

## Double Sided Coventry® Wall and Double Sided Tudor Wall™

**Tools:** Shovel, wheelbarrow, level, string line, hammer, tape measure, wooden stakes, dead blow hammer, plate compactor, and splitter for splitting block.

### GENERAL GUIDELINES

- Maximum height for the walls in freestanding applications without engineering assistance is 33" (exposed height including cap). Seek a qualified professional engineer where a taller wall may be required.
- Curves in the wall, corners, and piers will all help with the stability of the walls.
- Both pins and adhesive are required for proper installation of the walls.
- Seat walls are typically 18"-24" high, parapet walls are typically 30"- 33" high.

### CALCULATE MATERIAL NEEDED

Double Sided Coventry Wall and Double Sided Tudor Wall are sold by the square foot. Determine the total square feet of wall needed by multiplying the length times the height (don't forget the block that will be below grade). Both the 3" high pallet and 6" high pallet contain 40 square feet of wall block. Due to the walls' modularity, both heights can be combined within the same wall.

Use the following formula to calculate the number of pins needed:

$$(\text{Number of non-cap courses} - 1) \times \text{linear feet of wall} = \text{total number of pins.}$$

Example: A 20' long wall, 5 courses high (without cap)  $5 - 1 = 4 \times 20' = 80$  pins needed

Use the following formula to calculate the number of Universal Caps needed:

$$\text{Total lineal feet} \div 1.25 = \text{total number of Universal Caps needed}$$

Example: A 20' long wall =  $20' \div 1.25 = 16$  Universal Caps needed

### PREPARE THE FOOTING

Dig a trench 24" wide and a minimum of 12" below grade depending on the overall height of the wall. As a rule of thumb, you will bury 10 percent of the wall height or a minimum of 6", whichever is greater. Make sure the soil at the bottom of the trench is well compacted to prevent settling. In heavy or clay soils for best results, wrap the footer trench in a "U" shape configuration with geotextile. This will preserve the stone base over time and keep it from migrating into the clay soil. Using a vibratory plate compactor install 6" of modified stone in two 3" layers making sure the surface of last layer is smooth and level.

**Tip:** Add a 1" layer of sand or stone screenings on top of the footing to make the base course easier to level.

### INSTALL THE BASE COURSE\*

Install the first layer of the walls by placing the units, narrowest slot (1/2" wide) on the top, on the prepared base. Depending on the radius you are trying to achieve, you may need to turn a block upside down to ease installation. Screenings or coarse concrete sand may be used as a leveling agent, but should not exceed 1" in depth. It is recommended that 6" units be used for the first course to help ensure the wall's stability. Level the units from front to back and side-to-side using a dead blow hammer and level.

The walls blocks come in five different sizes. Use 6"x16" for setting the first course. Align the base course to a string line to assure a straight wall where applicable.

**Note:** EP Henry offers Base Course Block which facilitates ease of installation and provides improved structural stability.

### INSTALLING ADDITIONAL COURSES

Place the next and additional courses of the wall in such a fashion that each block bridges two units below in a running bond pattern, wherever possible. Avoid having a vertical line span more than two layers, or 6" of block. Lay additional courses starting at the corner and working toward the center.

**Insert pins in each course as you build the wall, making sure that the flag of every pin is oriented toward the wider part of the block.**

Marry the angles of the blocks to avoid gaps and to keep the continuity of the rock face on both sides of the wall. The tightest radius possible using all sized units is 42". By using more of the smaller block and less of the larger units you can achieve a tighter radius.

It is necessary to run a bead of high strength, flexible concrete adhesive on both sides of the slot about 1"-2" from both of the faces of the block, between each course for structural stability.

### BUILDING 90° CORNERS

Double sided corners are available in both 3" and 6" high units to readily create 90° corners. To build 90° corners, begin construction at the corner of the wall and work outward. Alternate corner units to maintain a running bond pattern. Use a high strength flexible adhesive to bond the corners together, as there are no slots for pins.

After splitting the corner, take a piece of block and rake the face of the fresh split to create the aged look.

