

HDPE Culvert Rehab Solutions



Fast "No-Dig" Renewal for Roadway, Rail, Levee, and Drainage Culverts



The No-Dig Advantage

A Faster, Low-Impact Fix for Failing Culverts

WHY CULVERTS FAIL

- 40-60% of installed culverts are beyond their design life — with corrosion, cracking, joint failure, and soil loss driving sinkholes, flooding, and road closures.
- Corrosion and cracking degrade CMP/RCP, separate joints, and undermine soil support
- Dig-and-replace is disruptive, expensive, shuts down roads, rail, and communities



WHY TRENCHLESS REHAB WORKS

- Slip-lining restores culvert structure without digging. HDPE liners provide watertight, corrosion-proof renewal with faster installs, lower cost, and almost no traffic disruption.
- A structural pipe with a smooth interior can increase the hydraulic capacity compared to the original host pipe.
- Long-life, corrosion-resistant, minimal environmental impact



RELIABLE, PROVEN PIPE REHABILITATION

Pipe rehab doesn't have to be risky or inconsistent. Government agencies and DOTs across the country are successfully restoring failing infrastructure using manufactured liner systems that eliminate field variability. By combining the established structural reliability of flexible pipe with grout designed to address voids and settlement, these solutions deliver reliable, long-term performance—while significantly reducing environmental impact, safety risks, and logistical challenges compared to other relining methods.



EXPERIENCE MATTERS, WHEN CULVERTS ARE FAILING

ISCO brings decades of no-dig culvert rehab expertise to every project. Our HDPE liners, technical guidance, and on-site support help restore flow, stabilize structures, and finish work faster—without shutting down roads, rails, or waterways.



WHERE NO-DIG REHAB DELIVERS

- + Roadways
- + Railroads
- + Levees
- + Floodwalls
- + Ponds
- + Dams
- + Spillway risers
- + Aquatic crossings
- + Limited access environment
- + Arched/elliptical culverts

Reliable Solutions for Culvert Rehab

One Method. Two Solutions.

SNAP-TITE® SOLID WALL HDPE PIPE

- Up to 63" diameter
- Meets AASHTO M326

SPIROLITE® PROFILE WALL HDPE PIPE

- Up to 120" diameter
- Meets ASTM F894



SNAP-TITE® & SPIROLITE®

- Trenchless culvert renewal
- Structural rehabilitation
- Lower cost, less disruption
- Faster, easier installation
- Increased hydraulic capacity
- Durable, lightweight
- 100-year service life
- High chemical, corrosion, and abrasion resistance
- Cellular/cementitious grout to fill voids
- U.S.-manufactured, BABA compliant
- ISO 9001:2015-certified manufacturing
- Joints meet ASTM D3212 watertight requirements



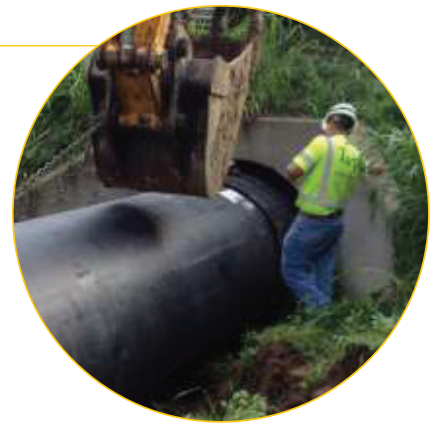
INSTALLATION OVERVIEW

Snap-Tite® and Spirolite® install using the same proven HDPE slip-lining method — providing reliable, long-life, no-dig culvert rehabilitation.



1. CONNECT

Join liner sections per product method—Snap-Tite® uses its patented snap-joint; Spirolite® uses a gasketed bell and spigot joint. Insert connected liner sections into the host pipe and continue till the liner extends from the inlet to outlet.



2. SEAL

Once the entire culvert is lined, seal the annular space at both ends. Bulkheads are the best way to seal the annular space and prevent grout from escaping. Bulkheads should be about one to two feet in distance at both ends to ensure sufficient strength to sustain hydrostatic pressure during annular grout placement. The end seal in the annulus can be made by using various materials. A relatively dry cement grout is used in most situations.



3. GROUT

It is recommended that the annular space between the existing culvert and the liner be grouted. This will help fill the voids created by previous washouts, provide additional structural support, maintain grade/alignment, and secure the liner from movement and flotation. Annular space grouting is discussed in greater detail in Chapter 7 of the Snap-Tite Culvert Rehab Technical Guide & Design Manual.



Specialized Solutions

Innovative answers
to unique challenges.

OVAL PIPE FOR ARCHED CULVERTS

Designed to match existing arched or elliptical culverts where round liners reduce flow or won't fit.



HYDRO-BELL™: IMPROVED INLET HYDRAULICS

Flared inlet that increases entrance efficiency, reducing headwater and over-topping potential.



**AQUATIC LIFE PASSAGE (A.L.P)
STREAM-FRIENDLY CULVERT
RENEWAL**

HDPE pipes with baffles and corrugations let fish migrate more easily by slowing flow, forming pools, and allowing stream bed material to collect at the culvert bottom.



**THREAD-LINER™: SEGMENTED
LINER FOR LIMITED ACCESS**

Short threaded HDPE sections install through manholes or catch basins where restricted access limits the use of standard length structural pipe liners.



