



INSTALLATION INSTRUCTIONS FOR SINGLE-PIECE SYSTEMS

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CAPPING A WALL

SINGLE-PIECE SYSTEM

INSTALLATION INSTRUCTIONS

STRAIGHT WALL

Trapezoidal caps must be laid alternately short and long faces for a straight line. Rectangular caps should have the finished side out. Always start capping from the lowest elevation.

OUTSIDE CURVES

Lay out the cap units side by side and cut at least every other cap to produce a uniform look. Start with the long side of the cap facing out and adjust to the radius.

INSIDE CURVES

Lay cap units side by side with the short side facing out. In most circumstances, making two cuts on one cap and then not cutting the cap on either side produces the most pleasing look.

CORNERS

On a 90° corner wall, the corner caps need to be saw-cut to achieve a 45° mitered corner.

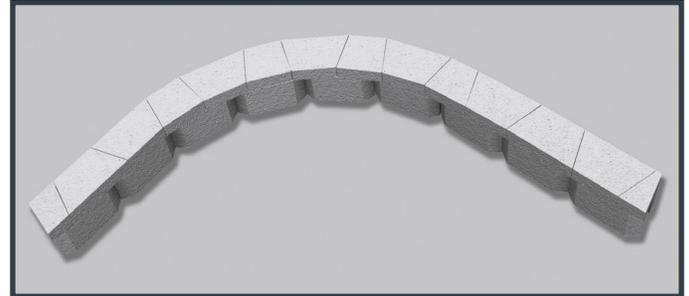
STEPPING UP CAPS

If a wall elevation changes, caps can be stacked where the wall steps up. Begin laying caps at the lowest elevation change and work your way back toward the previous step up. Split* a cap unit to create a rough face on the exposed side. Place the half unit directly on top of the capped portion of the wall with all three split faces exposed. Place the half unit directly on top of the capped portion of the wall with all three split faces exposed. Rectangular caps with one finished side should be saw-cut to fit and a manufactured side exposed.

FINISHING

After layout is complete and caps are saw-cut or split to size, carefully glue with a concrete adhesive.

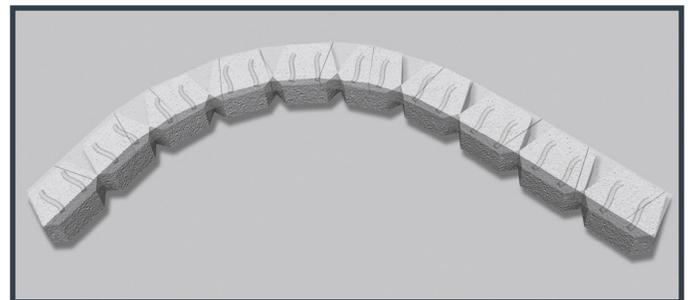
**To split a block, use a hydraulic splitter or split manually by using a hammer and chisel to score the block on all sides. Pound the chisel on the same line until the block splits. If partial unit sides are not exposed, use a circular cut-off saw with a masonry blade to achieve a tighter fit.*



Two cuts on every other cap on curved walls.



Glue each cap.



Capping an outside curve.

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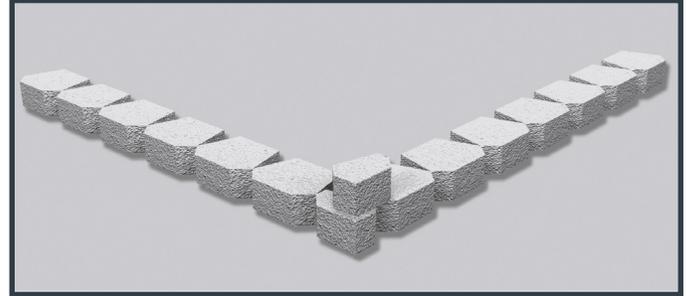
CORNERS — INSIDE 90°

SINGLE-PIECE SYSTEM

INSTALLATION INSTRUCTIONS

BASE COURSE

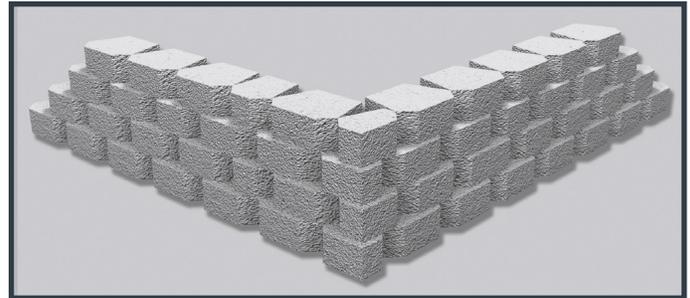
To create an inside 90° corner, begin by placing a block at the corner. Then lay a second block perpendicular to the first and continue laying out the rest of the base course working from the corner out. Make sure to construct the base course according to standard site prep and installation procedures described elsewhere on anchordiamond.com.



NEXT COURSE

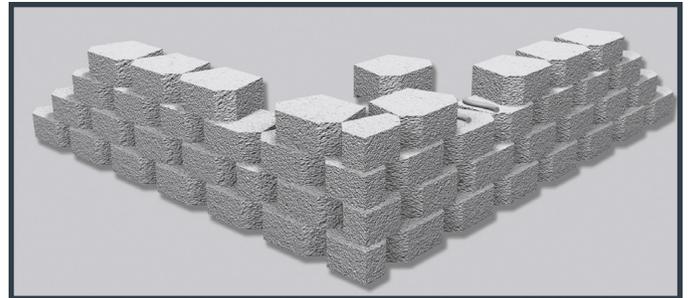
On the second course, place all blocks on bond along one side of the corner. Once the second course of one wall is established, begin the second course of the adjacent wall.

Split* units may be required on this wall to maintain running bond.



ADDITIONAL COURSES

Block placement in the corner should alternate direction with each succeeding course. These should be glued in place using a concrete adhesive.



