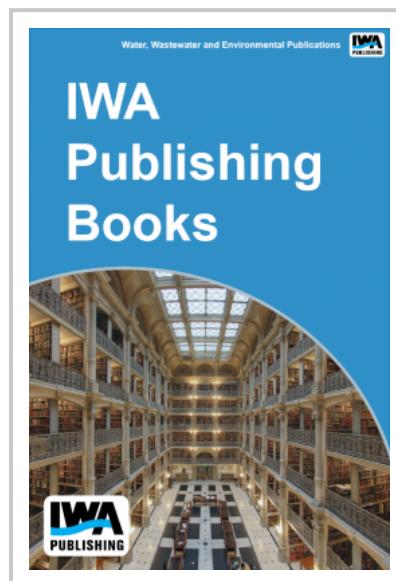


Sewer Lateral Electro Scan Field Verification Pilot

This research effort evaluated an innovative sewer lateral condition assessment tool in unique testing conditions, providing an opportunity for comparison to other traditional assessment approaches. This study field tested over 100 sanitary sewer lateral pipes for potential infiltration-generating defects using the Electro Scan ES-38™ technology according to ASTM F2550-006. Results of these inspections were compared to the results of other infiltration data produced in rainfall simulation tests of the same laterals and water exfiltration tests of each scanned pipe. The Electro Scan ES-38™ measurements were also compared to closed-circuit television (CCTV) inspection of laterals according to NASSCO Pipeline Assessment Certification Program (PACP) standards. Statistical comparisons of Electro Scan ES-38™ assessments to estimated leakage rates, from a field rainfall simulation test, were performed to determine the best means of correlating the two data sets.



The research effort was used to test the Electro Scan approach against the dye water/rainfall simulation testing techniques that the City of Wauwatosa (Wauwatosa) has already used to derive convincing condition information in general and on specific properties within the proposed testing area. Prior to this research effort, Electro Scan technology had only been tested side-by-side against CCTV inspection information.

The objectives of this proposed research effort were as follows:

Test Electro Scan ES-38™ in the two pilot lateral rehabilitation project areas;

1. ■ Compare Electro Scan ES-38™ results to pre-rehabilitation condition dye water/rainfall simulation tests;
2. ■ Compare Electro Scan ES-38™ results to CCTV inspection results;
3. ■ Perform water exfiltration tests and compare results to Electro Scan ES-38™ results;
4. ■ Evaluate the feasibility of performing Electro Scan ES-38™ tests from basement cleanouts; and
5. ■ Establish pros and cons of Electro Scan ES-38™ lateral condition evaluations, including estimated costs.

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