



# REQUEST FOR TECHNICAL PROPOSALS

## Northstar Ductile Iron Sewer Main Assessment & Design Project

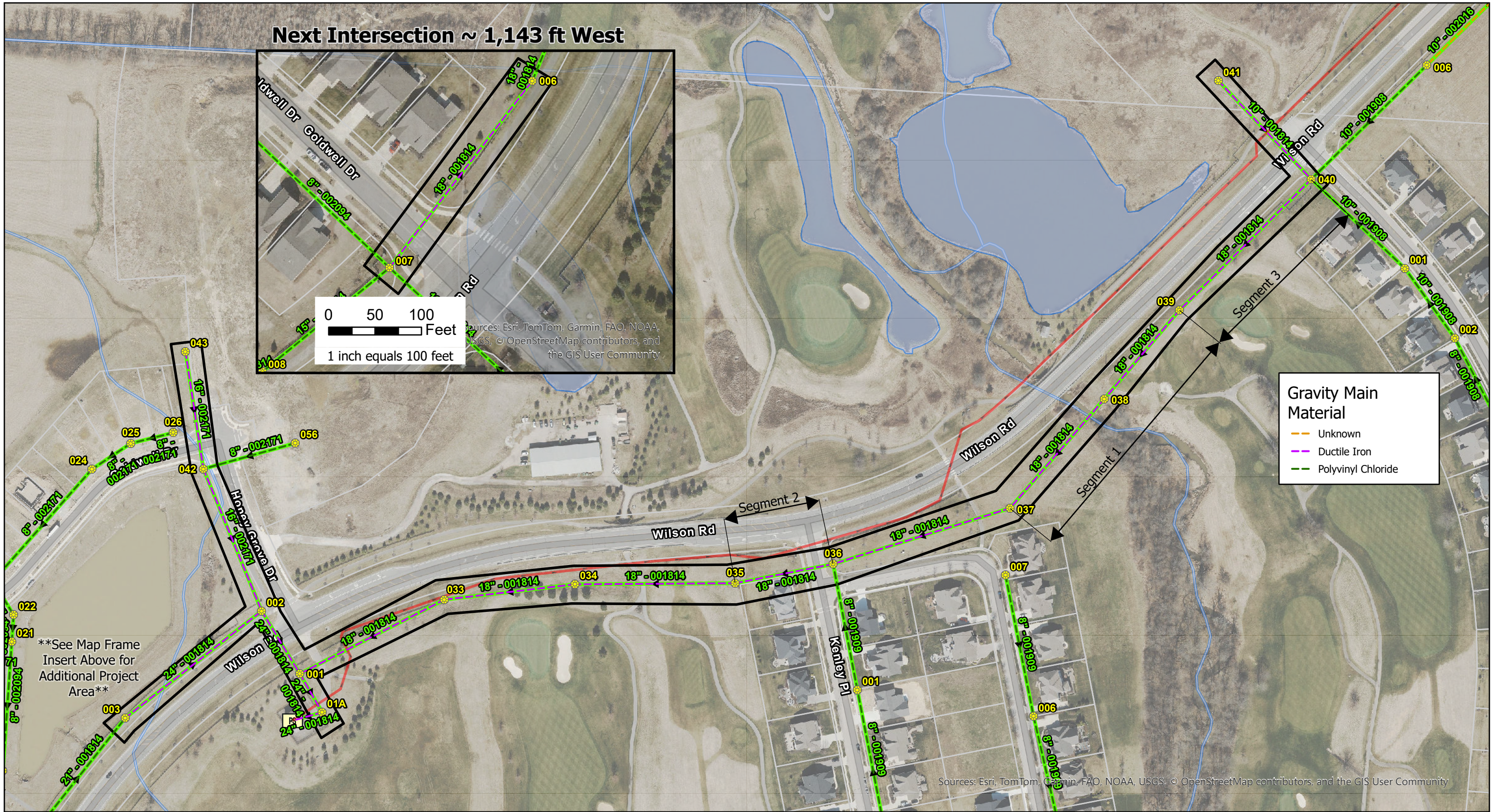
### ATTACHMENT A - PROJECT LOCATION AND SUMMARY

