



Published on *Inman News* (<http://www.inman.com>)

Trenchless fix for faulty pipes

By *Bill Kevin Burnett*
Created 2010-08-11 07:35

Several weeks ago we responded to a reader who wanted to know how to go about replacing her 100-year-old clay sewer lateral. Seems that roots from a 30-year-old ornamental plum tree had taken up permanent residence in the sewer line. A twice-a-year visit from Roto-Rooter was necessary to keep the waste flowing.

She asked our opinion about four options: 1) cut down the tree; 2) replace the entire 70 feet of sewer line with cast iron; 3) partially replace the line 10 feet on either side of the snag; and 4) install a new sewer line using a trenchless system.

We told her to forget about cutting the tree down. In our view that was penny-wise and pound-foolish. Because we were a little leery of the trenchless option, we suggested that she replace the portion of the line between the street and garage slab using cast iron, or plastic (PVC or ABS). The idea was to avoid the expense of saw-cutting the garage floor.

A few readers disagreed with our solution. One reader, who asked not to be identified, says he's done several installations and inspected dozens more. He thought the trenchless option was the best bet. He convinced us that if the conditions are right, this is the best and most cost-effective way for our questioner to go.

He noted that this is a fairly new technology. A torpedo-shaped metal bursting head is attached to a steel cable that is pulled through the existing sewer line to burst the pipe. The existing line is just a conduit to pull the new pipe through.

"A cable is pulled through the pipe first," he writes. "It is then connected to a bursting head. The head is attached to the new pipe. The bursting head splits the existing pipe and pushes it out of the way as the new pipe is pulled through.

"The new pipe is the same inside diameter as the old. If required, it's even possible to increase the size of the pipe. Very little damage is caused to the new pipe in this process. Usually just some light scratches."

He said the pipe that is used, called HDPE, is "a much heavier plastic than ABS or PVC and better withstands the earth movement common in many places. HDPE pipe is fused together resulting in a no-joint line from end to end. It's superior to no-hub cast iron in that there are no joints where roots can penetrate the pipe.

"This method of sewer replacement requires only a hole at each end of the line rather than digging a trench the entire length of the line, as required by more conventional methods. Contractors can be in and out in a day."

All of this sounded too good to be true -- and there are potential downsides.

Our original questioner told us in a later e-mail that she had spoken with the city inspector. He warned her that this installation method might not pass inspection if water pools in a low spot in the line. Because the new line uses the old line as a conduit, this is a possibility.

We pointed this out to our trenchless system fan and asked if he agreed, and if there were any other concerns.

He wrote that changes in direction (deflection, belly, sag) pose a significant concern. He said an experienced installer knows what deflections in the existing line can be removed. It depends on the degree of deflection and the soil conditions. If the soil is predominantly sand, many deflections can be removed. But, if the soil is less forgiving, such as shale, deflections can't be removed.

He went on, "Another issue is the close proximity of other utilities. As the bursting head passes through the pipe, it splits the existing pipe and forces it outward as the new pipe is pulled through. If there are utilities close enough, the existing pipe being pushed outward can damage them.


"Water lines can be cut and gas leaks can result. Contractors must locate all utility crossings as well as close parallel utilities to determine if there is adequate room for this type of installation."

With this in mind, our view is that anyone considering trenchless sewer replacement should verify that the contractor has significant experience doing it and has been trained by both the trenchless equipment manufacturer and the pipe material manufacturer.

Pipe bursting, if found to be suitable for the situation, could be the most cost-effective and least-disruptive option available.

Contact Bill and Kevin Burnett:

 [1]
[E-mail](#) [1]

 [2] [Letter to the Editor](#) [2]

Copyright 2010 Bill and Kevin Burnett

[bill & kevin burnett](#) [Buyers & Sellers](#) [cast iron](#) [Free](#) [Home Improvement](#) [home improvement](#) [septic inspection](#) [sewer line](#) [tree roots utilities](#)

Source URL: <http://www.inman.com/buyers-sellers/columnists/billkevinburnett/trenchless-fix-faulty-pipes>

Links:

[1] <mailto:sweatequity@sfchronicle.com>

[2] <http://www.inman.com/opinion/letter-to-editor>