



Tips for Building a Concrete Sidewalk



■ **Use a sod cutter** to strip grass from your pathway site. Available at most rental centers, sod cutters excavate to a very even depth. The cut sod can be replanted in other parts of your lawn.



■ **Install stakes and strings** when laying out straight walkways, and measure from the strings to ensure straight sides and uniform excavation depth.

QUIK-DATA

Cost ● ● ●

Skill ● ● ●

Time ● ● ● ●

TOOLS

Line level, hammer, shovel, sod cutter, wheelbarrow, tamper, drill, level, screed board, straightedge, mason's string, mason's float, mason's trowel, edger, groover, stiff-bristle broom.

MATERIALS

Garden stakes, rebar, bolsters, 2 x 4 lumber, 2 1/2" and 3" screws, concrete mix or crack-resistant concrete mix, concrete sealer, isolation board, compactible gravel, construction adhesive, nails.

Walkways

Pouring a concrete walkway is one of the most practical projects you can master as a homeowner. Once you've excavated and poured a walkway, you can confidently take on larger concrete projects, such as patios and driveways.

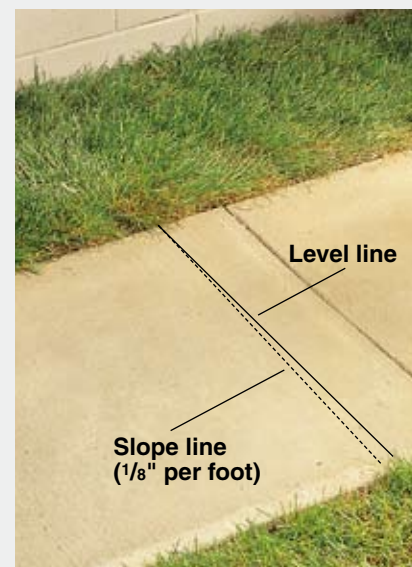
Poured concrete sidewalks are practical and extremely durable. A frost footing is not required, but you will need to remove sod and excavate the site. The depth of the excavation varies from project to project and depends on the thickness of the concrete, plus the thickness of the sand or compactible gravel subbase. The subbase provides a more stable surface than the soil itself and an opportunity for water to run off so it does not pool directly under the walkway.



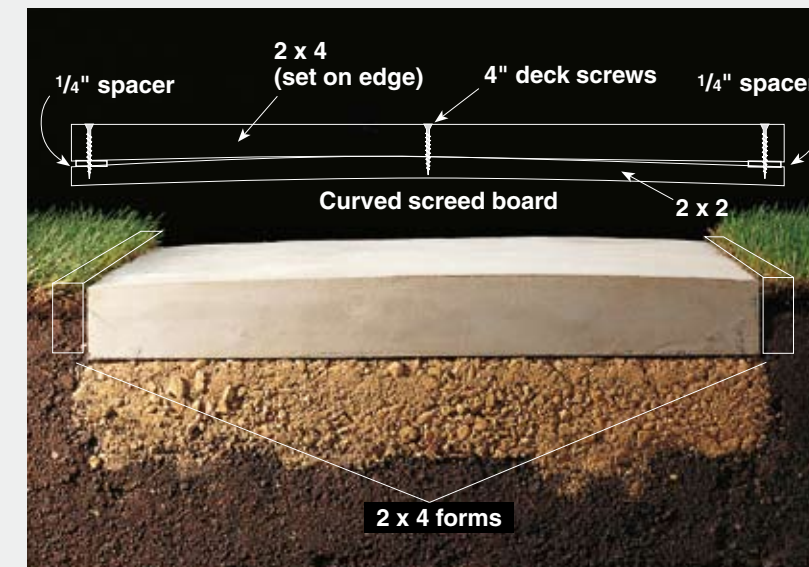
QUIK-TIP

Fiber-reinforced and air-entrained, crack-resistant concrete is recommended for concrete subjected to freezing and thawing to prevent scaling.

Options for Directing Water off Walkways



■ **Slope walkways** away from the house to prevent water damage to the foundation or basement. Outline the location of the walkway with level mason's strings, then lower the outer string to create a slope of 1/8" per foot.



■ **Crown the walkway** so it is 1/4" higher at the center than at the edges. This will prevent water from pooling on the surface. To make the crown, construct a curved screed board by cutting a 2 x 2 and a 2 x 4 long enough to rest on the walkway forms. Butt them together edge to edge and insert a 1/4" spacer between them at each end. Attach the parts with 4" deck screws driven at the center and the edges. The 2 x 2 will be drawn up at the center, creating a curved edge. Screed the concrete with the curved edge of the screed board facing down.

How to Build a Concrete Sidewalk



1 ■ Select a rough layout, including any turns. Stake out the location and connect the stakes with mason's strings. Set the slope, if needed. Remove sod between and 6" beyond the lines, then excavate the site with a spade to a depth 4" greater than the thickness of the concrete walkway, following the slope lines to maintain consistent depth.



2 ■ Pour a 5" layer of compactible gravel as a subbase for the walkway. Tamp the subbase until it compacts to an even 4"- thick layer.



5 ■ Prior to placing concrete, it is necessary to dampen the gravel subbase. Spray the subbase using a water hose until saturated but do not leave standing water.



3 ■ Build and install 2 x 4 forms set on edge. Miter-cut the ends at angled joints. Position them so the inside edges are lined up with the strings. Attach the forms with 3" deck screws, then drive 2 x 4 stakes next to the forms at 3-ft. intervals. Attach the stakes to the forms with 2½" deck screws. Use a level to make sure forms are level or set to achieve the desired slope. Drive stakes at each side of angled joints.



4 ■ Glue an isolation board to the steps, house foundation, or other permanent structures that adjoin the walkway using construction adhesive.



6 ■ Mix, then pour concrete into the project area. Use a masonry hoe to spread it evenly within the forms.



7 ■ After pouring all of the concrete, run a spade along the inside edges of the form, then rap the outside edges of the forms with a hammer to help settle the concrete.

How to Build a Concrete Sidewalk, continued



8 ■ Build a curved screed board and use it to form a crown when you smooth out the concrete. Note: A helper makes this easier.



9 ■ Smooth the concrete surface with a wood float. The goal is to smooth it, not to level it (you should maintain the slight crown created by the curved screed board).



12 ■ Create a textured, nonskid surface by drawing a clean, stiff-bristled broom across the surface once the surface is thumbprint hard. Avoid overlapping broom marks.



13 ■ Keep concrete damp by spraying periodically with a fine water mist or cover with plastic sheeting for five to seven days.



10 ■ Shape the edges of the concrete by running an edger along the forms. Smooth out any marks created by the edger using a float. Lift the leading edge of the edger and float slightly as you work.



11 ■ Cut control joints in the concrete after the concrete sets up but before it hardens.

Control Joints

- Control joints are designed to allow for concrete expansion, contraction, and movement.
- Control joints can be made using a grooving tool.
- Control joints tell the concrete where to crack as it shrinks during the hardening process, which is called hydration.
- Control joints made by a grooving tool must be a minimum of one-fourth the depth of the slab (for example, 1" deep for a 4"- thick slab).
- Control joint spacing formula: Slab thickness (in inches) x 2.5 = joint placement interval (in feet). For example, 4" thick x 2.5 = 10 ft.
- Keep the slab as square as possible.



► **Option: Apply acrylic cure and seal** with a garden sprayer or roller to eliminate the need for water curing and to seal the concrete for a more durable surface.



14 ■ Remove the forms, then backfill the space at the sides of the walkway with dirt or sod. ♦