

# leveraging data innovation

Transforming **Infrastructure Data**  
into **Actionable Business Intelligence**

# Safety is At Our Core.

At Hydromax USA we endeavor to introduce continuous improvements to our systems and processes which prevent the loss of life or damage to property potentially caused by the accidental installation of gas and other utility facilities into the sewer system. To that end:

- Each manager has a detailed working knowledge of the equipment, processes, and procedures necessary for total program success.
- Our staff has a dedicated Quality Control Manager to ensure all processes and procedures meet internal quality standards.
- Hydromax USA's Safety Council analyzes safety data to ensure we meet internal and utility established safety goals, providing baseline knowledge which drives constant improvement and awareness.

## INCREASING YOUR CROSS BORE DISCOVERY RATE.

Hydromax USA's Cross Bore Quality Control processes require verifiable and repeatable data at the highest confidence level because we understand the implications of a single failure. Established rules are used for all aspects of cross bore inspection with methods and equipment being continually refined for safety and efficiency by specific project or system. Distinguishing capabilities that highlight our cross bore program capabilities:

- GPS field data collection equipment capable of real-time corrected accuracy down to 3"
- Field personnel extensively trained on best practices and thorough troubleshooting to ensure maximum accuracy when recording positions
- Higher accuracy equipment for greater confidence in the review of data, lower system risk, and overall results
- High resolution aerial imagery from Nearmap allows data analysts to confirm the clearance of risk areas within a smaller tolerance and higher degree of confidence.
- Digital Cross Bore reports are searchable and linked to related GIS data for future data and studies, and stored in digital layers available through the utilities' system. Hydromax USA supports ESRI, GE Smallworld and a variety of other GIS platforms.

A significant contributing factor to our success in increasing cross bore discovery rates is the work of our data analysts, reviewing every inspection, providing 100% video review with GPS data correlation.

Hydromax USA's management team has 100+ years of cross bore mitigation program experience utilizing innovative technology to collect data and analyze risk.



# The Hydromax USA Cross Bore Program

Hydromax USA's Cross Bore Inspection program was developed with an emphasis on collecting high quality data by engineering out the potential for human error during the field collection and validation of data used to identify and mitigate cross bores. Core to our program are five comprehensive methodologies:

- Project Ramp-up
- Scoping Process Development
- Inspection Methodology
- Mapping & Data Review Precision
- Proximity Team

## PROJECT RAMP-UP

Agreement and permit negotiation management to gain access to municipalities and sewer operators resulting in:

- Significant savings for utilities
- Mutually beneficial partnerships with the sewer operators that help them identify problems before they worsen and often help them meet their inspection goals
- Turnkey services, managing all business licenses, insurance, and bonds required by every municipality and sewer operator

