

RETAINING WALL INSTALLATION INSTRUCTIONS

GETTING STARTED

Use best practices to lay out and build walls. See anchorwall.com for standard installation details. The following information will help you get started using Artisana[®] retaining wall blocks.

BASE COURSE

Since the 6-inch units are palletized together, it is easiest to use both the 6" x 16" and 6" x 8" units to build the base. This will help maintain the ratio of one to one with the blocks and will eliminate the need to pick through the smaller blocks on the pallet, thus saving time. Remove the rear lip from the block to ensure proper contact with the gravel base. Pitch the base course back $\frac{1}{16}$ inch for each foot of wall height to keep the wall level on higher courses.

COMPACTION

Keep heavy compaction equipment 4 feet away from the face of the wall and make sure you are compacting in proper lifts according to your equipment. After compaction, tap the back of the blocks with a rubber mallet or dead-blow hammer to ensure each lip has remained seated against the block below.

90° CORNERS

Corners are built by using corner/column units in an alternating fashion. Reversing the block direction back and forth allows them to be integrated into a pattern with little effort. Depending on the wall layout, there may be a need to go off the pattern and randomly place wall blocks near the corner to blend together. Glue should be applied to every corner unit from bottom to top. Corner units should be set back to reflect the batter of the wall block units.

USING 8-INCH UNITS IN CONSTRUCTION

The 8-inch-long units in both the 6-inch and 3-inch heights have two shapes. One has an offset angle on the left side and the other has an offset on the right. Either block can be used in most situations. In a curved wall, it may be necessary to select one shape or the other. For example, if two 8-inch blocks of either height meet on a 16-inch unit, put the two 90-degree sides together to form a 16-inch rectangle.

BUILDING AN OUTSIDE CURVE

A function of geometry with battered blocks is that the outside radius gets smaller as the wall gets taller. As a result, the spaces between the blocks also shrink. This requires some shaving or trimming of the blocks to fit. Plan to shave 3-inch blocks as you build. This will save time and saw blades. When removing a $\frac{1}{2}$ inch or less, a small handheld grinder will be easier and quicker to use than a large saw.

BUILDING AN INSIDE CURVE

When building an inside curve, the radius gets bigger as the wall gets taller. Gapping is a function of geometry and batter and will happen with any multiple-height system. If the gaps created are small, distribute them over several blocks to minimize the openings. Otherwise, fill the opening with two blocks. This will require going off pattern for awhile. For the best appearance, do not use pieces narrower than 4 inches. For example, a space that would be 8 inches in the pattern might be 9 inches on an inside radius. This would require cutting a 16-inch-long unit to 9 inches instead of using an 8-inch-long unit and a 1-inch sliver.

USING GEOSYNTHETIC REINFORCEMENT

For walls that are less than 4 feet high, use a lightweight grid such as Miragrid 2XT. It is thinner and can be used in either direction for a strong wall. Use best practices for installing geosynthetic reinforcement. Lay grid perpendicular to the wall face, bringing it to within 1 inch from the wall face. Pull the grid tight before backfilling. Cut off the selvage on grid to eliminate any unevenness.

STEPS

When constructing steps, consider whether it is a fill or a cut-grade situation. Construction is similar but varies in the amount of dummy units required.

A fill step solution will have a base course of dummy units in the entire footprint of the steps. For each additional step, add dummy units behind the facing units for stability. The facing units on the steps should alternate between 8-inch and 16-inch blocks glued to the dummy units. A cut-grade set of steps will use one layer of dummy blocks under each step, effectively stepping up the grade.

Both applications will require some sort of tread to cover the facing units. The double-sided cap is a great solution.

WALL ABUTTING A COLUMN

When abutting the wall in the middle of the column face, some sculpting of the blocks will give a clean, finished look to a project. To eliminate gapping between the returning wall block and the column unit, mark or scribe the retaining wall block to fit the face of the column unit into the edge of the wall unit. This is easily achieved with a small handheld grinder with a diamond blade.

ALTERNATIVE TO GEOSYNTHETIC REINFORCEMENT

Stabilized aggregate is a porous backfill material that can be used as an alternative to grid when building with Artisana® products in cut-wall situations where you don't have room to excavate for geogrid. Excavation time can be reduced by as much as 40% compared to installation with geosynthetic reinforcement. Reducing excavation also means reducing backfill time and eliminating the need to compact all the backfill soil.

Stabilized aggregate effectively increases the depth of the facing unit and creates a permeable concrete mass that can resist the weight of the soil wedge behind the wall. It is a proven system with several million square feet of Anchor products built worldwide with this method.

CAPPING

The double-sided cap has a right-angle side and an offset-angle side. The caps can be used in any of four directions since there is no specific top or bottom. There is an arrow on the side to guide capping straight walls. Just place the arrows in the same direction and touch them together as the caps are laid.

