

# **A Dangerous Situation Exposed With Private Property Laterals**



**Stu Bowns  
Hydromax USA  
and  
Laurie Chase  
Blue Heron Engineering**

**Ohio WEA – June 2010**

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- developing a private property program to implement in their service area
- enhancing existing private property programs

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### Mixed lines led to gas blast

By Lauren Pack  
Middletown Journal

MIDDLETOWN - After nearly two days of digging, Middletown officials and Cinergy crews uncovered the cause of the gas leak that leveled a Crescent Boulevard house Monday.

Officials said the blast and fire that destroyed the house wasn't caused by the plumber who was working in the basement of the structure just before the explosion.

The natural gas line leading to the house at 2212 Crescent Blvd. was found inside the sewer line, said Larry Tuttle, Middletown building inspector.

"The plumber did absolutely nothing wrong," Tuttle said. "He had no way of knowing the gas line had been run up into the sewer line."

Tuttle said the mixing of the lines likely was caused when Cinergy bored, or drilled, into the ground in a process to install new natural gas lines at the area.

"They're pretty good at it, but it's a complicated process and sometimes it's hard to know exactly where the lines are going," Tuttle said.

Tim Schmidt of Royal Rooter in Madison Township said he was attempting to unclog the pipes at the 86-year-old residence at about 11 a.m. Monday when his auger hit something hard. He said he pulled the tool out of the line and saw bubbles in the water, which led him to believe the auger might have breached the structural integrity of the gas line, according to the fire report.

Schmidt ran up the steps and told Vikki Temple and her granddaughters, Shyann Plowman, 2, Charlene Plowman, 4 and Charlotte Plowman, 6, to get out of the house, which exploded moments later.

"I can't tell you how relieved I am," Schmidt said Friday. "In all the years I have been doing this, I have never seen anything like that. Hundreds of customers and plumbers have called me with their support.

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# What is a Cross-Bore?

A cross-bore is “...an intersection of an existing underground utility or underground structure by a second utility resulting in direct contact between the transactions of the utilities that compromises the integrity of either utility or underground structure.”



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### CAMBRIDGE, Ohio – Sewer Cleaning Natural Gas Explosion

Investigators said that natural gas likely caused an explosion inside a home on Thursday afternoon that seriously injured two people.

Two homes were destroyed. Another home was heavily damaged, NBC 4's David Wayne reported.

One victim was transported to an Akron hospital. Michelle Lewis, 17, was taken to The Ohio State University Medical Center in Columbus, Wayne reported.



Firefighters said the pair was inside one of the homes when it exploded, causing damage to the others.

"It sounded like a sonic boom," said Nancy Laird, who shot photos of the fire after the blast shook her block. "My son screamed, 'The house down the street is



on fire."

Firefighters took several hours to put out the flames.

R



s all around the block said they knew right away that it was going to be

serious.

"I ran back in and called 911," said Jane Haney, a neighbor. "(The 911 operator) asked if we needed an ambulance. I said probably two of them."

Watch **NBC 4** and refresh [nbc4i.com](http://nbc4i.com) for additional information.

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Ohio WEA – June 2010**

NATIONAL TRANSPORTATION SAFETY BOARD  
WASHINGTON, D.C.