This project is located along Wilson Road in Sunbury, Ohio, 43074. The sanitary sewer system extends from just south of the intersection of Honey Grove Dr and Wilson Road in a northeast direction up to the intersection of Big Bluestem Way and Wilson Road. This project is associated with the Northstar Sanitary Sewer Improvement 2005 Phase A (Plan No. 1814), which installed in 2007 approximately 3,795 linear feet of ductile iron pipe (DIP). **Figure 1 – Project Location** illustrates all referenced DIP from Plan No. 1814 and also shows two additional DIP segments that were installed in 2023. These two DIP segments, totaling 587 feet in length, were installed parallel along Honey Grove Drive as part of the Northstar – Goldwell Neighborhood, Section 2 (Plan No. 2171) and are also to be included in this project scope. The DIP from Plan No. 1814 varies in burial depth from approximately 30 to 35 feet, with invert elevations ranging from 904 to 911 feet. The DIP from Plan No. 2171 varies in burial depth from approximately 20 to 35 feet, with invert elevations ranging from 905 to 907 feet. Table 1 summarizes the different DIP sizes and lengths installed for these projects.

Pipe Diameter (inch)	Segments	Total Length (ft)
10	1	292
16	2	587
18	9	2,809
24	4	694
<b>Total</b>	14	3,795

DCRSD has observed infiltration defects affecting this DIP pipe starting in 2016 in four different pipe reaches. These pipe reaches have been divided into 3 segments based on the history of events and are as follows:

- DIP located between MH 37 and MH 38 (2016, 2023 – 2025) /Segment 1 (**Figure 2** is a schematic of the history of defects and rehabilitation efforts on this segment).
- DIP located between MH 38 and MH 39 (2025)/ Segment 1
- DIP located between MH 35 and MH 36 (2023)/ Segment 2
- DIP located between MH 39 and MH 40 (2026)/ Segment 3



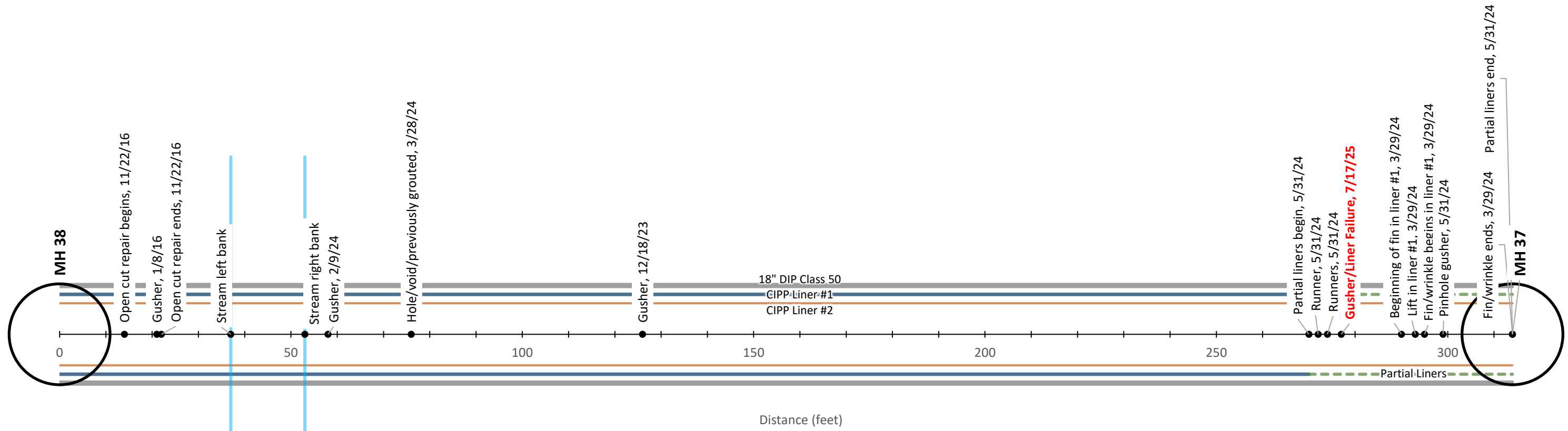
# Northstar Ductile Iron Sewer Main Assessment and Design Project Location

0 100 200 Feet  
1 inch equals 200 feet

- Legend**
- Project Area
  - Force mains
  - DCRSD
  - Manholes
  - DCRSD
  - Gravity Mains
  - DCRSD

**Figure 1**

FIGURE 2





The following is a summary of the events that have been observed and documented by DCRSD in each of the three segments. Relevant CCTV, inspection reports, correspondences, and photos will be provided to the selected consultant after the RFP selection process and during the development of the scope for the project.

