

Dangers of Sewer Cross-Bores



A safety Presentation

2024 Midwest Damage Prevention Training Conference
November 12, 2024 – November 14, 2024



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Cross-Bore Prevention = Damage Prevention

- Like all other utility strikes, cross-bores damage the underground facilities of others.
- Degrade the integrity of the impacted utility.
- Are a latent safety risk to utility employees and the general public.
- Their prevention is a key component in achieving our common goal:
Meeting the CGA's 50 in 5 Challenge.



What is a cross-bore?

An intersection of an existing underground utility/structure by another utility resulting in direct contact that compromises the integrity of both



What Construction types that cause them?

- Directional drilling
- Pneumatic piercing (hole hogs)
- Straight line hydraulic and/or pneumatic horizontal boring
- Large cable plows
- Vibratory plows

Dangers of Cross-Bores is not a New Issue



- ❑ Identified as far back as 1972
- ❑ More than 50 years later, the number of instances has increased at the same pace as the increase in the use of trenchless construction.
- ❑ One recent event happened in Sept 2023, in suburban Chicago



What Utilities Create Them?

All underground utilities create cross-bores.

Even sewer manholes and catch basins have been built around other underground utilities.

Cross-Bores impact all Underground facilities

Gas explosions make the news; but cross bores by all utilities are a huge latent safety risk and a future liability for damages:

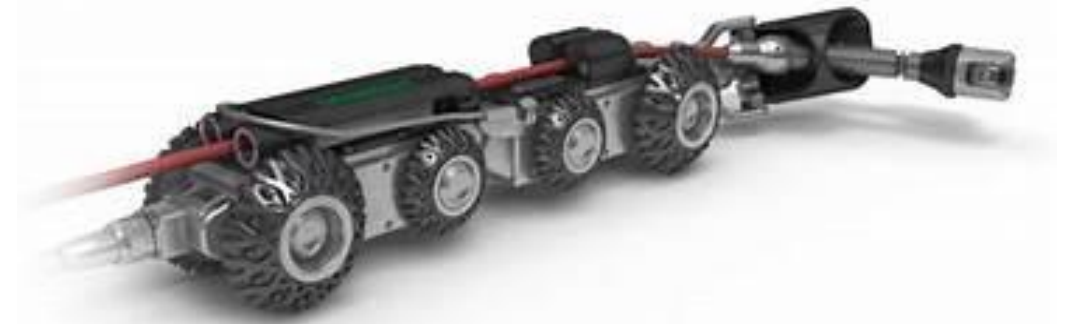
- ❑ All cross bores, degrade the integrity of the municipal infrastructure.
- ❑ Utilities inside sewers will be damaged eventually - when the sewer main is cleaned or cleared.
- ❑ Damage to an electric URD or Telecom line in a sewer means at minimum a lengthy outage; at worse an operator injury or death, and damage to the sewer clearing equipment.



Prevention

CGA Best Practices Manual - Section 8.11 Cross-Bores

Utilizing technologies such as camera inspection both pre-and post-construction are effective in preventing new cross bores.



How big a Problem? Worth the effort?

The Dirt Report

- tracks cross-bores as other damages – does not provide specific numbers for cross-bores
- Some gas utilities found an average of 1 cross bore per 100 laterals in areas where trenchless construction was used. This can be easily correlated to other utilities.



So, what are Gas Utilities doing about it?

❑ Legacy Cross-Bore Programs

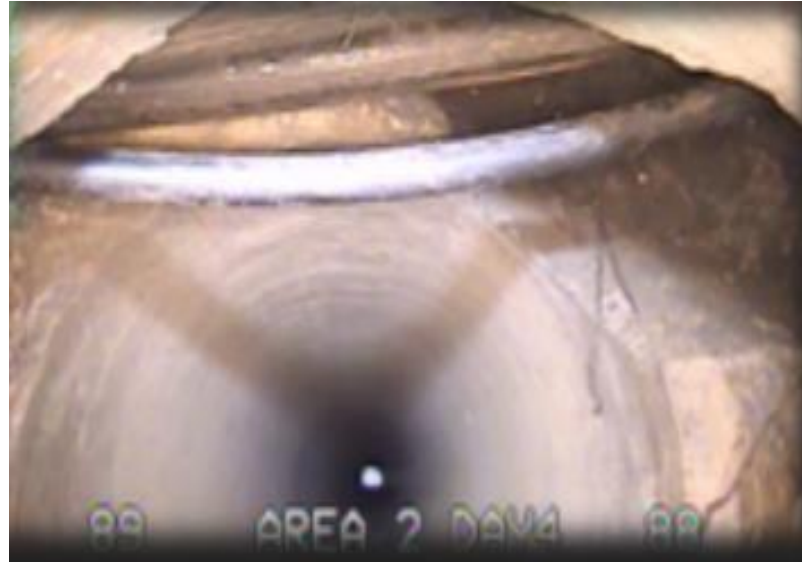
- ❑ Inspect all sewers where trenchless work was done.
- ❑ Link to 811 – Alerts homeowner and planners to ask the utility to review records and inspect their sewer lateral if needed.



Pre-Post Construction Sewer Locating

Pre-Construction Locating

- Pre-construction sewer inspection and locating performed as direct contract for utility, or as sub for distribution contractor.
- Provides design and planning data for utility and contractor.



Post construction QA/QC

Sewer inspection performed for the project/utility owner to ensure no new cross bores were created.

Questions.



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