

Report to Council

Report Title: Sanitary Sewer Inspection Program

Prepared By: Gregory Furtney, Director of Operations

Department: Utilities

Date: September 24, 2019

Report Number: UT2019-17 **File Number:** C11UT, F18

Attachments:

Recommendation:

That the Council of the Municipality of Brockton hereby receives Report Number UT2019-17 - Sanitary Sewer Inspection Program, prepared by Gregory Furtney, Director of Operations and in doing so approves a By-Law coming forward to accept the proposal from Infratech Services, in the amount of \$59,370.00 plus H.S.T to complete a town wide sanitary sewer inspection in Walkerton using zoom camera technology.

Report:

Background:

Walkerton has approximately 47 kilometers of sanitary sewer currently, with more being added each year with new subdivision developments. Walkerton has approximately 437 manholes throughout the sanitary sewer system.

Municipalities, as per Ontario Regulation 588/17 (subsection 5.1, 5.2, and 5.3 specifically), are responsible for the ongoing asset management of sanitary sewer systems (and other infrastructure assets) and typically complete their inspections using a CCTV camera in conjunction with a sewer flush. Traditionally, a portion of the system would be inspected each year or in conjunction with the capital works program (i.e. road rebuilding). Some Asset Management Professionals suggest that this approach results in an incomplete set of data and does not effectively look at the entire system in a cohesive manner.

There is an alternative inspection system that was recommended by Public Sector Digest called "Zoom Camera Inspections".

Zoom camera technology, and specifically truck-mounted zoom camera inspection systems, have been used in Ontario and Quebec since the mid-1990's. Zoom camera inspection systems utilize a zoom camera attached to a telescopic mast mounted on a vehicle and connected to a computer with standard sewer condition assessment software. A truck-mounted system allows the team to complete approximately 25 manhole inspections daily and can operate in active traffic conditions.

The basic zoom camera inspection process involves having the vehicle position the camera and mast over a manhole, lowering the camera on the telescopic mast into the manhole while video recording the condition of the manhole from top to bottom. When the camera is lowered to the bottom of the manhole, the field crew positions the camera in front of the opening of each attached sewer pipe and the camera operator, utilizing the zoom camera functionality of the camera, inspects each sewer line from the manhole.

Analysis:

In 2018, the Municipality of Brockton was given a generous grant from the Federation of Canadian Municipalities (FCM) for \$50,000.00. That money was split amongst three (3) departments for various projects. The Utilities Department used \$30,765.21 to do traditional sanitary sewer system inspections using a CCTV camera and a sewer flush. The work was completed by Municipal Sewer Services. That inspection looked at sanitary sewer lines within a small section of Walkerton, namely William Street, Orange Street, Catherine Street, Peter Street, Yonge Street, Campbell Street, Charlotte Street, and Scott Street, approximately 4,280 meters. Municipal Sewer Services had quoted and charged \$6.55 per meter for their services.

A report was submitted to Municipal Staff by the contractor. The data is reviewed and then ranked by priority repairs. The information is then uploaded to the Municipality's ARC GIS system which is connected to our Asset Management Plan. The Municipality has to show compliance with Ontario Regulation 588/17.

Unfortunately, the Federation of Canadian Municipalities grant was not available for 2019 but \$50,000.00 was approved in the Operating Budget (GL 01-3141-1337) to continue with this inspection program. In 2019, based on the per meter price of \$6.55 per meter, the Municipality could have an additional 7 kilometers of sanitary sewer inspected in 2019. Based on the per meter price it would cost the municipality approximately \$307,850.00, overall, to complete one round of sanitary sewer inspections within Walkerton. If \$50,000.00 was set aside each year to complete inspections, it would take approximately 6 years before a new inspection cycle could be started.

The proposal from Infratech Services, using the zoom camera method, suggests that they will inspect all 47 kilometers of sanitary sewer within Walkerton, within a 7 or 8 week period, for \$59,370.00 plus H.S.T. That is a theoretical savings to the Municipality of Brockton of \$248,480.00 over the next 4 to 5 years. They have work references from the City of Hamilton, City of Waterloo, and Halton Region. There is no flushing involved in their inspection process so that significantly reduces the cost. With flushing not being necessary, the inspection would allow the technician to identify infiltration areas as water would be free flowing. This is also a less intrusive process so any areas of pipe that may be less stable won't be significantly disturbed like they would with a full flushing. The data is collected and uploaded to the ARC GIS system in the same manner as the traditional CCTV inspection process. This process is acceptable for compliance with Ontario Regulation 588/17.

Staff is recommending that Infratech Services complete an inspection of Walkerton's entire sanitary sewer system in 2019 and also recommend a recurring cycle of inspection every 4 years going forward using the zoom camera inspection system.

Sustainability Checklist:

What aspect of the Brockton Sustainable Strategic Plan does the content/recommendations in this report help advance?

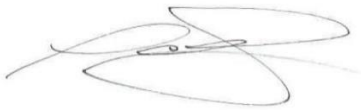
- Do the recommendations help move the Municipality closer to its Vision? Yes
- Do the recommendations contribute to achieving Cultural Vibrancy? N/A
- Do the recommendations contribute to achieving Economic Prosperity? Yes
- Do the recommendations contribute to Environmental Integrity? Yes
- Do the recommendations contribute to the Social Equity? N/A

Financial Impacts/Source of Funding:

- Do the recommendations represent a sound financial investment from a sustainability perspective? Yes

There is currently \$50,000.00 that was approved in the 2019 Operating Budget (GL 01-3141-1337). The additional \$9,370.00 can be funded from the Utility Reserve Fund

Reviewed By:



Trish Serratore, Chief Financial Officer

Respectfully Submitted by:



Gregory Furtney, Director of Operations

Reviewed By:



Sonya Watson, Chief Administrative Officer