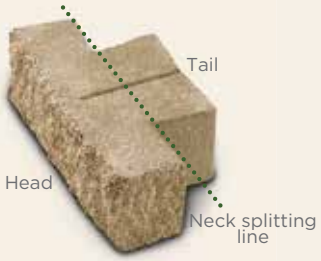
Design Tip

If needed, chisel away texture to create a tighter fit

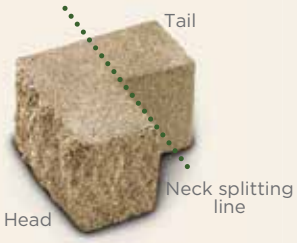
How to Create Wedge Pieces

Option 1. Use the tail to create a wedge piece for ends of curved walls or for one of the edger options.

1. Place the block on the grass or soft surface.
2. With a metal chisel and framing hammer, lightly tap along the neck.
3. Flip the block over and continue lightly tapping, creating a score line all the way around the four sides of the block.
4. Repeat process with solid force as needed until the block splits in two.



Option 2. Use L-shaped pieces (see top half of page) and split at the neck to create wedge pieces.



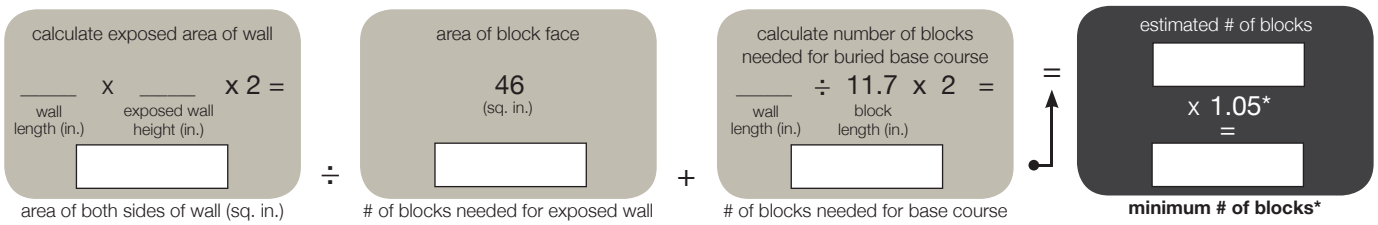
Seat/Freestanding Wall Estimating

Use the quick reference chart or calculate number of blocks needed per formula below.
Note: Quick reference chart is rounded up to account for additional pieces for splitting.

Quick Reference Chart Number of Blocks Needed

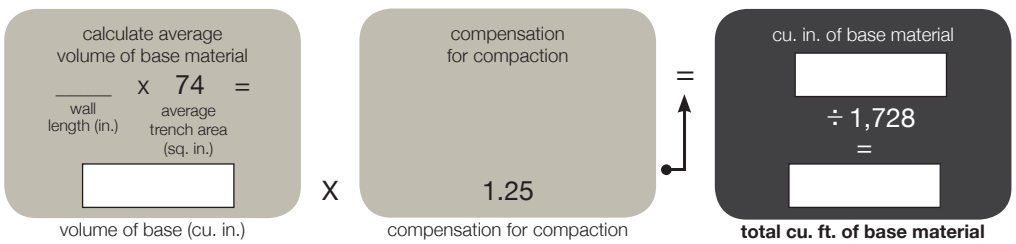
	Wall Length					
Number of Courses (Height)	**5′**	**10′**	**15′**	**20′**	**25′**	**30′**
1 Course/base course (4″)	12	22	32	42	54	64
2 Courses (8″)	22	42	64	84	106	126
3 Courses (12″)	32	64	96	126	158	190
4 Courses (16″)	42	84	126	168	210	252
5 Courses (20″)	54	106	158	210	264	316
6 Courses (24″)	64	126	190	252	316	378

Calculate number of blocks needed for project. If building on top of existing paver or concrete base, exclude adding number of blocks needed for buried base course.



* It is recommended that you purchase 5 percent more product than estimated to account for splitting and breakage.

