

Cured-In-Place-Pipe Rehabilitation

What is cured-in-place pipe (CIPP) lining?

CIPP is one of several trenchless methods used to rehabilitate existing pipelines. Little to no digging is involved in this process, making it potentially more cost-effective and less disruptive than traditional "dig and replace" pipe repair methods. CIPP is a jointless, seamless, "pipe-within-a-pipe" process.



What happens during the CIPP process?



The sewer must first be prepared for lining; this includes cleaning the line, removing roots, sediment and grease from the sewer (public and/or private lines) and cutting out intruding connections. The sewer lines and manholes are inspected using closed circuit television (CCTV). Like many types of pipe renewal/replacement, CIPP requires bypass pumping, which re-routes sewer flow around the section of pipe being rehabilitated. This ensures your sewer service is not interrupted. The lining process involves the insertion of a resin-saturated flexible lining into an existing sewer pipe using the manholes located within the street. The lining looks like a very large sock or flexible tube. Either air or water, under pressure, is forced into the tube, which turns the lining inside out and causes it to expand to fit tightly against the existing sewer walls. Hot air or water is circulated throughout the tube to harden the resin. When the curing process is completed (4-8 hours), a new "pipe-within-a-pipe" has been created, eliminating cracks and holes that allow rainwater and roots to enter the sewer and cause operational problems such as stoppages and overflows.

What are the benefits of CIPP?

CIPP has many advantages, including the following:

- CIPP allows for rehabilitation of pipes without disturbing roads, curbs, gutters, etc. or other utilities.
- The smooth interior reduces friction, thus increasing flow capacity.
- Private connections are made without further digging.
- This can be a faster and cost effective method.

The finished product has a 50-year design life, the same as a brand new pipe.

Bypass Piping and Pumping System

Why is bypass piping and pumping needed?

The sewer system carries wastewater from homes and businesses through pipes to a treatment plant. When sewage pump stations or pipelines require upgrades or replacement, a temporary bypass pumping solution is needed to maintain your sewer service while the existing service is being worked on. These bypass systems ensure that the sewer system remains operational by using a temporary line and pump setup to continue conveying flows away.



How does bypass piping and pumping work?

Because the flow of sewage cannot simply be diverted and service cannot be stopped, it must be “bypassed”—or temporarily pumped around the pipe being repaired or replaced. To do this, pumps capable of pumping all of the wastewater from homes and businesses are brought in, as well as pipes that collect and conveys the flow, on site to continue sewer service.

What will the system look like?

The pumps are usually set up near manholes and the pump machine's pipes will be inserted from the pumps into the manholes. You will also see a pipe, it often looks like a fire hose, running in front of each home from the starting or collecting manhole to the next manhole. These hoses allow access to driveways or entrances with the use of a driveway ramp.

