

How Are We Dealing With Cross-bores?



Stephen Thomas
Damage Prevention Specialist
Division of Utility and Railroad Safety
State Corporation Commission

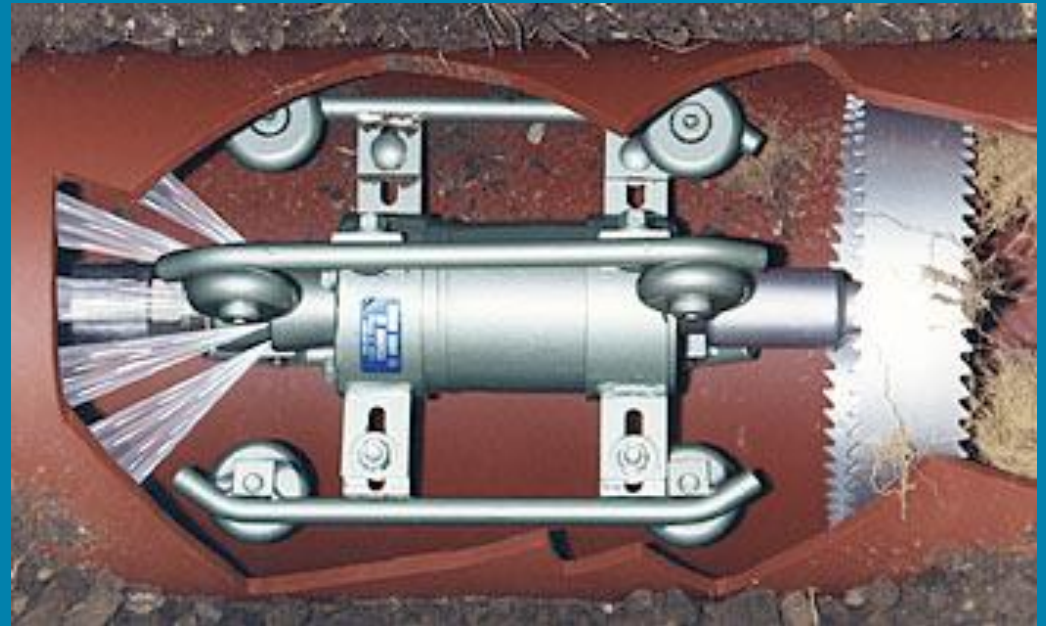
Trenchless Excavation Methods



Cross Bored Sewer Systems



Clearing a Blockage





Danger of death



Plumber Outreach

- Attended the 2008 & 2009 Plumbing Mechanical Professionals of Virginia (“PMPV”) Conference.
- Distributed approximately 15,000 Plumber Brochures through direct mailings working with The Department of Professional and Occupational Regulations, and outreach events with PMPV.
- Staff is currently working on partnering with the PMPV to have new sewer lateral cap stickers distributed to their member plumbers.



Plumbers Beware!

A blocked sewer line may be the result of another utility line (gas, electric, telecommunications) having been accidentally bored through the sewer line.



Attempting to clear this type of blockage can result in a serious accident involving loss of life, injuries, and significant property damage.

Please follow the precautionary measures in this brochure to help prevent such accidents.



Prepared by:
Virginia State Corporation Commission
Division of Utility and Railroad Safety
July 2007