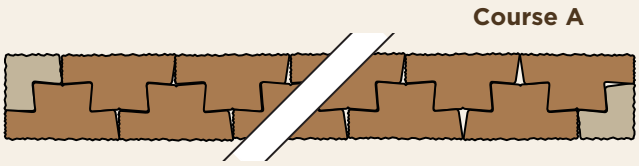
Calculate base material (paver base or ¾-inch minus [with fines] aggregate) needed for project. Base material is not needed if building on top of existing paver or concrete base. Calculations are based on an average of straight and curved walls.



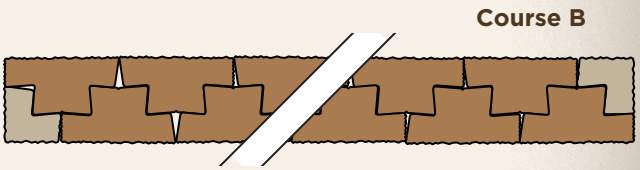
For cap estimating see page 30.

Seat/Freestanding Wall Installation

Straight Wall Nested Layout

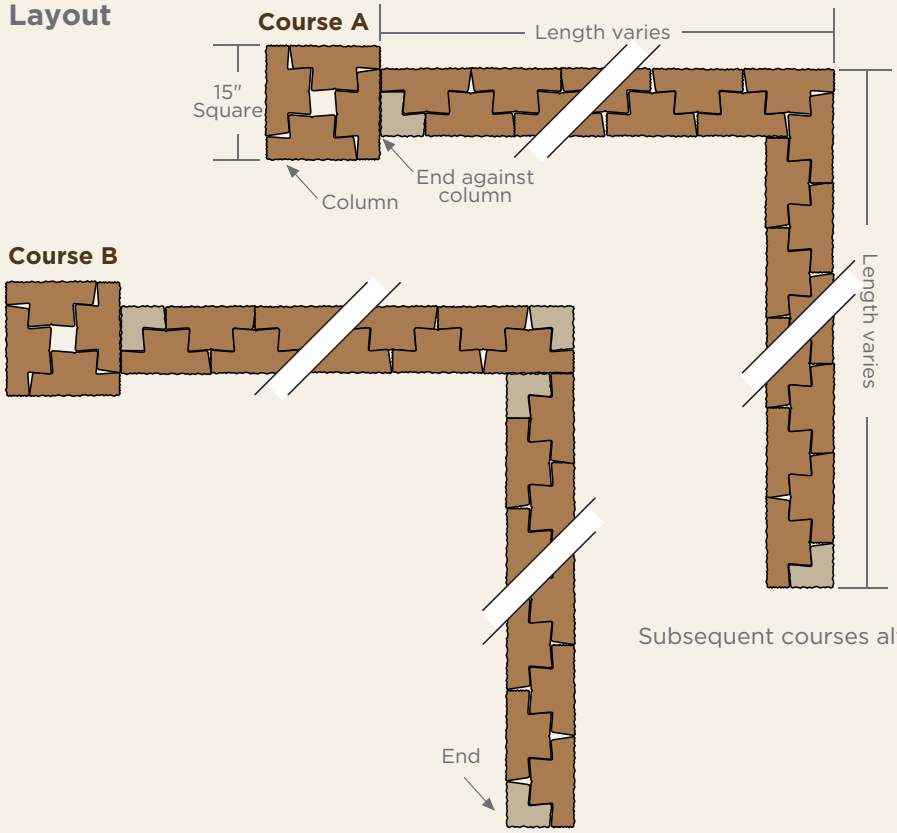


Reverse order of blocks in the second course to stagger them for a running bond.

