Sewer – Look at Cross Bores

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We’ve seen a lot of strange things in our sewers...
CHICAGO SUNDAY TRIBUNE: MAY 30, 1937

ONE KILLED WHEN BLAST FLIPS UPS MANHOLE COVER
Methods for Utility Installation

- Open Cut
- Horizontal Directional Drilling
- Moles
- Plowing
Benefits of Directional Drilling

• Cost savings over traditional open cut
• Reduced installation time
• Minimizes surface disruption
• Flexibility in location and alignment
• Durability
• Less soil contamination
• Fewer permit issues
What is a Cross Bore?

“An intersection of an existing underground utility or underground structure by a second utility resulting in a direct contact between the transitions of the utilities that compromises the integrity of either utility or underground structure.”
How do Cross Bores Happen?

• More utilities are being installed or updated underground
• Limited width to work within due to utility easement size
• Only choice is to go deeper – resulting in boring through sewer mains and private service laterals.
• Utilities
• Based on information from the North American Society of Trenchless Technology, field experience suggests that there are 2 to 3 cross-bores per running mile of installed pipe.
• This information is based on all types of utilities.
Dry Weather Sanitary Sewer Overflow
Root Mass in Sewer Pipe
Sewer Cleaning Root Saw
Distance: 22.4 ft.
MSA - Abandoned Survey
Clock from:
Clock to:
Rating:
Dimension 1:
Dimension 2:
%:

GAS PIPE THRU CENTER OF MAINLINE BLOCKING CAMERA
Gas Explosion

(Trenchless Technology Magazine 05-18-15)
Dangers of Cross Bore

• Gas bores are the biggest danger due to the potential for explosion
• Detection of a cross bore may go unnoticed for decades
• Plumbers can unknowingly cut a plastic line while clearing a blockage
• Death, injury and property damage all can be an unfortunate result
What can be done?

• Educate both the public, and utility workers
• Pre and post investigation for directional drilling projects
• Legacy projects
Pre and Post Investigation vs Legacy Projects

• Pre and post investigations are conducted during ongoing directional drilling projects
  • These allow for mainlines and laterals to be cleared shortly after pipeline installation

• Legacy investigations are conducted after the directional drilling projects are completed
  • This is a comprehensive inspection process going through any area directional drilling was completed
Mainline Inspections
having a bad day?
remember, it can always be worse
Thank You!

Questions?

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