Building Code – May 2008



Act Amended Effective January 1, 2011



Best Practices



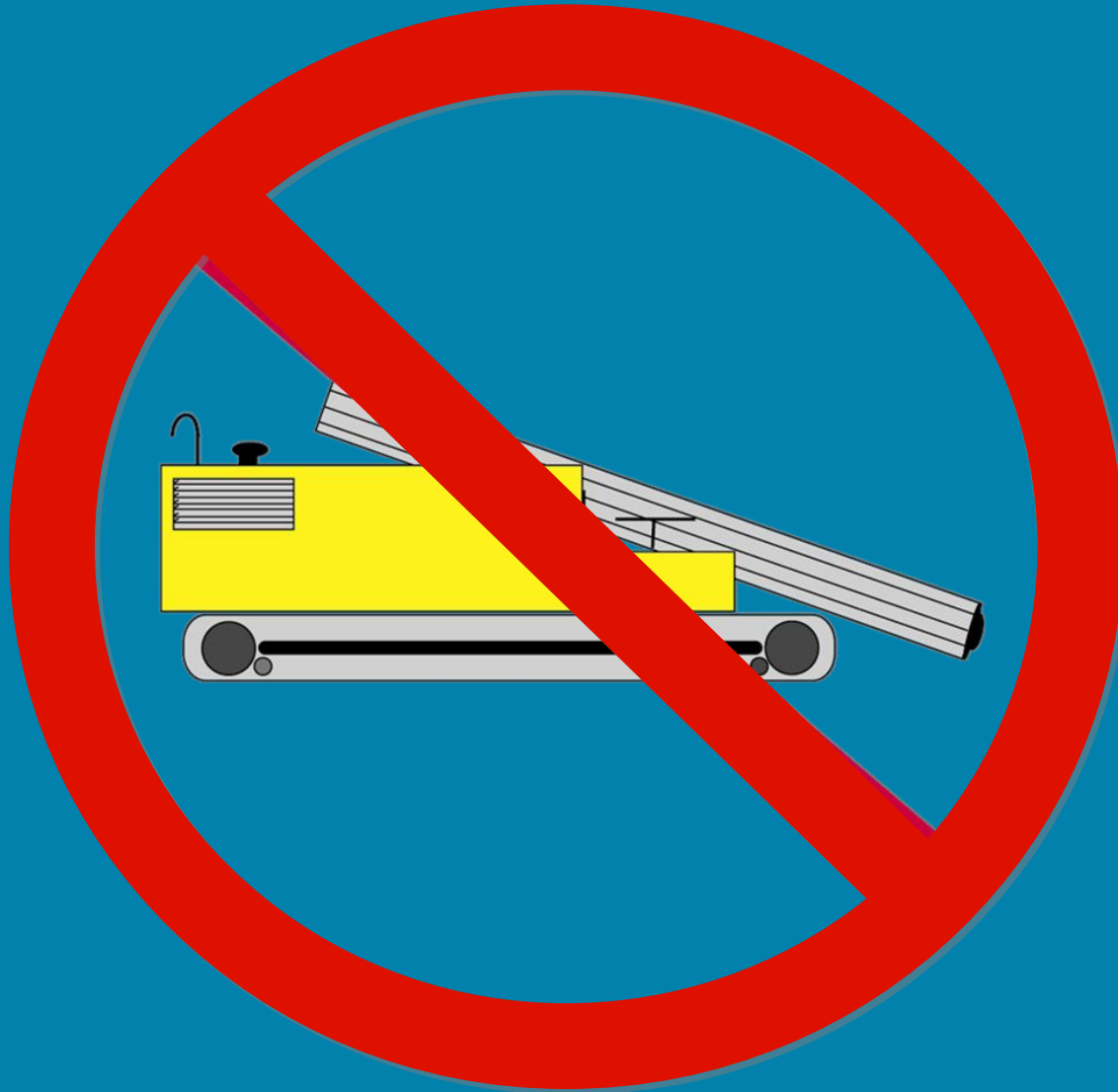
Best Practices



Best Practices



Best Practices



Information Made Available

Professional Excavator's Manual

Virginia



Prepared by
Virginia State Corporation Commission
Division of Utility and Railroad Safety

Dig With...

- C** Call Miss Utility at **811** before you dig.
- A** Allow required time for marking.
- R** Respect the marks.
- E** Excavate carefully.

An Underground Utility Damage Prevention Training Video

Dig With **CARE** Keep Virginia Safe!