FOR RELEASE: 6:30 A.M., E.S.T., NOVEMBER 12, 1976

(202) 426-8787

ISSUED: November 12, 1976

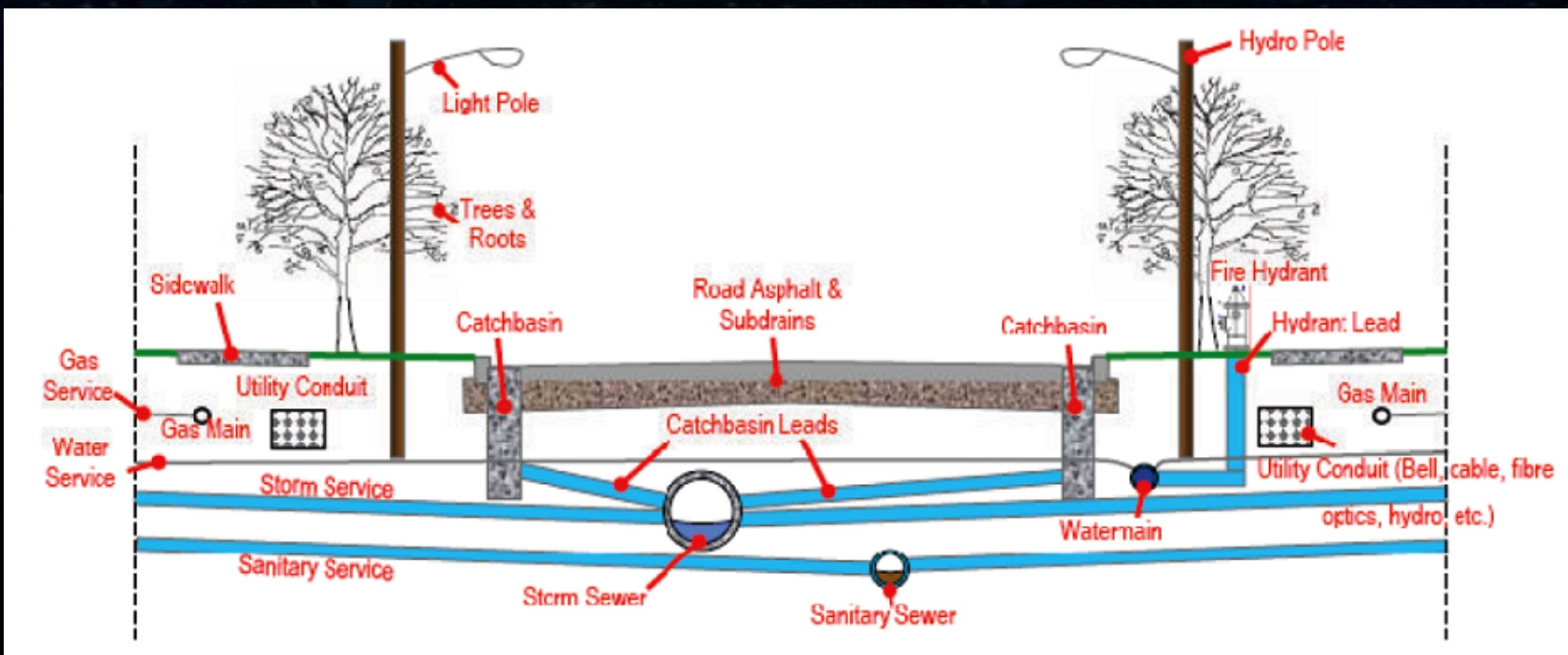
-----  
Forwarded to:  
Mr. C. S. McNeer  
President  
Wisconsin Natural Gas Company  
233 Lake Avenue  
Racine, Wisconsin 53401  
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SAFETY RECOMMENDATION(S)