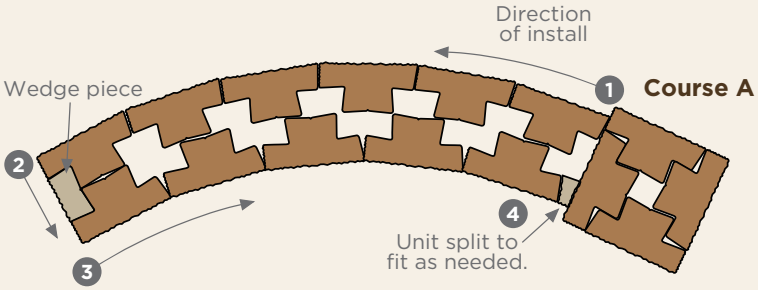


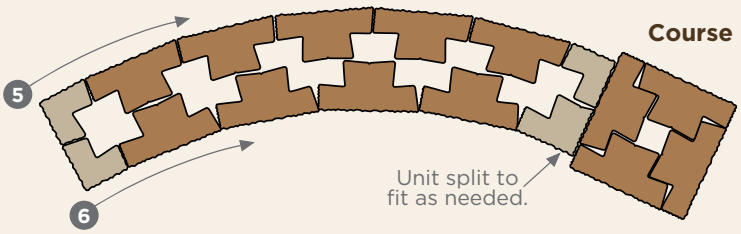
Subsequent courses alternate A,B,A,B.

Straight Wall Nested Corner Layout



Subsequent courses alternate A,B,A,B.





Curved Wall Tail-to-tail Layout

Subsequent courses alternate A,B,A,B. Always start subsequent courses at the end opposite of a column/structure.

Seat/Freestanding Wall Installation (continued)

If project will be on top of existing paver or concrete base, consider the weight that is being added and adequacy of existing base to bear the load. Proceed to step 3a or 3b for first course layout.

1. **Stake out wall and create trench –** Mark location of the wall from the back of blocks. Dig a trench for the leveling pad.

   a. **Straight wall trench –** 17 inches wide x 8 inches deep.

   b. **Curved wall trench –** 20 inches wide x 8 inches deep.

2. **Leveling pad –** Add a 2-inch layer of base material in the bottom of the trench; rake out and firmly compact. Repeat as needed for finished compacted base depth of 4 inches. Use a carpenter's level to level base material along the trench; check the level every few feet.

3. **First/Base course –** For buried course installation, place the face of the block about 4 inches from trench side. Level the first block, front-to-back and side-to-side; lay subsequent blocks in the same manner.

   a. **Straight wall nested layout –** For layout drawings see page 33. With textured surfaces facing out place a full block and a split L-shaped piece at project's end as shown in course A. Level block front-to-back and side-to-side. Lay the next block by rotating 180-degrees and interlock tails with the first block. Continue to level block and repeat to the end of the course.

      Important tip for 90-degree corners – Make sure textured surfaces are facing out and continue to build straight wall course.

   b. **Curved wall tail-to-tail layout –** For layout drawings see page 33. Starting the wall next to structure such as a column, build the outside radius, first with textured surfaces facing out. Level block front-to-back and side-to-side. End row by placing wedge piece before starting inside radius. Proceed with inside radius, placing blocks with sides and tails touching the outside radius row. Fill any open spaces at the wall end closest to structure with pieces split to fit. Glue all split pieces in place with exterior-grade concrete adhesive.

      Important tip for curved walls – If including column(s) in design, build one column first, then wall, and end with second column if desired.

4. **Subsequent courses –** Clean any debris off the previous course. Place the blocks as shown in layouts, alternating courses until project's height is reached. Glue the top two courses with an exterior-grade concrete adhesive as shown on page 30. Backfill trench with on-site soil and compact.

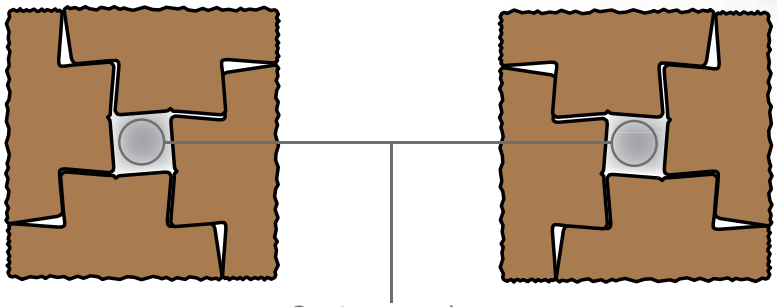
   Important tip for curved walls – Begin all subsequent courses at the wall end as shown on course B.

5. **Capping the wall –** Choose a cap option for your wall see page 30. Clean debris off the top course. Use an exterior-grade concrete adhesive on block to secure caps in place. Have score line facing down on the top course if using pavers as accent detail.