**To split a block, use a hydraulic splitter or split manually by using a hammer and chisel to score the block on all sides. Pound the chisel on the same line until the block splits. If partial unit sides are not exposed, use a circular cut-off saw with a masonry blade to achieve a tighter fit.*

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CORNERS — INSIDE 90° with Reinforcement

SINGLE-PIECE SYSTEM

INSTALLATION INSTRUCTIONS

FIRST COURSE WITH REINFORCEMENT

To install reinforcement on an inside 90° corner, begin by checking the wall plan to determine reinforcement lengths and elevations. Cut reinforcement to the lengths identified in the wall plan, paying attention to the reinforcement strength direction.

Next, determine the proper placement of the reinforcement by dividing the total proposed height of the wall by four. This represents the distance that reinforcement should extend beyond the front of the adjoining wall. Measure this distance from the front of the adjoining wall and begin your grid placement here. Make sure the grid is placed within 1 inch of the face of the wall and runs along the back of the adjoining wall.

Example: If your overall wall height is 8 feet, the reinforcement extension would be 2 feet.

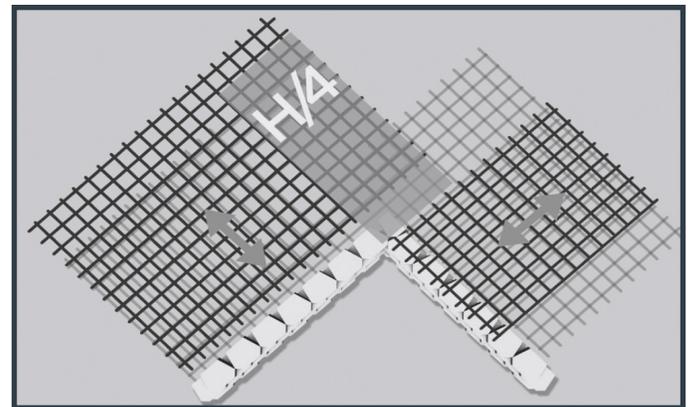
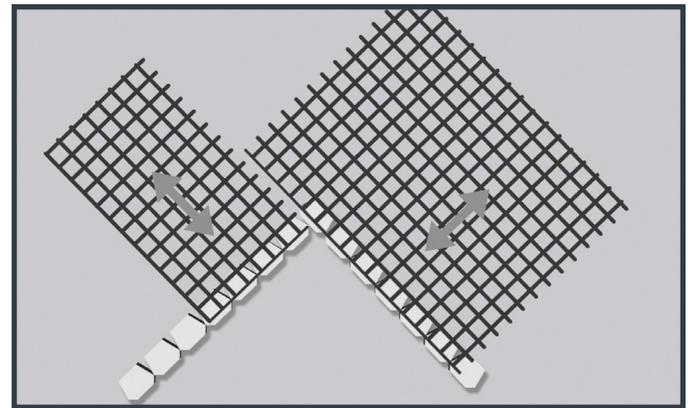
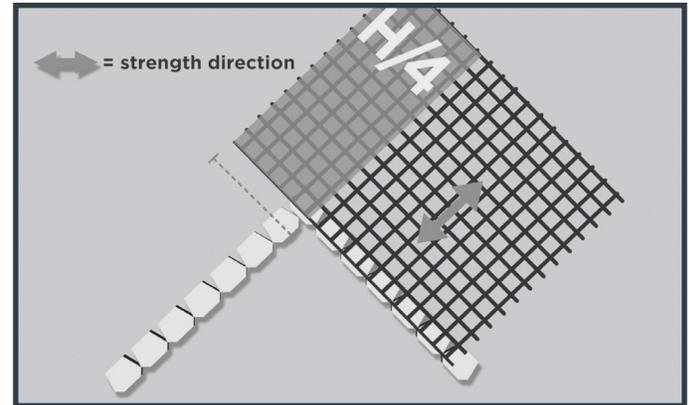
Place the next section of reinforcement on the adjoining wall. The reinforcement should not overlap and should lie flush with previously placed sections. Once reinforcement is in place, the next course of blocks can be installed.

SECOND COURSE WITH REINFORCEMENT

The first section of reinforcement on this course is placed using the same formula to determine placement in front of the adjoining wall.

Alternate the reinforcement extension on each course where reinforcement is required.

Place the next section of reinforcement on the adjoining wall. The reinforcement should not overlap and should lie flush with previously placed sections. Once reinforcement is in place, the next course of blocks can be installed.



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CORNERS — OUTSIDE 90°

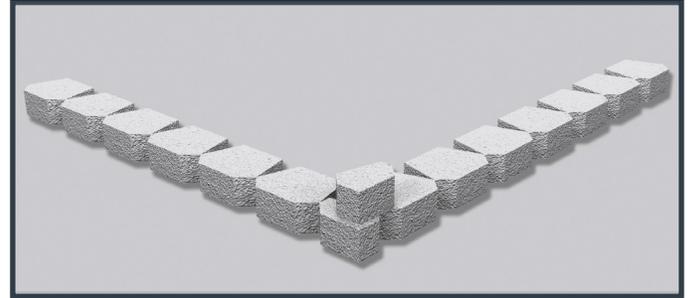
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SINGLE-PIECE SYSTEM

INSTALLATION INSTRUCTIONS

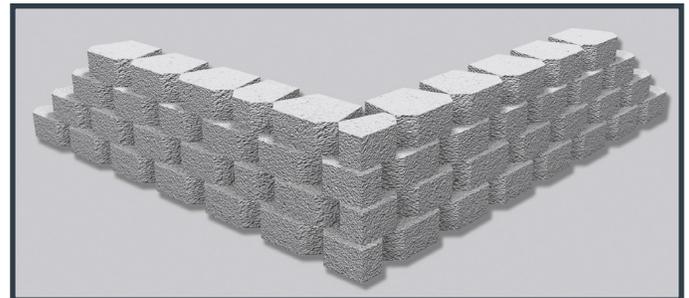
BASE COURSE

To build an outside 90° corner, begin by splitting* a unit in half. Place this unit with both split faces out at the corner. Remove the locator lip so that the block lies flat. Then lay the rest of the base course working from the corner block out.