The fact that the cap can be turned any of four ways reduces dramatically the amount of cutting required on a curve. For example, on an arc of about 25 feet, a standard trapezoidal or rectangular cap would require cutting every other cap or about 10 caps. With the Artisana product, only four caps need to be cut. This again saves time, saw wear and tear, and diamond blades. See specifics on page four.

WHEN TO USE A PATTERN FOR RETAINING WALLS

A versatile product, Artisana walls can be built using a combination of 6- and 3-inch-high units, or with either 6- or 3-inch-high units alone. You can install the Artisana multiheight retaining wall system in a random pattern using any combination of units. Just avoid vertical lines that span more than 18 inches in height.

If you are building a wall without geosynthetic reinforcement, use a pattern for inspiration or follow a pattern exactly. Pleasing random patterns can be built using an equal number of 6- and 3-inch-high units. Estimating formulas are based on using an equal number of units of each size in each height.

When building a wall that includes geosynthetic reinforcement, using a pattern at the appropriate spacing eliminates the need to cut the grid. When using a pattern, begin at one edge laying the units as indicated. Install at least one repeat of the pattern to establish the pattern before proceeding to the next course. Stagger the patterns as shown to avoid vertical bonds.

If you are using either 6- or 3-inch-high units alone, you can use the patterns to produce a more random look with fewer stacked bonds. Estimating formulas are based on using an equal number of units of each size.

When using a pattern, begin at one edge laying the units as indicated. Install at least one repeat of the pattern to establish the pattern before proceeding to the next course. Stagger the patterns as shown to avoid vertical bonds. See patterns on page three.

JOBSITE TOOL CHECKLIST

Hand tools

- Shovels
- Rakes
- Broom
- Tape measure
- 4-foot level
- Speed square

- Torpedo level
- Dead-blow hammer
- 2- or 3-pound sledge hammer
- Chisel
- Hand tamper
- String line
- Site level or laser level

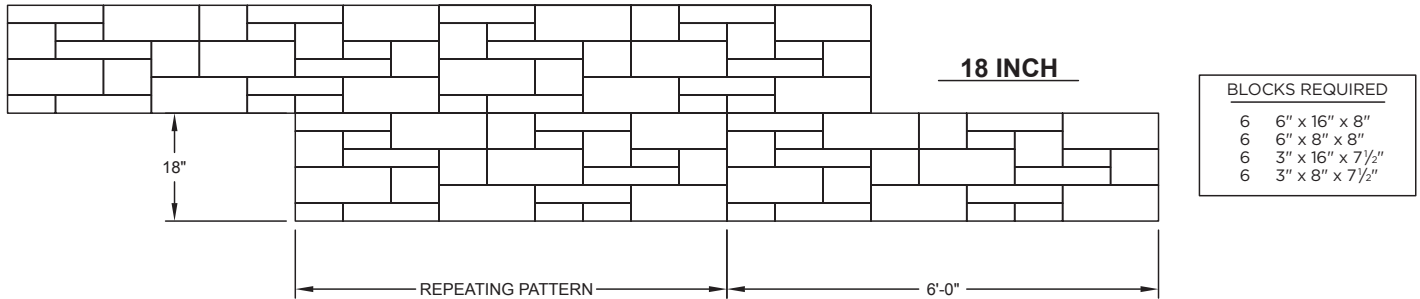
Power tools

- Cut-off or chop saw with diamond blade
- Handheld grinder
- Compactor

PATTERNS

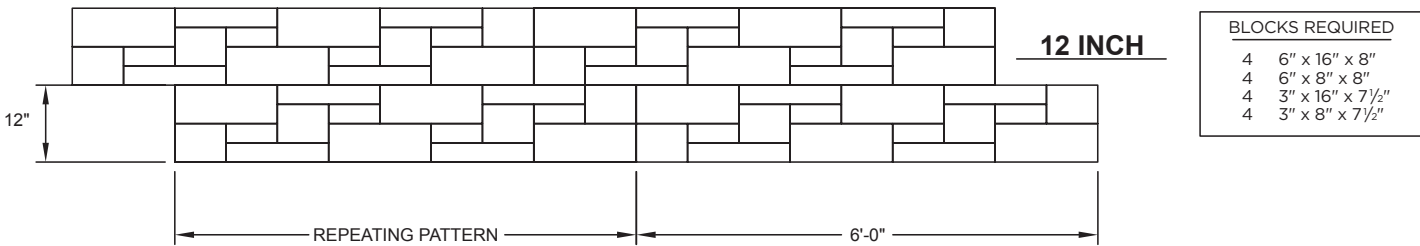
ARTISANA® MULTIHEIGHT 18-INCH BY 6-FOOT PATTERN

This illustrates a multiheight 18-inch-high by 6-foot-long repeating pattern. When your plan requires reinforcement at 18 inches, this pattern is ideal because it eliminates the need for cutting of the grid.



