



## **INSTALLING A CLEAN OUT between your downspout and storm sewer drain**

Because tree roots can invade your storm sewer, periodic snaking is routine maintenance for many homeowners. To insert a snake cable into the storm sewer, most people chip out the mortar that seals the downspout into the clay tile hub below it and pull out the downspout. By adding a clean out at that junction, however, you can have easy access to the storm sewer without having to disconnect the downspout each time.

A clean out for the storm sewer system can be easily constructed from schedule 20 PVC parts. You'll need a 4" S&D ("storm and drain") wye, two pieces of 4" S&D pipe about 4" long, a regular 4" round cap, and a specialty adaptor to connect your 4" round storm sewer pipe to the size and shape of your downspout drain (in most cases, a 4" round to 2" x 3" rectangular fitting.) If you can't find the parts at your local home improvement retailer, check a plumbing supply store. Glue the wye, one of the short pieces of pipe, and the downspout adaptor together using primer and adhesive for PVC pipe. (Don't glue the cap to the wye.) Insert the downspout into the adaptor, and lock it in place with a sheet metal screw. Then, screw the cap onto the other fork of the wye, and mortar the assembled clean out into the clay tile crock (*see Illustration 1 below.*)

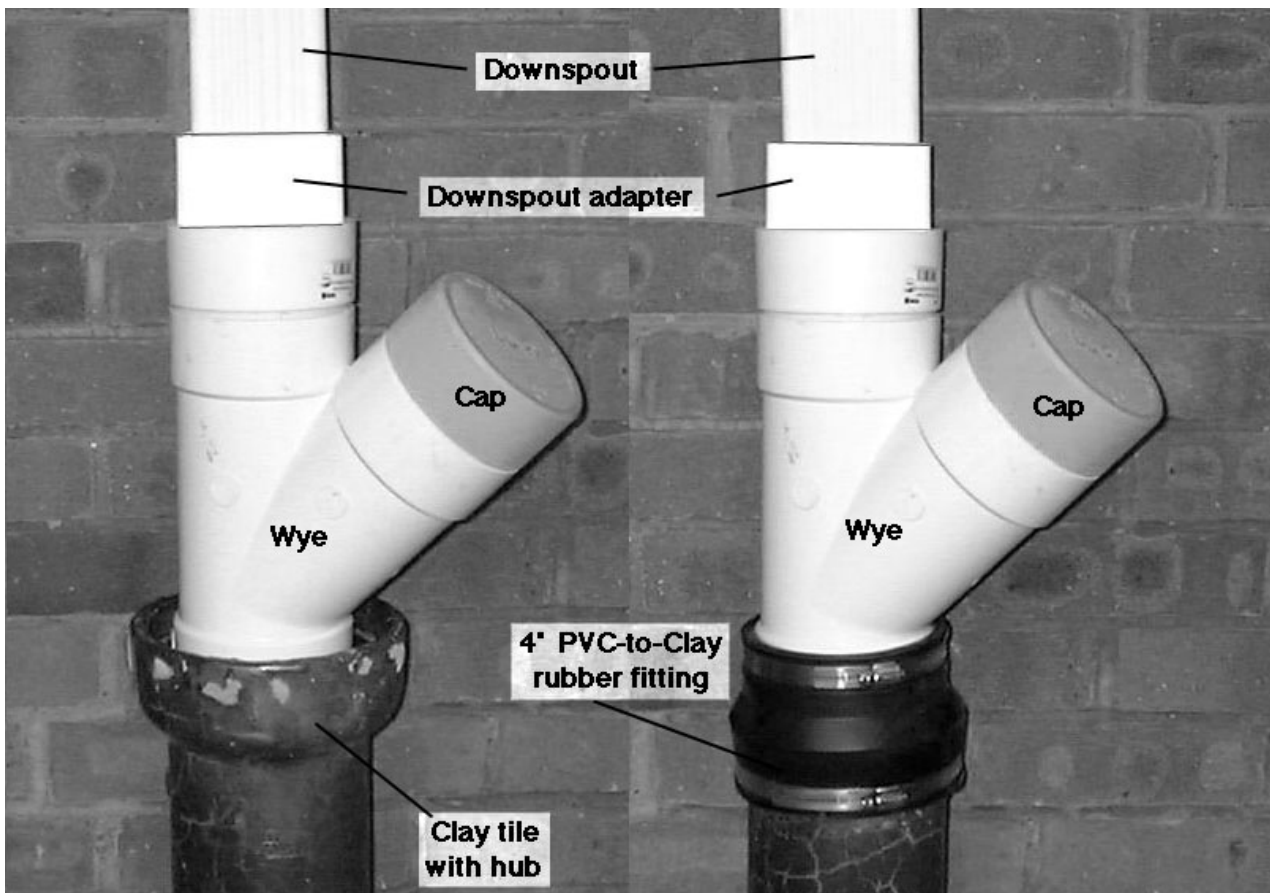


Illustration 1

(continued)

If the bell-shaped tile hub where you insert the clean out has broken away, you have a couple of options. The first is to dig down to the next hub joint, remove the broken piece, and purchase a replacement tile pipe at a building supply company. You can connect the new pipe to the next one with a rubber gasket (purchase it where you buy the replacement piece), or you can mortar it in place. Should the new piece of clay tile pipe be too long, cut it *outside* with a concrete saw or an angle grinder with a masonry cutter blade. Then you can mortar the PVC wye into the hub.



**4-1/2" angle grinder w/ diamond masonry blade**

*Illustration 2*

The other method is to use a PVC-to-Clay rubber coupling to join the PVC fittings to the tile pipe (*see Illustration 1*). Use an angle grinder to smooth and level any jagged edges on the clay pipe before slipping on the rubber fitting. Ultraviolet light (UV) rays can cause the rubber fitting to dry out and crack, so it's a good idea to arrange the connection in such a way that the coupling is buried in the soil to protect it from drying out.

You can install a clean out on all your downspouts, or just the one(s) used for snaking. The clean out will also give you an easy access to add copper sulfate to your drain lines. Be sure to read the directions on the package before diluting with water. Copper sulfate will kill the roots (but not the tree) in your storm sewer, so you don't need to snake as often. It will *not* dissolve existing roots, however – you'll need to snake to remove them.