Column Estimating and Installation

If project will be on top of existing paver or concrete base, consider the weight that is being added and adequacy of existing base to bear the load. Proceed to step 3 for first course layout.

1. **Stake out area and create trench –** Dig trench 23 inches wide x 23 inches long x 8 inches deep for the leveling pad.
2. **Leveling pad –** Add a 2-inch layer of base material in the bottom of the trench; rake out and firmly compact. Repeat as needed for finished compacted base depth of 4 inches. Use a carpenter's level to level base material along the trench; check the level every few feet.
3. **Base course –** Build course A, placing first block with the face and textured end facing out and each positioned 4 inches away from two adjoining sides of the trench. Rotate next block 90-degrees and interlock with first block. Continue with blocks to complete the course.
4. **Subsequent courses –** Check to make sure all textured sides are facing out. Clean any debris off the blocks and glue all courses with exterior-grade concrete adhesive as shown on page 30. Alternate courses B,A,B,A to maintain staggered bond until project's height is reached.
5. **Capping column –** Choose a cap option for your column see page 30. Clean debris off the top course. Use an exterior-grade concrete adhesive on block to secure caps in place. If using pavers as accent detail, have score line facing down on the top course. If layering caps, similarly secure each one in place with adhesive. Cap(s) should overhang column by one to three inches.



Center opening.

The hollow core for wiring electricity or mounting post is approximately 3" x 3"

If installing column project in ground instead of on existing patio, base material is required for buried course:

calculate volume of base material

____ (# of columns) x 2,116 (trench base volume (cu. in.)) =

volume of base (cu. in.)

x

compensation for compaction

1.25

compensation for compaction

=

cu. in. of base material

÷ 1,728

=

total cu. ft. of base material

Quick Reference Chart

Number of Courses (Height)	Number of Blocks Needed
1 Course/base course (4")	4
2 Courses (8")	8
3 Courses (1')	12
4 Courses (1' 4")	16
5 Courses (1' 8")	20
6 Courses (2')	24
7 Courses (2' 4")	28
8 Courses (2' 8")	32
9 Courses (3')	36
10 Courses (3' 4")	40
11 Courses (3' 8")	44
12 Courses (4')	48

*Including base course but excluding the cap

Retaining Wall Estimating and Cross-Sections

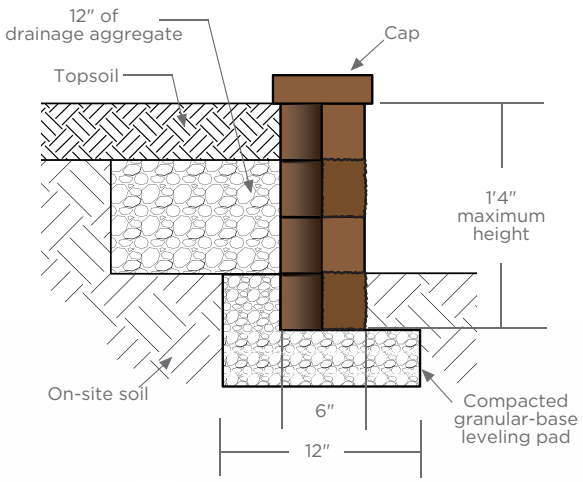
Use the quick reference chart or calculate number of blocks needed per formula on page 37.
Note: Quick reference chart is rounded up to the nearest block.

