

DETERMINING
WHAT YOU NEED



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Seven Simple Steps To Great Paver Projects



Get Started

WHAT YOU'LL NEED TO GET STARTED

GENUINE CLAY PAVERS

Brick Pavers used to create a path or patio are different from those used in walls. The primary difference — they don't have those familiar holes. Although their size may vary with each manufacturer, they are generally $3\frac{5}{8}$ " by $7\frac{5}{8}$ ", $3\frac{3}{4}$ " by $7\frac{1}{2}$ ", or an even 4" by 8". Their thickness ranges from $1\frac{1}{4}$ " to $2\frac{3}{4}$ ", with a number of styles to choose from, and each manufacturer offering its own selection.

SAND

This will serve as the top layer of the base which holds the Pavers in place. Choose a coarse, well-graded, washed concrete sand (ASTM C 33) with angular particles.

CRUSHED STONE

This will create a strong foundation. This material goes by many names — gravel, road base or crusher run — but, whatever its name, the stones should range in size from about $\frac{3}{4}$ " down to a fine dust.

Many indigenous crushed stone materials contain harmless salts or metallic contaminants. The well graded, washed concrete sand acts as a filter to help prevent these contaminants from discoloring the pavers after installation.

EDGING

Here you have a few choices:

1. More Genuine Clay Pavers;
2. Rigid plastic or metal specifically engineered as an edging material with metal spikes (at least 8" long) to anchor it; or
3. Wood — 2"x4" or 4"x4" pressure-treated or natural redwood.

STRING & STAKES

These will be used to mark out and align your brickwork.

You'll also need the following TOOLS

1. Shovel
2. Wheelbarrow
3. Garden Hose with fine spray nozzle
4. Rigid Garden Rake
5. Masonry Saw, Brick Splitter or Broad-Blade Chisel for cutting and fitting Pavers (*the first two should be readily available at your local rental store or brick distributor*)
6. Carpenter's Level/String Line Level
7. Wood "Screed" Board, a 2"x4" at least 3 feet long (*used to create a uniformly flat sand bed depth*)
8. Trowel or Long Flat Blade Screwdriver
9. Broom
10. Mechanical Plate Compactor, Rubber Mallet or Hand Tamper (*If you're considering renting a Mechanical Plate Compactor, be sure to ask about its compatibility with your selected pavers, as some pavers can be damaged by its use.*)
11. 1" Pipes (*outside diameter*)
12. Tape Measure



SHOVEL



WHEELBARROW



GARDEN HOSE



RAKE



CUTTING TOOL



LEVEL



SCREED BOARD



STEP **1**

DETERMINING HOW MUCH YOU'LL NEED

Genuine Clay Pavers

- a. Determine the square footage of the area you want to pave by multiplying the length by the width (length x width = ?).
- b. Estimate the number of Brick Pavers by simply multiplying your square footage (above) by:
 - 5.2** for 3⁵/₈" x 7⁵/₈" Pavers;
 - 5.1** for 3³/₄" x 7¹/₂" Pavers; or
 - 4.5** for 4" x 8".
 Then add 10% to that amount to cover cutting, chipped or broken pavers.

AN EXAMPLE:
 A 10' x 20' area = 200 square feet
 x 4.5 (for 4" x 8" Pavers) = 900 Pavers
 + 10% (900 x 1.1) = 990 Total Pavers

Edging

- a. Measure the Length of "open" edges (those not up against a wall, curb, driveway, etc.). This is the length of edging material you'll need. If you're planning to use brick pavers standing on end (known as the "soldier" position), five pavers will be needed for every foot of edge. (Don't forget to add this count to your Pavers Total.)
- b. If using rigid plastic or metal edging, follow the manufacturer's recommendations for the number of spikes. If using wood edging, anticipate needing one spike every 2-3 feet of edge.

Sand & Crushed Stone

- a. Both Sand and Crushed Stone are measured by the cubic yard (1 cubic yard = 27 cubic feet).
- b. For any type of Brick Paving, plan on using a 1" depth of Sand.

To calculate a 1" depth of sand in cubic yards, simply multiply your project's square footage by **.00309**.

AN EXAMPLE:
 200 square feet x .00309 = .62 cubic yards of Sand

- c. The amount of Crushed Stone you'll need depends on the type of paving project:

LIGHT DUTY

For projects such as walkways or patios you'll want to use a depth of 4". To determine the cubic yards of Crushed Stone needed to create a 4" depth, multiply your project's square footage by **.01235**.