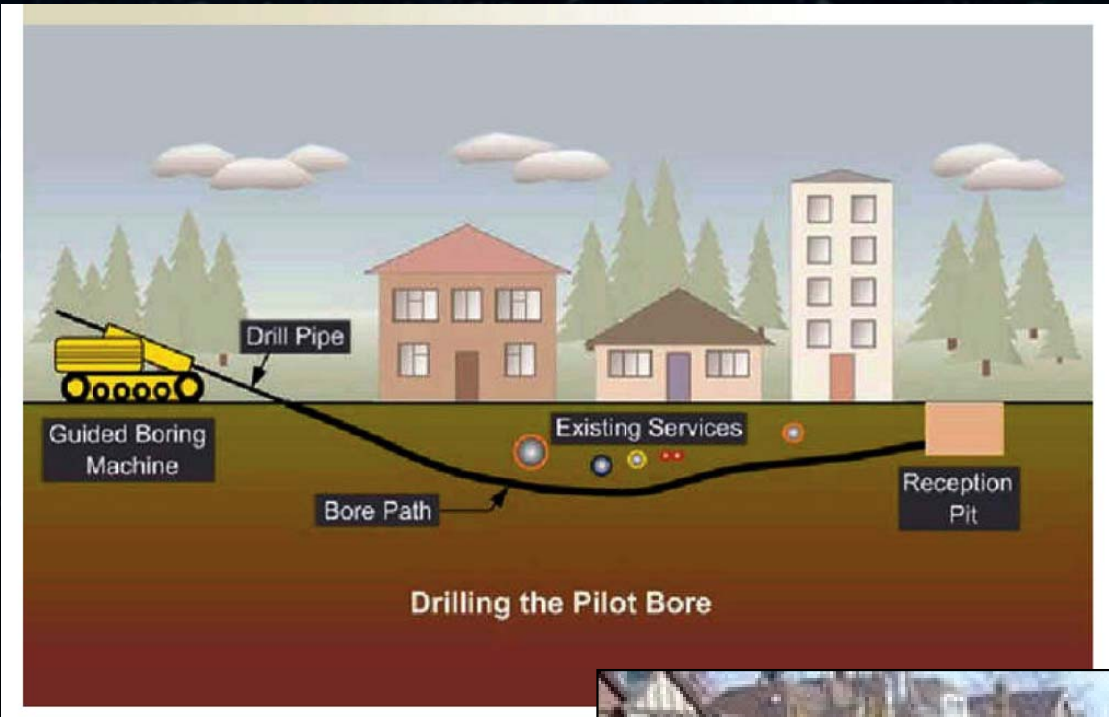
P-76-83 through P-76-86

~~At 8:53 a.m., on August 29, 1976, an explosion and fire~~  
destroyed a house at 6521 20th Avenue in Kenosha, Wisconsin.  
Two persons were killed, four persons were injured, and two  
adjacent houses were damaged. The destroyed house was not  
served by natural gas. However, natural gas, which was  
escaping at 58 psig pressure from a punctured 2-inch plastic  
main located 39 feet away, had entered the house through a  
6-inch sewer lateral. The gas was ignited by an unknown source.  
After the accident, the National Transportation Safety Board's  
investigation disclosed that the gas main had been installed by  
boring through the bottom of the sewer tile; the gas main was  
perpendicular to the sewer tile. 1/

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Ohio WEA – June 2010**



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Ohio WEA – June 2010**

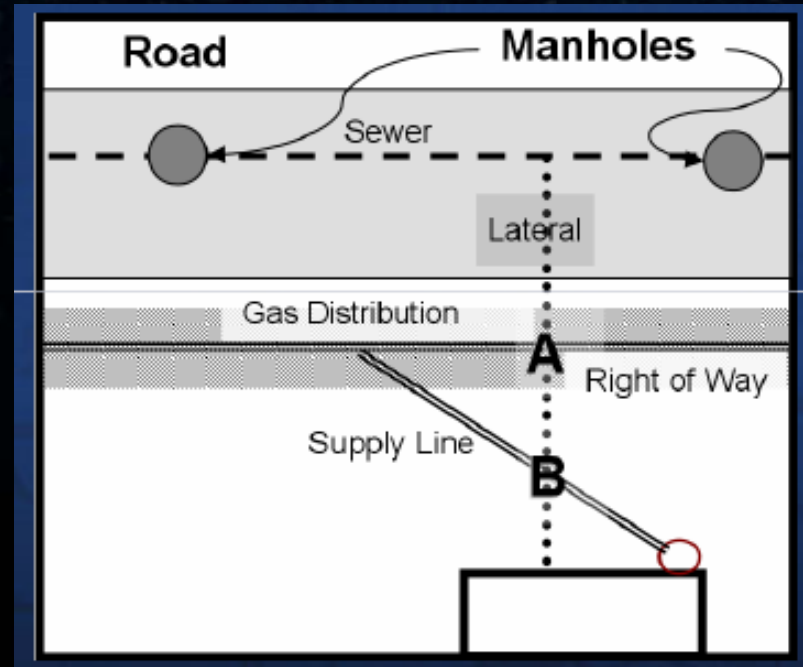


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Ohio WEA – June 2010**

# Common Cross-Bore Locations

Cross-bores tend to occur at right angles to homes and building:

- Location A: Within the utility right-of-way
- Location B: Supply line to House
- Other Documented locations:
  - Mainline sewers
  - Storm pipes
  - Electrical and telecommunication ducts



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**Ohio WEA – June 2010**

**Even when it seems as though you were born to do the job, things can go wrong.**



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Ohio WEA – June 2010**



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Ohio WEA – June 2010**

## Gratitude in the ruins: dog survives explosion

Officials investigate the second home blast in a month caused by contractors who punctured gas lines.