Requirements and Best Practices For Trenchless Excavation



In English and Spanish Versions

Versiones de Inglés y Español



Virginia
Underground Utility
Marking Standards



Table of Contents

Underground Utility Marking Best Practices	1
State Corporation Commission's General Marking Requirements	10
Locator Response Codes	13
White Lining Best Practices	19

Prepared by
Virginia State Corporation Commission
Division of Utility and Railroad Safety

March 2004

What Are We Doing With All of the
Education Received?

Education vs Action

Virginia Natural Gas Two Phase Approach to Sewer Cross Bores

Sewer Cross Bores

Pro-Active Steps

- ✓ Proper Planning for HDD Projects
- ✓ Issues

Historical Projects

- ✓ Prioritize
- ✓ Inspect
- ✓ Issues

Pro-Active Steps

Overview - Planning for HDD Projects

- ✓ Call in a locate ticket
- ✓ Determine location of the Gas Main Running Line to be Installed via HDD
- ✓ Locate all sewer laterals - Determine Depth & Alignment
- ✓ Ensure Clear HDD Path - 24" window, lateral or bore head
- ✓ Perform post inspections ensure install did not damage laterals or mains

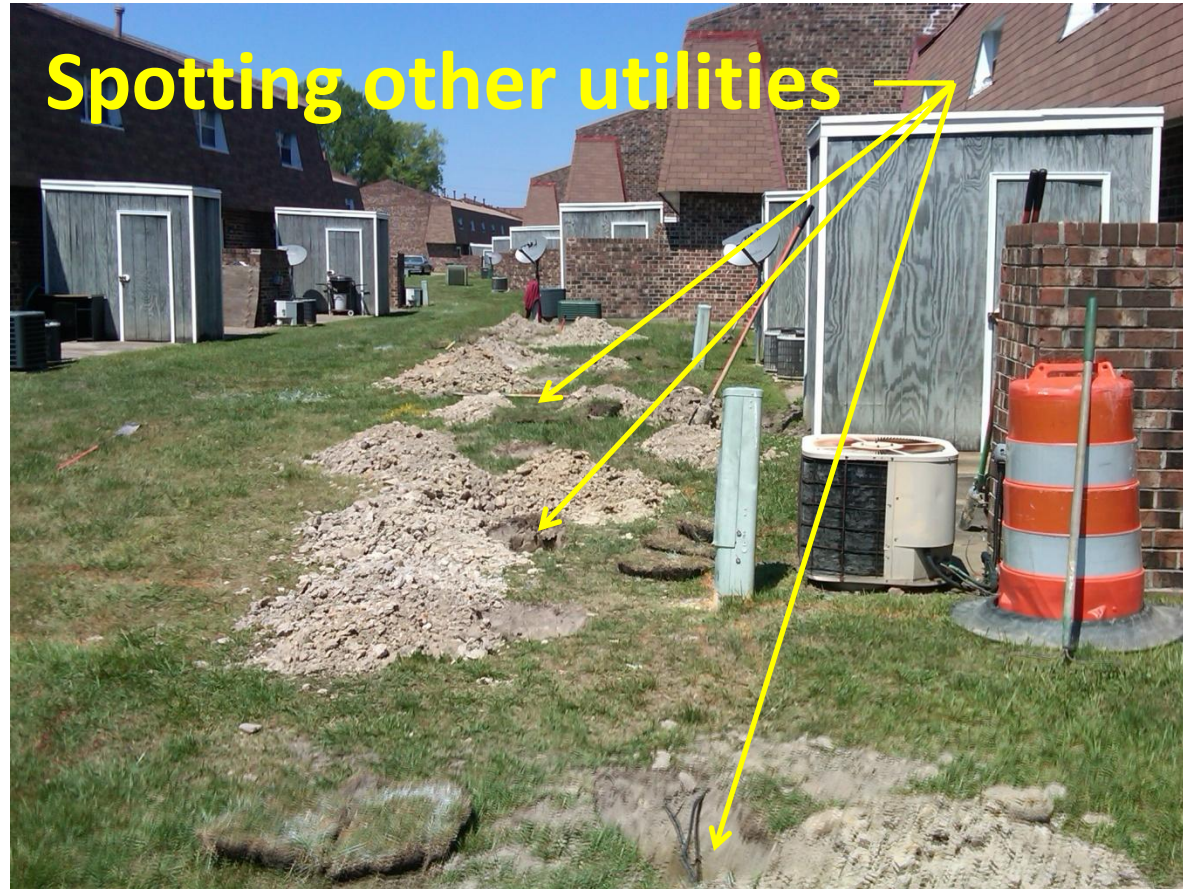
Pro-Active Steps

