



## **REQUEST FOR QUOTATIONS**

**Title: SEWER RELINE & POINT REPAIR PROGRAM**

**Reference No.: 1220-040-2017-034**

## **MINOR WORKS SERVICES (MMCD)**

(Construction Services)

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Attachments:

1. Prime Contractor Designation – Letter of Understanding
2. *Contractor* Health & Safety Expectations (Responsibility of *Contractor(s)*)
3. Compliance to Safety Procedure: Entry Procedure for Confined Space
4. Compliance to Safety Procedure: Working in Confined Space
5. Sanitary Sewer Flushing & Cleaning – Back Pressure Avoidance & Problem Reporting Procedure
6. Sanitary Sewer CCTV File Transfer Requirements

## REQUEST FOR QUOTATIONS

(TO BE READ WITH "INSTRUCTIONS TO TENDERERS – PART II" CONTAINED IN THE EDITION OF THE PUBLICATION "MASTER MUNICIPAL CONSTRUCTION DOCUMENTS" SPECIFIED IN SCHEDULE 1 BELOW)

### 1. INTRODUCTION

The City of Surrey (the "Owner") invites *Contractors* to provide a quotation on the form attached as Schedule C (the "Quotation") for the supply of the goods (if any) and services described in Schedule A (the "Work"). The description of the Work sets out the minimum requirements of the *Owner*. A person that submits a Quotation (the "*Contractor*") should prepare a Quotation that meets the minimum requirements, and may as it may choose, in addition, to also include goods, services or terms that exceed the minimum requirements.

The purpose of this RFQ is to obtain a schedule of prices for on demand sewer relining work, for both storm and sanitary sewers. No work will necessarily be awarded upon acceptance of this RFQ.

### 2. ADDRESS FOR DELIVERY

A Quotation should be labelled with the *Contractor's* name, RFQ title and number. A Quotation should be submitted in the form attached to this RFQ as Schedule C – Form of Quotation.

The *Contractor* may submit a Quotation either by email or in a hard copy, as follows:

#### (a) Email

If the *Contractor* chooses to submit by email, the *Contractor* should submit the Quotation electronically in a single pdf file to the *Owner* by email at: [purchasing@surrey.ca](mailto:purchasing@surrey.ca).

PDF emailed Quotations are preferred and the *Owner* will confirm receipt of emails. Note that the maximum file size the *Owner* can receive is 10Mb. If sending large email attachments, *Contractors* should phone to confirm receipt. A *Contractor* bears all risk that the *Owner's* equipment functions properly so that the *Owner* receives the Quotation.

#### (b) Hard Copy

If the *Contractor* chooses NOT to submit by email, the *Contractor* should submit one original unbound Quotation and one (1) copy [two (2) in total] which should be delivered to the *Owner* at the office of:

Name: Richard D. Oppelt  
Purchasing Manager  
At the following location:

Address: Surrey City Hall  
Finance & Technology Department – Purchasing Section  
Reception Counter 5<sup>th</sup> Floor West  
13450 – 104<sup>th</sup> Avenue, Surrey, B.C., Canada, V3T 1V8

**3. DATE**

The *Owner* would prefer to receive Quotations on or before **February 14, 2017**. The *Owner's* office hours are 8:30 a.m. to 4:00 p.m., Monday to Friday, except statutory holidays.

**4. CONTRACT DOCUMENTS**

All the work outlines in the Quotation shall be carried out in strict accordance with the schedule of Provisions, Drawings, Specifications and Conditions listed in Schedule B of the Request for Quotation.

**5. INQUIRIES**

All inquiries related to this Request for Quotations ("RFQ") should be directed in writing to:

Name: Richard D. Oppelt, Purchasing Manager  
Email: [purchasing@surrey.ca](mailto:purchasing@surrey.ca)  
Reference: 1220-040-2017-034

**6. ADDENDA**

If the *Owner* determines that an amendment is required to this RFQ, the *Owner's* Representative will issue a written addendum by posting it on the BC Bid Website at [www.bcbid.gov.bc.ca](http://www.bcbid.gov.bc.ca) (the "BC Bid Website") and the *Owner* Website at [www.surrey.ca](http://www.surrey.ca) (the "*Owner* Website") that will form a part of this RFQ. It is the responsibility of *Contractor* to check the BC Bid Website and the *Owner* Website for addenda. The only way this RFQ may be added to, or amended in any way, is by a formal written addendum. No other communication, whether written or oral, from any person will affect or modify the terms of this RFP or may be relied upon by any *Contractor*. By delivery of a Quotation, the *Contractor* is deemed to have received, accepted and understood the entire RFQ, including any and all addenda.

**7. NO CONTRACT**

This RFQ is simply an invitation for quotations (including prices and terms) for the convenience of all parties. It is not a tender and no obligations of any kind will arise from this RFQ or the submission of Quotations. The *Owner* may negotiate changes to any terms of a Quotation, including terms in Schedule A, Schedule B and Schedule C and including prices, and may negotiate with one or more *Contractors* or may at any time invite or permit the submission of quotations (including prices and terms) from other parties who have not submitted Quotations.

**8. ACCEPTANCE**

A Quotation will be an offer to the *Owner* which the *Owner* may accept at any time by signing the copy of the Quotation and delivering it to the *Contractor*. A Quotation is not accepted by the *Owner* unless and until both the authorized signatory and the purchasing representative have signed the Contract on behalf of the *Owner*. Delivery of the signed Quotation by the *Owner* may be by pdf email. In that event, the resulting Contract will be

comprised of the documents included in the definition of Contract in Schedule B – Draft Contract – Minor Works.

**9. CONTRACTOR'S EXPENSES**

*Contractors* are solely responsible for their own expenses in preparing and submitting Quotations, and for any meetings, negotiations or discussions with the *Owner* or its representatives and consultants, relating to or arising from the RFQ. The *Owner* will not be liable to any *Contractor* for any claims, whether for costs, expenses, losses or damages, or loss of anticipated profits, incurred by the *Contractor* in preparing and submitting a Quotation, or participating in negotiations for a contract, or other activity related to or arising out of this RFQ.

