

# The Corporation of the Municipality of Brockton



## By-Law 2019-111

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Being a By-Law to Accept a Proposal from Infratech Services for the Completion of a Sanitary Sewer Inspection in the Town of Walkerton for the Municipality of Brockton.

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**Whereas** the Council for the Corporation of the Municipality of Brockton Council deems it expedient to accept a proposal from Infratech Services for the completion of a sanitary sewer inspection in the Town of Walkerton for the Municipality of Brockton;

**Now Therefore** the Council of the Corporation of the Municipality of Brockton enacts as follows;

- 1.0 That the Council of the Corporation of the Municipality of Brockton hereby accepts the Proposal of Infratech Services in the amount of \$59,370.00 plus H.S.T for the completion of a sanitary sewer inspection in the Town of Walkerton as described in the attached Schedule "A" to this By-Law.
- 2.0 That the Mayor and Clerk are hereby authorized to sign on behalf of the Council for The Corporation of the Municipality of Brockton, any contracts and other documents required to authorize such purchase to proceed, and to affix the corporate seal of the Municipality of Brockton.
- 3.0 This By-Law shall come into full force and effect upon final passage.
- 4.0 This By-Law may be cited as the "Walkerton Sanitary Sewer Inspection Proposal Acceptance By-Law".

**Read, Enacted, Signed and Sealed this 24th day of September, 2019.**

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Mayor – Chris Peabody

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Clerk – Fiona Hamilton



**Proposal for Zoom Camera Video Inspection and  
Condition Assessment of Wastewater Collection System –  
Municipality of Brockton**

**September 11, 2019**

Submitted By:



**Proposal for Zoom Camera Video Inspection and Condition Assessment of Wastewater Collection System**

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# Municipality of Brockton

## Proposal for Zoom Camera Video Inspection and Condition Assessment of Wastewater Collection System



### ***Section 1 - Project Understanding:***

#### **Introduction:**

Infratech Sewer & Water Services Inc. is pleased to submit the following proposal in response to a request from the Municipality of Brockton for Zoom Camera Inspection Services to Complete a Sewer Condition Assessment Program.

We have reviewed the details provided by Gregory Furtney, Director of Operations, of the Municipality of Brockton and are confident we are able to supply the requested services. The following sections will briefly describe our understanding of the project, proposed staffing, our understanding and approach to specific technical issues and our anticipated project schedule as well as provide budget level cost estimates for the assignment.

#### **Project Purpose:**

This project is being conducted to gather information on the condition of the sanitary wastewater collection system within the Municipality of Brockton. Mr. Furtney has indicated that the system is comprised of approximately 437 manholes and the associated network of sewer pipes. The project would involve two distinct phases as outlined below.

#### **Phase1 – Zoom Camera Inspection of Sanitary Maintenance Holes and Pipes**

The first phase involves the collection of the manhole and pipe condition data utilizing a zoom camera inspection system. The results of the field investigations will provide condition data on structural and services issues in the individual manholes and sewer mains within the sewer network.

The Municipality of Brockton has asked that the proposal be presented, with costing broken down by various percentages, namely 25% (110 manholes), 50% (218 manholes) 50% (328 manholes) and 100% (437 manholes). It should be noted that by breaking it into numerous phases, the number of mobilizations, project setups and reporting effort will be increased, adding to the project cost. It is also understood that the Municipality is working to specific project financial constraints.

Based on this Infratech Services would propose that the zoom camera assessment program can be adjusted to work within these constraints. This proposal will present the costing and schedule accomplish the entire 437 manhole inspection program. If the Municipality of Brockton wishes to split the workload into a number of phases, Infratech Services will commit to the unit costs offered in this proposal for the manhole inspections over the span of the project. The only additional fees in subsequent phases would be the additional fees for Project Setup and Reporting.

#### **Phase 2 – Development of a Condition Assessment Report for the Wastewater Collection System**

The second phase of this assignment will be the development of a summary Condition Assessment Report outlining the observed deficiencies and issues within the network.