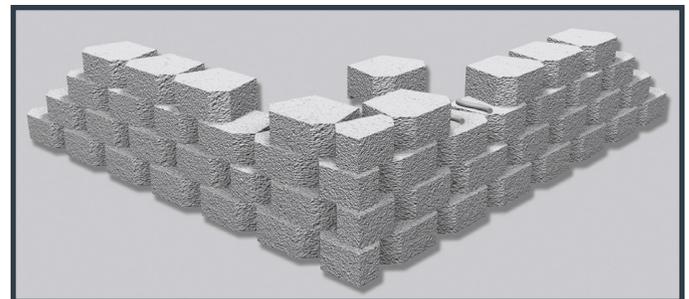
NEXT COURSE

Begin the next course with the other half of the split unit faced in the opposite direction at the corner. Place the second and third blocks on either side of the corner unit. Once the corner unit is in position, glue block in place with a concrete adhesive. Continue to alternate the corner unit orientation with each course and always use a concrete adhesive on the corner units.



RUNNING BOND

Use split units* as necessary to maintain running bond.



**To split a block, use a hydraulic splitter or split manually by using a hammer and chisel to score the block on all sides. Pound the chisel on the same line until the block splits. If partial unit sides are not exposed, use a circular cut-off saw with a masonry blade to achieve a tighter fit.*

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CORNERS — OUTSIDE 90° with Reinforcement

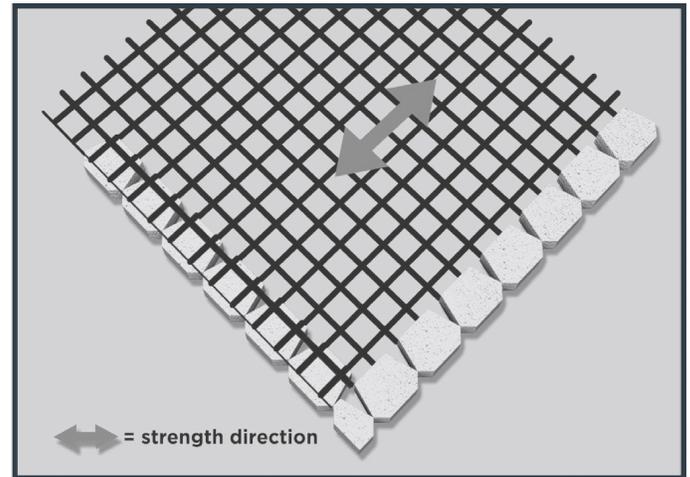
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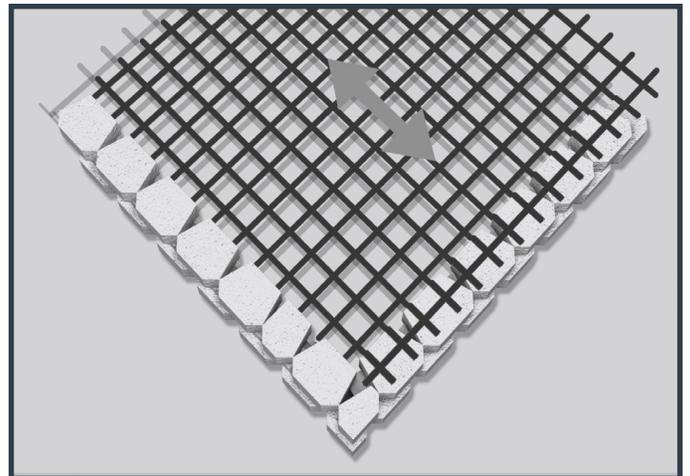
FIRST COURSE WITH REINFORCEMENT

Begin by checking the wall plan to determine reinforcement lengths and elevations. Lay a section of reinforcement near the corner of the wall, ensuring that it's placed within 1 inch of the face of the block and running along the back of the adjacent wall.



ADDITIONAL COURSES

Lay the next course of block, backfill and compact. When installing the next section of reinforcement, place within 1 inch of the face of the block and running along the back of the adjacent wall. Alternate the reinforcement extension on each course where reinforcement is required.



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CURVES — INSIDE

SINGLE-PIECE SYSTEM

CALCULATE THE RADIUS

Check the wall plan to determine the radius of the base course. This will be the smallest radius in the wall and must not be less than the minimum for the block system used.

BASE COURSE

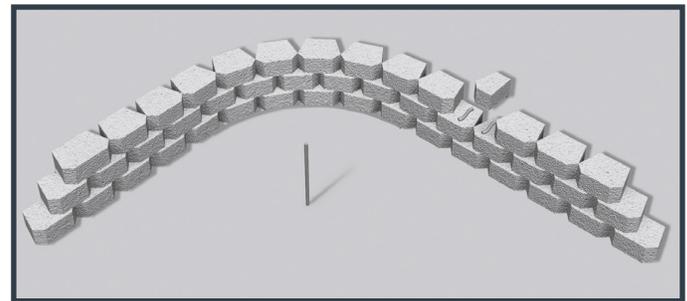
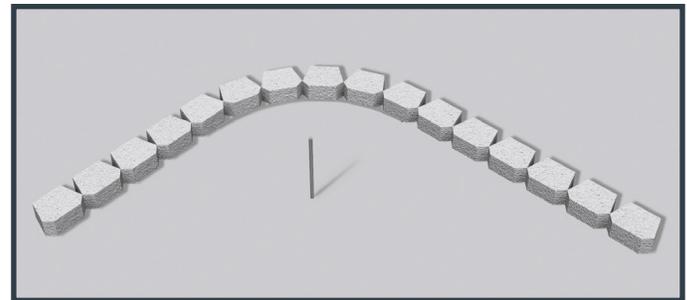
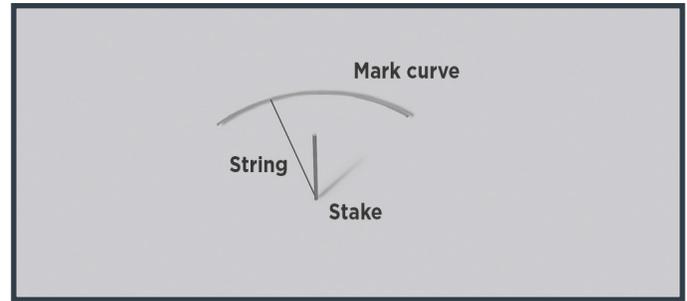
Begin by driving a stake into the ground at the desired center of the curve. Attach a string and rotate it in a circle around the stake to mark the radius in the soil. Align each block face with the curve and ensure level placement from side to side and front to back. Inside curves have varying minimum inside radii. Check the Product Information of the product you are using. When calculating the radius of the top course, add the setback in inches for each course used. See Product Information of the product you are using for setback.