Quick Reference Chart Number of Blocks Needed

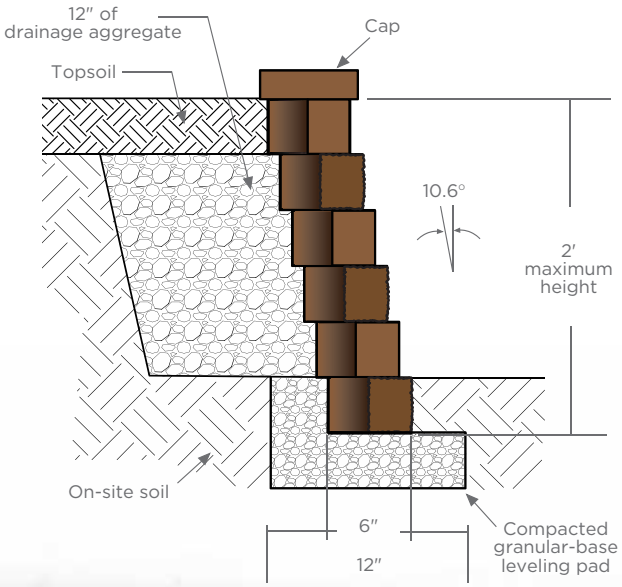
	Wall Length					
Number of Courses (Height)	**5′**	**10′**	**15′**	**20′**	**25′**	**30′**
1 Course/base course (4″)	6	11	16	21	27	32
2 Courses (8″)	11	21	32	42	53	63
3 Courses (12″)	16	32	48	63	79	95
4 Courses (16″)	21	42	63	84	105	126
5 Courses (20″)*	27	53	79	105	132	158
6 Courses (24″)*	32	63	95	126	158	189

*Battered wall only

Cross-section of a Vertical Wall



Cross-section of a Battered Wall



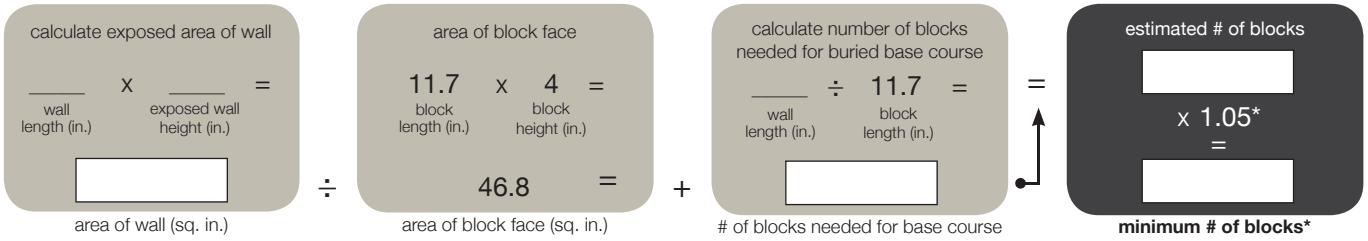
Retaining Wall Installation

1. **Stake out wall and create trench –** Mark location of the wall from the back of the block. Dig a trench 12 inches wide x 8 inches deep x ___ (length of wall) for the leveling pad.
2. **Leveling pad –** Add a 2-inch layer of base material in the bottom of the trench; rake out and firmly compact. Repeat as needed for finished compacted base depth of 4 inches. Use a carpenter's level to level base material along the trench; check the level every few feet.
3. **Base course –** For buried course installation place the face of the block about 4 inches from trench side and centered. Level the first block, front-to-back and side-to-side; lay subsequent blocks in the same manner. Backfill behind base course with base material.
   a. **Straight retaining wall –** Place blocks next to each other using a string line along the back edge to check for proper alignment.
   b. **Curved retaining wall –** Begin by driving stake into the ground at the desired center of the curve. Attach a string, rotate it in a circle around the stake, and mark the radius in the soil. Align each block face with the outside radius and level front-to-back and side-to-side.
4. **Subsequent courses –** Stagger blocks to maintain running bond. Split blocks as needed to fit desired length of wall. After each subsequent course, backfill with drainage aggregate and tamp before installing additional courses. The last course of blocks can be backfilled with topsoil to allow for plants or sod. Fill trench in front of wall with on-site soil and compact. Clean any debris off the blocks and glue all courses with an exterior-grade concrete adhesive as shown on page 30.

   Important tip for vertical walls – Place block with face aligned vertically as shown on page 36.

