

walks, patios & drives

Grading & Drainage

Your site's terrain, soil conditions, and drainage requirements, as well as the walkway materials to be used, determine how you must prepare the ground for your walk. Virtually every walk project will require some excavation to create a level surface and provide a stable base for the paving materials. This is especially true of concrete. If poured concrete or concrete pavers are not laid on a firm, well-compacted, and well-drained base, they will likely buckle, crack, or sink. A base consisting of 4 inches of compacted gravel or crushed stone topped by 2 inches of builder's sand should suffice. Soils that drain poorly—or those subject to frost heave, settling, or erosion—may require a thicker base of 6 to 8 inches of gravel or crushed stone.



In the good old days when wood was cheap, this hotel in Bermuda thought nothing of building a walkway to the beach that was wide enough for an early-1930s sedan to drive across it.

Drainage Systems

There are two basic ways to drain soggy soil: construct a surface drain system or install a subsurface system consisting of area drains, catch basins, trench drains,

dry wells, or drain tiles. In wet soils, you may need to bury perforated drainage pipe in a gravel subbase. However, due to the expense and work involved, consider a subsurface system only as a last resort.

Surface drain systems consist of shallow drainage ditches, called swales, and built-up mounds that direct runoff, called berms. After you've identified the area where runoff enters your site, the next step is to decide where to channel the water. Generally, you'll want to direct it to an existing storm sewer located in the street, channeling the water with swales, berms, and retaining walls. If it's impossible to channel storm water to the street system, look for an alternative outlet. But take care to respect your neighbors' property, and don't divert your water into their yards.

Don't install walks that cross swales or run across slopes. Such walks can act as dams; they'll impede natural drainage patterns in the yard and even cause problems with flooding.

Edges & Joints

USE: ► edging and jointing trowels • metal float



1 Form the perimeter of the slab with an edging trowel. Run it slowly back and forth to smooth the mix and release the form.

Control-Joint Spacing

Slab thickness	JOINT SPACING	
	Aggregate < ¾ in.	Aggregate > ¾ in.
4 in.	8 ft.	10 ft.
5 in.	10 ft.	13 ft.
6 in.	12 ft.	15 ft.

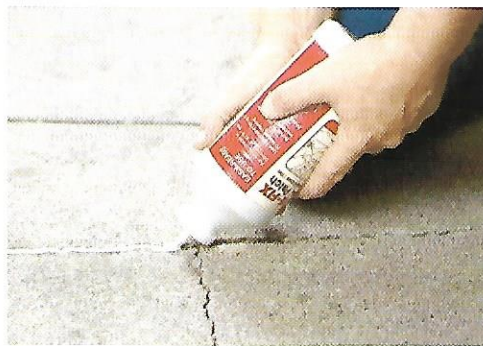
Control joints reduce surface cracking in concrete. The thicker the slab the fewer you need.

Cracks & Breaks

USE: ► whisk broom • cold chisel • hammer • paintbrush • mason's trowel • safety glasses ► concrete repair caulk • masking tape • bonding adhesive



1 To make minor repairs of small cracks, start by cleaning out dirt and debris with a whisk broom.



2 Concrete repair caulk provides a quick fix for minor cracks. It prevents further damage but is only a temporary repair.



3 To patch larger areas and edges, clear out loose debris with a cold chisel. Add a form board to contain the patch material.