ADDITIONAL COURSES

For each course, the lip of each block must be in contact with the back of the units below to ensure structural stability. The setback of the block will cause the radius of each course to gradually increase and eventually affect the running bond of the wall. To maintain proper running bond, use split units* as needed. Once a unit is cut to size, glue in place with a concrete adhesive.

**To split a block, use a hydraulic splitter or split manually by using a hammer and chisel to score the block on all sides. Pound the chisel on the same line until the block splits. If partial unit sides are not exposed, use a circular cut-off saw with a masonry blade to achieve a tighter fit.*

INSTALLATION INSTRUCTIONS



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CURVES — INSIDE with Reinforcement

MULTI-PIECE SYSTEM

Most retaining walls are designed assuming 100 percent coverage of the reinforcement. When building an inside curve, the back edges of the reinforcement will fan out, producing slight gaps. In order to ensure 100 percent coverage, additional lengths of reinforcement are used to fill those gaps on the next course of blocks. To prevent slippage, don't overlap the grid on any given course.

FIRST COURSE WITH REINFORCEMENT

Cut reinforcement to the lengths specified in the wall plan. Lay segments of reinforcement within 1 inch of the face of the wall, making sure that the strength direction of each section is perpendicular to the wall face. Avoid overlapping the reinforcement by separating each section.

SUBSEQUENT COURSES

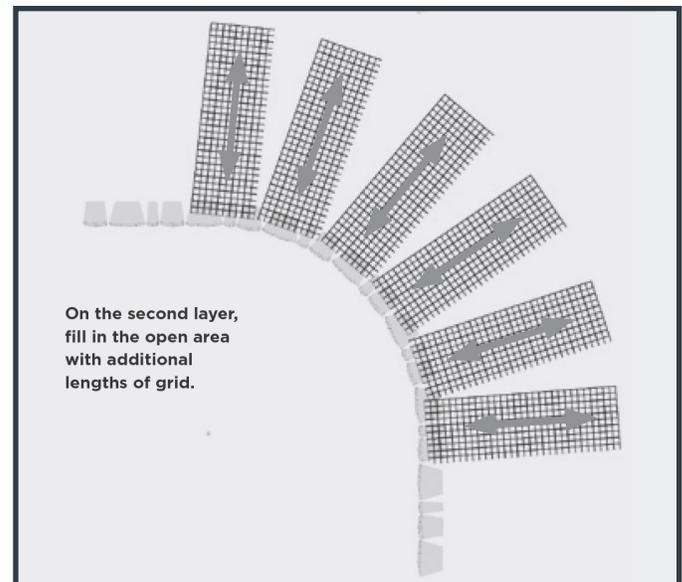
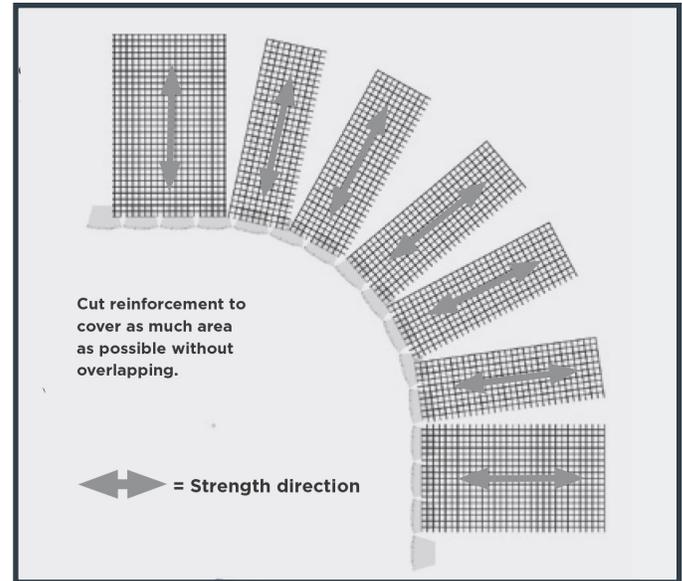
Place the next course of units, marking their backs to identify the middle of unreinforced areas. Backfill and compact. Center subsequent sections of reinforcement on the marked blocks to ensure full reinforcement coverage.

Repeat this procedure throughout the construction of the curve when reinforcement is required.

MINIMUM INSIDE RADIUS

The minimum radius varies by product. Please check Product Information for the product you are using at anchordiamond.com.

INSTALLATION GUIDELINES



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CURVES — OUTSIDE

SINGLE-PIECE SYSTEM

INSTALLATION INSTRUCTIONS

CALCULATE THE RADIUS

When building an outside radius curve, begin by calculating the radius of the top course. This will be the smallest radius in the wall and must not be less than the minimum for the block system used.

Here is the rule of thumb used to calculate the approximate radius of the top course: Add 1/4 inch to the setback of the block used. Multiply that amount by the numbers of courses in the finished wall. Then subtract the result from the radius of the base course. This number equals the calculated radius of the top course.

