

The background is a grayscale photograph of an industrial facility. In the foreground, a set of railroad tracks leads into the distance. To the right, a white truck is partially visible, with the words 'HYDRO-KLEAN' and 'SHIP, AT YOUR SERVICE!' printed on its side. A large blue 'K' logo is superimposed over the truck. In the background, there are various industrial structures, including silos and a tall smokestack.

HK

SOLUTIONS

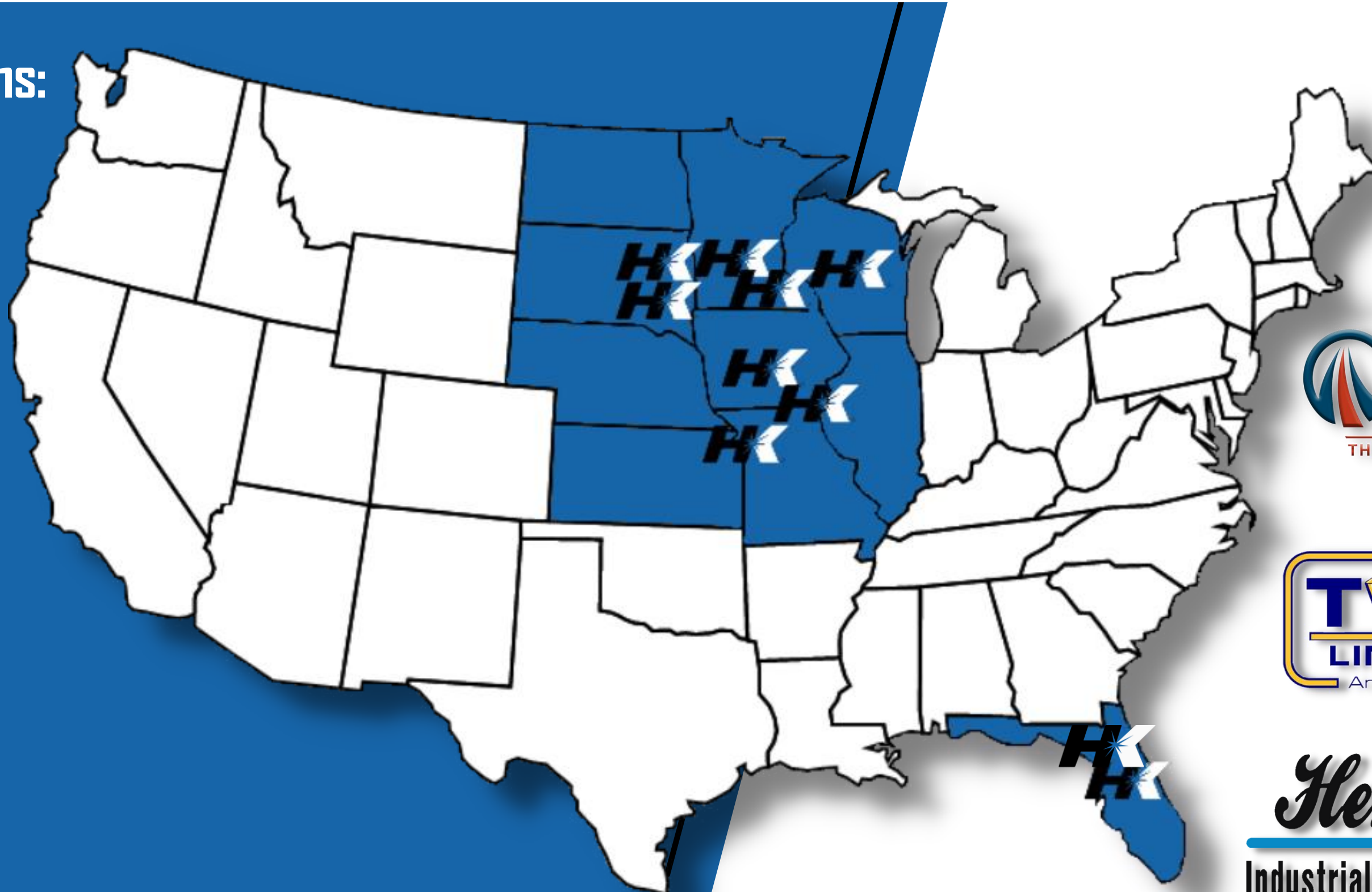
GROUP

DES MOINES | MANKATO | KANSAS CITY | MINNEAPOLIS | SIOUX FALLS | WATERTOWN | KEOKUK | RHINELANDER | ORLANDO | JACKSONVILLE