**Segment 1: MH 37 to MH 38**

DCRSD has observed recurring failures with DIP located between MH 37 and MH 38. In 2016, a severe groundwater leak, known as a "gusher," was found in the pipe near Station 21 (see **Figure 2**) and downstream of MH 38. An open-cut repair was performed on this pipe segment. Photos of the gusher are shown in **Figure 3**, and construction photos in **Figure 4**.



**Figure 3: 2016 Gusher (MH 37 – MH 38)**



Figure 4: 2016 Construction (MH 37 – MH 38)



**Segment 2: MH 35 to MH 36**

In July 2023, DCRSD observed defects in the DIP segment located between MH 35 and MH 36. At the time, DCRSD assumed this to have been a utility strike, but with the compounding issues on the other DIP sewer pipes, it is unclear if that assumption was accurate or not. Visu-Sewer performed a point repair in this pipe segment in October 2023.



Figure 5: 2023 gusher (MH 35 - MH 36) and point repair



---

**Segment 1: MH 37 to MH 39**

On December 18, 2023, the DCRSD's CCTV inspection showed a new gusher in DIP segment located between MH 37 and MH 38 near Station 126 (see **Figure 2**) and downstream of manhole 038. DCRSD hired Visu-Sewer to perform a point repair on this segment of the 18-inch DIP sewer. In early January 2024, Visu-Sewer's subcontractor attempted the point repair, but failed, and returned to remove the failed partial liner as part of their pre-cleaning activities. Due to scheduling delays with the subcontractor, Visu-Sewer chose to return to the site in early February to grout the pipe segment and reduce the infiltration until the point repair could be completed. Without any additional timeline able to be provided by Visu-Sewer for the point repair to be completed, DCRSD terminated the contract and proceeded to move on to a new contractor. There was no CCTV provided by Visu-Sewer during this time period for the work completed.

DCRSD staff completed CCTV inspection on February 9, 2024, on this sewer segment after the grouting was completed by Visu-Sewer and before hiring a new contractor. At this time, a second new gusher was identified near Station 58 (see **Figure 2**) and downstream of MH 38. Therefore, DCRSD decided to have a full-length cured-in-place pipe (CIPP) lining installed between MH 37 and MH 38 and hired United Survey Inc. (USI) to design and perform the work. As well, DCRSD utilized DLZ Corporation to provide on-site construction inspection and oversight of the project during installation. The CIPP liner #1 was completed in March 2024. Review of the post installation video showed the jetter head moving around something around 282 feet and a potential lift in the liner from Station 285 to 289 feet that turns into a fin at Station 290 feet and continues with issues until the end of the CIPP liner section. USI decided that from approximately Station 270 feet to the end of the pipe segment (MH 37), a partial overtopping CIPP liner would be installed to address the issue. This work was completed in May 2024, and pinhole leaks were observed in the overlapping liners, so USI returned in July 2024 and installed a completely new CIPP liner #2 over the initial liner and partial liners. Pictures of the gusher are shown in **Figure 6**, and some of the rehabilitation work in **Figure 7**.