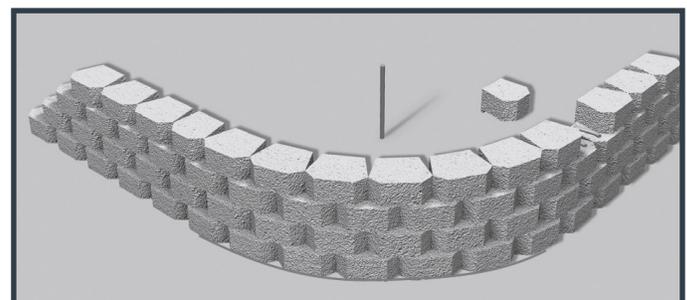
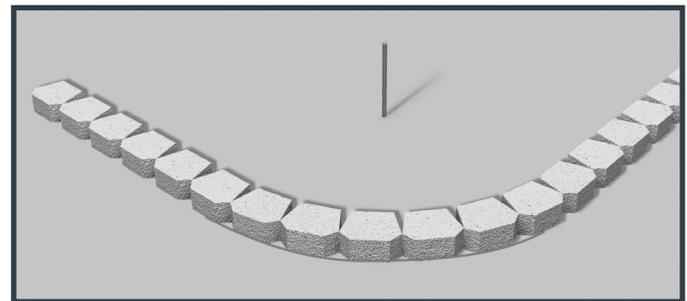
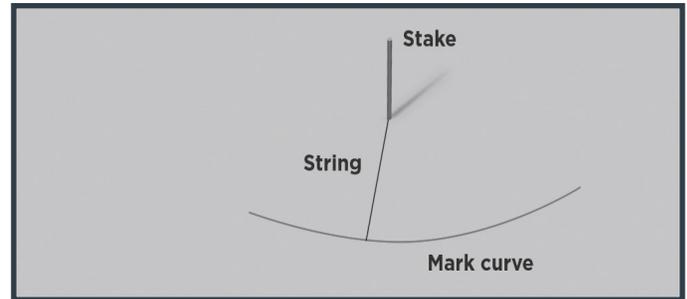
BASE COURSE

Drive a stake into the ground at the desired center of the curve. Attach a string and rotate it in a circle around the stake to mark the radius in the soil. Align the front of the block with the marked curve and ensure level placement from side to side and front to back.

ADDITIONAL COURSES

For each course, the lip of each block must be in contact with the back of the units below to ensure structural stability. The setback of the block will cause the radius of each course to gradually decrease and eventually affect the running bond of the wall. To maintain proper running bond, use split units* as needed. Once a unit is cut to size, glue in place with a concrete adhesive.

**To split a block, use a hydraulic splitter or split manually by using a hammer and chisel to score the block on all sides. Pound the chisel on the same line until the block splits. If partial unit sides are not exposed, use a circular cut-off saw with a masonry blade to achieve a tighter fit.*



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CURVES — OUTSIDE with Reinforcement

SINGLE-PIECE SYSTEM

Most retaining walls are designed assuming 100 percent coverage of the reinforcement. When building an outside curve, the block edges of the reinforcement will have gaps and the back edges don't overlap. In order to ensure 100 percent coverage, additional lengths of reinforcement are used to fill those gaps on the next course of blocks. Don't overlap the grid on one course.

FIRST COURSE WITH REINFORCEMENT

Cut reinforcement to the required lengths specified in the wall plan. Lay sections of the reinforcement within 1 inch of the face of the wall with the strength direction perpendicular to the wall face. Avoid overlapping the reinforcement by separating each section.

NEXT COURSE

Place the next course of blocks, marking the backs of blocks to identify unreinforced areas. This step is important because when this course is backfilled, it's impossible to locate the unreinforced areas. Use the marked blocks as a guide, placing subsequent sections of reinforcement to overlap the gaps left on the previous course. This will ensure total reinforcement coverage.

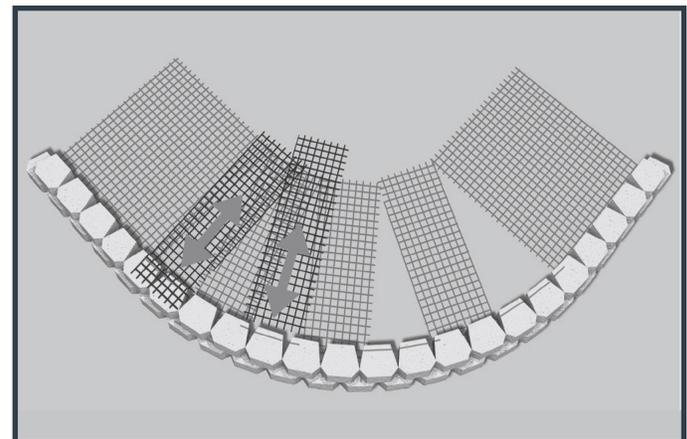
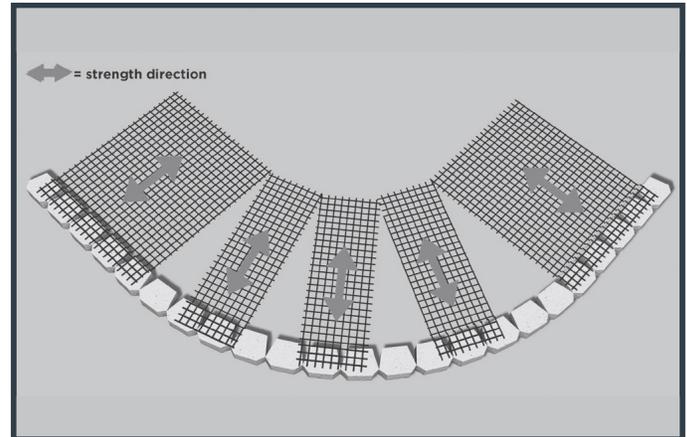
ADDITIONAL COURSES

Repeat this procedure throughout the construction of the curve when reinforcement is required.