**10. CONTRACTOR'S QUALIFICATIONS**

By submitting a Quotation, a *Contractor* represents that it has the expertise, qualifications, resources, and relevant experience with the requirements of the Work. Tradesmen engaged in the performance of the Work shall be qualified in accordance with the requirements of the *Tradesman Qualification Act* and all pertinent licensing requirements required by the Ministry of Municipal Affairs.

**11. CONFLICT OF INTEREST**

A *Contractor* must disclose in its Quotation any actual or potential conflicts of interest and existing business relationships it may have with the *Owner*, its elected or appointed officials or employees. The *Owner* may rely on such disclosure.

**12. SOLICITATION OF COUNCIL MEMBERS, CITY STAFF AND CITY CONSULTANTS**

*Contractors* and their agents will not contact any member of the City Council, City staff or City consultants with respect to this RFQ, other than the contact person named in Section 4, at any time prior to the award of a contract or the cancellation of this RFQ.

**13. CONFIDENTIALITY**

All Quotations become the property of the *Owner* and will not be returned to the *Contractor*. All Quotations will be held in confidence by the *Owner* unless otherwise required by law. *Contractors* should be aware the *Owner* is a "public body" defined by and subject to the Freedom of Information and Protection of Privacy Act of British Columbia.

**14. SIGNATURE**

The legal name of the person or firm submitting the Quotation should be inserted in the Quotation. The Quotation should be signed by a person authorized to sign on behalf of the *Contractor* and include the following:

- (a) If the *Contractor* is a corporation then the full name of the corporation should be included, together with the names of authorized signatories. The Quotation should be executed by all of the authorized signatories or by one or more of them provided that a copy of the corporate resolution authorizing those persons to execute the Quotation on behalf of the corporation is submitted;

- (b) If the *Contractor* is a partnership or joint venture then the name of the partnership or joint venture and the name of each partner or joint venturer should be included, and each partner or joint venturer should sign personally (or, if one or more person(s) have signing authority for the partnership or joint venture, the partnership or joint venture should provide evidence to the satisfaction of the *Owner* that the person(s) signing have signing authority for the partnership or joint venture). If a partner or joint venturer is a corporation then such corporation should sign as indicated in subsection (a) above; or
- (c) If the *Contractor* is an individual, including a sole proprietorship, the name of the individual should be included.

**15. PERFORMANCE BOND**

No Bonding is required.

**16. BID SECURITY**

Bid Security is not required for this Quotation.

**17. RFQ DOCUMENTS**

The RFQ documents which a contractor should review to prepare a Quotation consist of the entire contract documents listed in Schedule [1] of Schedule B entitled "Schedule of Contract Documents". Schedule 1 of Schedule B is attached to the Agreement which is included as part of the RFQ package. The contract documents include the drawings listed in Schedule [2] of Schedule B to the Agreement, entitled "List of Contract Drawings".

A portion of the contract documents are included by reference. Copies of these documents have not been included with the RFQ package. They are those contained in the publication entitled "Master Municipal Construction Documents, Platinum Edition".

**18. BUDGET**

The anticipated budgeted amount per one year term is **\$400,000** however there is no guarantee of minimal amount of work or compensation.

**19. NO GUARANTEE OF WORK**

The Goods and Services will be ordered by the City solely on an "as required" basis. The aggregate value of Goods and Services which may be ordered is conditional upon the needs of the City. No compensation will be accrued, owed or paid to any Applicant in the event that the Goods and Services are not ordered. The parties agree that the City may not place any orders for Goods and Services with the Applicant for the duration of the term of the Agreement. The parties agree that the City may purchase identical or similar Goods and Services from any other source.

**- END OF PAGE -**

## **SCHEDULE A – SCOPE OF WORK AND *CONTRACT DRAWINGS***

**PROJECT TITLE: SEWER RELINE & POINT REPAIR PROGRAM**

**PROJECT No.: 1220-040-2017-034**

### **1. DESCRIPTION OF SCOPE OF SERVICES REQUIRED**

The work generally includes but is not limited to, the delivery of labour, equipment and material for the installation of point repairs and relines, by approved methods, on existing sewer systems on an “as required” basis. The work carried out under this Contract includes but is not limited to the following:

1. Flushing and cleaning sewers;
2. Closed Circuit Television (CCTV) inspection and deficiency reporting for sanitary and storm sewers;
3. Digitally video inspect and prepare reports upon completion of all rehabilitation work;
4. Provision for traffic control and traffic diversion in accordance with the General Conditions;
5. Restrict and divert the flow of water or sewage from the sewer section or service lateral being inspected, tested or rehabilitated, as required;
6. Point repairs of those locations will be supplied by the City;
7. Relining of those sections will be supplied by the City;
8. Summary of Defects table complete with sewers that require attention; and
9. Any other related works.

All working locations are limited to City right-of-ways and the private property covered by property impact statements, or consented to by owners.

The detailed scope of work is as described on the Contract Drawings (listed below), Special Provisions (Schedule B – Appendix 1), and Supplementary Specifications (Schedule B- Appendix 3).

The lack of and/or omission of detailed specifications does not minimize the acceptable levels of service and only the best commercial practices are acceptable.

The Contractor is to comply with all BC Plumbing Code, BC Fire Marshal, BC Workers' Compensation Board, National Building Code of Canada, BC Boiler Inspector, BC Electrical Inspector, National Fire Protection Association, and any other authorities having local jurisdiction. Failure to abide by these rules and regulations will result in being immediately escorted from the work site.

**2. CONTRACT DRAWINGS – (PROJECT)**

The following drawings are included as part of this RFQ.

DRAWING NUMBER SPECIFICATION	DATE	REVISION NO.	REVISION DATE
NONE AT THIS TIME	n/a	n/a	n/a





## SCHEDULE B SAMPLE FORM OF AGREEMENT

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1. Form of Agreement between *Owner* and *Contractor*
2. Schedule 1 – Schedule of *Contract Documents*
3. Schedule 2 – List of *Contract Drawings*

**SAMPLE FORM OF AGREEMENT**

**BETWEEN OWNER AND CONTRACTOR**

This form of agreement (the "Agreement") made in duplicate this

\_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

*Contract:*

( TITLE OF CONTRACT )

Reference No.