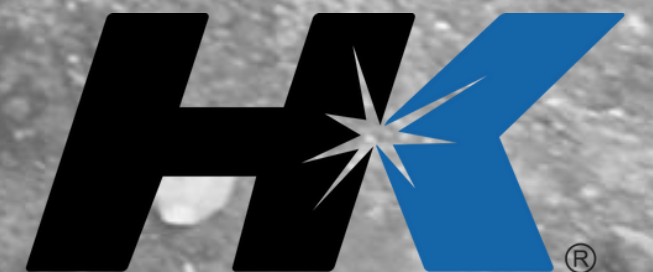
HK'S FOOTPRINT

Our Office Locations:

- Des Moines, IA
- Keokuk, IA
- Kansas City, MO
- Mankato, MN
- Minneapolis, MN
- Sioux Falls, SD
- Watertown, SD
- Rhinelander, WI
- Orlando, FL
- Jacksonville, FL

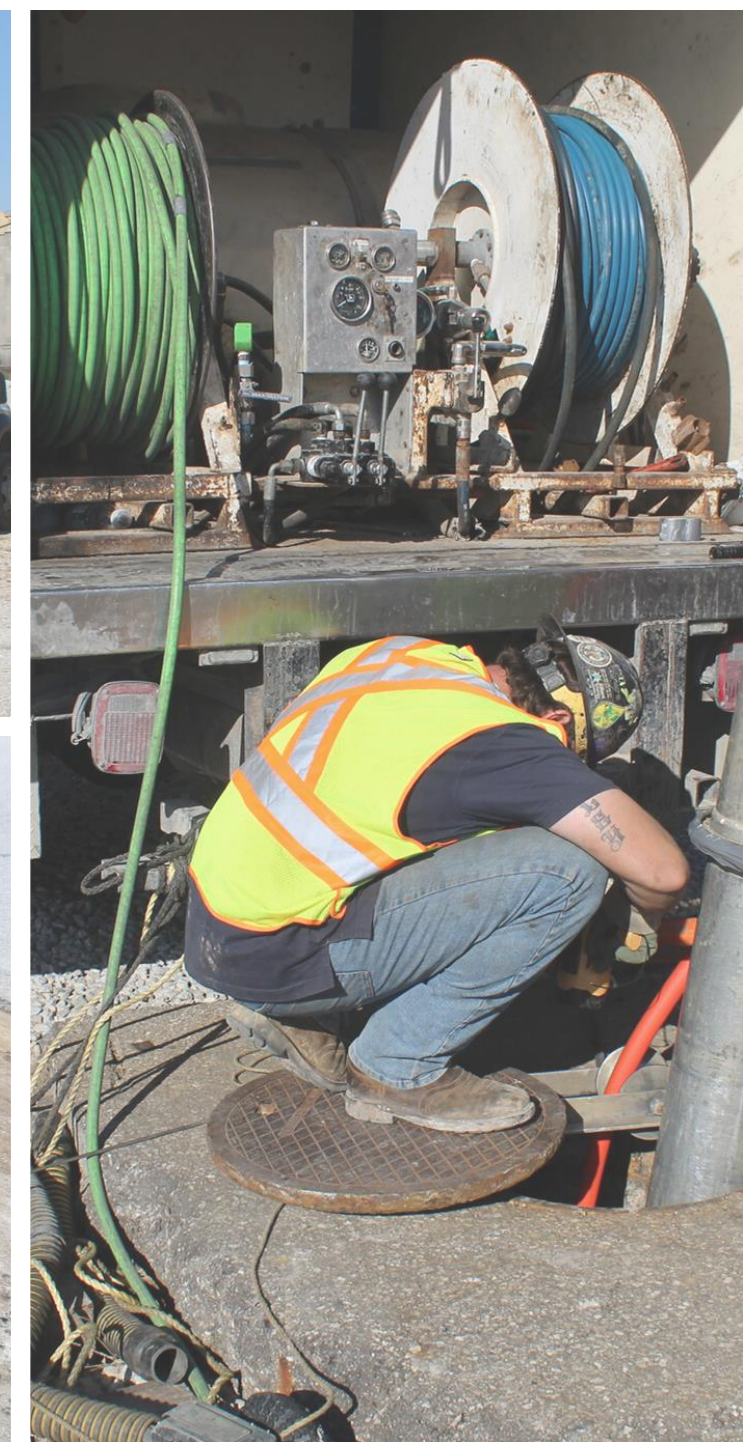


MONOFORM PLUS™ CASE STUDY

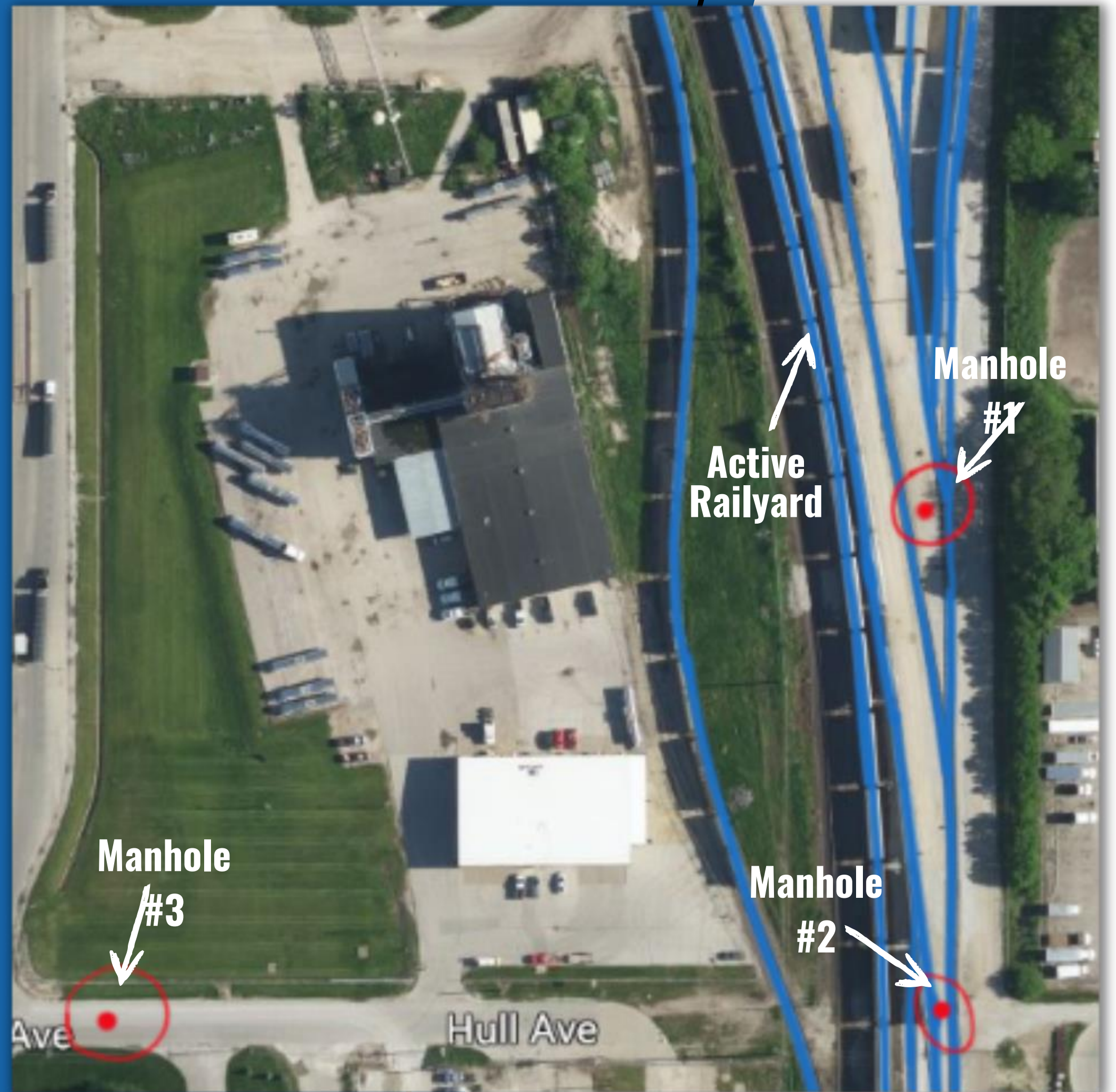


EXECUTIVE SUMMARY