MINIMUM RADIUS

Each product has a unique radius. Check the Product Information on anchordiamond.com.

INSTALLATION INSTRUCTIONS



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SINGLE-PIECE SYSTEM

The specific dimensions of the fence and fence post spacing are required to accurately determine the placement of the sleeves.

Provide at least 1 inch clearance between the inside of the sleeve and the outside of the post, and allow for mortar and grout. Install the sleeves according to the wall plan during the construction of the wall.

If the fence is at least 3 feet behind the wall face, generally no additional reinforcement is required.

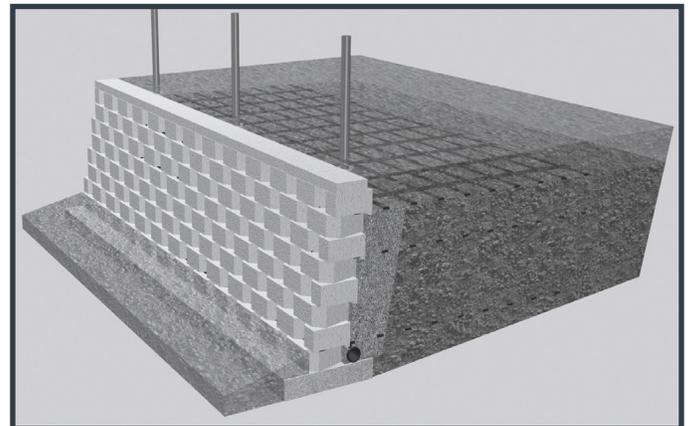
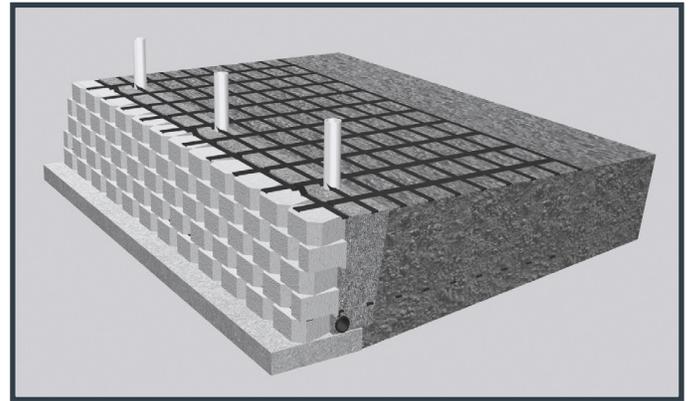
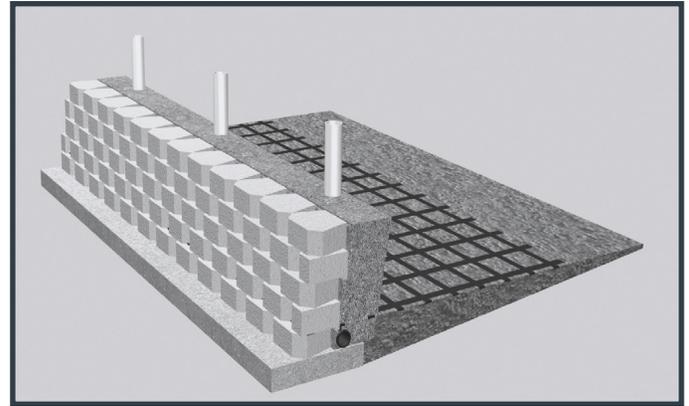
If the fence is installed within 3 feet from the face of the wall, there may be some load transferred to the wall from wind, snow or pedestrians. Additional reinforcement around the fence sleeves may be needed. Consult a suitably qualified engineer before installation takes place.

Walls should not be completed and sleeves then 'punched' through the already installed backfill and reinforcement layers after construction is complete. This may result in damage to the reinforcement grids and lead to subsequent failure of the wall.

Carefully cut the reinforcement cross (weft) straps to allow the reinforcement to fit around the sleeve without distortion or additional tension being introduced to the grid when in its final location.

Grout the fence post into the sleeve after the wall is built.

INSTALLATION INSTRUCTIONS



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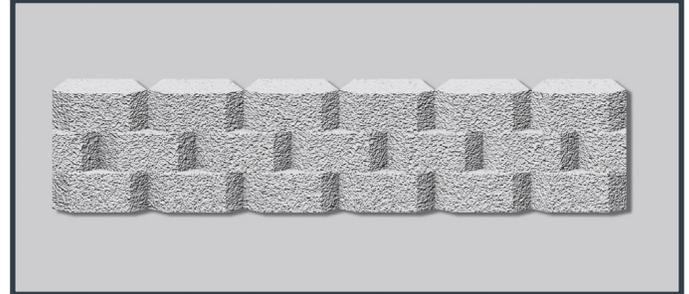
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SINGLE-PIECE SYSTEM

INSTALLATION INSTRUCTIONS

STRAIGHT WALL

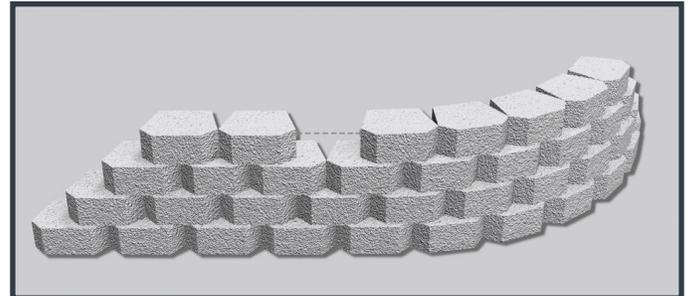
Proper installation of an Anchor™ retaining wall requires that running bond be maintained. Running bond occurs when the blocks are centered over the vertical joints of the previous course. This adds to wall stability and makes your wall system aesthetically beautiful.



