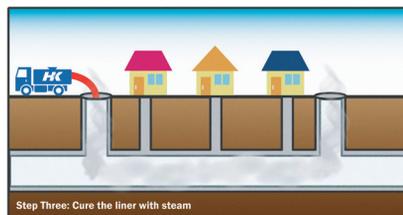


## Cured In Place Pipe (CIPP)

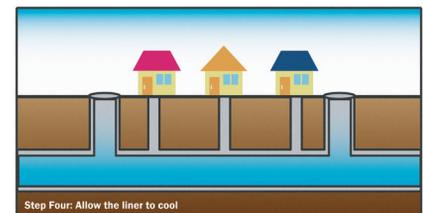
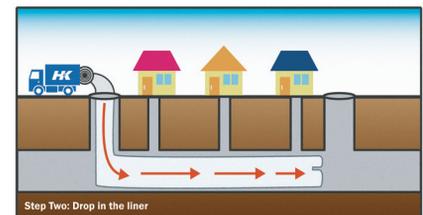
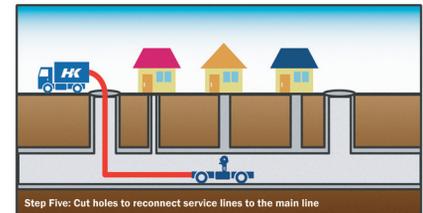
### The CIPP process begins with:

1. Pre-inspection of the pipe to locate obstructions that need to be internally removed, locate services, and determine which services are active.
2. Measurements of the lines length, diameter, and depth are taken.
3. The data collected is then brought back to our facility where the process of pipe design calculations is performed with our software. This critical data is required to design a CIPP liner that, when installed, will meet or exceed ASTM standards.
4. The data is then sent to our wet out facility. Wet out is the unseen process of impregnating a high quality felt tube with a calculated amount of catalyzed resin.
5. After wet out, the product is loaded and cooled down for proper shipment to the job site. A successful CIPP liner installation can be directly related to a well-run wet out facility.
6. Installation is then completed by an inversion process or a pulled in place process
  - Air and/or water are used to carefully pressurize the liner.
  - The catalyzed resin is heat activated, therefore we use steam to cure the liner (Careful monitoring of temperatures and pressure are required to assure the line is properly cured.)
  - With proper cool down, there is now a new pipe within the old pipe. The old pipe is no longer needed for structural support.
7. The next step in the process is reinstatement of services. This task is an art in itself, requiring specialized equipment and trained personnel. A robot is driven down the line and extends an arm with a high speed carbide tool on it to cut out services.



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to view our project library and learn more about the valuable services we have to offer.



## Lateral Connection Repair/Rehabilitation

Lateral Connection Liners are a one piece, structural, stand alone homogenous Main/ Lateral CIPP connection liner extending into the lateral pipe. This was designed for municipalities that needed to structurally renew and seal the Main/Lateral junction from root intrusion and infiltration of ground water.

### Lateral Connection Grouting

- ➔ A lateral/mainline packer is positioned robotically inside the sewer main at the lateral connection.
- ➔ Once in position, the bladder is launched up into the lateral for the distance to be sealed. Once in position the bladder is inflated isolating the connection for injection.
- ➔ Grout is injected under pressure into the isolated area.
- ➔ Bladders are deflated and moved to the next lateral connection for repair.