



Miller Pipeline



vacuum
excavation
services

Saving time and money is no small feat.



In the U.S., the gas industry spends over a billion dollars a year on pipeline rehabilitation. The conventional methods using pavement breakers, backhoes and dump trucks to remove surface materials and soil account for 80 percent of that cost. Vacuum excavation can reduce these costs by more than 50 percent.

Vacuum excavation services allow a wide range of underground procedures utilizing the Vac-Hoe® and keyhole technique first developed by Miller Pipeline in the late 1970's. The typical opening necessary is about 18 inches. After the small area of pavement is removed, the Vac-Hoe® equipment removes the soil. An air lance loosens the soil and it is removed by the vacuum hose, providing access to the pipe beneath. Once the excavation has been made, crew members can carry

material stored in the soil collector is backfilled into the hole and the surface is repaired. In cold weather, the soil collector is heated to prevent the



material from freezing, which effectively extends the work season. To make the project even more efficient, our coring process can be used to remove the pavement. With this process, the existing pavement core can be reinstated and traffic can travel over the cut within 30 minutes in most cases.



out operations from the above ground with a wide variety of specialty tools designed and manufactured by Miller Pipeline.

When work is completed, the excavated

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Vacuum excavation is the way to go.

- Only a small area of pavement, usually about 18 inches in diameter, is removed
- Vacuum-excavated soil is used for backfill after job completion, eliminating the cost of special backfill
- Specialty extension tools enable many tasks to be done from above ground, allowing for smaller excavations and eliminating the need for ladders and/or shoring in excavations over 4-feet deep
- Smaller work area reduces traffic inconveniences
- Fewer and shorter service interruptions
- Improved production per day with the same manpower
- Cost savings of 50-60%
- When the coring method is utilized, no additional equipment or crews are needed for street repair

Why choose Miller Pipeline

Miller is the recognized leader and innovator in vacuum excavation contracting, equipment and technology.

- Originators of vacuum technology
- More than 30 years experience designing and utilizing vacuum excavation equipment and tools
- Operate a fleet of more than 80 trucks
- Manufacturer of ENCAPSEAL Safe-T-Seal® slot kit, the preferred method of keyhole gas pipeline leak repair
- Capable of handling any size job in any environment
- Far less disruption of traffic or inconvenience to the public
- Virtually eliminates the chance of causing damage to surrounding underground utilities



The effectiveness of vacuum excavation coupled with our specially designed tools allows for a wide range of applications.



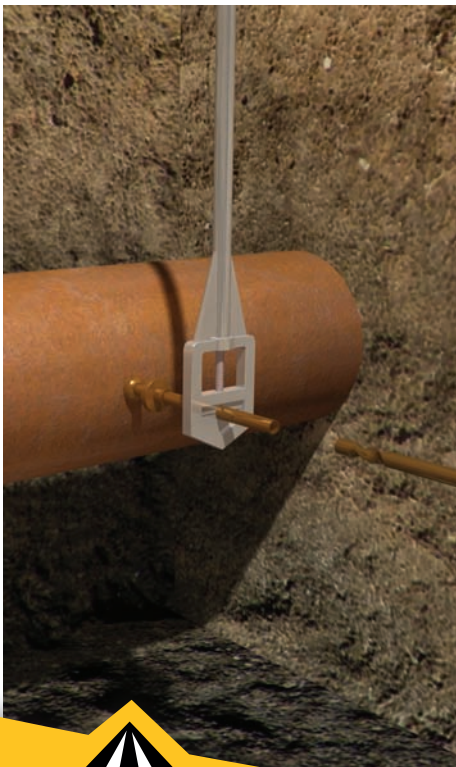
Leak Repair

- Gas main cast iron bell joint and fitting repair with our line of external sealing products including ENCAPSEAL Safe-T-Seal® slot kit



Cathodic Protection

- Anode, test wire and bonding wire installations
- Test station installations/maintenance
- Troubleshooting, short repair, over line survey



Service Renewals and Terminations

- Gas or water service line termination
- Service installations and renewals
- Plastic punch tee cap replacement
- Valve and curb box locating adjustments, installations and cleaning
- Tracer wire trouble shooting/installation



Potholing/SUE

- Underground utility location and verification
- Pre-design utility verification to eliminate conflicts and change orders
- Utility depth verification in advance of directional drilling or other installation methods (pipe bursting, open cut) to avoid third party damages



Vac-Hoe® Vacuum Excavators

Miller Pipeline has been building and operating our fleet of vacuum excavators for over 30 years. They have proven to be a cost-effective, efficient and safe method of handling many subsurface operations. Due to increasing demand in the industry, we make them available to utilities and other companies.



