HOME REPAIR RESOURCE CENTER

HOMEOWNER REPAIR GUIDE

SIDEWALK LEVELING

For do-it-yourself repairs

Many people are interested in trying to level sidewalk slabs, but are afraid that the segment will be too heavy to handle without damaging the slab – or their backs! If you've been really struggling to get your sidewalks lifted and straightened out, there are some ways to get that project done even if you're not a body builder.

CONCRETE OR SANDSTONE?

In many northeastern Ohio communities like Cleveland Heights, sidewalks are made of either concrete or sandstone.

MATERIAL	WHAT TO KNOW
Concrete	Although concrete is the heavier material, it's less likely to crack. It is usually poured 2-1/2" to 4" thick, and generally doesn't lie on a bed of sand.
Sandstone	Sandstone, on the other hand, is usually installed over a bed of sand – and if it isn't, it should be. It's lighter, but the edges tend to chip, and it may crack while you're lifting the block to level it, if you don't handle it with care.

CAUTION

Don't try to use a crowbar on sandstone, as you will almost assuredly crack or chip it.

WHY SLABS NEED LEVELING

Nine times out of ten, a section of sidewalk needs to be leveled because some uncooperative tree root grew where it wasn't supposed to and gradually lifted one section up until it is no longer at the same height as its neighbor. Code regulations in many communities require that there be no more than 3/4" difference between two adjacent sections of walkway, to avoid creating a trip hazard. To level a slab, you'll need to lift the section up, raise or lower the bed underneath it (so the slab ends up at the level of the section next to it), and lower it into place again.

PERMITS

You won't usually need a permit if you're just leveling existing slabs (though you'll need one if you're replacing a slab with fresh concrete – check with the Building Department in your city).

LIFTING THE SLAB

There are some tools that will make leveling a sidewalk section a little easier.

1. First, if your sidewalk is concrete, check to see if the block was poured as one piece with its neighbor; if so, you can cut all the way through the control joint between them with a concrete saw to separate the segments.

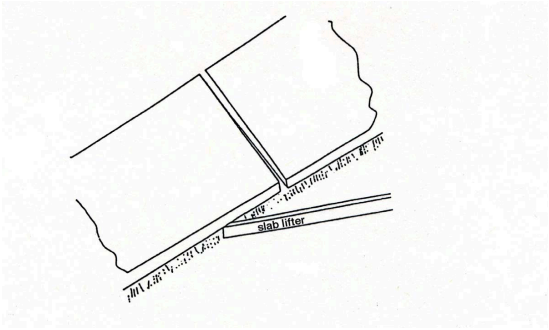
2. Next, use a trenching shovel to dig the dirt out along the edges of the slab. You don't need to dig too much; you just want to expose the edges and dig a trench under one side deep enough to pry up the slab.

3. Then, use a mule or a slab lifter to begin raising the slab (see illustrations). A **mule** is a long piece of wood with a metal lip on one end. Slip the metal lip under the slab, and then push down on the handle to pry up the concrete. **Slab lifters** are basically two 2 x 4's nailed together for extra strength and leverage. Use the narrow width – not the wide edge – of the lifter, for greater strength.

4. After you raise the slab up about 12", you can place a **hydraulic jack** under the slab. Then, raising it up further will be as easy as jacking up a car.



"Mule"



Slab lifter



Hydraulic bottle jack

REMOVING THE TREE ROOT

BLOCK THE SLAB

When you have the slab raised up enough to get at the tree root, place some type of blocking under the slab to prevent it from coming down sooner than you planned (maybe with your hands underneath it!)

Sometimes, you may find it easier to drag the slab completely out of the cavity, so you have easier access to the problem beneath it. With the slab safely blocked or removed, you can attack the tree root. Don't use a chain saw; it's not meant to be used in the soil. You can cut out the root using a rough cutting blade in a power reciprocating saw (such as a "Sawzall"). An ax will also work, if there's enough room to swing it. Before replacing the slab, seal the cut ends of the root with some roof tar, to prevent insects from invading the tree.

RAISING A LOW SLAB

If the slab is too low, and you need to raise it to the level of the one next to it, lift it up and add some **play sand** underneath it where it's low. Then, lower the slab into place again. If there are "humps" in the sand, water from a garden hose can be used to even them out.

So, if you let the tools do the hard work and take the time to get the root out, you should be able to get this job done without taking a weight-lifting class.

HOME REPAIR RESOURCE CENTER

Home Repair Resource Center empowers homeowners to maintain their homes for sustainable and diverse communities.

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