Issues – Determining Depth & Alignment of Sewer Laterals

Methods

- ✓ Fish Tape thru clean out without sonde
- ✓ Fish Tape thru clean out with sonde
- ✓ Camera from clean out thru lateral to main
- ✓ CCTV sewer lateral via lateral launch (equipped with sonde) via sewer main
- ✓ Hand Dig

Pro-Active Steps



Historical Projects

Prioritize – Where to start ?

- ✓ Claims or Damages
- ✓ Surrounding Area - Landmarks
- ✓ Install Date
- ✓ Contractors

Historical Projects

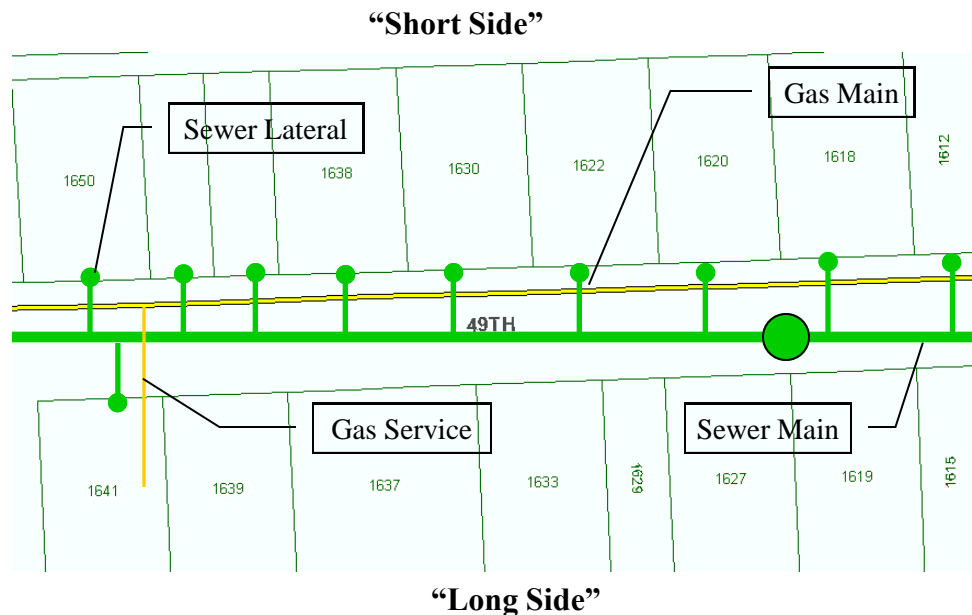
Issues

- ✓ Coordination
- ✓ Condition of Sewer
- ✓ Repairs
- ✓ Data Collection & Standardization
- ✓ Addresses – Parcels – Multi Units

Historical Projects

Methodology – How much to do?

- ✓ Establish Project Boundary
- ✓ Short Side vs. Long Side Inspections



What to expect?



What to expect?



What to expect?



What to expect?



Repairs



CROSS BORE
BEFORE REPAIR



CROSS BORE
AFTER REPAIR

Resources

CBSA - Cross Bore Safety Association

<http://www.crossboresafety.org/Photos%20Cross%20Bores%20&%20Explosions.htm>

AGA – American Gas Association

<http://www.aga.org/our-issues/safety/pipleinesafety/Technicalreports/Pages/1004DPWHITEPAPER.aspx>