Vac-Hoe® Standard Model

The workhorse of our fleet, this pneumatically-operated model is designed especially for gas and water utility applications in urban environments.



Vac-Hoe® Utility Model

When vacuum excavation is needed at an off-road site or when a smaller footprint is required in congested areas, this model makes minimal impact on its surroundings.

Specialty Designed Tools

The vacuum excavating tools are designed for many types of operations, all utilizing the small hole, above ground slot technique. Operations using these tools:

- Gas and water service termination
- Gas main bell joint repair
- Valve, curb box, installation, cleaning and adjusting
- Cathodic protection
- Repair clamp installation
- Service renewals

NOTE: These are not the limitations of slot tools. Tools can be designed to suit an individual's specific needs.

Coring

Coring is a specialized pavement-removal process allowing Miller Pipeline crews to cut and remove a clean, intact section of concrete or asphalt covering a utility. Holes can range from 4 inches for spot-hole purposes, and up to 18 inches for full maintenance operations.

The cored section is set aside during excavation. After the task is performed, the hole is backfilled with excavated material or material of choice (bagged flowable fill, sand, stone, etc.) and the core is reinstated. It is set using non-shrinking grout, returning the original look and structural integrity of the entire area.

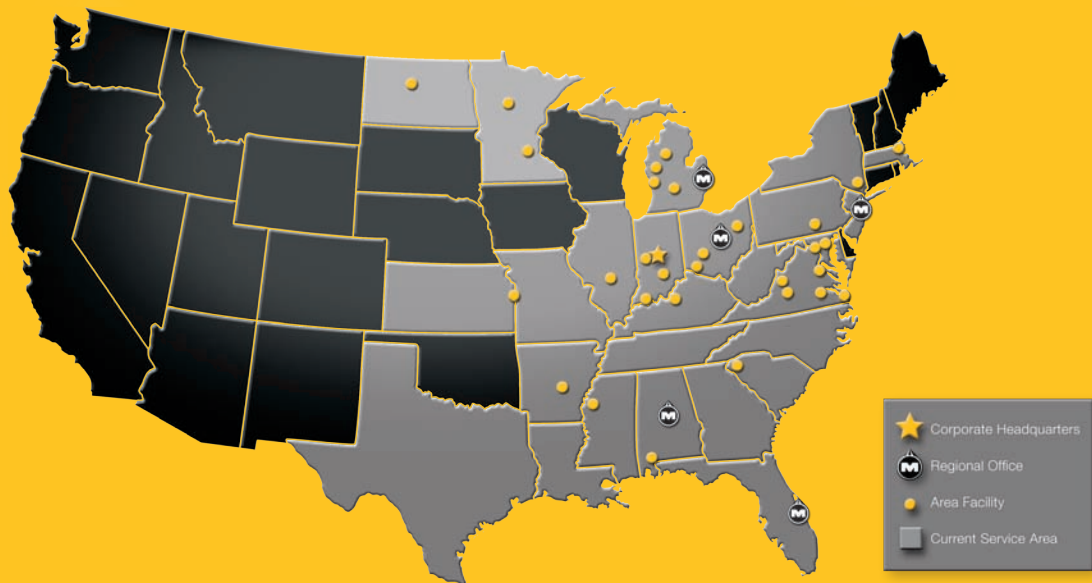
Coring is minimally disruptive; it allows access to underground pipelines without damaging the integrity of the road base in close proximity to the excavation. Miller crews are able to reinstate the pavement or sidewalk, eliminating the need to pour new concrete, use plates or barricades or hire a paving contractor.





Miller Pipeline

Miller Pipeline is one of the nation's premier natural gas distribution, transmission pipeline and utility contractors. We provide a comprehensive range of pipeline contracting and rehabilitation services for natural gas, liquids, water and wastewater pipelines. Specialty products and services for the industrial and telecommunication industries are also offered. With our corporate headquarters in Indianapolis, Indiana, and area facilities throughout the country, our steadily expanding geographic footprint enables us to ensure the availability of local resources and expertise to support your project.



Our representatives will be glad to discuss your pipeline needs. For further information, or to arrange an on-site inspection, please contact us.

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