AN EXAMPLE:
 200 square feet x .01235 = 2.47 cubic yards of Crushed Stone

HEAVY DUTY

For heavy duty paving such as a driveway, and in areas with extreme wetness or severe freeze/thaw conditions, you will need a deeper base. *Consult with your local Brick distributor.*





STEP 2

PREPARING THE AREA

- Check with your local utility companies to determine the location of any underground lines. *Safety first!*
- Outline the area with stakes and string. The prepared area should extend beyond the edge of the pavement equal to the depth of the base, or a minimum of 6".
- Using your shovel, remove sod or dirt to the combined depth of the intended layers of Pavers, Sand and Crushed Stone. The area you plan to pave should slope $\frac{1}{4}$ " per foot or more away from building foundations or other permanent structures to ensure proper drainage.

NOTE:

It's important that any loosened dirt or excess soil that is reintroduced into your excavation be properly compacted, using a mechanical plate compactor or hand tamper to provide a firm, level surface upon which to place the Crushed Stone base.



NOTE:

Complex patterns, like herringbone, may require significant amounts of cut brick. You may be able to minimize cutting by laying out a sample area of Pavers and adjusting your borders, if possible, to optimally fit the paved area.

To prevent any inhalation of dust, be sure to use wet cutting procedures when cutting or sawing any brick.



STEP 3

INSTALLING THE BASE

- After compacting the soil, place the Crushed Stone into the excavation. Slightly dampen it once this work is complete.
- Using a hand tamper or mechanical plate compactor, tamp no more than 4" (depth) of Crushed Stone at one time. The surface of compacted Stone should be without depressions or humps, and should maintain the $\frac{1}{4}$ " + slope established in Step 2.

CRITICAL:

If too much (depth of) base material is tamped at one time, it may result in pavers that move over time.



STEP 4

FRAMING THE BORDERS

- Edging is necessary to ensure that your Brick Pavers remain firmly in place and stay beautiful for years. Begin by installing but not anchoring your selected edging material. Experiment now with the Paver pattern you're thinking of using by temporarily laying Brick Pavers along the edge of your paving area.
- Once you're satisfied with placement, anchor the edging material by driving spikes (at least 8") every 2-3 feet. For Brick edging, you'll need to dig a trench deep enough so that the top edge of the Brick edging will be flush with the paved surface of your finished project.
- One or two edges can remain unanchored until final Paver installation to ensure a tight fit. Now you can remove the Pavers you temporarily installed.



STEP 5

INSTALLING THE BED

- a. Place two pieces of 1" diameter pipe or two pieces of wood cut to the desired depth of the Sand (1") along the edges of the paving area and fill the area with Sand.
- b. Pull your "screed" board across these rails, much like a squeegee, to ensure a uniform Sand depth of 1".
- c. Remove the screed rails, fill their indentations with loose Sand, and level with a broom or trowel as needed.



STEP 6

LAYING THE PAVERS

- a. Start at a corner – if possible, one that includes a fixed edge, such as a wall, curb, or existing sidewalk. Set one run of Pavers on the Sand, from the corner along two adjacent borders. They should fit with about $\frac{1}{16}$ " – $\frac{1}{8}$ " gap between each Brick. As you go, be sure to

work from the laid Brick and not the Sand. If you disturb the virgin Sand, re-level it with a broom or trowel before laying more Brick.

- b. If you are planning to use a mechanical compactor, you can skip the following step: If the manufacturer of your selected Pavers recommends, hand tamp the Bricks with a rubber mallet to set them into the Sand bed. Work as far ahead as you can reach, then tamp the Pavers behind the two leading courses. Tamp firmly to force some Sand into the spaces between the Pavers and to level each Paver. Never press or tamp the leading edge of Pavers in the Sand.



NOTES:

Be careful not to walk in or otherwise disturb the Sand once it's leveled.

For a Walkway or other fairly narrow project, use the pipes or wood rails on either edge of the paving area.

For wider projects, like a Patio, place the pipes about 6 feet apart.



LAYING THE PAVERS
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STEP 6

LAYING THE PAVERS

CONTINUED

- c. Continue to lay Brick in your pattern, working from the starting corner to the unanchored edge. Every 3-5 feet, put a string across the front of your edge, using the original perimeter Brick as a reference, to maintain alignment. If the pattern wanders somewhat, use a trowel, screwdriver or wide-blade putty knife to make small adjustments. Don't be concerned with small gaps between the Pavers – you'll be filling them with Sand later.

