

What is Cured-In-Place-Pipe?

Cured-in-place-pipe (CIPP) is one of the most widely used and cost-effective rehabilitation methods to repair existing sewer pipes. It is a jointless, seamless, corrosion-resistant pipe lining that is inserted within an existing pipe—basically a pipe within a pipe.

How is CIPP installed?

CIPP is installed through existing manholes. After bypassing all sewer flow, the upstream section of the manhole is temporarily removed, and the CIPP liner is inserted into the sewer pipe from the manhole using water pressure. The CIPP liner is then cured to a hardened state using hot water. To learn more about this method, [watch this video](#) or visit www.sakcon.com/product-demonstrations.

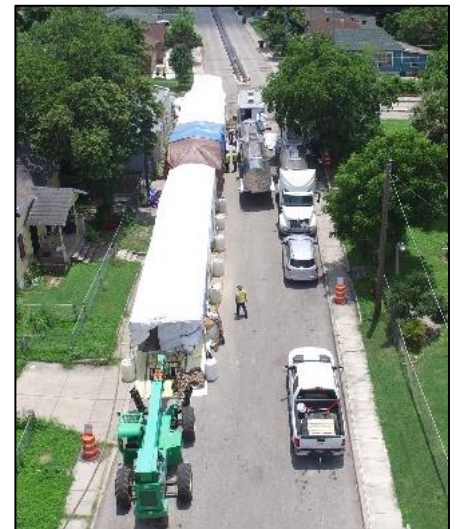
What are the advantages of the CIPP rehabilitation process?

In comparison to traditional open-cut construction, this trenchless rehabilitation of sewer pipe is less disruptive, can be completed on a shorter schedule, and generally costs much less. Using CIPP means less impact to traffic and fewer inconveniences to surrounding neighborhoods.

What are the impacts of CIPP?

During the Mission Trunk Sewer Project, SASD and its contractors will make every effort to minimize construction impacts, including the following:

- **Preparation tent:** To prepare the CIPP lining materials, the project team sets up a tent approximately 150 feet long and 25 feet wide (see photo) over a manhole. Crews then insert the liner into the sewer pipe through the manhole.
- **Continuous operation:** Once the CIPP lining process begins, crews must work 24/7 until the CIPP liner is completely inserted and has cured. The duration of the lining process varies based on the length of the CIPP liner. The shorter the section of sewer being lined, the less time it will take. At most locations, two sections are completed and generally each section will take one week to complete.
- **Noise:** During CIPP work, homes and businesses near the work area can expect noise impacts from various types of equipment, such as generators, boilers, and heavy equipment. This equipment is necessary to remove the top of the manhole and then insert and cure the CIPP liner.
- **Odor:** When the top of the manhole is temporarily removed, homes and businesses near the work area may notice odor from the open manhole until the CIPP liner is inserted into the sewer pipe. Additionally, odors similar to plastic or glue may be present during the insertion of the resin into the liner and when hot water is used to cure (harden) the CIPP liner. This odor is from the material within the CIPP liner. While this odor may be noticeable, please be assured that the Sacramento Metropolitan Air Quality Management District has determined that the air emissions associated with this project meet all local, state, and federal requirements for the protection of public health.
- **Traffic and property access:** In some instances, the location of the preparation tent may require lane closures and temporarily block driveway access to homes and businesses. In these situations, SASD and its contractors will coordinate closely with affected property owners both before and during the work.



Are the odors from CIPP harmful?

No. While the odor can be unpleasant for some, the Sacramento Metropolitan Air Quality Management District has determined that the air emissions associated with this project meet all local, state, and federal requirements for the protection of public health.

How long will the odor be present?

Odor can be expected while the CIPP work is going on in your area, which is usually for a couple weeks at each insertion location. Once the liner is in place and fully cured, the odor will dissipate. This could take up to two or three days after the crews have finished and moved on to the next section of pipe.

What should I do if the odors bother me?

We recommend closing your doors and windows if the smell is unpleasant. Because the CIPP lining process is a 24/7 operation, odor may be noticeable even after normal working hours. We appreciate your patience during this temporary inconvenience. If you have questions or concerns, please call the Mission Trunk Sewer Project hotline at **916-876-SASD (7273)**.

UNDERSTANDING THE CIPP PROCESS



DELIVERING MATERIALS & EQUIPMENT

Trailers carrying hundreds of feet of CIPP liner are delivered. Additionally, equipment like generators, fork lifts, and boilers that will be used throughout the CIPP process are placed at the work area.

PREPPING THE CIPP LINER

As the CIPP liner is sensitive to heat, the preparation tent is used to protect the lining. Crews then unfold the lining onto a conveyance belt so that it can be prepped and the resin can be inserted.



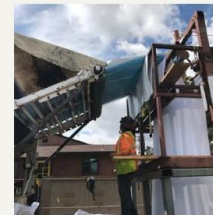
INSERTING THE RESIN

Stored in large tanks, the resin is then inserted into the CIPP liner. Resin is the component that will later make the liner rigid. Once the resin is inside the CIPP liner, the lining changes from white to blue.



LINING PROCESS

Once the resin has been inserted, the CIPP liner is then hoisted up to a platform stationed over the manhole. From there the CIPP liner is inverted and inserted into the sewer pipe using water.



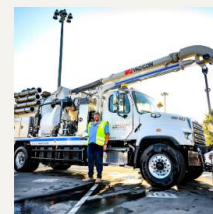
CURING

Once the CIPP liner has been completely inserted into the sewer pipe, it then needs to harden and cure. This is done by using heat (hot water) that is circulated into the pipe from the hot water boiler truck. When the pipe is fully cured, cold water is then circulated to cool the liner, forming the pipe within a pipe.



CUTTING

Once cured, crews work to cut the CIPP liner at identified locations where other pipes or manholes connect to the Mission Trunk.



SERVING YOU

After the CIPP lining process is complete, the rehabilitated pipe will ensure continued reliable service for decades to come.

SACRAMENTO AREA
SEWER DISTRICT
SERVING YOU 24/7

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