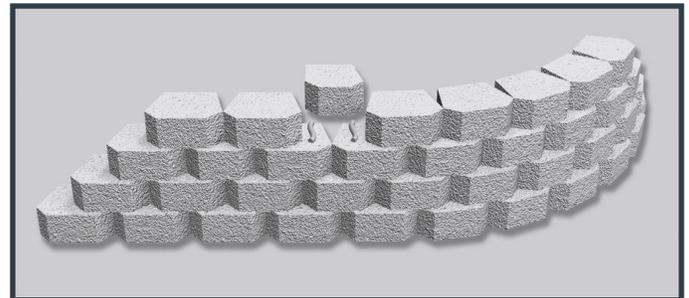
OUTSIDE CURVED WALL

Any wall that is not perfectly straight will eventually run off bond. When this happens, skip a block position and place the next block into the next place where it is back on bond. Measure the remaining gap and cut or split* a block to fit.

Tip: It may be possible to run the off-bond block into the soil bank to avoid cutting of partial units.



Once the partial unit is in place, glue with a concrete adhesive. Partial units should not be less than 5 inches long and should not be placed directly on top of each other. If the gap is larger than the length of one block, divide the measurement by two and put two partial units in place.



**To split a block, use a hydraulic splitter or split manually by using a hammer and chisel to score the block on all sides. Pound the chisel on the same line until the block splits. If partial unit sides are not exposed, use a circular cut-off saw with a masonry blade to achieve a tighter fit.*

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STEPS IN CURVED WALL

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SINGLE-PIECE SYSTEM

These drawings feature step units. Caps or pavers can be used for treads. Check local building codes for any tread depth standards.

BASE COURSE

Thoroughly compact the leveling pad. Lay out the base course according to the wall design. Place step units first, working from the center to each side. Remember, it is very important to backfill and compact behind and along the sides of each course of step units.

FIRST STEP COURSE

Place the first course of step units directly on top of the base course so there is no setback. Stagger them from the previous course and glue in place.

SECOND STEP COURSE

Add the second course of steps, staggering them from the previous course to maintain running bond. Overlap the previous course by 2 inches and glue to lower course. Place and compact soil fill prior to installing the next course.

NEXT WALL COURSE

Place a standard block near the second course of steps, maintaining running bond with the base course. Measure and cut a block to fit the space remaining between the step unit and the next course of the wall. Place the unit in the wall, making sure that both the vertical edges fit tight against both the step and standard unit. Remove the rear lip on the blocks when necessary, and angle the blocks flush with the face of the previous course. Glue in place with a concrete adhesive. Repeat these steps until the wall is finished.

ADDITIONAL STEP COURSES

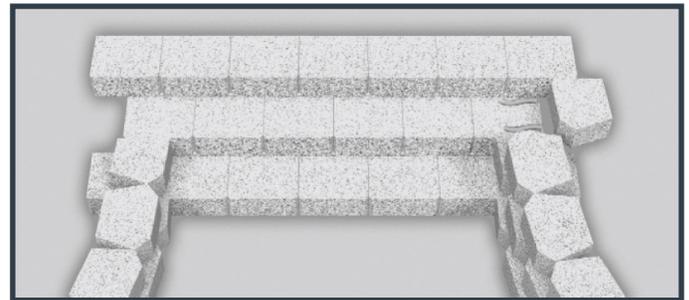
Beginning in the center, add the third course of steps, lining up the units with the first course. Overlap 2 inches and glue in place.

Drainage Tip: Drainpipe can be placed behind the lowest step units at grade. An alternative would be to place the drainpipe behind each wall adjacent to the steps.

INSTALLATION INSTRUCTIONS



First wall course and second step course shown.



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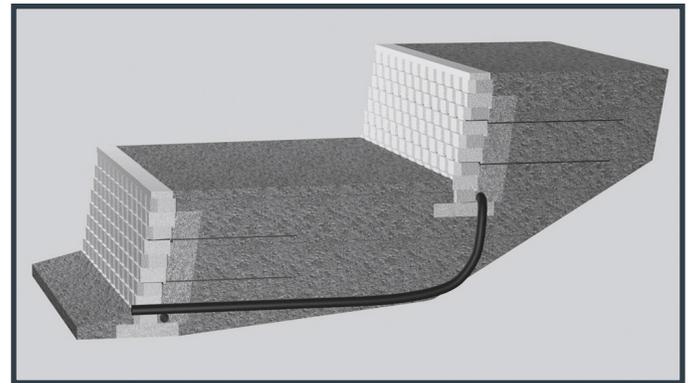
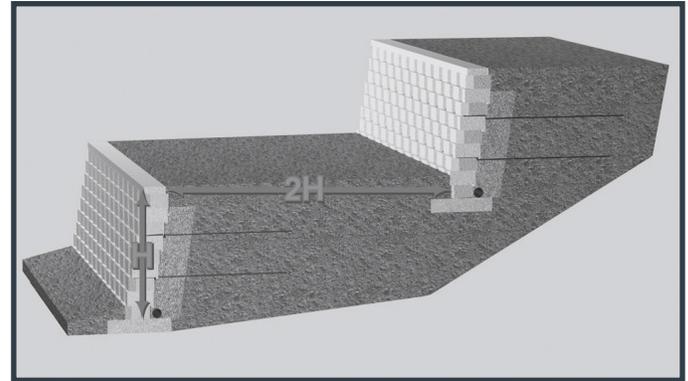
SINGLE-PIECE SYSTEM

INSTALLATION INSTRUCTIONS

INDEPENDENT TERRACED WALLS

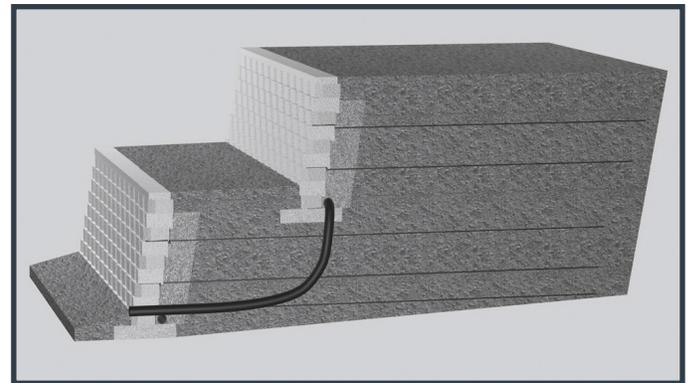
For each wall to be independent of others, they must be built using a 2:1 ratio: The upper wall must be built a distance away from the lower wall of at least twice the height of the lower wall. In addition, the upper wall must also be equal to or less than the height of the lower wall. Exceptions to this general rule include weak soil conditions or where slopes exist above, below or between wall locations. For example, if the lower terrace is 3 feet tall, the distance to the upper terrace must be at least 6 feet, and the upper wall must not be higher than 3 feet.