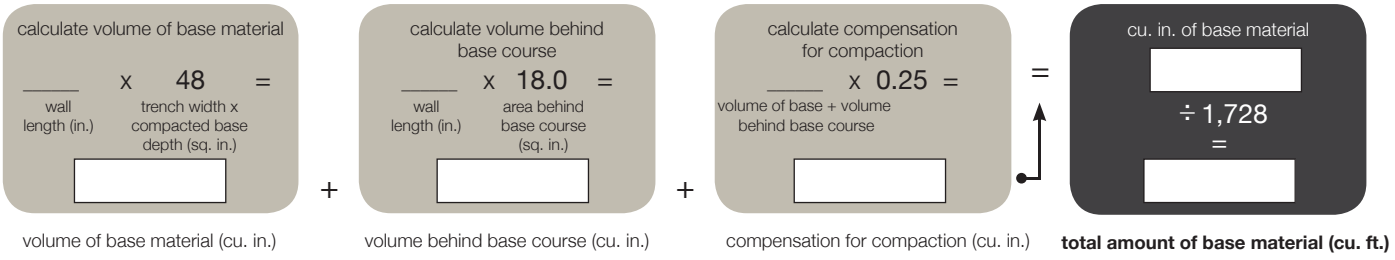
   Important tip for battered walls – Set block with the front face of the block back by ¾ inch as shown on page 36.
5. **Capping the wall –** Choose from cap options on page 30. Use an exterior-grade concrete adhesive on block to secure caps in place.

Calculate the number of blocks needed for project.

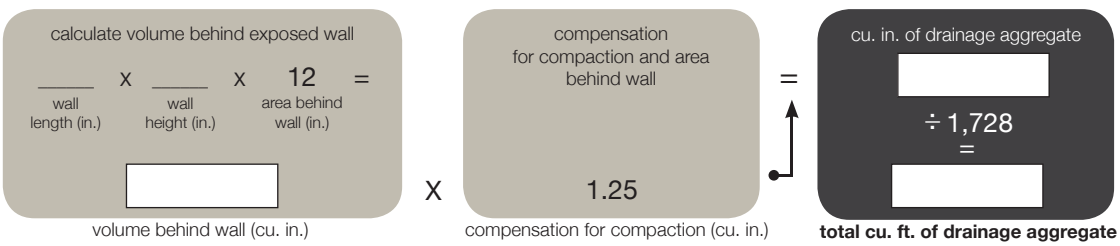


* It is recommended that you purchase 5 percent more product than estimated to account for splitting and breakage.

Calculate base material (paver base or ¾-inch minus [with fines] aggregate) needed for project.



Calculate drainage aggregate (¾-inch angular/crushed free-draining aggregate) needed for project.



Edging Estimating and Installation

Basic Installation Prep for All Design Options

Excavation

1. **Excavation –** Begin by laying out the project using stakes and string line or a garden hose (great for curves). Dig a trench 6 inches wide x 4 inches deep (3 inches deep for Option 3).

Leveling pad

2. **Leveling pad –** Level bottom of the trench. Place 1-inch of base material in the bottom of the trench and firmly compact.

Helpful tip – Use 1 cubic feet of base material for every 25 feet of edging.

Calculate base material (paver base or ¾-inch minus [with fines] aggregate) needed for project.

calculate the volume of base material

_____ x 6 =

length of project (in.) | trench width X base depth (sq. in.)

volume of base material (cu. in.)

X

compensation for compaction

1.25

compensation for compaction

=

cu. in. of base material

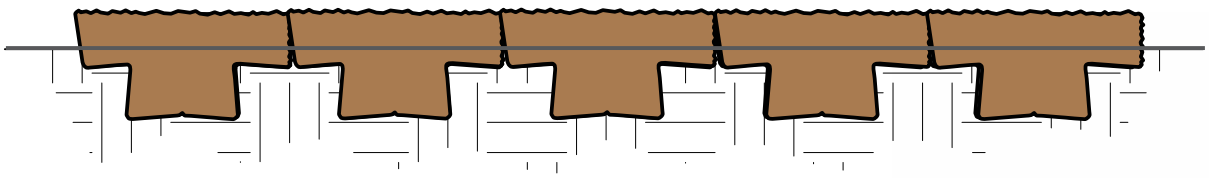
÷1,728

=

total cu. ft. of base material

Edger Design Option 1

3. Using a post hole digger or hand trowel is recommended. Position blocks centered and end-to-end in the trench by creating a hole 4 inches wide x 3 inches deep x 6 inches long every 12 inches to bury tail into base. Using a rubber mallet, tamp the edger firmly into place. Use a level to ensure edger units are uniformly level. Continue to place the units until the desired length of the project is reached.
4. Split block as needed to fit desired length of edging.
5. Finish project by firmly packing excavated material along sides of the edger units.