The data gathered will be compiled and delivered in a cohesive database structure. The database will be fully ODBC compliant and expandable to facilitate the continuation of the inspection program over a multi-year period.

# Municipality of Brockton

## Proposal for Zoom Camera Video Inspection and Condition Assessment of Wastewater Collection System Scope of Work:



### Phase1 – Zoom Camera Inspection of Sanitary Maintenance Holes and Pipes

A more detailed description of the work to be completed by Infratech Services for each of the requested sections of this project is provided in the following paragraphs. These descriptions are meant to confirm our understanding of the type of work and scope of effort required to accomplish the goals of this assignment:

- 1) Zoom Camera Inspection of 437 manholes and associated pipes utilizing zoom camera technology within a 5-6 week period in the Municipality of Brockton.
- 2) Standard MACP inspection protocol will be applied for each manhole to ensure the data gathered is compiled in a consistent manner.
- 3) A zoom camera inspection of each associated pipe section will be completed. The CTZoom camera system is capable of viewing the minimum distances required in small diameter lines. It is understood that the alignment of the sewer pipe and / or debris within the line can limit the length of the inspection, but all efforts will be made on each inspection to achieve this minimum requirement.
- 4) A PACP certified Lead Operator will utilize the CTZoom camera inspection system and compile the inspection data and video records utilizing the CT-Spec condition assessment software and ESRI Arcview GIS software.
- 5) All pipe inspection data gathered will be coded according to NASSCO PACP 7<sup>th</sup> Edition guidelines. All manholes will be assessed according to the NASSCO MACP 7<sup>th</sup> Edition guidelines.
- 6) Person-entry of maintenance holes will not be conducted as part of this assignment. In our experience, the likelihood of encountering a field condition that necessitates person-entry is very low. Should this type of work be required, all applicable OH & S guidelines will be followed.
- 7) As part of our standard operating procedures for the field inspection crews, it is expected that the field inspection crews will verify pipe and system connectivity for the sewer network as they progress through the inspections. Any discrepancies between the mapping and actual field conditions are readily evident during the inspection process. Any anomalies found in the field, will be noted on the daily worksheet.

### Data Collection and Management:

Infratech Services utilizes a software program, CT-Spec, specifically developed to facilitate the collection of digital sewer video information and the condition assessment of the sewer assets. A brochure related to this software will be included in our submission.

The CT-Spec software compiles the condition assessment data into a Microsoft Access database and works seamlessly within the ESRI Arcview software program allowing thematic mapping of the condition assessment results onto the Municipality of Brockton GIS mapping layers. The database is fully expandable to accommodate the multi-year nature of this type of work. The structure of the database is easily modified, and this will be addressed with Municipality of Brockton staff prior to commencement of the work program.

# Municipality of Brockton

## Proposal for Zoom Camera Video Inspection and Condition Assessment of Wastewater Collection System



### Qualifications / Experience:

All sewer and manhole inspection work and subsequent analysis will be completed by **NASSCO PACP / MACP Certified Technicians**. Our field technicians are all qualified zoom camera operators and are qualified in OHS and traffic safety according to Book 7 protocols. Copies of NASSCO training certificates can be provided for your review if required.

### Schedule of Work:

Based on approval of this proposal and contract details, it is anticipated that the field inspection phase of the work can be accomplished approximately 6 weeks of continuous inspection. Based on this and in keeping with our previous experience, Infratech Services is confident that the assignment can be accomplished within a 2-month period.

Upon contract award, a schedule will be developed and submitted to the Municipality of Brockton.

### Equipment Requirements:

All inspections will be completed by a two-person crew in our specially outfitted Ford E-350 vans using a truck mounted zoom camera system that employs a motorized telescopic boom, telephoto zoom digital camera and a digital video recording system capable of meeting the specifications requested in the Request for Proposal terms of reference. Photographs of our existing inspection vehicles are included in the appendices of this submission.

Infratech Services owns and operates the CT-Zoom zoom camera system as described in the attached **CTZoom brochures**. This camera and telescopic mast system have been successfully utilized by our forces to complete approximately 85,000 manhole inspections over the past 13 years with excellent results. Copies of sample video inspection files are included with this submission for your review.

