

Innovative

# Shotlining:

## Revolutionizing Underground Infrastructure Rehabilitation

### Description

Shotcrete mix has been used for over a century to construct the most durable concrete structures. Our partner, Shotcrete Technologies Inc. has been perfecting our **Shotlining** blend and application methodology specific for underground pipe rehabilitation for over 40 years.

After 20 years of applying and testing various cementitious mixes in the field, Innovative Shotlining became a partner and certified applicator of Shotcrete Technologies Inc.'s proven solutions. We combine decades of experience with a comprehensive approach to provide the best **Shotlining** mixes and equipment tailored to each project's needs.

Collectively, we have completed dozens of projects around the world, providing durable and economical solutions for new and damaged pipes, culverts, tunnels and shafts. Our work has been recognized and approved by many government agencies and we continue to set the standard in the shotcrete industry through innovation, quality and durability.

As underground infrastructure across the nation continues to age and deteriorate the need for cost-effective rehabilitation solutions grows. Tackling these issues proactively is paramount. Waiting for a pipe breaker or emergency situation is not sustainable. Our proven trenchless **Shotlining** technology (mix and application equipment) allows for quick repairs with at a fraction (15-20%) of the cost of full pipe replacements.

### Shotlining Highlights

- **SAVES MONEY AND TIME**  
**Shotlining** reduces pipe replacement costs by up to 80% and cuts repair time by over 50% with minimal equipment and excavation.
- **GUARANTEED RESULTS**  
**Shotlining** utilizes special shotcrete blends and a proprietary coating process to deliver certified outcomes.
- **LASTS LONGER**  
**Shotlining** is uniquely applied with high-pressure impaction requiring minimal cure time and a service life up to 75 years, ensuring lasting repairs and eliminating repetitive maintenance.
- **REDUCES ENVIRONMENTAL IMPACT**  
**Shotlining** eliminates extensive equipment needs and minimal excavation (< 90%) of the lands resulting in minor changes to natural or built habitat.

## COMPANY STATEMENT

*Innovative Shotlining offers a cost-effective, non-invasive solution for rehabilitating aging underground pipes and culverts using:*

- patented cement blend
- patented application equipment

### PROVEN HISTORY

- 100+ years of Shotcrete used
- 40+ years of **Shotlining** perfected
- 100,000's+ feet **Shotlining** applied
- 100's+ of unique projects experience

### PREVENTIVE MAINTENANCE COSTS LESS

#### EMERGENCY REPAIRS COST 5X MORE THAN PREVENTIVE MAINTENANCE!

Each day, 6 billion gallons of water are lost due to faulty pipes. Much of the current water infrastructure dates back to World War II, with some pipes from the 1800s. Delaying repairs and replacements could cost up to 6x more, over \$1 trillion in the next two decades.

Preventive Maintenance with **Shotlining**:

- Increases water conservation efforts sooner
- Eliminates digging up roads or habitats
- Results in 80+% cost savings compared to emergency pipe replacement

*Completed 20 years ago for the Colorado DOT, this pipe rehabilitation project delivered a compression strength of over 8000 psi with expected life of 75 years.*



Typical Shotlining crew



Pipe re-lining completed for Colorado DOT 2004

*Want us to demo our solution? Contact us at [info@shotlining.com](mailto:info@shotlining.com)*



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## Mix Strength & Performance

The **Shotlining** blend is designed to achieve a compressive strength of **5000 PSI within 7 days and over 8000 PSI at 28 days**. Inherently resistant to corrosive chemicals, the blend is tailored to be more acid and abrasion-resistant, offering superior impermeability compared to traditional concrete. This makes it particularly suitable for environments exposed to harsh conditions. Shotlining is also designed to save significant time, with a typical one pass application with the ability to complete 500 linear feet or less in a day. In addition, the patented formula creates an instant bond or lining and provides a fast and full cure time of days - allowing you to be back in business quickly!

## Application Methodology

One of the primary benefits of **Shotlining** is its non-invasive application process, using its proprietary and specialized equipment for a one pass lining solution. Unlike traditional methods that require extensive excavation and disruption to the surrounding environment, **Shotlining** can be applied directly to the existing structure, minimizing downtime and reducing costs. The quick setting and curing times allow for rapid deployment, enabling small crews to cover significant lengths of infrastructure, such as 500+ linear feet per day.

## Carbon Footprint

**Shotlining** offers significant environmental benefits since natural ingredients like pozzolan are used in place of synthetic materials or polymers. By incorporating natural pozzolans, similar to the ancient Roman construction methods, the shotlining mix can achieve high durability and strength while reducing the environmental impact. Natural pozzolans, derived from volcanic ash, are abundant and require less energy-intensive processing. Additionally, pozzolans improve the concrete's resistance to chemical attacks and reduce permeability, extending the lifespan of the structure.

## CUSTOMER PARTNERSHIPS

Innovative Shotlining has successfully completed shotcrete rehabilitation projects for irrigation districts, cities/counties, culverts, department of transportations, drainage and water distribution systems and other infrastructure owners throughout California.

Innovative Shotlining is your contracting partner for any underground infrastructure project, or we can supply the material and equipment and train and certify your team to complete the work.



**Innovative Shotlining Inc.**

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## GENERAL USES

- Pipe Rehabilitation - 30" or greater
- Culvert Repair or Lining
- Underground Infrastructure Repair
- Pipeline Preventative Maintenance

## SHOTLINING MIX

Our proprietary shotcrete mix is a specialized blend of cement, sand, and pozzolanic admixtures designed for superior pumpability, adhesion, and durability. The unique high-slump mix can be easily sprayed using our advanced centrifugal sprayer. Our proprietary mix is prepared at a plant in California, to provide fast turnaround, less storage requirements, and optimal product quality control.



Available in standard 1000lb bags and 2000lb pallets.

## NEW - FIRE STOP MIX

Our **NEW Fire Stop** shotcrete is a sprayable, cementitious, inorganic fireproofing blend with excellent adhesion to surfaces like concrete, steel, and wood. It releases no toxic fumes during application or when heated. Enhanced with volcanic ash, "**Fire Stop**" outlasts ordinary concrete in quality, durability and reuse. No more replacing structures after a fire. Call us for a demo.



**Fire Stop** meets or exceeds international specifications for passive fireproofing in public structures and infrastructures to control "hot" areas. Tests on 1/2" to 3/4" samples at 2400°F for 4 hrs showed the back side never exceeded 800°F.

## SHOTLINING RESULTS - AFTER 20 YEARS



BEFORE



AFTER