**KEY BENEFIT:** Enhanced relationships with municipalities, inspectors and sewer operators

## SCOPING PROCESS DEVELOPMENT

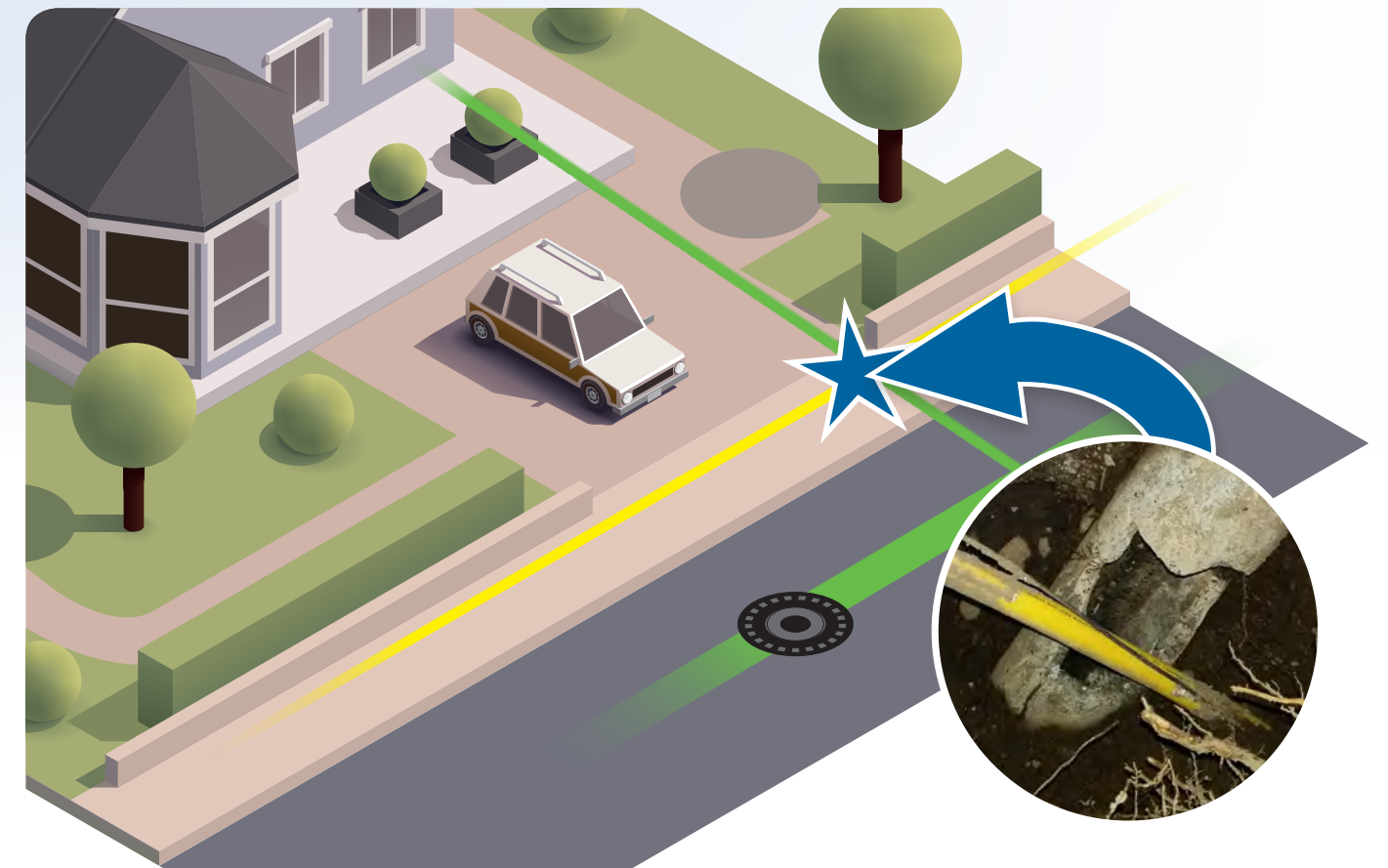
Develop rules specific to your environment/region to support:

- Mainline inspections
- Push camera inspections
- Proximity review
- Data analyst review

Identifiable risk area review with existing datasets:

- Gas service cards
- As-builts
- City sewer and right-of-way records
- GIS
- Other paper or digital records available to us

**KEY BENEFIT:** Ensures inspections are performed only on at-risk facilities



## INSPECTION METHODOLOGY

- Inspect all mainlines surrounding the parcel and laterals
- Videos and GPS points reviewed by highly trained Data Analyst.
- Conflicts? Proximity Technician in the field reviews all measurements to ensure accuracy and confidence in clearing inconclusive inspections.
- Review of proximity determinations to ensure complete agreement with available data

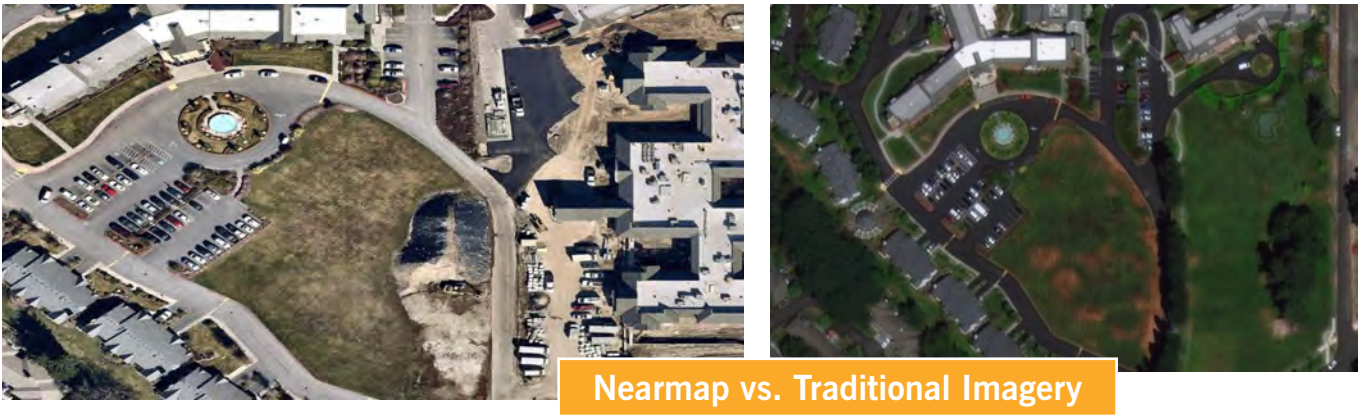
**KEY BENEFIT:** Thorough process ensures no risk areas are left uninspected