### Duty to Report:

It is understood that if an Infratech Services field crew encounters a structural or service condition that requires immediate attention by a Municipality of Brockton Public Works representative, they will immediately contact the Project Manager and provide details of the conditions found.

### Deliverables:

#### Phase 2 – Development of a Condition Assessment Report for the Wastewater Collection System

Infratech Services will compile all digital inspection data and associated database / mapping components onto an external server that will be delivered to the Municipality of Brockton. Written & PDF reports for the Condition Assessment Report identified as Phase Two above will be submitted at the end of the analysis phase of the assignment.

A draft summary report detailing the findings of the investigation will be compiled, submitted and reviewed by Municipality of Brockton Staff. Upon review and comment, a revised copy of the Condition Assessment Report will be developed and submitted that presents the current state of the wastewater collection system. **Sample Reports and Mapping have been e-transferred prior to proposal submission.**

## Municipality of Brockton

### Proposal for Zoom Camera Video Inspection and Condition Assessment of Wastewater Collection System



### Special Conditions:

#### Buried manholes

If Infratech Services field staff were to encounter the situation where a maintenance hole is buried, it will be recorded on the daily work log and the crew will continue on to the next location. The crew will notify the Municipality of Brockton representative and await further direction re: the completion of the inspection. If the maintenance hole is located and made accessible it will be inspected at the standard unit inspection rate.

#### Manholes not accessible by vehicle

Infratech Services will dismount the required camera and computer equipment from the inspection vehicle to facilitate the inspection of the manholes. If this situation is encountered an additional cost item will be applied over the standard unit maintenance rate.

#### Manhole entry required

If this situation is encountered, Infratech Services will immediately notify the Municipality of Brockton representative and await direction / approval from the Project Lead. If deemed necessary, the Infratech Services field crew will mobilize to site and complete the inspection according to the prescribed Confined Space Entry protocol. Costs for this work would be considered as an extra to this assignment.

#### Abandoned inspections

Assuming Infratech Services have mobilized to a manhole location and a temporary obstruction is encountered and can't be moved, or a permanent obstruction is encountered and the inspection cannot be completed, the location will be noted on the daily work log and a record given to the Municipality of Brockton representative. An inspection will be charged for this asset at a reduced rate.

### ***Section 2 - Project Team:***

#### Corporate Bio:

**Infratech Sewer & Water Services Inc.**, incorporated in April 2006, in Sudbury, Ontario, Canada. Infratech Services is a sewer and water inspection company capable of providing a wide range of sewer and water infrastructure inspection technologies including zoom camera, CCTV crawler inspection, and sewer cleaning and rehabilitation services. The core focus of Infratech Services is sewer and water infrastructure inspection, and data management. **A Corporate Bio and Resumes of our nominated staff are included in the Appendices.**

The primary service we provide is camera inspection of municipal sewer infrastructure, using **zoom camera inspection technology**. This inspection service provides municipal and industrial clients with an operational and structural condition assessment of their sewer collection systems.

**Infratech Services** has a solid background in the zoom camera inspection field and has been at the forefront of its development and acceptance by numerous municipalities around the Province of Ontario. Infratech Services is also the manufacturer / distributor of the **CTZoom PortaZoom** suite of zoom camera products.

## Municipality of Brockton

### Proposal for Zoom Camera Video Inspection and Condition Assessment of Wastewater Collection System

#### Zoom Camera Project Experience:

The following brief project summaries provide a quick synopsis of our previous project experience in zoom camera sewer assessment assignments:

#### City of Hamilton - Zoom Camera Inspection Project

(2011- 2014 – Completed Current assignment – 2015 to 2020 20 % completed)

Project consisted of zoom camera inspection of approximately 42,000 manholes and related pipes, for sanitary and storm sewer line inspections in the City of Hamilton, Ontario. This inspection program focuses on the inspection of all sewer lines in the City of Hamilton over a three-year period, with the intent of identifying any lines requiring flushing or cleaning for the City's Wastewater Operations Department.