- Three city-owned manholes in danger of collapse on privately held rail spur
 - Collapse would cause significant damage to production at facility
 - Significant threat to safety of plant and rail personnel



AERIAL VIEW OF SITE



Investigation

- Establishing cause of collapse



Manhole #1

- Manhole base and flow line eroded causing severe sink hole
- Between two active tracks
- Severe degradation due to H₂S



Manhole #2

- Caved in at base of manhole causing massive sink hole
- In between & under active tracks
- Severe degradation due to H₂S



Manhole #3

- Caved in at base of manhole
- On busy semi route
- Neglected for years
- Sever H₂S

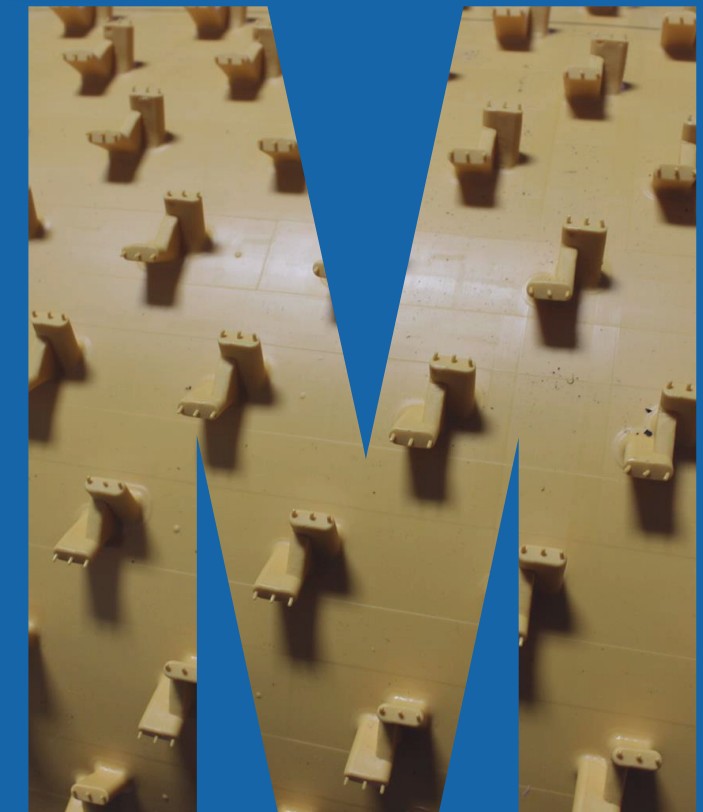
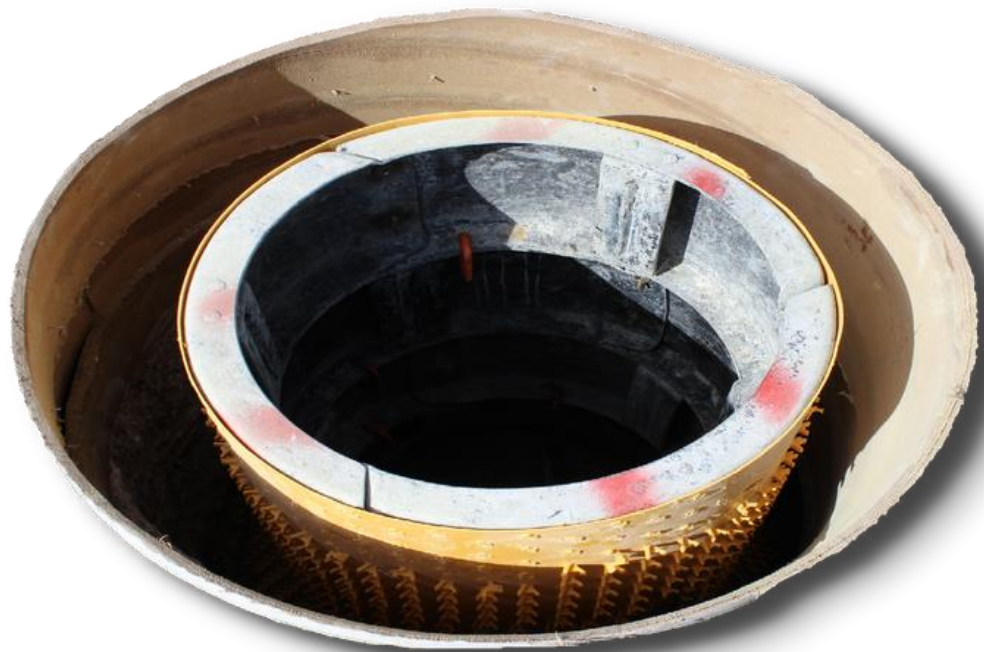