(OWNER'S CONTRACT REFERENCE NO.)

**BETWEEN:**

The City of Surrey

\_\_\_\_\_  
( NAME OF OWNER )

(the "Owner")

**AND:**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
(NAME AND OFFICE ADDRESS OF CONTRACTOR)

(the "Contractor")

**The Owner and the Contractor agree as follows:**

- |                  |  |     |   |
|------------------|--|-----|---|
| <b>Article 1</b> | <b>The Work Start / Completion Dates</b> | 1.1 | The <i>Contractor</i> will perform all <i>Work</i> and provide all labour, equipment and material and do all things strictly as required by the <u><i>Contract Documents</i></u> .  |
|                  |  | 1.2 | The Contractor shall commence the Work within 5 working days of assignment, unless alternate scheduling is agreed upon with the Owner. Each item of Work shall also have an agreed upon date of completion. The Contractor will proceed with the Work diligently and will perform the Work generally in accordance with the agreed upon schedule, subject to the provisions of the Contract Documents for adjustments to the Contract Time. |
|                  |  | 1.3 | Time shall be of the essence of the <i>Contract</i> .   |

- Article 2 Contract Documents**
- 2.1 The "Contract Documents" consist of the documents listed or referred to in Schedule [1] of Schedule B entitled "Schedule of Contract Documents", which is attached and forms a part of this Agreement, and includes any and all additional and amending documents issued in accordance with the provisions of the Contract Documents. All of the Contract Documents shall constitute the entire Contract between the Owner and the Contractor.
- 2.2 The Contract supersedes all prior negotiations, representations or agreements, whether written or oral, and the Contract may be amended only in strict accordance with the provisions of the Contract Documents.
- Article 3 Contract Price**
- 3.1 The price for the Work ("Contract Price") shall be the sum in Canadian dollars of the following
- 3.1.01 the product of the actual quantities of the items of Work listed in the Schedule of Quantities and Prices which are incorporated into or made necessary by the Work and the unit prices listed in the Schedule of Quantities and Prices; plus
- 3.1.02 all lump sums, if any, as listed in the Schedule of Quantities and Prices, for items relating to or incorporated into the Work; plus
- 3.1.03 any adjustments, including any payments owing on account of Changes and agreed to Extra Work, approved in accordance with the provisions of the Contract Documents.
- 3.2 The Contract Price shall be the entire compensation owing to the Contractor for the Work and this compensation shall cover and include all profit and all costs of supervision, labour, material, equipment, overhead, financing, and all other costs and expenses whatsoever incurred in performing the Work.
- Article 4 Payment**
4. Subject to applicable legislation and the provisions of the Contract Documents, the Owner shall make payments to the Contractor.
- Article 5 Rights and Remedies**
- 5.1 The duties and obligations imposed by the Contract Documents and the rights and remedies available thereunder shall be in addition to and not a limitation of any duties, obligations, rights and remedies otherwise imposed or available by law.
- 5.2 Except as specifically set out in the Contract Documents, no action or failure to act by the Owner, Contract Administrator or Contractor shall constitute a waiver of any of the parties' rights or duties afforded under the Contract, nor shall any such action or failure to act constitute an approval of or acquiescence in any breach under the Contract.

**Article 6 Notices**

6.1 Communications among the *Owner*, the *Contract Administrator* and the *Contractor*, including all written notices required by the *Contract Documents*, may be delivered by hand, or by fax, or by pre-paid registered mail to the addresses as set out below:

The *Owner*:

City of Surrey  
Wastewater, Storm Water and Construction Operations  
\_\_\_\_\_  
6651 - 148 St.  
\_\_\_\_\_  
Surrey, BC V3S 3C7  
\_\_\_\_\_  
Email: [RLim@surrey.ca](mailto:RLim@surrey.ca)  
\_\_\_\_\_  
Fax: 604-591-7836  
\_\_\_\_\_  
Attention: Ron Lim

The *Contractor*:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
Attention: \_\_\_\_\_

The *Contract Administrator*:

R.F. Binnie and Associates  
\_\_\_\_\_  
101 - 19232 Enterprise Way  
\_\_\_\_\_  
Surrey, BC V3S 6J9  
\_\_\_\_\_  
Attention: Michael Hill

- 6.2 A communication or notice that is addressed as above shall be considered to have been received:
- 6.2.1 immediately upon delivery, if delivered by hand; or
  - 6.2.2 immediately upon transmission if sent or received by fax or email; or
  - 6.2.3 after 5 days from date of posting if sent by registered mail.
- 6.3 The *Owner* or the *Contractor* may, at any time, change its address for notice by giving written notice to the other at the address then applicable. Similarly if the *Contract Administrator* changes its address for notice then the *Owner* will give or cause to be given written notice to the *Contractor*.

**Article 7 General**

- 7.1 This *Contract* shall be construed according to the laws of British Columbia.
- 7.2 The *Contractor* shall not, without the express written consent of the *Owner*, assign this *Contract*, or any portion of this *Contract*.
- 7.3 The headings included in the *Contract Documents* are for convenience only and do not form part of this *Contract* and will not be used to interpret, define or limit the scope or intent of this *Contract* or any of the provisions of the *Contract Documents*.
- 7.4 A word in the *Contract Documents* in the singular includes the plural and, in each case, vice versa.
- 7.5 This agreement shall ensure to the benefit of and be binding upon the parties and their successors, executors, administrators and assigns.