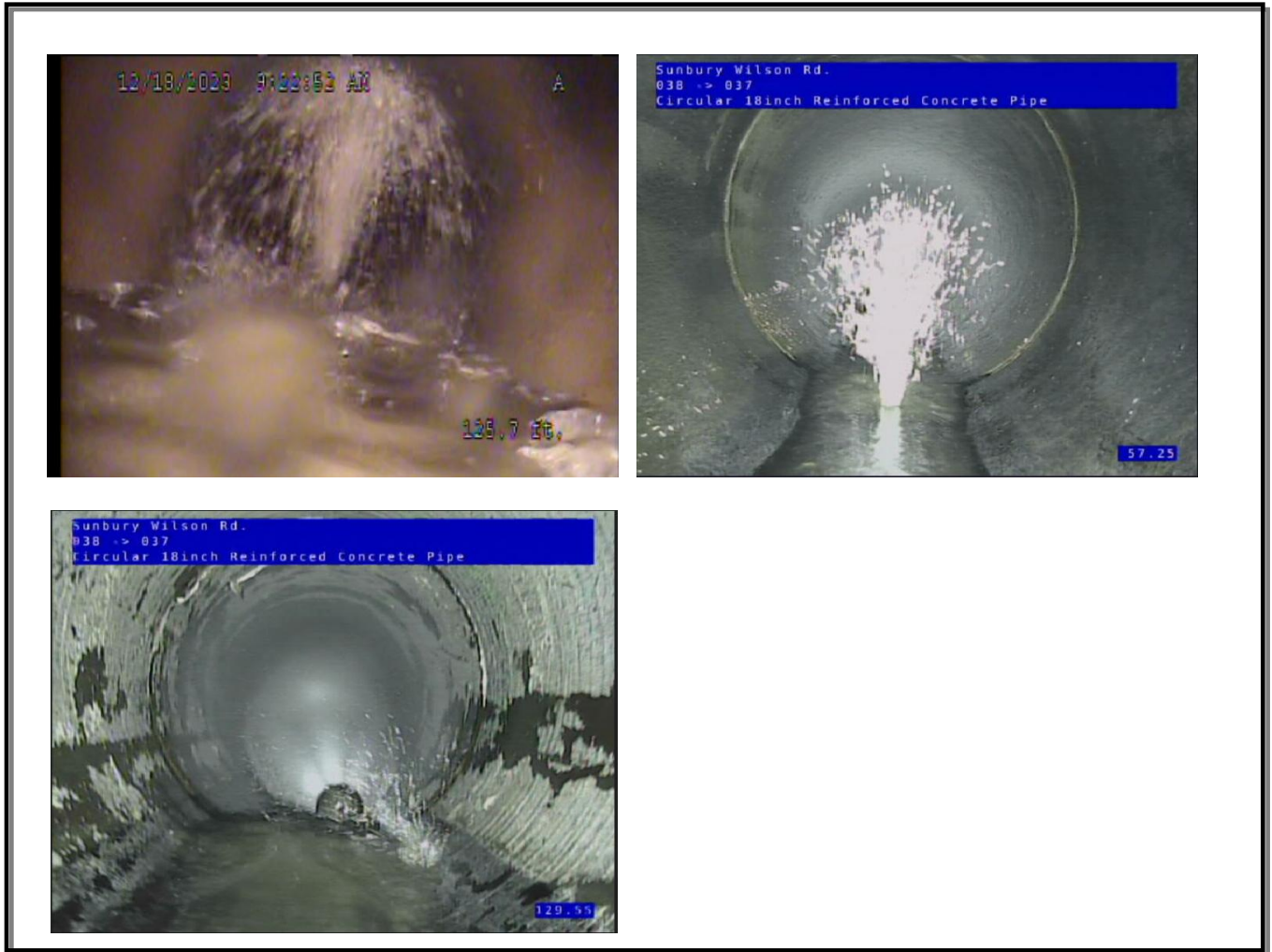


Figure 6: 2023/2024 gushers (MH 37 – MH 38)



Upper Left: After initial CIPP lining when fin shows up along bottom of liner.  
Upper Right: Pinhole leak after initial CIPP liner installed.  
Lower Left: Post-CIPP overlapping liner.

**Figure 7: 2024 CIPP Lining (manhole 37 - 38)**

One year later, DCRSD noticed a significant increase in the Northstar WRF plant flows in July 2025 and performed CCTV inspection of this sewer segment going upstream from MH 37 to MH 38 and found that the previously installed partial overtopping liners had been lifted upward, the bottom liner appears to have pushed through the top liner, and was causing approximately a 75-80% pipe blockage.

