Quick View Storm Sewer Camera

Project Title  Quick View Storm Sewer Camera
Project Number  2007-02
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Problem  The implementation of the National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Permit requires that owners of (MS4) storm sewer systems inspect the systems for maintenance needs. Many times these inspections would require a confined space entry team (3 personnel) and would take about 30 minutes per entry. Confined space entry requires special training, equipment, and places the team in potentially dangerous situations.

Solution  The Quick View camera system allows a single person to view the storm sewer system, with setup, including calibration, taking less than 10 minutes. The inspector can then view up to 300 unimpeded feet from the camera without relocating. Quick View allows the inspector to take still images and record them on a memory card as well as video/audio recorded on a DVR tape or on the memory card. The camera also measures distance, which allows the inspector to pinpoint problem locations with a known distance from the structure allowing for more accurate maintenance procedures.

Procedure  The camera was used in several structures including; short corrugated culverts, long concrete storm sewer, sanitary pipe, shallow and deep manholes, outlets and inlets from systems, both with and without water. Both the standard lens and the wide-angle lens were tested. The testing crew also took still imagery and video footage.

Results  Ramsey County found the camera to be efficient and easy to use. The camera saves on time and eliminates the dangers associated with confined space entry. Photo/video was used successfully to record the current condition of County pipes, although there was some trouble keeping the unit calibrated between moves and uses. The camera system has a slightly cumbersome camera cable, a delay in switching between modes, the ability to record audio is not readily supported by the current equipment set-up, and the vest is somewhat awkward to wear. Quick View provides a warranty on the system, and assistance is easily obtained.

Approximate Cost  $16,000 - $17,000 ($10,000.00 approved for project)
Implementation  Ramsey County Public Works
Status  Completed