Proper drainage is vital to maintaining stable, longlasting terraced walls. Drainpipe must be installed so that the water is directed around or under the lower wall. (Never place the drainpipe outlet for the upper wall above or behind the lower wall.)



DEPENDENT TERRACED WALLS

When the distance between the lower and upper walls is less than twice the height of the lower wall, the walls become structurally dependent on each other. In this situation, it is important to take global stability into account, incorporating additional reinforcement, and longer layers, into the wall plan. In addition, structurally dependent walls require even more excavation, backfill and time; so plan ahead. Be sure to check the wall plan for specific requirements. For structurally dependent walls, consult with a qualified segmental retaining wall engineer.



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SINGLE-PIECE SYSTEM

With correct design and construction, Anchor™ products can be successfully installed at the edge of water channels, river banks and drainage ditches.

The final design of the wall is affected by various factors, including the movement and velocity of the adjacent water, erosion and scour, the direction of water travel to the wall, the risk of flooding, as well as the soil and ground conditions where the wall is being built.

A qualified engineer should always be consulted to determine the effect of water on the wall and to design a wall that takes all these factors into account.

Consult a qualified engineer before design, construction and installation take place, and follow the engineer's design.

BASE COURSE

Place a filter fabric with extra length in front of the wall.

Install the leveling pad and the first course of block, including drainpipe and drainage aggregate. Wrap the extended filter fabric up along the face of the base course. Place soil fill in front of the wall and compact. Install another section of filter fabric in front of the wall to protect against erosion. Cover the fabric with a minimum of 3 inches of sand. Install larger stones, such as riprap, to hold it in place.

NEXT COURSE

Continue constructing the wall. Drainage is vital. To prevent clogging of the drainage aggregate and drainpipe by fine-grained soils, a geosynthetic filter fabric is installed to separate the drainage aggregate from the reinforced soils.

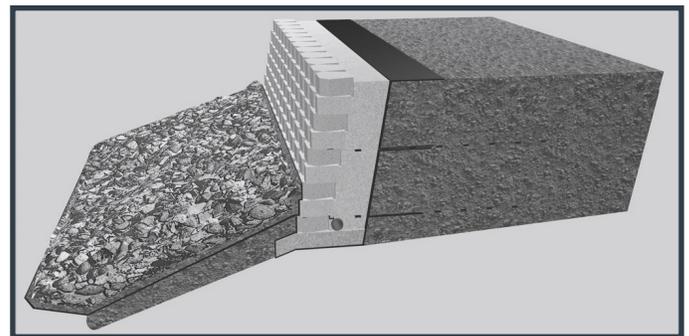
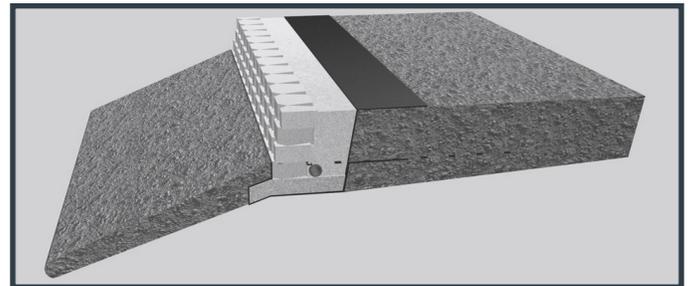
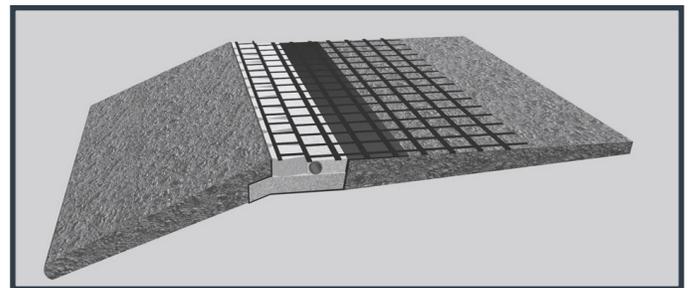
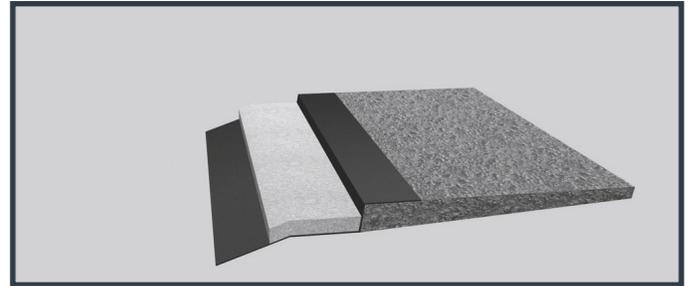
ADDITIONAL COURSES

Continue these steps until the wall is complete. The last section of filter fabric should cover the drainage aggregate and run up against the back of the top course of block. Add fill soil and compact.

Keep in mind there are numerous issues related to water wall applications, including wave or ice impact, erosion or scour in front of the wall and ice uplift of the wall that must be considered in the use of water applications of segmental retaining walls.

For more information, consult with a qualified engineer.

INSTALLATION INSTRUCTIONS



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