



## Minimally Invasive Methods For Installing Sewer Service Cleanout With Same Day Restoration (SDR)

Speaker: Shaun Flanery on behalf of Larry Kiest

Track I-B Sewer Construction and Rehabilitation  
Wednesday July 14, 2021 Time 9:30 AM



## Making CIPP More Like New Pipe

Three (3) most important things a Utility can do to improve quality, reduce defects, maximize performance and extend service life

1. Practice Proper Order of Operations
2. Design pursuant to industry standards
3. Blocking all system flows during CIPP Installation & Curing



## Pipeline Access Is Necessary

1. Manholes provide access for the Mainlines
2. Cleanouts provide access for the Lateral Pipes

Access points are necessary for:

- Inspection
- Cleaning
- Stopping infiltration
- Plugging flows
- Controlling emissions from CIPP Curing

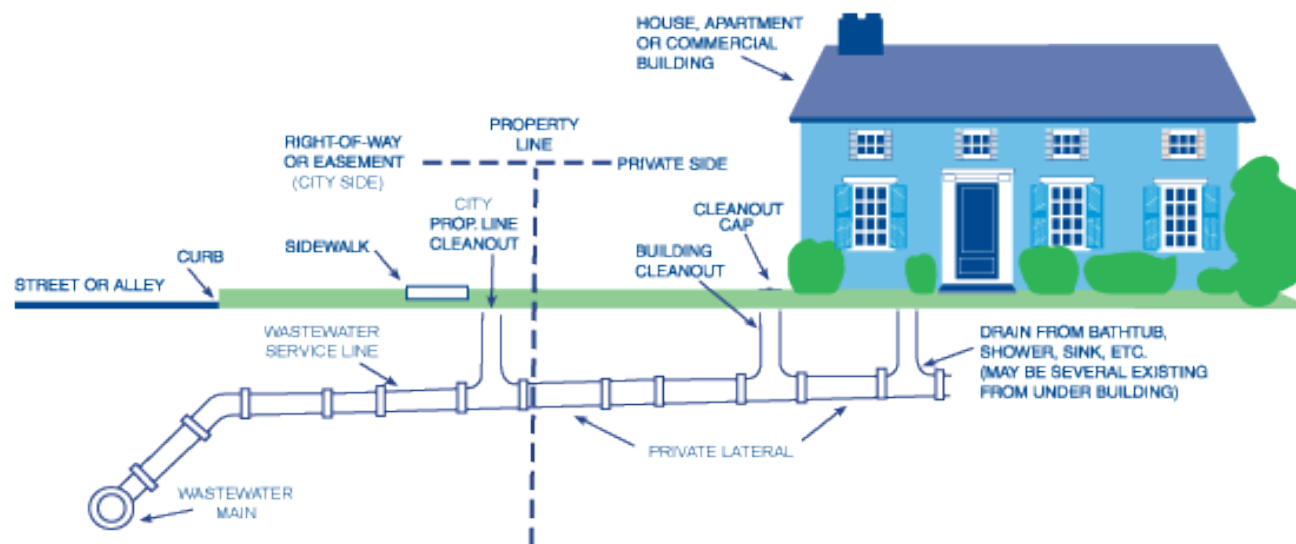
### **Best Quality**

Proper access allows best practices



## Why a Clean-out is so Important

- Access to plug the lateral and take system flow off the liner during installation and curing
- Industry Standard ASTM F2561 requires a 2-way cleanout and flows plugged during CIPP installation
- Access for future inspection and maintenance



### Best Quality

To achieve best value, be sure technical specifications require a proper 2-way cleanout for every lateral



## Initial Inspection, Measuring & Locating

Service Lateral CCTV inspection pursuant LACP

- Laser profile Measure exact pipe diameter at each manhole

We inspect the lateral pipes pursuant to LACP

- Measure pipe diameter at the main connection and the end of the inspection where the cleanout will be installed
- The lateral launch camera is outfitted with various methods to pinpoint and locate sewer lateral pipes