WHAT IS MONOFORM PLUS™?

100% Structural 100% Corrosion Resistant

Combination of **TWO** Proven Technologies into **ONE SINGLE** System
Providing the Ultimate Manhole Rehabilitation Product Available

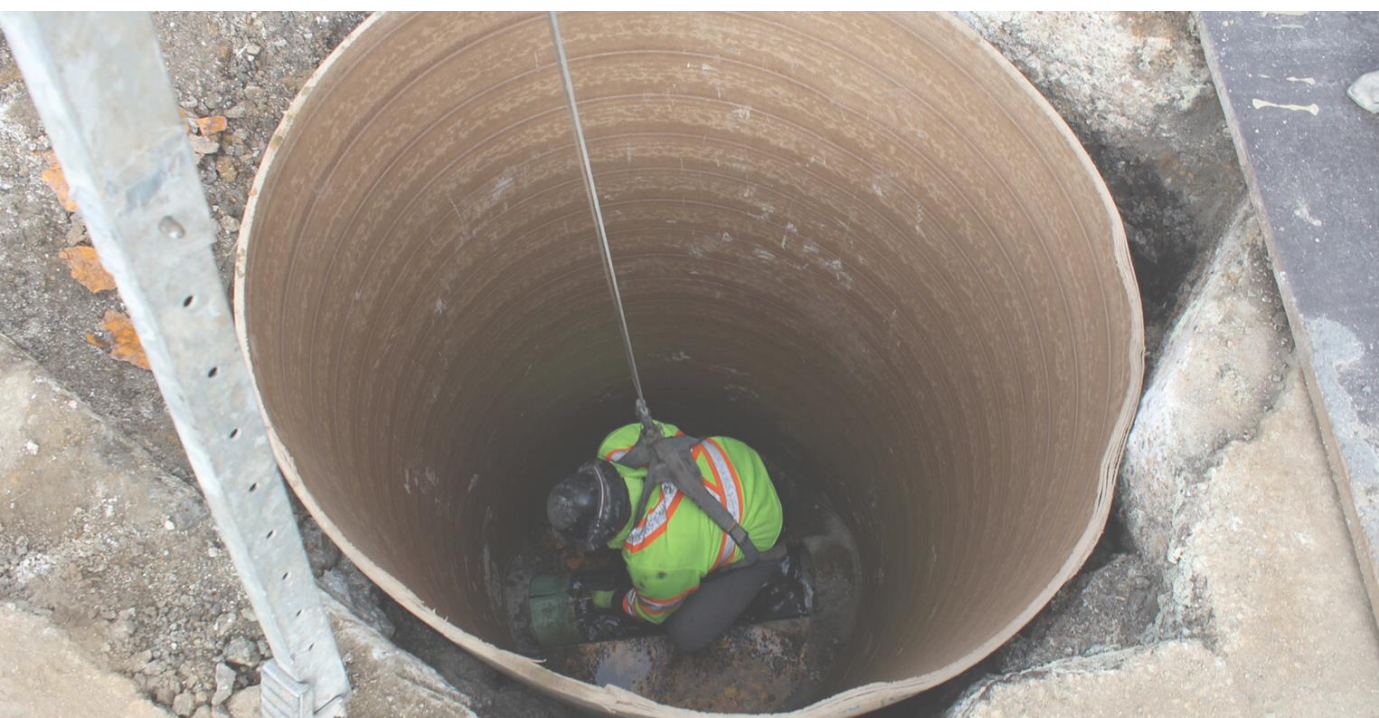
- 1 Traditional Monoform Process:
Fully Structural Trenchless
Manhole Rehabilitation
- 2 Incorporating a Thermoplastic **HDPE AGRU**
Sure-Grip Interior Liner That Provides
Corrosion Protection From MIC While
Eliminating Exfiltration and Infiltration