**Article 8 Term**

- 8.1 The *Contractor* will provide the service for the period commencing on **February 1 2017** and, terminating on **December 31, 2017** (the "Term"). The Contractor will proceed with the Work diligently; will perform the Work generally in accordance with the Construction Schedule as set out in Appendix 5.
- 8.2 If any particular Work assignment is not fully completed within the timeframe agreed upon with the Owner, the Owner has the option to charge the Contractor the sum of \$100.00 for each and every day after the agreed upon completion date until the date of actual completion.
- 8.3 The City shall have the option of renewing this Agreement for three (3) additional terms of twelve (12) months each commencing on **January 1<sup>st</sup>** (the "Renewal Term") by giving notice in writing to the *Contractor* at any time prior to thirty (30) days before the end of the then-current term. The provisions of the Agreement shall remain in force during the Renewal Term, except where amended in writing by the parties. There shall be no additional rights of renewal after the third Renewal Term.

IN WITNESS WHEREOF the parties hereto have executed this Agreement the day and year first written above.

*Contractor.*

\_\_\_\_\_  
**(FULL LEGAL NAME OF CORPORATION, PARTNERSHIP OR INDIVIDUAL)**

\_\_\_\_\_  
**(AUTHORIZED SIGNATORY)  
(SIGN & PRINT NAME)**

\_\_\_\_\_  
**(AUTHORIZED SIGNATORY)  
(SIGN & PRINT NAME)**

*Owner.*

**CITY OF SURREY**  
\_\_\_\_\_

\_\_\_\_\_  
**(AUTHORIZED SIGNATORY)  
(SIGN, PRINT NAME & POSITION)**

\_\_\_\_\_  
**(AUTHORIZED SIGNATORY)  
(SIGN, PRINT NAME & POSITION)**

## Schedule B – Sample Agreement

### Schedule 1: Schedule of *Contract Documents*

The following is an exact and complete list of *Contract Documents*, as referred to in Article 2.1 of the *Agreement*.

Note: The documents noted with “\*” are contained in the “Master Municipal Construction Documents – General Conditions, Specifications and Standard Detail Drawings”, Platinum edition dated 2009, and the documents noted with “\*\*” are contained in the City of Surrey Supplementary Master Municipal Construction Documents, edition dated January, 2016 (updated July 11, 2016). All sections of this publication are included in the *Contract Documents*.

1. Agreement, including Schedules;
2. Addenda, if any;
3. Supplementary General Conditions, Project;
4. Supplementary General Conditions \*\*;
5. General Conditions\*;
6. Supplementary Specifications, Project;
7. Supplementary Specifications\*\*;
8. Specifications\*;
9. *Contract Drawings*;
10. Supplementary Standard Detail Drawings\*\*;
11. Standard Detail Drawings\*;
12. Executed Form of Quotation;
13. Schedule 2 to the Agreement – “List of *Contract Drawings*”;
14. Instructions to *Contractors* – Part I; and
15. Instructions to Tenderers – Part II\*.

A portion of the *Contract Documents* is included by reference. Copies of these documents have not been included with the RFQ package. These documents are the Instructions to Tenderers -Part II, General Conditions, Specifications and Standard Detail Drawings. They are those contained in the publication entitled “Master Municipal Construction Documents - General Conditions, Specifications and Standard Detail Drawings” and the latest edition of “City of Surrey Supplementary Master Municipal Construction Documents - Supplementary General Conditions, Supplementary Specifications, and Supplementary Standard Drawings”. Refer to Schedule 1 to the Agreement or, if not specified in Schedule 1, then the applicable edition shall be the most recent edition as of the date of the *RFQ D preferred Date*. All sections of this publication are by reference included in the *Contract Documents*.

Any additional information made available to *Contractors* prior to the *preferred Date* by the *Owner* or representative of the *Owner*, such as geotechnical reports or as-built plans, which is not expressly included in Schedule 1 or Schedule 2 to the Agreement, is not included in the *Contract Documents*. Such additional information is made available only for the assistance of *Contractors* who must make their own judgment about its reliability, accuracy, completeness and relevance to the *Contract*, and neither the *Owner* nor any representative of the *Owner* gives any guarantee or representation that the additional information is reliable, accurate, complete or relevant.

## Schedule B – Sample Agreement

(COMPLETE LISTING OF ALL DRAWINGS, PLANS AND SKETCHES WHICH ARE TO FORM A PART OF THE CONTRACT OTHER THAN STANDARD DETAIL DRAWINGS AND SUPPLEMENTARY STANDARD DETAIL DRAWINGS.)

### Schedule 2: List of *Contract Drawings*

The following *Contract Drawings* are included as part of this RFQ documents:

DRAWING NUMBER SPECIFICATION	DATE	REVISION NO.	REVISION DATE
NONE AT THIS TIME	n/a	n/a	n/a





# Schedule B – Appendix 1 Supplementary General Conditions (Project)

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These Supplementary General Conditions (Project) should be read in conjunction with the General Conditions contained in the Master Municipal Construction Documents, Volume II, Printed 2009.

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## SCHEDULE B – APPENDIX 1

### SUPPLEMENTARY GENERAL CONDITIONS (PROJECT)

#### SGC 1 Scope of Work

The *Contractor* will provide all labour, materials, equipment and plant and other related services to Storm and Sanitary sewer rehabilitation including flushing, video, repair, inspections, pipe relines, manhole repairs, etc.

The general components of Work includes, but not limited to, the delivery of labour, equipment and material for the installation of sewer pipe relines, by approved methods, on existing City of Surrey gravity sewer systems, which includes both mains and service connections. A best practice method of lining shall be utilized for services connected directly to manholes to form the best possible seal and reline result.

The Work will be undertaken at the Place of Work, as follows:

All working locations are limited to City right-of-ways and the private property covered by property impact statements, or consented to by owners.

The *Contractor* is to furnish certificates confirming Work conforms to requirements of Authorities having jurisdiction.

The detailed scope of work is as described on the *Contract Drawings* (listed below), Supplementary General Conditions (Schedule B – Appendix 1), and Supplementary Specifications (Project) (Schedule B- Appendix 2).

The lack of and/or omission of detailed specifications does not minimize the acceptable levels of service and only the best commercial practices are acceptable.

