

CaseHistory

CIPP leaves diverse attractions undisturbed



Trenchless technology for downtown Reno prevented disruptions to the city's busy convention trade.



CIPP preserved the scenic Rosewood Hills area. The arrow points to the location of the on-site wet-out facility.

Application:	CIPP
Resin:	Vipel® isophthalic polyester
Diameters:	8 to 72 inches (20 to 183 centimeters)
Total project length:	25,285 feet (7,707 meters)
Location:	Reno, Nevada, USA • Busy downtown district • Scenic Rosewood Hills area
Installed:	2008

From the downtown convention center to the scenic outskirts, Reno, Nevada, offers many attractions as “The Biggest Little City in the World.” When choosing a contractor for a sewer rehabilitation project that involved both busy downtown and more remote idyllic settings, City of Reno engineers selected cured-in-place pipe (CIPP) specialist PIPEnergy. When choosing a resin system they could rely on for CIPP, PIPEnergy chose Vipel® corrosion-resistant resin from AOC, a global leader in resins for sewer infrastructure.

PIPEnergy’s sewer repairs were installed from existing manhole access points to eliminate the need for disruptive and potentially damaging excavation. At the downtown site, a major convention was able to continue without rescheduling. At the Rosewood Lakes Golf Course site, the homes and scenery in this quiet and picturesque neighborhood were undisturbed. The consulting engineering firm responsible for initial design and overseeing construction on the project was Brown & Caldwell of Phoenix, AZ.

CIPP leaves diverse attractions undisturbed, continued



Over-the-hole insertions at existing manhole sites eliminated the need for trenches.

Meeting the Challenges

“Each jobsite presented its own challenges,” said Ryan Broyles, President of PIPEnology.

The work in the downtown area had to be completed in a narrow, three-week time window to accommodate event scheduling for the convention business. For the downtown work, we lined 5,468 linear feet (1,667 meters) of 30- to 42-inch (76- to 107-centimeter) diameter pipe, including an installation that crossed under the Truckee River.”

The Rosewood Lakes Golf Course work upgraded 66- and 72-inch (168- and 183-centimeter) diameter pipe. Broyles said the distance between manholes in the Rosewood Lakes area severely limited access to the host pipe. “To eliminate destructive excavation, individual installations of more than 2,000 feet (619 meters) were a necessity,” he pointed out.

How CIPP Works

CIPP technology rehabilitates aging or damaged pipelines by inserting a new liner inside the existing host pipe. A special felt tube of predetermined dimensions and length is impregnated with resin then inserted into existing manholes to eliminate or minimize the need for excavation.

Water pressure introduced into the resin-impregnated tube moves the tube forward and inverts it along the walls of the host pipe. When the entire length of tube has been inverted, heat is introduced, typically by heating the water used during insertion.

The heat accelerates a chemical reaction that cures the resin from a liquid state to a molecularly-crosslinked solid with excellent corrosion-resistance and durability. The result is a new seamless liner. Robotic equipment cuts openings to reconnect laterals to the main pipe.

The recent sewer rehabilitation in Reno by PIPEnology totaled 25,285 feet (7.7 kilometers) of 8- to 72-inch (20- to 183-centimeter) diameter sanitary sewers. More than 40% of the work involved pipe that was 60 inches (152 centimeters) in diameter or more. “Because of the excellent teamwork involved, including prompt AOC service and delivery, we were able to get the CIPP phase of the work completed in less than five months,” Broyles stated.

About PIPEnology

Managed and operated by professionals with over a decade of experience and expertise, PIPEnology

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**Vipel**[®]
CORROSION
RESISTANT RESIN

PIPEnergy's on-site wet-out facility handled liners up to 72 inches (183 centimeters) in diameter and more than 2,000 feet (310 meters) in length

specializes in cured-in-place pipe (CIPP) rehabilitation of pipelines of all sizes and materials. For more information, contact Jennifer Allen at PIPEnergy headquarters in Rocklin, California, by phoning 916.408.5038 or e-mailing jallen@pipenologyinc.com.

The World of AOC

AOC is a leading global supplier of resins, gel coats, colorants, additives and synergistic systems for composites and cast polymers. AOC knows technology, lives quality and delivers service better than other supplier. Cured-in-place pipe systems and other sewer rehabilitation are priorities and areas of expertise for AOC. For more information, e-mail Ben Bogner, P.E., C. Eng., at bbogner@aoc-resins.com, phone him at 630.665.2675, or go to www.corrosionresins.com.