



CROSS BORES:

CGA MEMBERS WORK TOGETHER TO MEASURE AND ADDRESS THIS DANGEROUS TYPE OF UTILITY DAMAGE

CROSS BORES, which occur when an existing underground facility is intersected by another, is a persistent issue in the damage prevention industry. A number of factors combine to make the issue particularly complex. Given the serious nature of the incidents they can lead to, Common Ground Alliance (CGA) members continue to work through the consensus-based process to address cross bores. Cross bores can be considered a two-pronged issue: 1) avoiding creation of new ones, and 2) avoiding incidents caused by the ones already in the ground.

CGA members are sharing their experiences with cross bore mitigation and collaborating on the ways the damage prevention industry as a whole can work to reduce the impact of this type of utility damage. In 2018, CGA's Damage Information Reporting Tool (DIRT) is incorporating new questions designed to better measure instances of cross bores, our first Technology Report included a case study on possible technical solutions for cross bore identification, and our Best Practices committee is reviewing existing cross bore determination and mitigation practices.

A Complex Problem

Sewer lines, which are often non-metallic and therefore difficult to locate using traditional methods, are most often affected by cross boring. When a gas main or service is inadvertently placed through a sewer line, typically using "trenchless" excavation methods, the resulting cross bore creates a particularly dangerous situation. When a sewer blockage occurs, attempts to clear it can result in gas migration into residences and businesses, with the potential for an explosion.

Compounding the issue is the reality that sewer laterals are often owned by municipalities exempted from One Call membership. As a result, these laterals are not always located and marked. During the facility installation process, gas utilities can attempt to locate sewer lines using surface ground penetrating radar (GPR), acoustic/seismic measures, traceable wire, electronic markers or closed-circuit television (CCTV) camera inspections – a process that typically falls to a specialized contractor.

With several stakeholder groups directly and indirectly involved in the cross bore issue, CGA's consensus process is essential as we work to reduce this type of damage.

How Member Washington Gas Tackles Cross Bores

CGA member and Bronze Sponsor Washington Gas delivers natural gas in the Washington, D.C. metro region, and has developed a robust and effective cross bore mitigation program after beginning to look at the issue seriously in 2008. Washington Gas' multi-pronged approach proactively identifies legacy cross bores, addresses new facility installation processes to prevent new cross bores, and integrates day-to-day operational procedures to prevent dangerous situations from developing.

To find and address legacy cross bores, Washington Gas began to systematically review its records to identify locations where the possibility of cross bores was high due to known use of horizontal directional drilling (HDD), moling or other trenchless digging techniques, known conversion work, areas where its facilities are buried at the same depth as water and sewer, and/or proximity of other known cross bores. After identifying potential cross bores via record review, Washington Gas sends contractors to those sites who use CCTV cameras to inspect sewer laterals via either a "lateral launch" capability, or in cases of blockages or other accessibility issues, via a "push camera" from a clean out or from inside of a house. The same camera inspection process was



added to the company's Operations and Maintenance Manual for new installations as well to prevent new cross bores by carefully locating and inspecting sewer facilities by camera before excavation begins, and in some instances after installations are completed.

The company also created and promotes a "Call Before You Clear" program that encourages plumbers and excavators who use mechanical equipment to clear sewer blockages to make an emergency locate request. A Washington Gas locator will respond by painting the approximate location of the gas facility, and the plumber can use those paint marks to assess whether there is the potential for a cross bore. In instances where there is cross bore potential, Washington Gas immediately responds just as it would to a Grade 1 emergency and will stay onsite until the issue is resolved. Washington Gas promotes the "Call Before You Clear" program through One Call centers, customer outreach/education and the training it provides throughout its footprint. The company has mitigated 48 cross bores to date, and damage prevention manager Scott Brown has brought Washington Gas' mitigation program to bear on his work as a member of the Best Practices committee's cross bore task team.

2018 DIRT Data will Tell us More

In a data-driven industry, a first step toward addressing a problem is having good information about the issue. As part of a larger revision of the DIRT form, CGA's Data Evaluation & Reporting Committee added a question to begin measuring instances of cross bores as it collects 2018 data.

As the committee evaluated how best to collect cross bore data, it decided the best solution was to add a simple "yes or no"

question in Part C: "Did the event involve a cross bore?" Making cross bore its own root cause would take away the ability to correlate it with other root causes like lack of 811 notification or failure to pothole. DIRT Users Guide material has been written on how to fill out a DIRT report for the various scenarios by which a cross bore condition is created and/or discovered and can be found at www.cga-dirt.com.

Best Practices Task Team Identifying Cross Bores Mitigation and Determination Practices

In 2014, CGA's Best Practices committee established a task team dedicated to identifying best practices for determining the presence of and mitigating cross bores. The team has worked diligently since then to incorporate input from CGA's stakeholder groups, as well as soliciting input from plumbers, and gathered information from providers of technical solutions and several CGA members who have successful cross bore mitigation programs.

At its most recent meeting in March 2018, the task team discussed how the draft language of TR2014-02 is geared mostly toward legacy cross bores, and how membership can work together to identify practices to avoid new cross bores. The team will meet again in July to discuss next steps. If you would like to get involved in the cross bore task team, contact CGA staff at support@commongroundalliance.com.

The Future of Damage Prevention

Addressing the issues surrounding cross bores requires collaborative problem solving across industries and disciplines – an expansive endeavor, but one that CGA is uniquely suited for given its members' commitment to our shared responsibility philosophy. As CGA increases efforts to measure the scope of the cross bore issue, documents potential technology solutions, and works toward a consensus-based Best Practice, the organization's integrated program structure is bringing the best minds in damage prevention together to tackle this entrenched issue. **ESG**