*Contractor* to comply with all BC Plumbing Code, BC Fire Marshal, BC Workers' Compensation Board, National Building Code of Canada, BC Boiler Inspector, BC Electrical Inspector, National Fire Protection Association, and any other authorities having local jurisdiction. Failure to abide by these rules and regulations will result in being immediately escorted from the work site.

#### SGC 2 Contract Time

All Work under this Contract shall be completed by no later than **December 31, 2017**. No items of Work will be assigned to the Contractor that could not reasonably be completed before this date.

#### SGC 3 Consultant

The Consultant is R.F. Binnie and Associates, 101 - 19232 Enterprise Way Surrey, BC, V3S 6J9. Telephone: 604-574-3336 Fax: 604-574-7355 E-mail: [MHill@binnie.com](mailto:MHill@binnie.com), represented by: Michael Hill, Project Manager will be the *Owner's* representative during the performance of the Work until the Work is complete. The Consultant will advise and

consult with the *Owner*. The *Owner's* instruction(s) to the *Contractor* may be forwarded through the Consultant.

The Consultant may periodically visit the Work site(s) to become familiar with the progress of the Work, the quality of the Work being provided and to determine if the Work is proceeding in accordance with the Contract Documents.

#### **SGC 4          Payment Certifier**

The Payment Certifier is R.F. Binnie and Associates, 101 - 19232 Enterprise Way Surrey, BC, V3S 6J9. Telephone: 604-574-3336 Fax: 604-574-7355 E-mail: [MHill@binnie.com](mailto:MHill@binnie.com), represented by: Michael Hill, Project Manager.

#### **SGC 5          Project Manager**

The Project Manager is City of Surrey, 13450 104 Ave., Surrey BC, V3T 1V8 Telephone: 604-590-7209 Fax: 604-591-7836 E-mail: [RLim@surrey.ca](mailto:RLim@surrey.ca), represented by: Ronald Lim, Engineering Assistant.

#### **SGC 6          Schedule of Quantities and Prices**

This Contract is based on unit prices.

For unit price items, the number of units for each item (i.e., quantities) as listed in the Schedule of Prices has been estimated. Actual quantities will vary. Payment will be made based on the measurement of the actual quantity of Work incorporated into the Contract.

The unit prices for each item will be applicable regardless of the variation in the actual quantity as compared to the estimated quantity. No adjustment to the unit price will be considered as a result of such variation.

#### **SGC 7          Coordination**

The *Contractor* will be responsible for coordinating with other *Contractors*, *Owner* forces, outside agencies and others as required throughout the Contract. While it is not an all-inclusive list of potential coordination requirements, the following list of know activities that the *Contractor* should be aware of when planning for coordination:

##### Other Contractors

The *Contractor* will be required to coordinate their schedule and work program with the following construction activities, which will be tendered to other *Contractors* by the *Owner* and will be construction concurrent with the Contract.

#### **SGC 8          Availability of Place of Work**

The Place of Work is available for the immediate commencement of the Work. The anticipated start date is **February 1, 2017**. The *Contractor* will schedule the Work accordingly.

## **SGC 9            Quality Assurance**

Work covered shall be performed by a single firm experienced in rehabilitation of sewer mains and laterals using a cured in place liner, CCTV inspections, manhole inspections and smoke testing of sewer mains and laterals or other work of similar nature and scope. Subject to approval of the *Owner*, the *Contractor* may subcontract any work to be performed under this Contract. However, the election to subcontract work shall not relieve the *Contractor* from responsibility or liability which it has assumed under this Contract and the *Contractor* shall remain liable to the same extent that its liability would attach, as if the Work had been performed by the *Contractor's* own employees.

All materials and hardware to be supplied by the *Contractor*, which is not specifically described herein, shall be of suitable construction, composition and quality to achieve their intended function.

## **SGC 10          Job Conditions**

The *Contractor* shall be familiar with the project location and how the existing conditions will affect their work. This is so that no misunderstanding may arise afterwards as to the character or as to the extent of the work to be done; likewise, in order to advise and acquaint themselves with all precautions to be taken in order to avoid injury to person or property of another. No additional compensation will be granted because of any unusual difficulties or *Owner's* special requests that may be encountered in the execution of any portion of the work.

## **SGC 11          Environmental Protection**

The *Contractor* warrants that it will not produce or discharge in any manner or form, directly or indirectly, chemicals or toxic substances into the environment and that all equipment used will not pose a hazard to, or harm or adversely affect anyone coming into contact with it and covenants and agrees to provide the *Owner* with an environmental plan (where applicable), acceptable to the *Owner*, which plan shall outline the procedures to be followed by the *Contractor* to prevent the production or discharge of chemicals or toxic substances into the environment and the actions to be taken should the discharge occur.

The *Contractor* will be responsible to take all necessary measures to comply with the requirements of the Federal and Provincial environmental protection agencies, *Owner* by-laws, the *Waste Management Act*, R.S.B.C. 1996, c. 482, as amended and any other applicable acts and regulations in respect to air, earth and water pollutants.

The *Contractor* will report to the *Owner* immediately if any hazardous or toxic materials are found or discovered. Such materials are to be left untouched and the area is to be marked and cordoned off to prevent any access to the workers and the public.

## **SGC 12          Safety**

The *Contractor* will be responsible for site safety at the Place of Work as and to the extent required by applicable construction safety legislation, regulations and codes, including *Workers Compensation Act* and applicable regulations, and by good construction practice.

Safety – Fall Protection - The *Contractor* and any trade *Contractor* shall include for all fall protection equipment and requirements necessary to complete scope of Work in a safe manner and in compliance with the site safety plan, which includes: Fall protection must be worn when working at a height over 6 ft. or as the hazards present necessity.

Safety – On-Site Hazards and Utilities Present – Before commencing any Work at the Place of Work, the *Contractor* is to make themselves aware of any and all on-site hazards including but not limited to underground and overhead utilities near to the Work area and to take every precaution necessary to eliminate any risk that may exist. If an on-site hazard exists that is causing or may cause injury to any person(s), the *Contractor* is to take immediate action to mitigate risk and damage, and then notify the *Owner* and the *Owner's* consultant (if any).