By **BILL McAULIFFE** and **AIMEE BLANCHETTE**, Star Tribune staff writers

Last update: February 25, 2010 - 7:55 AM

The last call Matt Augustson might have expected on his business trip to Europe was the one from Westgate Pet Clinic in Minneapolis.

"They said, 'We have your dog and she seems to be OK, but she's a little singed,'" Augustson said. "I thought, 'Why do you have her and why is she singed?' That's when I started to put 2 and 2 together."

Augustson returned to the Twin Cities Wednesday to begin putting the rest of his and his wife Jen's lives together. A natural gas leak and explosion destroyed their Edina home Tuesday and left them with their two kids, their dog Grete and little else, beyond Matt's luggage. Wednesday the couple visited the remains of their home at the corner of Arden Av. and W. 50th Street, finding a hole

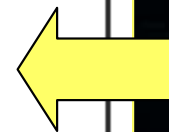
in the ground and a corner lot strewn with ice-covered, barely recognizable personal possessions.

"I'm still just thinking about being relieved that we're OK, nobody was there and Grete is OK," Jen said. "Things are things, and we'll be able to replace a lot of them. But we're healthy and happy and that's most important."

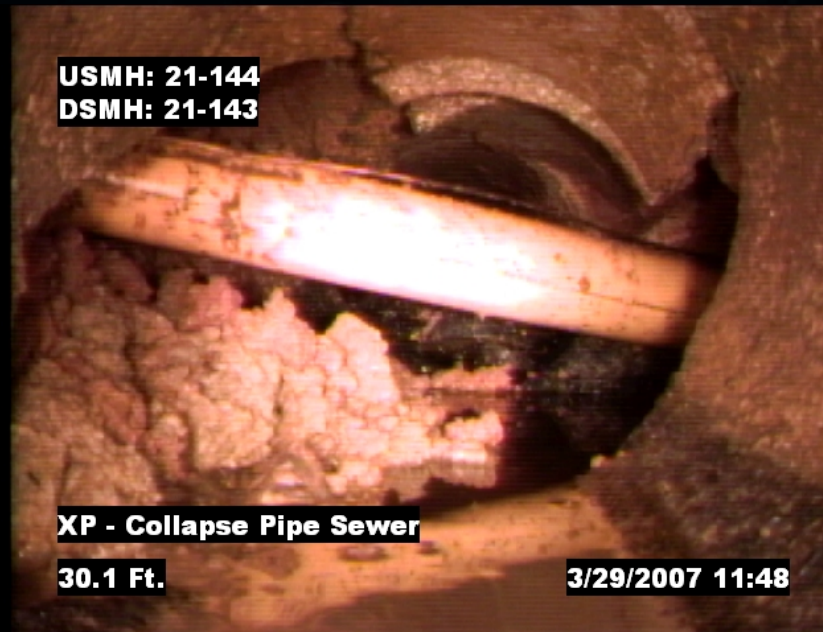
It was the second time this month that a metro area home was destroyed by a gas leak caused by utility work. A St. Paul home burned down Feb. 1 after a gas line was broken by a contractor cleaning out a clogged sewer pipe, which had been penetrated crosswise by a gas line.

Elizabeth Skalnek, chief engineer for the Minnesota Office of Pipeline Safety, said that natural gas is "a clean, safe method of heating our homes" and that pipelines are the safest method of delivering it.