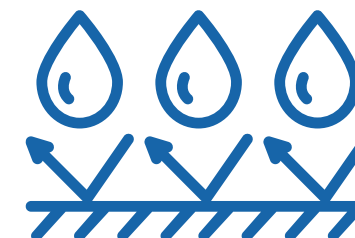


DIRECT BENEFITS OF MONOFORM PLUS™

- Minimal Traffic Disruptions - Typically No Traffic Detours/Community Disruptions
- No Compaction Issues With Replacement
- No External Bypassing with Flows Managed Internally
- Quick Installation: 4 to 6 Structures per Week
- 1/3 of the Cost of Replacement
- Structure is rated at a Cooper E-80 (fully loaded freight train)



100% STRUCTURAL



100% CORROSION RESISTANT



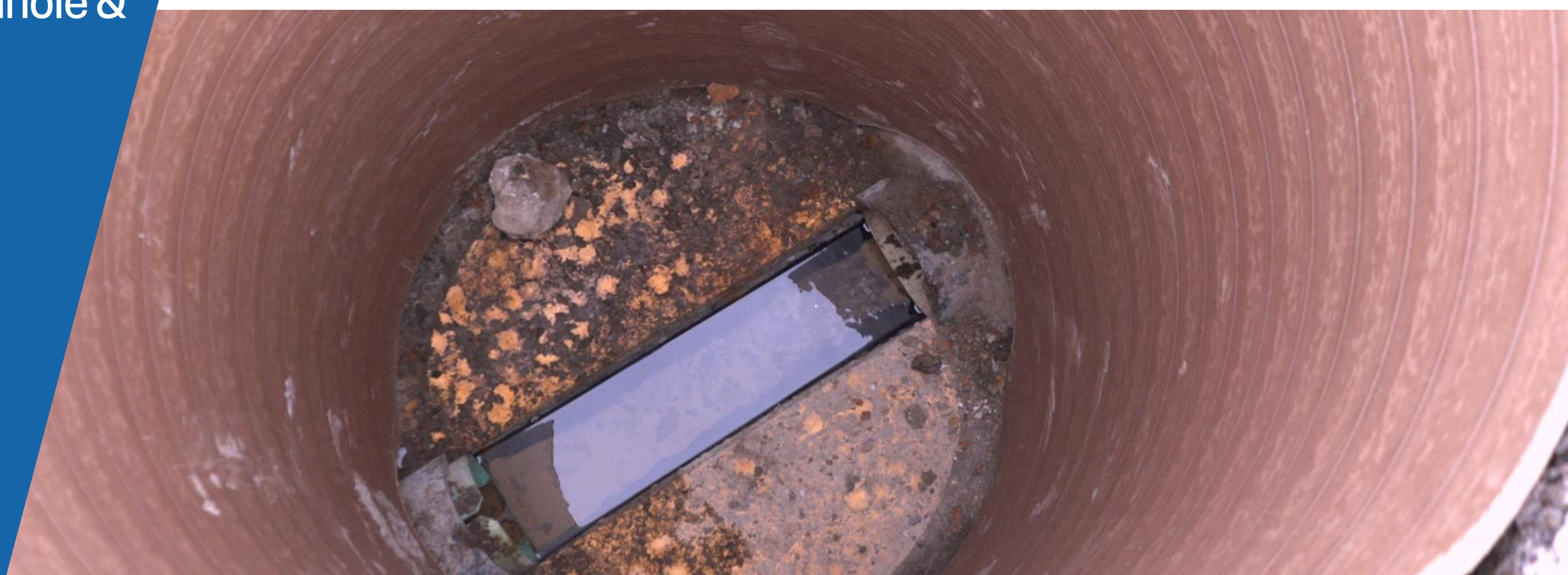
NO EXCAVATION