### **SGC 13      Traffic Control**

The *Contractor* shall at all times ensure that safety of the public (vehicular and pedestrian traffic) and its employees while carrying out cured in place relining, CCTV inspection, manhole inspections and smoke testing of sewer mains and laterals or other work of similar nature and scope.

Whenever such works are carried out, the *Contractor* at his expense is to provide:

- All necessary signs, materials, barricades, and other warning devices;
- Qualified and trained Traffic Control Personnel for traffic flagging services; and,
- In some cases, equipment such as flashing arrow boards, cones, etc.

These are specified in accordance with the Province of British Columbia, Ministry of Transportation & Highways' General Specifications for Highway Jurisdiction, Section 194 (Appendix A), and the Traffic control Manual for Work on Roadways, 1995 and the Traffic Control Manual for Work on Roadways, Field and Office Edition, (1999 Update). Please visit

[http://www.th.gov.bc.ca/trafficcontrol/tc\\_guidelines1.htm](http://www.th.gov.bc.ca/trafficcontrol/tc_guidelines1.htm) for the latest updates.

Additional services to ensure safety may be required at the discretion of the *Owner*. The *Contractor* is to provide such additional services as directed at no extra cost.

### **SGC 14      Construction Access and Traffic Maintenance**

The designated access to and from the construction site must be approved by the *Owner*. All construction traffic must use the designated access including heavy equipment, trucks and workers' personal vehicles.

Construction access to the Place of Work areas within existing building for workers and delivery of materials shall be designated by the *Owner*. No other existing exits or entrances shall be used by workers for access or for delivery of materials.

The *Contractor* shall conduct construction operations with minimum interference to adjacent roadways, sidewalks and access facilities in general and shall keep such areas free from materials, debris and equipment at all times. The *Contractor* shall not close or obstruct

existing roadways, sidewalks, parking areas or delivery points and shall not place or store materials or park cars on same.

The *Contractor* shall cooperate in all ways with the *Owner* in all matters concerning necessary interference with normal operation of the Place of Work. Minimizing disruption of normal facility/site operation and vehicular movements at the Place of Work is an essential requirement of the Contract.

The *Contractor* shall:

- (a) Include project phasing strategies in the Construction Schedule to minimize traffic disruption on the Place of Work.
- (b) Should provide one (1) week minimum notice to the *Owner*, previous to any disruption or alteration of access to the Place of Work. The *Contractor* shall provide all signs, pylons and flag persons necessary to direct vehicular traffic around work in progress.
- (c) The *Contractor* shall maintain access to existing fire hydrants and Siamese connections and shall keep entrances and exits to existing and adjacent buildings clear at all times.

#### **SGC 15 Proposed Substitutions**

Acceptance of material specifications that are an equal or higher level of quality compared to the material specified will not be unreasonably withheld.

Quotations for equipment substitutions to be made as separate line items and as additive or deductive alternates to the base equipment bid.

Evaluation of the substitutions to be made solely by the *Owner* whose decision shall be final.

#### **SGC 16 Manuals**

Installation and Operator's manuals must accompany equipment delivered. Electrical, Mechanical, and Plumbing booklets shall be provided to the *Owner*, as per the Specifications.

All manual(s) must be furnished prior to payment and delivered to the *Owner*. Failure to deliver all manual(s) that are ordered may result in non-payment until all manual(s) are received.

#### **SGC 17 Hours of Work**

Refer to the City of Surrey applicable bylaws for acceptable work hours.

No work is to be performed outside of these acceptable work hours without written approval from the *Owner*, and with approval by obtaining a noise variance if required.

All work shall conform to local bylaws, including building and parking bylaws and municipal guidelines and regulations. This includes Building Bylaws and Noise Restrictions, which will apply to all work being completed. Where work or the work schedule does not permit compliance with the Bylaws, the *Contractor* shall request permission from the *Owner* for

special exemptions from the bylaws. No extra compensation, in any form (e.g. overtime, etc.) will be given without prior written approval from the *Owner*.

#### **SGC 18      Damage**

The *Contractor* will be responsible for any and all damages to property or persons and for any losses or costs to repair or remedy the Works as a result of any negligent act or omission, or misconduct in the performance of the Works and its subcontractor's Work and shall indemnify and hold harmless the *Owner*, its officers, agents and employees from all suits, claims, actions or damages of any nature whatsoever resulting therefrom unless such loss, damage, injury or loss results from or arises out of the error, omission and/or negligent acts of the *Owner*, or its officers, for subsequent correction of any such error, omission and/or negligent acts or of its liability for loss or damage resulting therefrom. Except as to professional liability, these indemnities shall not be limited by the listing of any insurance coverage.

#### **SGC 19      Worksite Conduct**

All labourers and workers, while working in and around the Birdland area (refer to map), Surrey, British Columbia, and the *Owner* facilities, shall act in a professional manner. The *Contractor* is to enforce proper discipline and decorum among all labourers and workers on the worksite and is to control, among other things: 1) noise, including music; 2) the use of offensive language; 3) smoking or drinking of alcoholic beverages on the worksite; 4) physical violence; 5) riding in the passenger elevators; 6) thievery; and 7) the transportation of articles or materials deemed hazardous. If the *Owner* determines, in its sole discretion, that any labourer need to be removed due to his or her failure to comply with the terms of this provision, the *Contractor* will remove such labourers from the worksite immediately.

Alcohol and drugs are not tolerated on this site at any time including anyone deemed to be under the influence shall be escorted off site.

#### **SGC 20      Cleanliness and Disposal of Unwanted Materials**

Continuous daily clean-up of the work areas shall be performed by the *Contractor* and trade *Contractor* throughout the performance of the Work and will be undertaken in accordance with the *Contractor's* waste management plan. Clean up of waste products and debris generated by the *Contractor* and any trade *Contractor* outside of the building and on the site shall be the responsibility of the *Contractor*. Should the *Owner* be required to clean up the work of the *Contractor* or trade *Contractor* the cost of such clean-up will be recovered from the *Contractor*.