However, she and Edina officials acknowledged that gas leaks caused by digging and other human-caused disruptions are "not uncommon." Edina Fire Chief Marty Scheerer said most breaks occur when the work involves a hole or trench, which allows the gas to escape into open air. Tuesday's



Hydromax has inspected over 40,000 laterals and our field experience suggests that there are 2 to 3 cross-bores per mile of sewer main



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Ohio WEA – June 2010**

# In the Last Ten Years Known Explosions

- Austell, GA
- Bellwood, IL
- Burlington, VT
- Cincinnati, OH
- Clayton County, GA
- Fairfax, OK
- Gilbert, AZ
- McKinney, TX
- Madill, OK
- Massena, NY
- Merriam, KS
- Middletown, OH
- Mobile, AL
- Phoenix, AZ
- Rochester, MN
- St. Paul, MN
- Tucson, AZ
- White Bear Lake, MN

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# MINNESOTA DEPARTMENT OF PUBLIC SAFETY



## State Fire Marshal and Pipeline Safety

444 Cedar Street • Suite 147 • Saint Paul, Minnesota 55101-5145  
Phone: 651.201.7230 • Fax: 651.296.9641 • TTY: 651.282.6555  
www.dps.state.mn.us

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ARVER/911 Program  
Bureau of Criminal Apprehension  
Driver and Vehicle Services  
Homeland Security and Emergency Management  
Minnesota State Patrol  
Office of Communications  
Office of Justice Programs  
Office of Traffic Safety  
State Fire Marshal and Pipeline Safety



### Alert Notice to Underground Gas Pipeline Operators

#### *Preventing Sewer Service Lateral Cross Bores: Acceptable Practices and Documentation Requirements*

**Date:**  
May 10, 2010

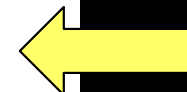
**Purpose:**  
The purpose of this Alert Notice is to provide guidance for gas pipeline installers on acceptable installation practices and documentation requirements when installing gas mains and services.

**Background:**  
The Minnesota Office of Pipeline Safety (MNOPS) is now aware of at least 155 instances in Minnesota where gas pipelines were inadvertently installed through privately owned sewer service laterals due to trenchless construction techniques; MNOPS believes there are probably more.

The majority of these "cross bores" were found by plumbers while cleaning sewer service laterals. Since 2000, six gas lines have been punctured by sewer cleaning contractors. On three occasions, the gas ignited, resulting in significant injuries and property damage.

The following *Acceptable Practices and Documentation Requirements* were developed following a review of industry white papers, a review of previous cross-bore incidents, and discussions with gas distribution pipeline operators on widely available methods and practices.