DEMOLITION OF OLD STRUCTURE



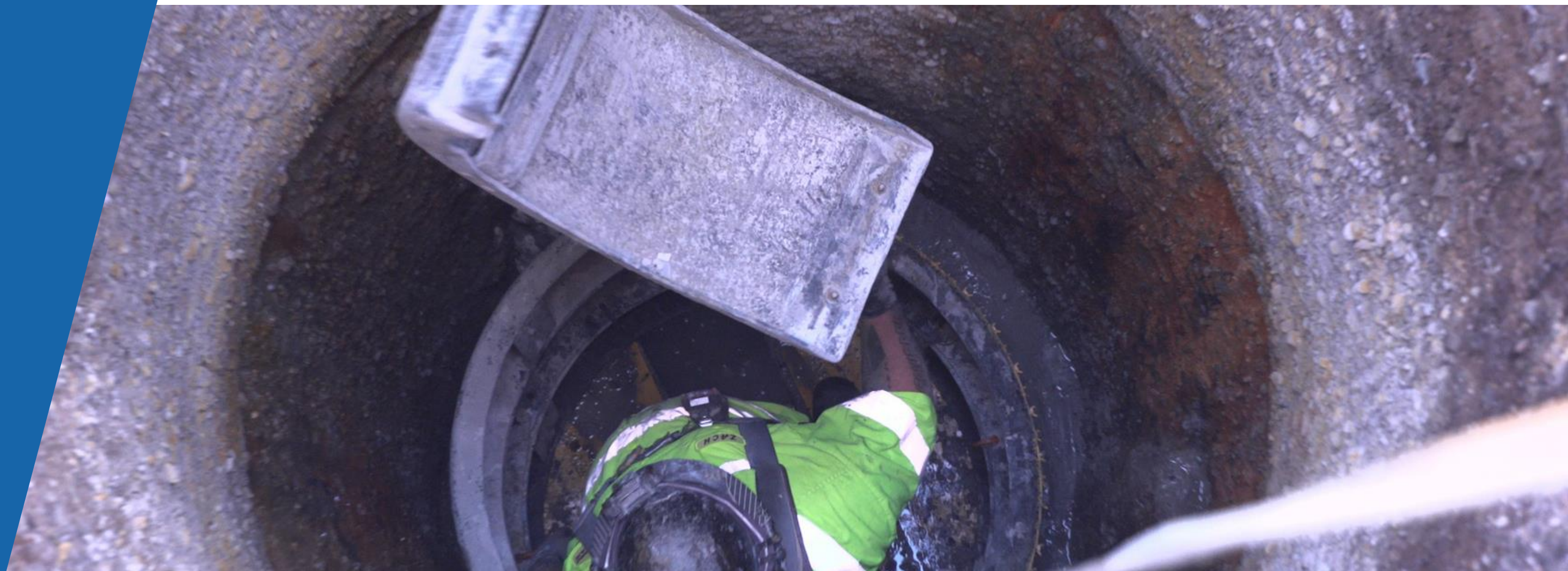
INSTALLING MONOFORM PLUS™

- Bench repair & fabrication of Agru Liner for bottom of manhole & bench



INSTALLING MONOFORM PLUS™

- Installing the Monoform forms



INSTALLING MONOFORM PLUS™

- Adding the Agru HDPE liner



INSTALLING MONOFORM PLUS™

- Pouring the concrete



INSTALLING MONOFORM PLUS™

- Field welding of seams
- Spark testing



MONOFORM PLUS™



Before & After:



Manhole #1



Manhole #2



Manhole #3

