

## Oval Pipe Reline Cuts Down on Costs for Small Arkansas Town

Garner, Arkansas

### The Problem

A large sink hole formed down the side of a main road in the small town of Garner, Arkansas. The four oval-shaped 30-year-old culverts serving as drainage pipes were completely rotted out, causing the sink hole. The road could have collapsed at any time. The town needed a quick cost-effective solution as it did not have the budget for an expensive dig and replace option. Plus, doing a complete replacement would mean closing down the road – something that the town wanted to avoid. There are about three school buses that travel that road each day. Closing down the road would mean rerouting them 10 to 12 miles out of the way.

### The Solution

Snap-Tite representative Brad Elisar worked with the town of Garner to provide the best solution. Snap-Tite offered a turnkey oval pipe installation. Snap-Tite pipe is made of high-density polyethylene (HDPE) pipe. The company has the capability to oval the HDPE pipe using a machine at its manufacturing facilities, providing a custom solution for



*Snap-Tite pipe liner is pulled inside one of the old culverts.*



*A look inside one of the damaged culverts.*

this type of project. Snap-Tite used the machine to oval 36-inch pipe for this project. A total of 30 linear feet was supplied.

Relining the culverts instead of replacing them represented a much needed cost-savings to the small town. Digging and replacing the pipes would have cost Garner close to \$75,000 once engineering costs were also factored into the project, according to Arnold Sewell, the town mayor.

"Replacing only the liner pipe cost us closer to \$46,000, when figuring in the engineering fees, we saved about \$27,000 by choosing the relining method," said Sewell.

### The Installation

Baldwin Construction served as the contractor on this project. They lined the old culverts with the new oval Snap-Tite pipe liner. Once the new pipes were pulled inside the old culverts, any annular space between the old and new pipes was filled in with grout. The pipe liner project also served as a demonstration for surrounding county officials

and judges. The installation took only three days to complete.

About three days after the installation was completed, Garner and the surrounding community experienced flash floods. There was a lot of rain and water also flooded in from an upper community.

"It came down pretty quick and increased our water flow," said Sewell. "However, the relined pipes handled the water. It made a big difference knowing that the road was safe. If the water would have stayed in the pipes or backed up and we had a lot of heavy traffic, who knows what would have happened."

### Conclusion

Relining the culverts with Snap-Tite oval pipe cost the town 40 percent less than what it would have cost to dig and replace the pipe. In addition, the road did not have to be shut down during installation of the new pipe. The town's preventative measures helped save the road and the newly relined pipes held up during a storm event soon after installation, proving the relining method worked.

### About Snap-Tite

- Meets AASHTO Standard M326 for rehabilitating culverts.
- Offers flexibility for insertion into misaligned concrete or rusted deteriorated corrugated



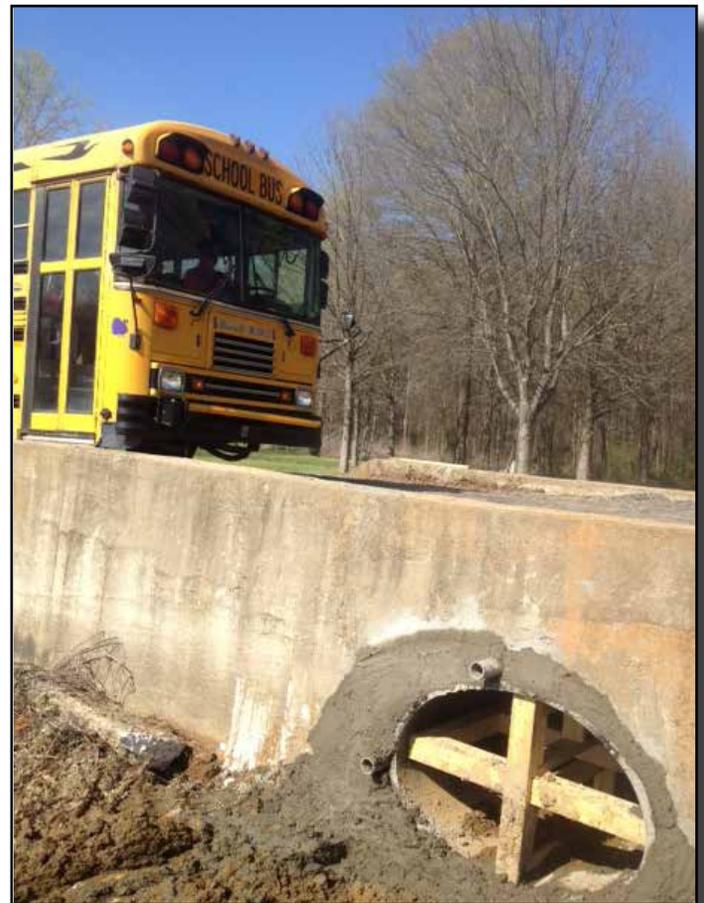
A view of the completed project with the pipe liners in place.

metal pipe.

- Offers a safe method for installers and doesn't require traffic control.
- Tough but lightweight, the Snap-Tite® joint makes a solid water-tight mechanical connection that can be pushed or pulled.

Due to the Snap-Tite system's installation flexibility and cost-effectiveness, it continues to provide successful results for many projects throughout the U.S. and internationally.

**For more information on Snap-Tite oval pipe please visit [www.culvert-rehab.com](http://www.culvert-rehab.com).**



Traffic continued to flow during the installation. Here the annular space between the old culvert and pipe liner is filled in with grout. Struts are used when Snap-Tite pipe is oveled to hold the pipe in its oval shape. The struts are removed after the pipe is grouted in place.

**SnapTite®**

1-800-CULVERT  
[www.culvert-rehab.com](http://www.culvert-rehab.com)