**Acceptable Practices and Documentation Requirements:**



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Ohio WEA – June 2010**

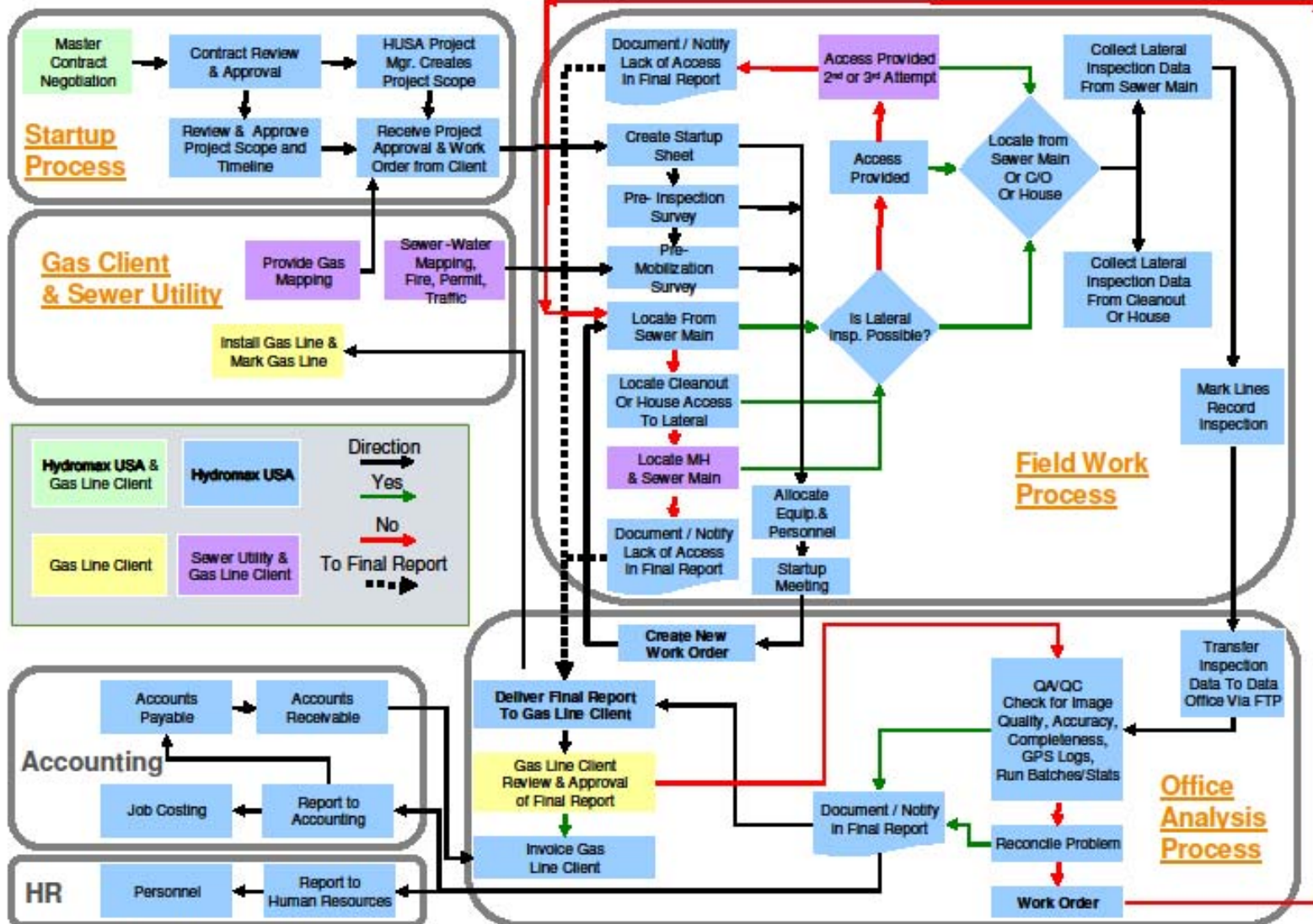
# New Gas Construction Cross Bore

A cross bore created during present construction activities



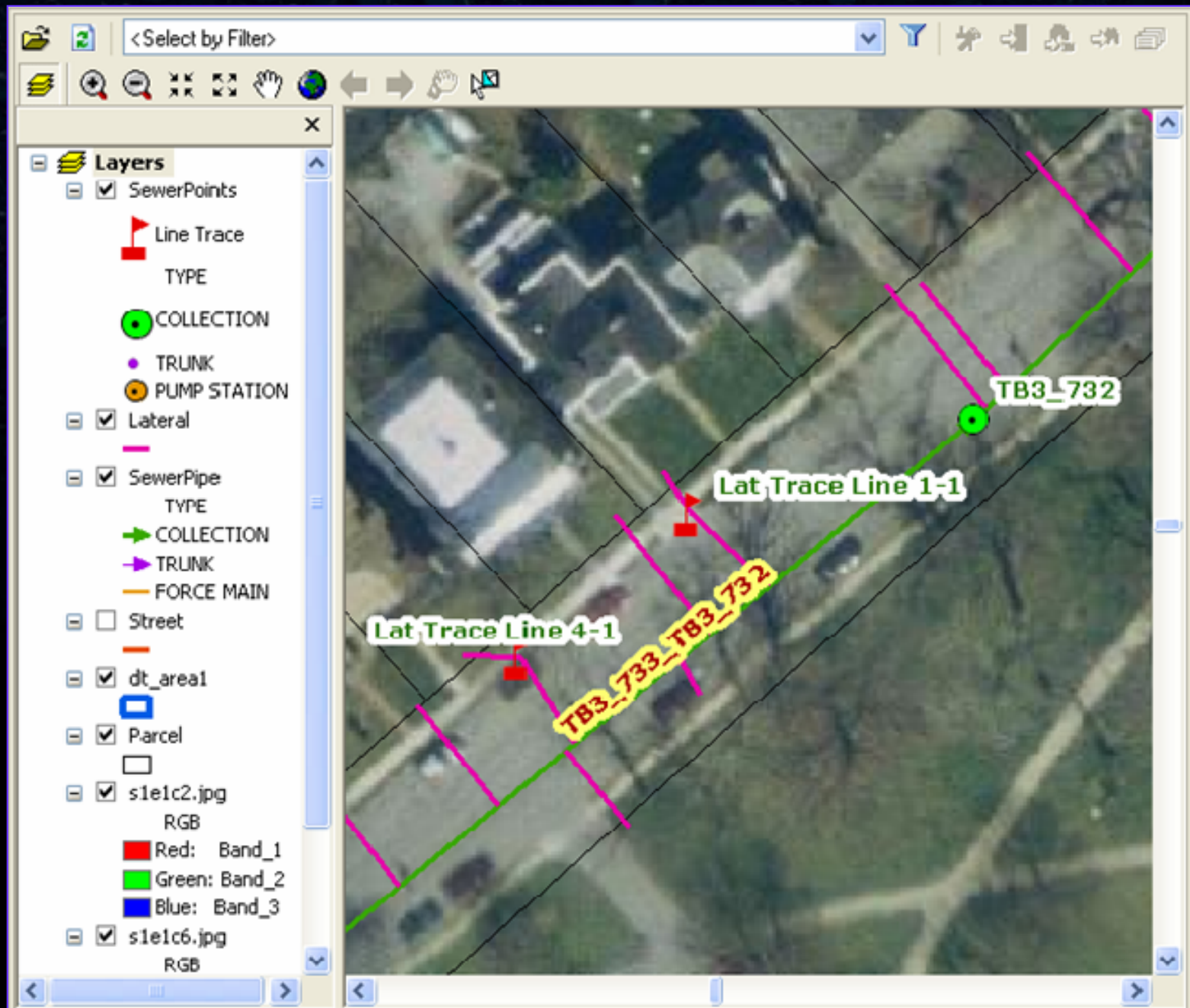
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Ohio WEA – June 2010**

