

Project

Mortarless Block Construction with QUIKWALL®

QUIKWALL® Surface Bonding Cement (SBC) now makes most block construction possible without using mortar; it's literally a "stack and stucco" project. A single coat on dry-stacked block gives a handsome stucco finish and provides greater flexural and impact strength than mortar with less expense. A 50 pound bag will cover approximately 50 square feet at a 1/8" thickness. In planning your project, note that actual rather than normal block size is used since joints are not buttered.

Block Walls

The same basic techniques of wall construction are used no matter what your project happens to be.

Required Tools & Materials

- QUIKRETE® Surface Bonding Cement
- QUIKRETE® Concrete Acrylic Fortifier
- QUIKRETE® Sand Mix or QUIKRETE® All-Purpose Sand (if needed)
- QUIKRETE® Concrete Repair Caulk
- Mason's line
- Level concrete or joint trowels
- Chalk line
- Mason's hammer
- Brick set
- Straight-edge
- Metal tie bars
- Metal lathe strips

Step by Step

Construction

1. Construct the footer for the wall.



2. To ensure square, accurate corners and straight walls, dry-lay the corner leads and first course and chalk mark the block positions on the footer. Use a level and mason's line for accuracy.

3. Remove the blocks and lay 1/8" bed of prepared QUIKWALL®

SBC on the footer. This bed of QUIKWALL® SBC helps in leveling the first course if there are slight irregularities in the slab of footer. Relay the bottom course checking alignment and level every 3 to 4 blocks.



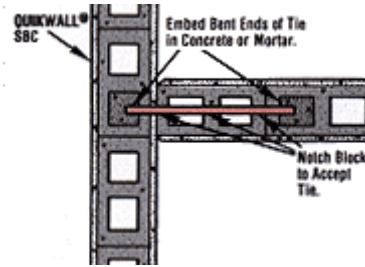
4. For projects with wall openings or intersecting walls (other than at corners), refer to steps 6 and 7. Otherwise, dry-stack the remaining block in a running bind pattern to the desired height. If necessary, shim with QUIKRETE® All-Purpose Sand or Sand Mix.



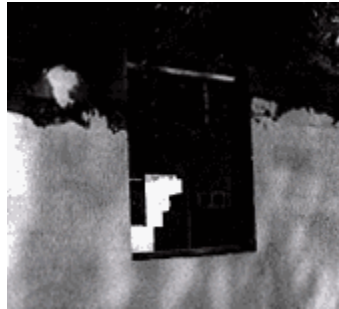
5. Wet down the wall and apply 1/8" QUIKWALL® SBC coat to both the sides and exposed ends of wall using a finishing trowel with an upward motion. If you must stop work, stop the QUIKWALL® SBC application on a block, not a joint between blocks.



6. Stack and bond the main and bearing wall intersection together in 4- to 6- course intervals. After the main wall has been stacked and coated no higher than 6 courses, begin constructing the intersecting wall. It too should be placed and leveled in an 1/8" to 3/8" bed of QUIKWALL® SBC. Embed metal ties every 4 to 6 courses as shown. Stuffing the bottom of the block cell opening with paper will allow you to fill it with mortar to hold the tie. Continue to build the intersection in intervals to the full height of the wall.



7. To construct window or door openings, dry-stack the block no more than 2 or 3 courses higher than the bottom of the opening before framing out the opening to exact dimensions. The wall is then built up around the frame. Precast lintels make finishing the top of doors and windows easy. Because precast lintels are nonporous, the QUIKWALL® Surface Bonding Cement applied over the lintel must be fortified with QUIKRETE® Concrete Acrylic Fortifier. Simply lay the lintel in place and coat it with fortified QUIKWALL® SBC mix.

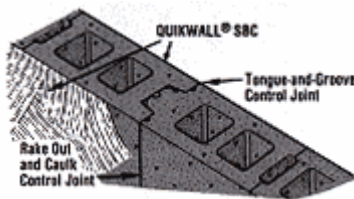
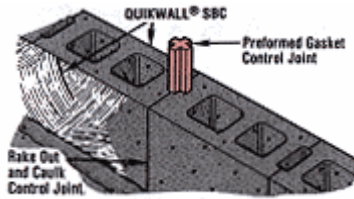
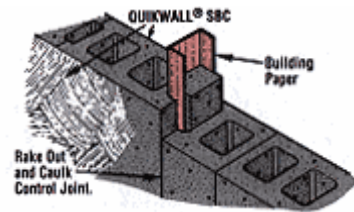


8. Vertical control joints are needed to handle stresses and prevent cracking of the block or QUIKWALL® SBC finish. Spacing between control joints is determined by wall height. In general the ratio of control joint spacing to wall height is about 2:1. That is a 2' high wall should have control joints every 4', a 4' wall every 8', and an 8' wall every 16' to 20'.

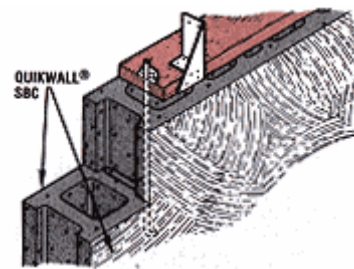
Control joints are also needed at the following points of weakness and/or high stress concentration.

- At all abrupt changes in wall height
- At all changes in wall thickness, such as those at pipe or duct columns or pilaster
- Above joints in foundations and floors
- Below joints in roots and floors that bear on the wall
- At a distance of not over half the allowable joint spacing from bonded intersections or corners
- At one or both sides of all door and window openings unless other crack control measures are used, i.e., joint reinforcement or bond beams

Regardless of the control joint design used, rake out the wall joint and caulk with QUIKRETE® Concrete Repair Caulk.



9. Attach capping sills to the top course by anchoring bolts firmly into the concrete or QUIKWALL® SBC. Moist-cure the wall after 8 hours by dampening with a fine spray. Repeat several times daily for 3 days. Roof or floor construction can proceed when the curing is complete.



For Best Results

- Take extra care that the bottom course is laid properly, because each succeeding course will simply be stacked on it.
- To ensure proper bonding, make certain that the blocks are clean and free of any dirt, soil, or grease.
- Before laying the block, remove any burrs and chips from it with a hammer to get a tight fit. Mix only as much QUIKWALL® SBC as can be used in 1 hour.
- To obtain the finish you desire, experiment with different trowels and techniques before applying the QUIKWALL® SBC coat to your wall.