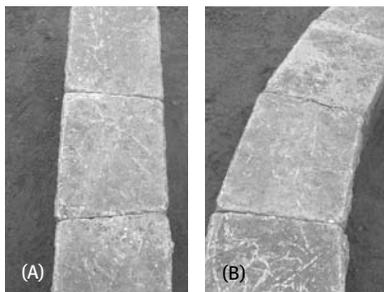
Start by laying the corner unit first and work your base course away from the corner unit. After installing and leveling your base course, start the second course again at the corner. No pins will be used in the corner; use high strength, flexible concrete adhesive only. When building a corner, make sure that the corner unit overlaps two blocks beneath.

### CAP THE WALL

After installing your last course of wall block, attach the Universal Coventry Wall Caps with a high strength, flexible concrete adhesive. The cap units should be installed following the contour

of the wall and with a 1/2" - 1" overhang on both sides. Universal Coventry Wall Caps will fit a 6' 6" inside radius with no cuts.

- Alternate Coventry Universal Caps for a straight wall.
- For a curved wall, marry the angles of the cap to conform to the radius. Some cutting may be necessary.



## Double Sided Cast Stone Wall™

**Tools:** Shovel, wheelbarrow, level, string line, wooden stakes, dead blow hammer, and splitter for splitting block.

### GENERAL INSTALLATION GUIDELINES:

Recommended maximum height: 4 courses (24") exposed not including cap. Install the first course of Double Sided Cast Stone Wall block with a gap of 1" separating the back of the blocks of the opposing walls.

EP Henry strongly recommends the use of high-strength concrete adhesive between every course and the cap. The 10" and 6" units will allow construction of radius walls with virtually no cuts.

### CALCULATE MATERIAL NEEDED

Double Sided Cast Stone Wall™ is sold by the square foot. Calculate the total square feet of Double Sided Cast Stone Wall™ wall needed by multiplying the length times the exposed height.

Double Sided Cast Stone Wall™ has its own Footer Block which is sold by the piece. Calculate the number of units needed by dividing the length of the wall by 1.30 (decimal equivalent of 15 5/8").

### PREPARE THE FOOTING

Dig a trench 24" wide and 10" below finished grade. Make sure the soil at the bottom of the trench is well compacted to prevent settling. In heavy or clay soils for best results, wrap the footer trench in a "U" shape configuration with geotextile. This will preserve the stone base over time and keep it from migrating into the clay soil. Using a vibratory plate compactor install 6" of dense graded aggregate (modified stone) or clean #57 stone in two 3" lifts making sure the surface of the last lift is smooth and level.

**Tip:** If using dense graded aggregate or modified stone: add a 1" layer of concrete sand or stone screenings on top of the footing as a leveling agent for the footer course.

### INSTALLING THE FOOTER COURSE BLOCK

Install the Double Sided Cast Stone Wall™ Footer Block™ by placing the units tightly together on the prepared base. Level the units from front-to-back and side-to-side using a dead blow hammer and level. Radius construction will require the base course block to be spread apart (the gap should not exceed 4") and/or to be cut and trimmed accordingly using a diamond blade saw.

**Note:** These instructions are meant as a general guideline for walls under ideal conditions, and assuming no slopes or surcharges. Site-specific conditions may warrant additional installation requirements.

**Caution:** Dry sawing or grinding of concrete products may result in the release of respirable crystalline quartz. Prolonged exposure to respirable crystalline quartz may cause delayed (chronic) lung injury (silicosis). The use of a NIOSH-Approved respirator and tight-fitting goggles are recommended when sawing or grinding operations are in progress.