# New Gas Construction - Location Inspection Process Chart



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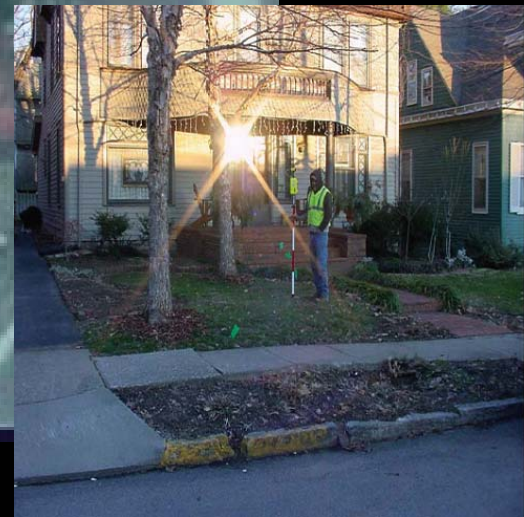
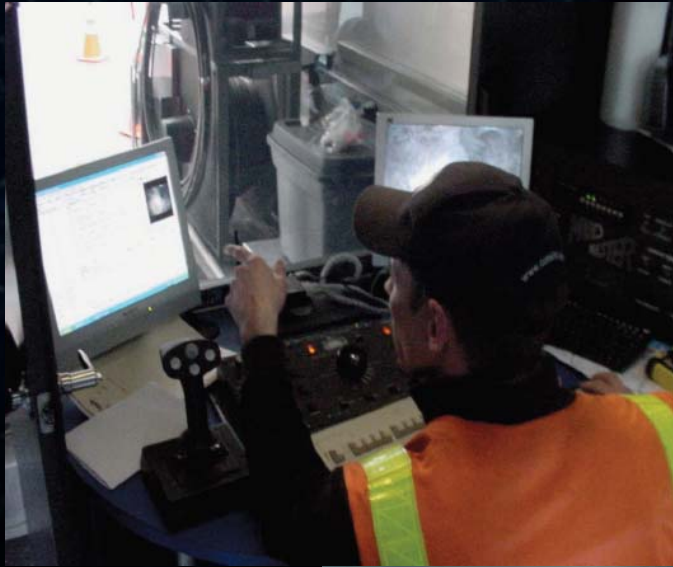
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Ohio WEA – June 2010**