The *Contractor* shall dispose of all debris, trash and unsuitable materials collected under this Contract off site. The *Contractor* is solely responsible for any and all damages done or regulations violated in the disposal of waste materials and for any other actions, which the *Contractor* performs.

The *Contractor* warrants that it will produce or discharge in any manner or form, directly or indirectly, chemicals or toxic substances into the environment and that all equipment used will not pose a hazard to, or harm or adversely affect anyone coming into contact with it and covenants and agrees to provide the *Owner* with an environmental plan (where applicable), acceptance to the *Owner*, which plan shall outline the procedures to be followed by the



*Contractor* to prevent the production or discharge of chemicals or toxic substances into the environment and the actions to be taken should the discharge occur.

The *Contractor* shall be responsible to take all necessary measures to comply with the requirements of the Federal and Provincial environmental protection agencies, *Owner* by-laws, the *Waste Management Act*, R.S.B.C. 1996, c. 482, as amended and any other applicable acts and regulations in respect to air, earth and water pollutants.

#### **SGC 21      Accidents; Equipment Safety**

Any and all accidents, regardless of how minor, involving another person, private property, or vehicle, shall be reported immediately to the Surrey R.C.M.P. and a report requested. The *Owner* shall also be contacted immediately and be provided a copy of any reports.

The *Contractor* shall assume all responsibility for damages to property or injuries to persons, including accidental death, attorneys fee and costs of defense which may be caused by *Contractor's* performance of this Contract, whether such performance be by itself, its *subcontractor*, or anyone directly or indirectly employed by *Contractor* or its *subcontractors* and whether such damage shall accrue or be discovered before or after termination of this Contract.

The *Contractor's* equipment operators shall maintain good safety and driving records, and use extreme caution during the performance of the Work.

#### **SGC 22      Permits and Fees**

The *Contractor* is to secure and pay for any additional permits, and governmental fees, licenses and inspection necessary for proper execution and completion of the Work which is customarily secured after execution of an agreement and which is legally required. The *Contractor* is to comply with and give notices required by laws applicable to performance of the Work.

#### **SGC 23      Workmanship**

- (a) General: Workmanship shall be of best quality, executed by workers experienced and skilled in respective duties for which they are employed. Do not employ any unfit person or anyone unskilled in their respective duties. The *Owner* reserves the right to dismiss for site, workers deemed incompetent, careless, insubordinate or otherwise objectionable. Decisions as to quality of fitness of workmanship in cases of dispute rest solely with the *Owner*, whose decision shall be final.
- (b) Coordination: Ensure cooperation of workers in laying out work. Maintain efficient and continuous supervision.
- (c) Protection of Work in progress: The *Contractor* is to adequately protect Work completed or in progress. Work damaged or defaced due to failure in providing such protection is to be removed and replaced, or repaired, as directed by the *Owner* at no cost to the *Owner*.

Should any dispute arise regarding the quality of the workmanship, materials or products used in the performance of the Work, the final decision regarding the acceptable quality of the workmanship, and fitness of the materials and products rests strictly with the *Owner*.



Additionally, all Works required hereunder will be performed as promptly as possible, and in any event within the time stated by the *Owner*, and such Work will be subject to approval and acceptance of the *Owner*, but such approval and acceptance will not relieve the *Contractor* from the obligation to correct any incomplete, inaccurate or defective work, all of which shall be promptly remedied by the *Contractor* on demand, without cost to the *Owner*.

#### **SGC 24      Vehicles/Equipment**

The *Contractor* should have a sufficient number of service vehicles together with sufficient operating personnel to perform the Work. If, in the opinion of the *Owner*, whose opinion shall be final and binding, the numbers of service vehicles that the *Contractor* has in service are inadequate to meet the Work response times stated herein, the *Contractor* may be given thirty (30) calendar days' notice, after which time the *Contractor* must provide additional vehicles to perform the Work, as directed by the *Owner*.

*Contractors* Vehicles/Equipment used in the performance of the Work are to be properly equipped for cured in place relining, CCTV inspection, manhole inspections and smoke testing of sewer mains and laterals or other work of similar nature and scope. Off-road (e.g. ATV's) type of equipment may be utilized within the parks provided that they conform to WCB standards. The units should be sealed to prevent loss of waste materials while collecting & transporting garbage.

All vehicles/equipment will be kept clean, in good mechanical condition, painted to present a neat appearance, show evidence of annual safety inspections and display proper registration and license.

All *Contractor's* vehicles/equipment should be equipped with approved back-up alarms, multiple lite revolving/strobe lights, or other necessary warning systems, which should be maintained and in proper operating condition at all times. In the event of a breakdown, the *Contractor* should arrange for reserve equipment, with always the intent to maintain the schedule frequency.

Vehicles/Equipment used in the performance of the Work is to be identified on both sides with the company name and telephone number. This should be fully legible and displayed in a professional manner. The *Contractor* may also be required to display magnetic signs as supplied by the *Owner*, identifying the *Contractor* as a 'City *Contractor*'. This will not replace the company identification.

#### **SGC 25      Liability Insurance**

The following shall be additional named insured on this Contract:

- 1) City of Surrey;
- 2) Consultant; and
- 3) Sub-Contractors.

#### **SGC 26      Dispute Resolution**

The parties will make reasonable efforts to resolve any dispute, claim, or controversy arising out of this Agreement or related to this Agreement ("Dispute") using the dispute resolution procedures set out in this section.

**Negotiation:** The parties will make reasonable efforts to resolve any Dispute by amicable negotiations and will provide frank, candid and timely disclosure of all relevant facts, information and documents to facilitate negotiations.

**Mediation:** If all or any portion of a Dispute cannot be resolved by good faith negotiations within thirty (30) days, either party may by notice to the other party refer the matter to mediation. Within seven (7) days of delivery of the notice, the parties will mutually appoint a mediator. If the parties fail to agree on the appointment of the mediator, then either party may apply to the British Columbia International Commercial Arbitration Centre for appointment of a mediator. The parties will continue to negotiate in good faith to resolve the Dispute with the assistance of the mediator. The place of mediation will be Surrey, British Columbia. Each party will equally bear the costs of the mediator and other out-of-pocket costs, and each party will bear its own costs of participating in the mediation.