NOTE:

Be sure to check the level and alignment of your Brickwork frequently during installation.

- d. Once all the full Brick has been installed along the final, unanchored edge, cut or split any Brick as needed to complete the pattern.

NOTE:

No cut Brick should be smaller than two inches in width.

- e. Inspect your work, making final adjustments in the Brick height and joint alignment.



STEP 7

FINISHING UP

- a. Anchor the rest of the edging material.
- b. Spread and then sweep dry Sand into all the joints to lock the Brick into place.
- c. To further set the Brick, the following methods are typically used:

METHOD ONE:

Mechanical Compaction

If the Paver manufacturer recommends, you may use a plate compactor to set the Brick and gently tamp it down. Be sure to spread a layer of Sand over the Pavers to prevent contact between the compactor and your Brick. Alternately sweep Sand into the joints and compact until the joints between all Pavers are full.





METHOD TWO:

Tamping with a Rubber Mallet

If you chose or the Paver manufacturer recommended this method (back in Step 6), go back over the entire paved area, tamping each Paver individually to be certain each is firmly set and leveled.

NOTE:

If a Paver needs to be leveled after tamping, simply pull it out using a knife, coat hanger, paint can opener or similar device, adjust the Sand, and then reset the Paver.

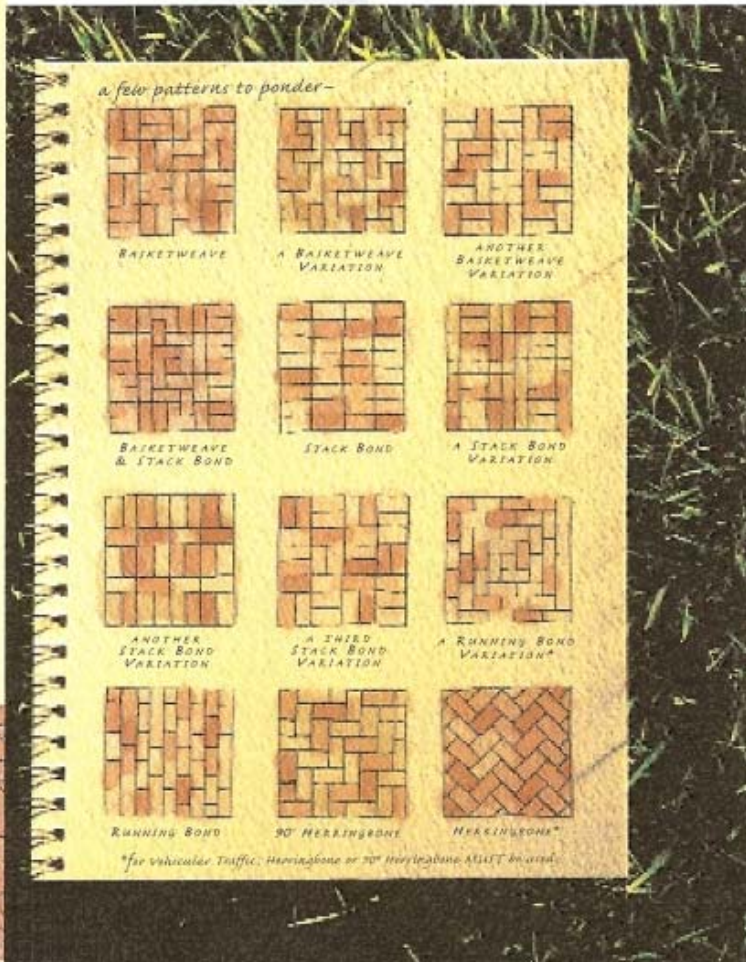
- d. When you're finished sanding, sweep off the excess and backfill the edges of the paved area with dirt, planting grass unless other landscaping is to be done at the perimeter. The Sand you swept into the joints will gradually settle, so you should sweep additional Sand into the joints as needed following the next few rains until the Pavers are fully stabilized.



RELAX & ENJOY (unofficially Step 8)

This is the best part. Take a well-deserved rest and feast your eyes on your own creation. You've completed a paving project that will enhance the value of your home, and, since genuine clay Brick only looks better with age, you can enjoy for many years to come.

For the Brick for your next paving project, and for expert advice and answers to all your Brick Paving questions, visit your local Brick distributor. *You'll find them in the Yellow Pages under "Brick."*





GENUINE
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THE BRICK
INDUSTRY

Brick Industry
Association
11490
Commerce Park Dr
Reston, VA 20191
703.620.0010

www.gobrick.com

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