MAPPING & DATA REVIEW PRECISION

- High resolution imagery to aid data analysts, beyond the scoped gas risk
- Custom workstations for maximum resolution to ensure no cross bores or installation damage is missed
- Specially developed software ensures no risk areas are left uninspected
- High accuracy GPS data creates a complete system map for both gas and sewer facilities and our data analysts review 100% of the collected data to ensure that all potential conflict areas are free of risk and that no sewer branches are missed due to roots, water sags, or poor visibility due to dirty camera lenses.

**KEY BENEFIT:** No inspections are cleared in the field; Hydromax USA offers the only Cross Bore Inspection program in the industry holding inspections to this rigorous standard

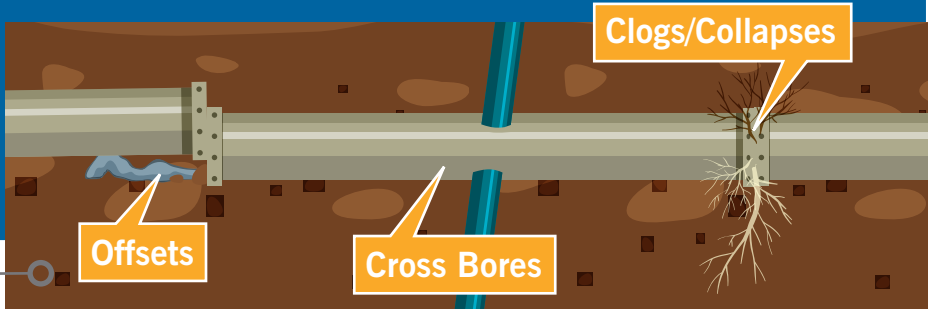


HYDROMAX USA'S PROXIMITY TEAM

Our Proximity team is comprised of highly-trained individuals with extensive GIS, construction and survey backgrounds – allowing us to eliminate risk in the most challenging conditions by confirming the location of sewer and gas facilities when they are otherwise inaccessible.



All questionable parcels go through a rigorous process where the Proximity Team reviews field measurements against as-builts, D4s, and any other available information.



ACCURACY + PRECISION = CONFIDENCE

Hydromax USA utilizes 3" accuracy GPS equipment. The accuracy of Hydromax USA's equipment allows us to ensure that all scoped risk limits have been reached. This level of precision is impossible with lower quality GPS data and without the rigorous training our field personnel undergo.

EQUIPMENT CAPABILITIES UNIQUE TO YOUR ENVIRONMENT

*"You can't build a great house with a hammer alone"*

We continually evaluate every available tool on the market to bring our customers the most value. We select and customize our robotic equipment to meet the unique challenges encountered in your regions' sewer systems, such as steep sloping pipes or rough concrete sewers. Our adaptable lateral equipment has delivered project cost savings for our customers while increasing completed inspections with limited access options and reducing the requirement for costly follow-up inspections.

THE LAST WORD

Hydromax USA delivers innovative data collection and analytics, specializing in Water, Wastewater and Gas Infrastructure. We transform data through our GIS-Centric Methodology: Integrating client needs and field services to develop data management platforms that support infrastructure analytics, providing the highest level of actionable business intelligence, ensuring public safety and improving asset management.



High Accuracy, High Precision



Low Accuracy, High Precision



High Accuracy, Low Precision



Low Accuracy, Low Precision



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understand the present | **protect the future**

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