In early August 2025, USI mobilized to the site to assess site conditions and remove approximately 40 feet of the lifted liner to restore full-flow capacity in the pipe. At that time, they confirmed no additional liner defects in the CIPP liner. They also identified a new gusher in DIP located between MH 38 and MH 39, approximately 125 feet upstream from MH 38. By mid-August, the USI team proposed using partial liners again as a repair method, which raised concerns among DCRSD staff. Through collaborative discussion, the USI team, DCRSD staff, and representatives from DLZ had agreed in mid-September to move forward with the installation of UV-cured CIPP liner for both pipe segments currently observing the groundwater gushers between MH 37 and MH 39. Photos of the uplifted liner are shown in **Figure 8** along with some of the rehabilitation work.

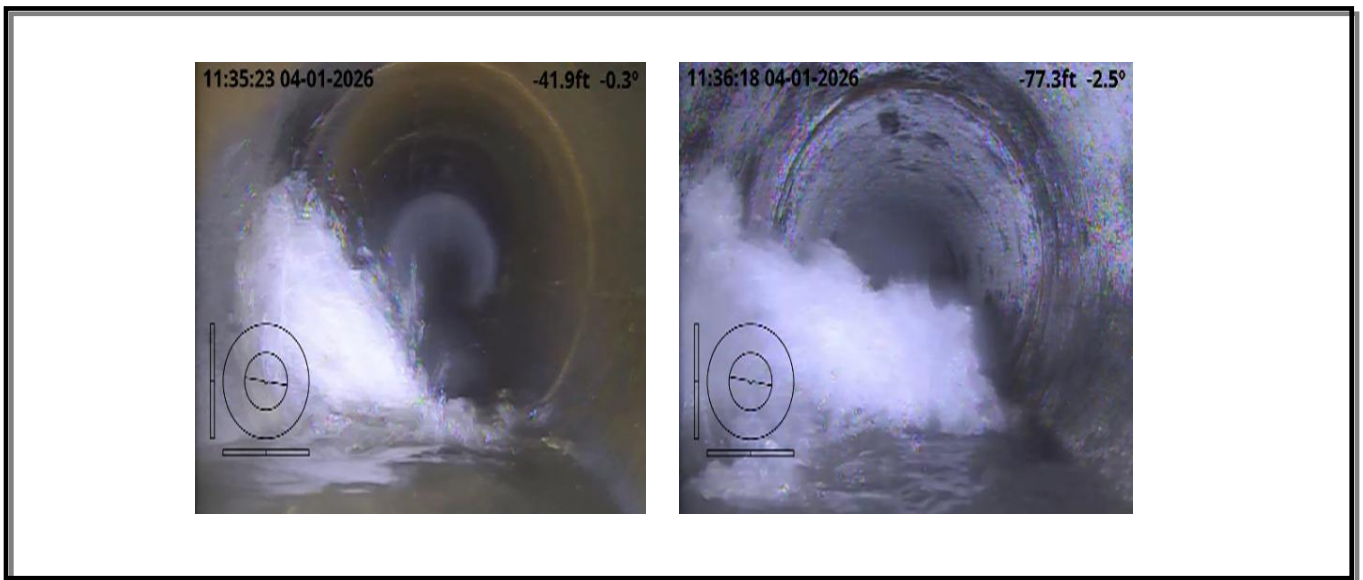


Figure 8: 2025/2026 Lifted liner and UV liner Rehabilitation (manhole 37 - 38)



**Segment 3: MH 39 to MH 40**

In March 2026, the Northstar WRF observed increased flows at the plant, so the DCRSD's staff performed a CCTV inspection of the DIP sewer pipe and found two gushers in DIP located between MH 39 and MH 40, and directly upstream of the two pipe segments that just received the UV-Cured CIPP lining. The CCTV video observed one gusher approximately 40 ft upstream of MH 39. As the CCTV inspection crew was retracting the camera out of the pipe segment, they observed a new gusher that formed mid-inspection, 77 feet upstream from MH 39. Photos of the gushers are shown in **Figure 9**.



**Figure 9: 2026 gusher (manhole 39 - 40)**