## Double Sided Cast Stone Wall™

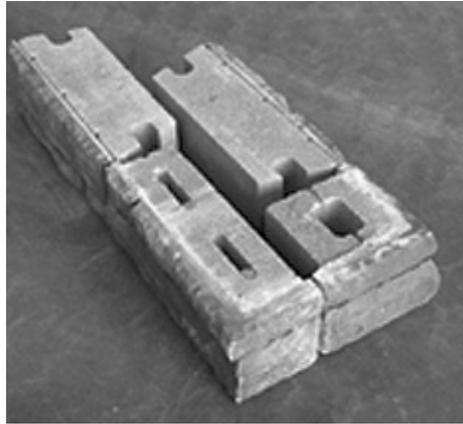
(continued)

### INSTALLING DOUBLE SIDED CAST STONE WALL

Install the first course of Double Sided Cast Stone Wall™ block with the face of the unit overhanging the footer block while maintaining a gap of 1" separating the back of the blocks of the opposing walls. Check to make sure all units are level front-to-back, side-to-side and wall-to-wall. Install courses whenever possible so that each block spans the two units below it in a running bond pattern. Avoid having a vertical line extend more than two courses of block. Install additional courses starting at the corner and working toward the other end. Do not start at both corners and try to meet in the middle. Install the faces of the blocks flush to avoid gaps and to keep the continuity of the stone face on both sides of the wall. It is necessary to bond all the courses of block, the footer block, and the cap together. To achieve structural stability, beads of high strength, flexible concrete adhesive must be run between each course staying 1"-2" behind the face of the block.



▲ Block Alignment



▲ Corner 1st Course



▲ Corner 2nd Course



▲ Corner 3rd Course

### TERMINATING THE WALL

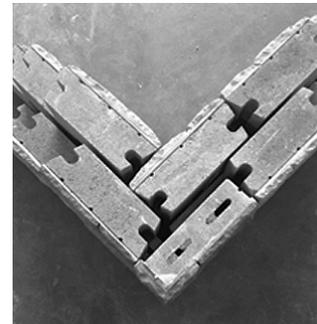
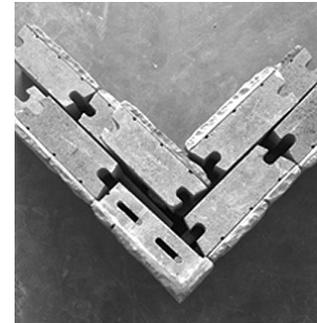
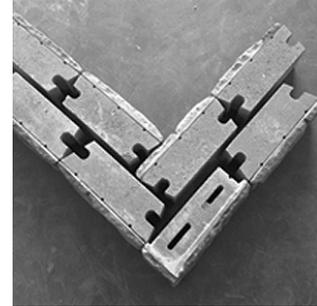
Double Sided Cast Stone Wall™ corners are manufactured in two unit sizes - 16"x 6" and 8"x 8" - to readily terminate the wall. At the termination point of the wall place the long and short corner units back-to-back as opposing pairs to create the end of the wall. (See below.) Alternate the position of the corner units on each successive course to maintain a running bond pattern. When terminating the wall make sure that the corner units overlap the two corner blocks beneath them maintaining a running bond.

**Note:** Double Sided Cast Stone Wall™ may also be terminated by building a column at the end of the wall using single sided Cast Stone Wall™ corner units with the column cap.

Cap options: Terra Vista Cap - minimum inside radius without cuts is 9' 10". Chapeau 16" Cap - minimum inside radius without cuts is 9' 6".

### BUILDING 90° CORNERS

To build 90° corners install a Double Sided Cast Stone Wall™ "A" corner unit at the spot where one wall will terminate and the return wall begins. Work off of the "A" Corner unit using the 16" stretcher units. For each successive course of block alternate the position of the "A" Corner unit (see below). It is recommended to start construction at the corner and work out from that point. This insures virtually no cut pieces at the corner which means better structural stability and a cleaner overall appearance. Use a high-strength flexible concrete adhesive on all Double Sided Cast Stone Wall™ units when constructing the 90° corner.



### CAPPING THE WALL

After laying the last course of wall block, install the wall cap units using a high strength, flexible concrete adhesive applied to both sides of the wall. The cap units should be installed following the contour of the wall and with a uniform overhang on both sides. If needed, use a shim to eliminate any minor variations in height between the wall caps.

The EP Henry Double Sided Cast Stone Wall™ cap options can be installed by alternating the units front-to-back to cap a straight wall or by marrying the angles of the cap to conform to the wall's radius. Cutting the cap units may be necessary depending on the radius. All of the cap options have available finished end units for terminating the wall.