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## Legacy Cross Bore

A cross bore created during prior construction activities



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Ohio WEA – June 2010**



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RFQ Document

RFQ Questionnaire  
(Word .doc format)

MSD Form 147

MSD Form 172

## Request for Qualifications: Sewer Cleaning, CCTV Inspection, Locating and Surveying Services

**Notes:**

- *The due date for this RFQ has been changed to December 22, 2009.*
- *This page is a general announcement only. The full text of the RFQ is available from the link under 'Downloads' at left.*

SEALED Statements of Qualifications will be received at the Metropolitan Sewer District of Greater Cincinnati (MSDGC) by Mr. Donald Cahill at 1081 Woodrow Street, Cincinnati, Ohio 45204:

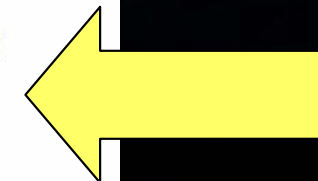
UNTIL 1:30 PM ON Tuesday, DECEMBER 22, 2009

MSDGC respectfully solicits revised Statements of Qualifications from qualified companies for sewer cleaning services and closed circuit television (CCTV) inspections of main sanitary and storm pipe sewers as well as connected building sewers (laterals) throughout the MSDGC service area, in conjunction with Duke Energy Gas Main Installations, and in support of the Duke Energy Gas Main Renewal program.

As of Tuesday, December 1, 2009, the revised Request for Qualifications and accompanying documents may be obtained from the MSDGC website ([www.msdcg.org](http://www.msdcg.org)). A Mandatory Pre-Submittal Meeting will be held on Tuesday, December 8, 2009 at 1:00PM local time at MSDGC's Wastewater Collections Division Facility, located at 225 West Galbraith Road, Cincinnati, Ohio in the Assembly Room.

Any inquires or requests for clarifications to this RFQ must be submitted in writing by no later than Tuesday, December 15, 2009 at 3:00PM local time. Requests must identify the organization making the request, the appropriate contact person within the organization, current contact information, the reference information for the section of the RFQ requiring clarification, and a clear and concise description of the question or clarification requested. All inquiries should be addressed in writing (e-mail preferred) to Donald Cahill and Jerry Weimer:

TO:



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Ohio WEA – June 2010**

# Cross Bore Safety Association

Utility Cross Bore Elimination



To Protect  
An Association of  
Industry Professionals



- Home
- History
- Legacy Cross Bores
- New Construction
- Drain Cleaner Safety
- Photos-Cross Bores+
- State Regs and Rulings
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## [CBSA Brochure](#)

(Click for pdf)

## Highlighted on This Page:

- [Mission Statement](#)
- [Target Areas of Interest](#)
- [Initial Focus](#)
- [Definition of a Utility Cross Bore](#)
- [Articles of Incorporation](#)

The Cross Bore Safety Association is a community of industry professional that have joined together to address all aspects of utility cross bores for protection against loss of life, injury and property damage.

Click here for: [CBSA Benefits and Goals](#)

## Mission Statement

"The purpose of the Cross Bore Safety Association is to bring persons and organizations together to create comprehensive high quality standards, guidelines, best practices, means and methods, courses, training, instructional materials and other related resources for the education and training of owners, installers, regulators, users, inspectors, maintainers and others who can benefit from such so as to minimize the risk for injury, loss of life and property damage from utility cross bores in an effective and efficient manner."



## Target Areas of Interest:

- Utility owner regulatory locating requirements
- New construction procedures
- Legacy verification procedures
- New technology peer review
- Out reach to affected service industries
- Municipal guidelines for acceptable installation practices

## Initial Focus:

"The association recognizes the impact from all types of utility cross bores. The association concludes that setting priorities and focus for different types of cross bores will best serve our stated mission statement. The association agrees that the initial focus will be to address cross bores where natural gas lines intersect sewer lines."

Other types of cross bores can occur between other combinations of utilities. These may be disruptive, costly and have potential for injury. Intersecting buried electric cables can cause death. Intersecting communications cables can interrupt calls for emergency assistance.

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**QUESTIONS ????????**

**stu.bowns@hydromaxusa.com**

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**Ohio WEA – June 2010**