Deep River Ontario CEL Case Study

July 8-13th 2019

Envirologics Engineering Inc.

Deep River, On

- Joint project with City of Deep River, OCWA and Envirologics
- 240m of 1940s 150mm CIP
- Ideal sandy soils condition
- 2 previous breaks on line
- Project completed over 5.5 days (one day lost to rain) July 8th – 13th

Iberville Street

Pipe Segment

Access Pit

Pipe Segment

Preparatory work

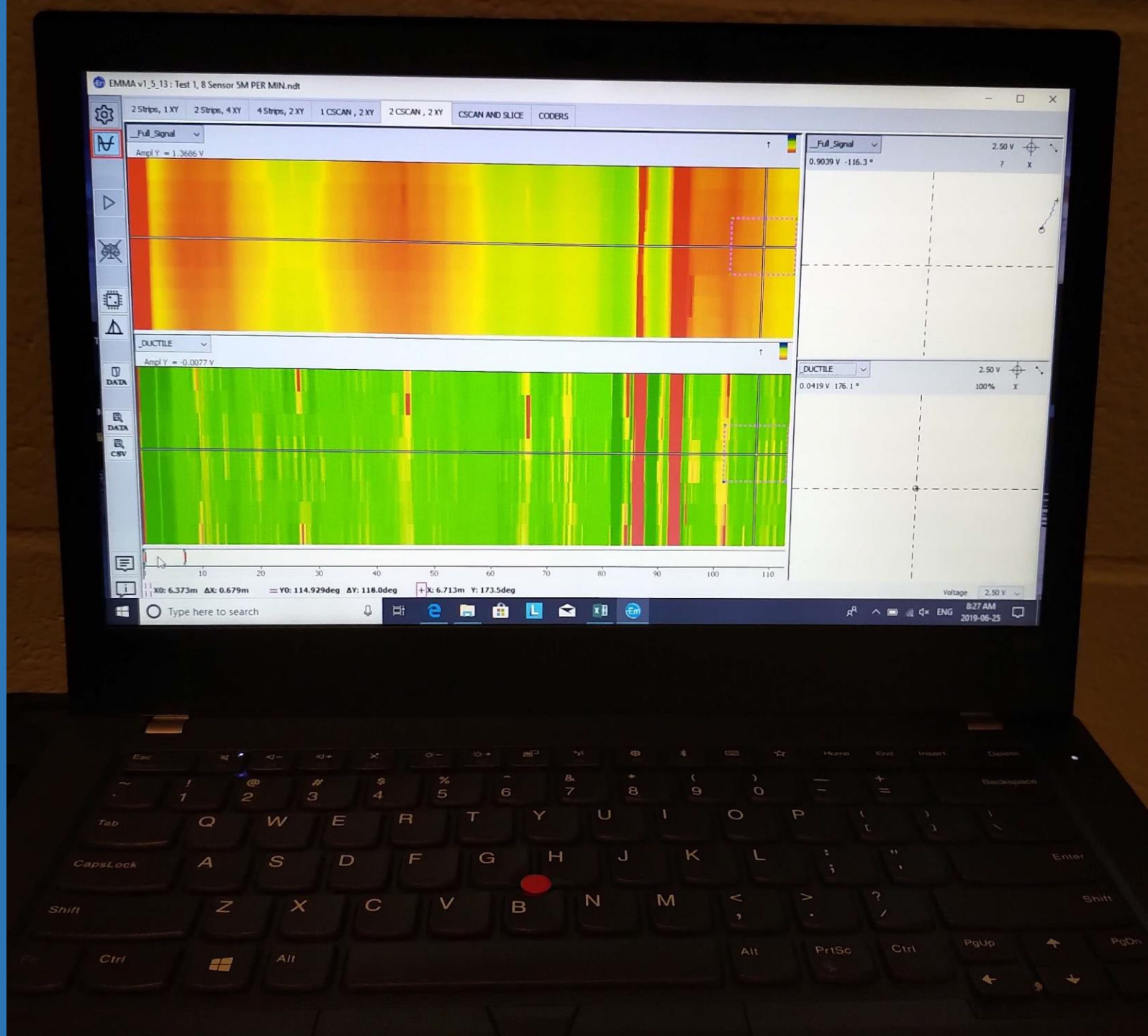
- Bypass – set up by OCWA
- Excavation – performed by city. Elected sloped pits due to lack of shoring boxes and time;
- No need for traffic control, street closed;
- Service connection testing - OCWA

Tomahawk™ cleaning

- Done in 3 segments;
- Vacuum truck is set up and aggregate is loaded into hopper;
- Upon completion the truck and set-up reversed;
- Took an average of 3 hours to clean each segment.

Detective Evaluation

- Performed on 2 of the 3 sections (1” service connections on sec. 3)
- Found minimal wall loss (2 or 3 pits >50% TW)
- Identified service connections, joints, and 2 repair sleeves (including one that had no record)
- Successful live-streaming



BluKote Lining Application

- Applied from one pit
- After polymer inserted into pipe our patented DB is passed up and down the line
- All residual paint is captured in separation tank – not Vac truck
- Takes about 15 minutes after set-up
- Successfully lined a 22.5° bend
- Tack free in 4 hours

Results

Left, Iberville St. pipe before cleaning, center, after cleaning and right, after lining with BluKote.

- The residents on Iberville Street are enjoying improved water pressure and water quality
- The water blow off used to maintain water clarity prior to cleaning and lining has been shut off, saving thousands of liters of drinking water
- Pipe life has been extended by decades

Deep River summary

- Completed on-time and on budget!
- Client very happy – making request to Council for annual program in areas with similar conditions
- Residents now enjoying improved water pressure and quality
- Thousands of liters of water being saved
- Due to sandy soils no cathodic protection was required (joint OCWA and Deep River decision)
- Deep River agreed to co-author paper for forthcoming conferences