

Instructions on installing a core-fill, gravity retaining wall.

-Excavation:

- 1.) Excavate to the lines and grades required.
- 2.) Leveling pad should be cut to a depth of 8".
- 3.) Place and compact 4" of 1" minus crushed rock, (meaning rock size is 1" & smaller, available at local landscape supply yards). The leveling pad should be compacted to provide a level surface on which to place the first course of Cuesta block.

-Wall Block Installation:

- 4.) Place the first course of Cuesta on the base-leveling pad. Repeatedly check the base course to ensure that it is level from side to side and front to back and aligned perfectly with the neighboring block.
- 5.) Units must be in full contact with the base-leveling pad.



- 6.) Before starting the second row, fill the unit cores and between the units with core-fill material, (1" minus crushed rock is recommend). This technique helps lock the base block in place and maintain alignment.
- 7.) Place core fill material behind Cuesta units a minimum of 8" to 12" behind wall. This allows free drainage of water, which reduces the pressures applied to the backside of the wall. Taller walls require more back fill.

8.) Sweep excess material from top of units and install next course. When each course is completely filled, back fill and compact behind the wall in 8" lifts before the installation of the next course.

9.) Each course requires that the block be placed side-by-side and aligned perfectly. To help with alignment, use a string along the backside of the block. Place each course a minimum of a 1/2" further back on the course below. This is called "set back" and it creates "wall batter" which anchors the wall into the slope creating better stability and drainage.

10.) When installing the top row, turn the block over to create a flat surface to adhere the cap to. Use an exterior grade concrete adhesive to adhere the cap to the top wall block. Backfill behind the wall and compact to finished grade.

NOTES

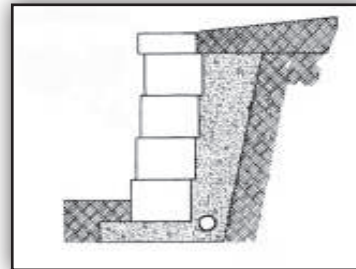
~ Two or three courses may be set in place before the core fill is added. Backfill materials should be installed in 8" lifts & compacted.

~ When building two-tiered walls, the "range of action" is twice the height of the bottom wall, meaning if the lower wall is two feet tall, the upper wall should be built four feet behind the lower wall and not exceed the height of the lower wall. Check with local building codes, they can vary.

**As a gravity wall, Cuesta Retaining Wall can be built to 3 feet tall.
It can be engineered for taller walls.**



Shown above is an example of two 90° turns, incorporating 8" tall steps.



Above shows the back fill area and the circle is the drain which is necessary for drainage.

Project Estimation

Each Cuesta wall block covers .88 of a square foot, therefore 1.13 blocks are required to cover one square foot. To calculate how many Cuesta block needed, first calculate the square footage by measuring the length and the height of the wall. Second, multiply those two numbers to establish the total square footage. *When you calculate the height of the wall, don't forget to factor in the bottom course of block that will be buried.* Multiply the square footage by 1.13, to find the number of block needed for the project.



The Cuesta Cap is split on both the front and the back sides. This allows installers to flip-flop the caps in straight walls and create a seamless top row, thus eliminating voids created by the trapezoidal shape of retaining wall. On curved walls, installers can flip-flop the cap block where it fits but be prepared to have to cut some of the cap if a seamless cap row is desired. To estimate the number of cap required for the wall, first decide whether the caps will be flip-flopped or placed all the same way. If the caps are flip-flopped, multiply the linear footage by .86. If the cap block will be set with the 16" side towards the front of the wall entirely, multiply the linear footage by .76.

Cuesta Dimensions: 8" tall, 16" wide, 10" deep

Cap Dimensions: 4" tall, 16" wide front face,

~12" wide rear face, 10" deep.

Cuesta Block weighs 60 pounds

Cuesta Cap weighs 42 pounds.

Colors

Cuesta Retaining Wall System has trapezoid block, trapezoid cap, and rectangular corners, which are split on a long and short end for turning 90°.

Gray



Tan



Red



#5 Buff
& Black*



Red
& Black*



Tan
& Brown*



#8 Purple
& Buff*



**Marbled colors can have block that are mostly solid color. Colors may vary from photos.*

Core-Fill vs. Other Systems



The three gravity wall systems: core-fill, lip and pin. Our Cuesta is core-fill, which means structural integrity is obtained by filling the large voids in each block with crushed rock. The aggregate forms stabilized columns that span from bottom to top, locking the wall together. Crushed rock is required by every retaining wall system, allowing water to drain rapidly through the wall to avoid failure. *Please review the installation instructions.* St. Vrain Block prefers core-fill systems. They are easier to install which reduce labor costs and installer's frustration.

Pin systems require careful alignment which takes time. The pins get lost or broken on job sites. The blocks are often solid in pin systems and are heavy and awkward to handle.

Lip systems are stabilized by leading lips or trailing lips. The lip can be broken off in transit, or to enable turning corners, thus reducing the systems structural integrity.

Both pin and lip systems limit the installer's creative flexibility by mandating placement of the block. Core-fill systems are infinitely versatile. An installer can turn corners both directions without having to remove stabilizing pins or break off lips. Setback can be increased or reduced, depending on the projects needs and abilities. All this creativity and versatility is achieved without compromising the system's stability.



Cuesta Retaining Wall



St. Vrain Block Company manufacturer of high-quality concrete products since 1946.

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