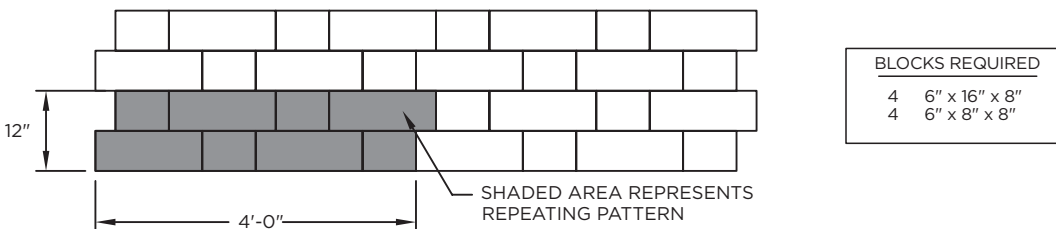
ARTISANA MULTIHEIGHT 12-INCH BY 6-FOOT PATTERN

This illustrates a multiheight 12-inch-high by 6-foot-long repeating pattern. When your plan requires reinforcement at 12 or 24 inches, this pattern is ideal because it eliminates the need for cutting of the grid.



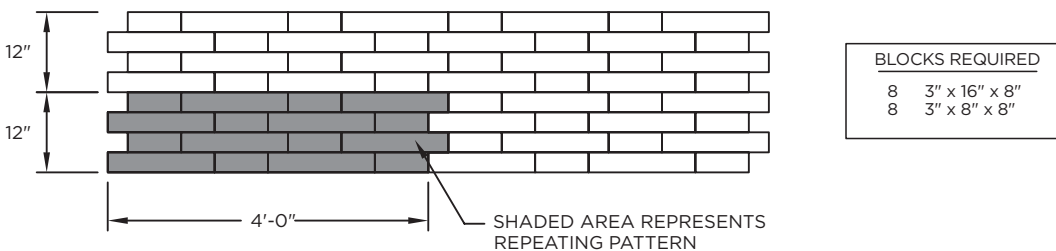
ARTISANA MULTIPIECE 12-INCH BY 4-FOOT PATTERN – 6-INCH UNITS

This illustrates a multipiece 12-inch-high by 4-foot-long repeating pattern using 6-inch-high units.



ARTISANA MULTIPIECE 12-INCH BY 4-FOOT PATTERN – 3-INCH UNITS

This illustrates a multipiece 12-inch-high by 4-foot-long repeating pattern using 3-inch-high units.



GETTING STARTED

- Always start capping a wall from the lowest elevation.
- Lay out caps prior to using adhesive.
- Use exterior-grade construction adhesive to glue caps.

STRAIGHT WALLS

Alternate short and long cap faces every other cap to achieve a straight row of caps. Place stamped arrows (1) on the side of caps in the same direction, either up or down, and touch them together as caps are laid. Always start capping from the lowest elevation.

CURVED WALLS

The double-sided cap has a right-angle side and an offset-angle side. The caps can be used in any four directions since there is no specific top or bottom.

Cut caps to fit. Occasional cutting will be necessary for radii other than approximately 7'6".

STEPPING UP CAPS

If a wall elevation changes, caps can be stacked where the wall steps up. Begin laying caps at the lowest elevation and work your way back toward the previous step up. Cut a cap unit to fit. Place the cut unit directly on top of the capped portion of the wall with the cut side hidden from view.

90° CORNERS

Mitered Corner

Place two caps together, arrows touching and facing in the same direction. Measure 1½" in from corners as shown. Use straightedge to connect measurements and draw line. Carefully cut along line to preserve both sides of the cut.

Flip pieces "c" and "d" over to create corner.

Alternate Corner

Cut 3"-high piece from column unit.

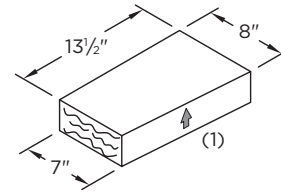
Cut 3"-high piece to 13" length.

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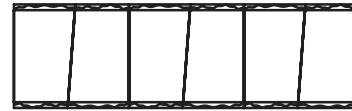
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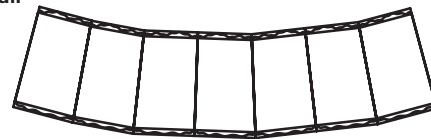
Cap unit



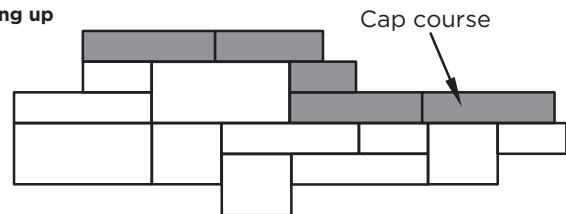
Straight wall



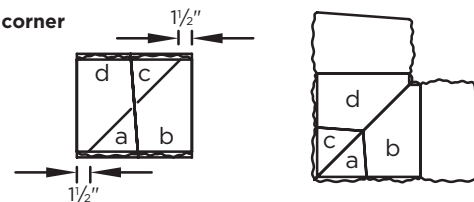
Curved wall



Stepping up



Mitered corner



Alternate corner