#### City of Waterloo – Zoom Camera Inspection Project

(2012 – 2015 3 Year Contract Completed, Current assignment 2015 – 2019 underway)

This annual assignment is part of an ongoing zoom camera inspection program initiated by the City of Waterloo to facilitate its annual repair and sewer cleaning program. The contract is for approximately 2000 manhole and associated pipe inspections. Infratech Services conducted the inspections and provided sewer condition assessment data for the sewers inspected in WRc standard format as per the terms of reference, as well as field investigations to confirm sewer network continuity and alignment.

#### Halton Region - Zoom Camera Inspection Project – Phase 1

(2009 - 2010)

Project consists of zoom camera inspection of approximately 2,000 manholes and related pipes, for sanitary and storm sewers in the Region of Halton. The inspection program forms the basis for the development of a rehabilitation and maintenance plan for Halton Region.

Inspections were conducted according to a WRc 4<sup>th</sup> Edition inspection protocols. All video inspection records and condition assessment data were delivered on portable hard drive along with manhole GPS data in shape file format. A technical report detailing the findings of the inspection program and the development of a rehabilitation / replacement program was also submitted.

**A detailed Schedule of Project is included in the Appendices**

#### **Section 3 - Work Plan:**

As noted in previous sections of this submission, a detailed work plan for this assignment involves the collection of the field data and the analysis of the data.

Based on the limited scope provided and in light of the need to move the proposal to Council as soon as possible we have attempted to quantify the work plan into a series of scheduled events, and the following basic items are presented in task form for your review:

Task 1	Contract Award	TBD
Task 2	Project Initiation Meeting	TBD
Task 3	Preliminary Inspection & Review	October 2019
Task 4	Field Investigation	October 2019
Task 5	Draft Report 2 weeks	November 2019
Task 6	Final Report Sign-off	End of November 2019



## Municipality of Brockton

### Proposal for Zoom Camera Video Inspection and Condition Assessment of Wastewater Collection System



#### **Section 4 - Schedule:**

Infratech Services proposes, as outlined in **Section 3 – Work Plan** above, to complete this assignment in approximately 2 months. In our experience, this is a reasonable estimate of the time required to complete the number of inspections requested and will provide an adequate amount of time for the analysis of the sewer condition report for the Municipality of Brockton.

#### **Section 5 - Fee Proposal:**

Item Description	Price Schedule
<b>Phase 1 – Zoom Camera Inspection of approximately 437 manholes and associated sewer pipes, including defect coding of sewer defects within the sewer network.</b>  1. Zoom Camera Inspection of sanitary manholes and associated sewer pipes in the Municipality of Brockton. Zoom Camera Inspection crew and rig – two-person crew. Assume 20 inspections per 8 hr. day. Unit cost \$ 125.00 per manhole.	\$ 54,625.00
<b>Phase 2 – Project Setup Fees / Development of a Condition Assessment Report for the Wastewater Collection System</b>  2. Preparation of summary report and compilation of electronic data for submission to the Municipality of Brockton (includes compilation of electronic data, hard drive, etc... Hard copy maps are not included.)	\$ 4,750.00
<b>TOTAL</b>	<b>\$ 59,370.00</b>

#### **Conclusion:**

We appreciate the opportunity to undertake this significant project with the Municipality of Brockton and look forward to a favourable outcome to the proposal evaluation process. If there are any further questions or items you wish clarified, please call (705) 929-3180 or contact the undersigned via e-mail at [don@infratechservices.ca](mailto:don@infratechservices.ca).

Sincerely,

Donald Gunn, C.E.T.,  
President, Infratech Sewer & Water Services Inc.

September 11, 2019

## **Municipality of Brockton**

**Proposal for Zoom Camera Video Inspection  
and Condition Assessment of Wastewater Collection System**



### ***Appendices***

- 1. Infratech Services – Corporate Bio**
- 2. Infratech Services – Project Listing**
- 3. Infratech Services – Resumes**
- 4. CTZoom Camera Brochure**