### **Best Quality**

Measure and Install a liner that exactly matches the pipe



## ASTM F3097 Sewer Cleanout

“A cleanout is a cleanout”, that is not so much the case today

- The old school of thought is the sewer cleanout needs to be directional
- However, trenchless technologies have advanced allowing inspection, cleaning, and liner inversion through a T-shaped cleanout
- Having a two-way (2) cleanout allows for an inflatable plug to be positioned on the upstream side of the cleanout



*ASTM F3097 Sewer Cleanout*

### **Best Quality**

Use 2-way Cleanouts to take the pipe out of service during CIPP installations



**UNDERGROUND CONSTRUCTION TECHNOLOGY**

The Underground Utilities Event | July 13-15, 2021 | Music City Center | Nashville, TN

# Coring for the Cleanout





# UNDERGROUND CONSTRUCTION TECHNOLOGY

**The Underground Utilities Event** | July 13-15, 2021 | Music City Center | Nashville, TN





# UNDERGROUND CONSTRUCTION TECHNOLOGY

## Minimally Invasive Excavation

The Underground Utilities Event | July 13-15, 2021 | Music City Center | Nashville, TN

Far fewer complaints from residents

- Far less Disruption
- Safe process - no workers in a trench
- No open holes, yard, sidewalk, driveway typically restored the same day
- Provides 2-way access



*Vacuum Excavated Cleanout*

### **Best Quality**

Provide Proper Pipe Access Using Minimal Disruptive Methods



# UNDERGROUND CONSTRUCTION TECHNOLOGY

## Minimally Invasive Excavation

The Underground Utilities Event | July 13-15, 2021 | Music City Center | Nashville, TN



### **Best Quality**

Pinpoint locate laterals for small bore hole pipe access



UNDERGROUND CONSTRUCTION TECHNOLOGY

The Underground Utilities Event | July 13-15, 2021 | Music City Center | Nashville, TN

# Compaction and Same Day Restoration (SDR)

- Compact approved fill in 6" lifts
- We use dowels to reinforce sidewalk and driveway restorations
- We use a mobile cement unit or an asphalt hot box to make SDR
- Homeowner complaints are drastically minimized, and the contractor does not have to return to make final restorations



*Compacting Trench Fill*

## **Best Quality**

Trench Fill Compacted In Lifts Ensures No Settling





# UNDERGROUND CONSTRUCTION TECHNOLOGY

The Underground Utilities Event | July 13-15, 2021 | Music City Center | Nashville, TN

## Landscaped SDR







# UNDERGROUND CONSTRUCTION TECHNOLOGY

## Sidewalk SDR

The Underground Utilities Event | July 13-15, 2021 | Music City Center | Nashville, TN

- Faster return to service
- Driveways, sidewalks, yards are restored the same day
- Provides a safe worksite with no missing flags of sidewalk
- No piles of dirt in residents' yard

### Best Quality

Developed on Ft Lauderdale projects



*Minimally Invasive Cored Sidewalk*



*Restored Concrete*



## Maintaining Sewer Service

Multi-story buildings, restaurants, hospitals, schools

- Install two (2) cleanouts approximately 18-inches apart
- An inflatable sewer plug is positioned between the two cleanouts
- Prevent flow from mixing with the resin saturated liner
- Protect building occupants and provide access to the lateral and main pipe in the public ROW
- The second cleanout provides access to bypass pump and maintain uninterrupted service from the commercial building

### **Best Quality**

Maintain Necessary Flows and Keep the Resin Clean



## Maintaining Sewer Service

What happens when no cleanout is installed

Sewage is mixed with the resin saturated liner

Homeowners are at risk of potentially harmful CIPP emissions

No future access to monitor and maintain the service pipe, so when a resident has a problem....

When it comes to lateral lining from the main without a cleanout:

### **Best Quality**

Maintain Necessary Flows and Keep the Resin Clean