Calculate number of edgers needed for project.

calculate project length

length of project (in.) _____

project length (in.)

÷

12

approximate edger coverage (in.)

=

estimated # of edgers

X

1.05*

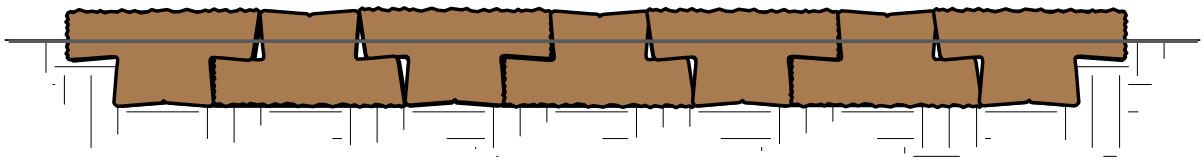
=

minimum # of edgers*

*It is recommended that you purchase 5 percent more product than estimated to account for splitting and breakage.

Edger Design Option 2

3. Position a block textured face up, then place a block textured face down, both centered in trench. Using a rubber mallet, tamp the edgers firmly into place. Use a level to ensure edger units are uniformly level. Continue repeating this pattern to complete project.
4. Split block as needed to fit desired length of edging.
5. Finish project by firmly packing excavated material along sides of the edger units.



Calculate number of edgers needed for project.

calculate project length

length of project (in.) _____

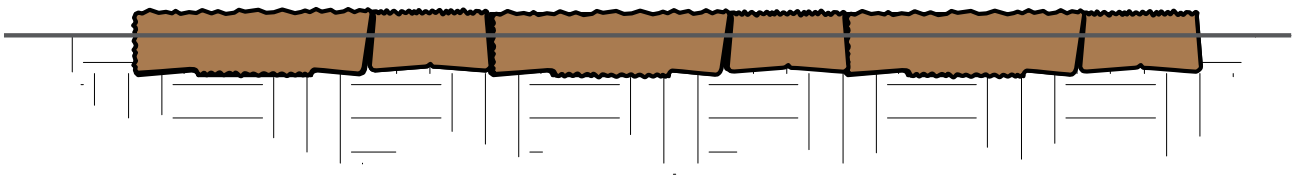
project length (in.) ÷ 9 approximate edger coverage (in.) = estimated # of edgers [ ] X 1.05* = [ ]

minimum # of edgers*

*It is recommended that you purchase 5 percent more product than estimated to account for splitting and breakage.

Edger Design Option 3

3. Split each block to create a wedge piece (see page 31).
4. Position the long piece of block textured face up, then place the tail piece next to it, textured surface up. Using a rubber mallet, tamp the edgers firmly into place. Use a level to ensure edger units are uniformly level. Repeat pattern to complete project.
5. Finish project by firmly packing excavated material along sides of the edger units.



Calculate number of edgers needed for project.

calculate project length

length of project (in.) _____

project length (in.) ÷ 18 approximate edger coverage (in.) = estimated # of edgers [ ] X 1.05* = [ ]

minimum # of edgers*

*It is recommended that you purchase 5 percent more product than estimated to account for splitting and breakage.

Decorative Wall Color Charts

Stonewall® II


Cream-Brown-Charcoal


Gray-Moss-Charcoal


Sand-Stone-Mocha


Tuscan


Cream-Terracotta-Brown


Gray-Charcoal

Rustic Wall Stone


Cream-Brown-Charcoal


Gray-Moss-Charcoal


Sand-Stone-Mocha


Tuscan


Cream-Terracotta-Brown


Gray-Charcoal

Tango™ Lawn-and-Garden Project Block


Cream-Brown-Charcoal


Gray-Moss-Charcoal


Sand-Stone-Mocha


Tuscan


Cream-Terracotta-Brown


Gray-Charcoal

Angelus 12″ & 16″ Planter Wall


Gray


Tan


Charcoal


Sand-Stone-Mocha


Tuscan

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