**Litigation:** If within ninety (90) days of the request for mediation the Dispute is not settled, or if the mediator advises that there is no reasonable possibility of the parties reaching a negotiated resolution, then either party may without further notice commence litigation.

## **SGC 27 Fuel Emissions Data**

In 2007, the City of Surrey signed the BC Climate Action Charter, a voluntary agreement that commits the City to be carbon neutral in its corporate operations (for more information go to <http://www.livesmartbc.ca/community/charter.html>). The City is also committed to reducing corporate greenhouse gas (GHG) emissions by 20% by 2020.

Following on these commitments, the City of Surrey tracks its corporate energy use and greenhouse gas (GHG) emissions annually within traditional service areas. Where the City has a contractual arrangement to deliver these traditional services as defined under the BC Climate Action Charter, some of the GHG emissions from the services need to be included as part of the annual corporate emissions inventory.

Commencing January 1, 2013, the City will require all service providers to communicate the quantity of fuel (gasoline, diesel, natural gas, propane and bio-fuel blends) used to operate vehicles, equipment and machinery as part of the delivery of the services described in the contract and to provide this data to the City at the earlier of termination of the assignment or at the end of each calendar year.

Data provided should include the following (see sample format):

- Type of fuel consumed (gasoline, diesel, natural gas, propane and bio-fuel blends); and
- Litres of fuel consumed in relation to the service delivered under the contract
  - Although actual fuel volumes are preferred, the City recognizes it may be difficult to assign fuel use to any particular contract. In these cases, apportioning fuel use for equivalent services based on contract dollar value, total service hours, or some other logical method is acceptable. If fuel consumption is prorated and/or estimated, the method of proration and/or estimation must be noted.

**Sample Report:**

<b>P.O. Number</b>	<b>567932</b>
<b>Date Range</b>	<b>March 1 – September 15</b>
<b>Gasoline (litres)</b>	<b>1,200</b>
<b>Diesel (litres)</b>	<b>4,500</b>
<b>Prorated Based on</b>	<b>Service hours</b>

The City can provide direction, if necessary, to calculate this information

**SGC 28 Non Road Diesel Engine Emission Regulation**

If you **own, operate, or hire** diesel powered equipment, Metro Vancouver's Non-Road Diesel Engine Emissions Regulation Bylaw No 1161, 2012 (the Bylaw) may impact your business. The Bylaw came into force on January 1, 2012 and requires owners or operators to register and label Tier 0 and Tier 1 non-road diesel engines that are 25 horsepower (19kW) or greater in order to operate within Metro Vancouver. Tier 0 engines must have **90 days** of registration purchased by **December 31, 2014** or the engine(s) will be **prohibited from ever operating** in Metro Vancouver. To be fully registered an owner/operator must:

- provide required information (machine/engine/company details),
- pay fees, and
- label machines with Metro Vancouver issued registration number.

Other important information:

- Non-road Tier 1 engines must be registered and pay fees to operate,
- Failure to comply with the Bylaw may result in fines up to \$200,000, and
- 80% of fees paid into the program can be recovered.

The City may, at its discretion, give preference to equipment that meets higher emission standards.

Contact Metro Vancouver staff at 604-451-6655, visit [www.metrovancouver.org/nonroaddiesel](http://www.metrovancouver.org/nonroaddiesel) or email [nonroaddiesel@metrovancouver.org](mailto:nonroaddiesel@metrovancouver.org) for more information about the Bylaw, the rebate program, and for assistance with the registration process.



## Schedule B – Appendix 2 Supplementary Specifications (Project)

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These Supplementary Specifications (Project) should be read in conjunction with the Specifications contained in the Master Municipal Construction Documents, Volume II, Printed 2009 and the City of Surrey Supplementary Specifications and Detailed Drawings.

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**SCHEDULE B - APPENDIX 2  
SUPPLEMENTARY SPECIFICATIONS – (PROJECT)**

**METHOD OF MEASUREMENT AND PAYMENT**

**1.0 General**

The methods of measurement and payment as described in the individual sections of the MMCD will not apply to the work in this Contract. This section replaces any MMCD paragraph entitled Measurement and Payment.

**1.1 Payment**

.1 All payment for work within this Contract is included in the lump sum(s) and unit prices listed in Schedule C – Form of Quotation. No separate or extra payment will be made for the work described as part of the work in the *Contract Documents*.

.2 The work includes all materials, labour, equipment, plant, cut and waste, specified testing, other incidentals, and miscellaneous materials necessary to complete the work in conformance with the Contract Drawings and Specifications.

.3 The determination of the percentage of the work complete for the purposes of a progress payment will be made by the Contract Administrator and will be determined to an accuracy of plus or minus 5%

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**SCHEDULE B - APPENDIX 2**

**SUPPLEMENTARY SPECIFICATIONS – (PROJECT) (SSP)  
Related to Wastewater Cleaning, CCTV Inspection,  
And Relines**

*These supplementary specifications shall apply in conjunction with the NASSCO Pipeline Assessment Certification Program – Canadian Edition, Version 7.0.0 (not included herein); and the City of Surrey Supplementary Master Municipal Construction Documents: Supplementary Specifications and Supplementary Standard Drawings, latest edition and revisions (not included herein).*

**SUPPLEMENTARY SPECIFICATIONS – (PROJECT)**  
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## SUPPLEMENTARY SPECIFICATIONS (PROJECT)

The *Contractor* is required but is not limited to, as part of his obligation under the Quotation, to perform the various services and activities described in the General Conditions and the Supplementary Specifications (Project) SSP 1 to SSP 21 hereunder.

### **SSP 1 General**

This section outlines all special provisions (SSP's) related to sewer rehabilitation including flushing, video, repair, inspections, pipe relines, manhole repairs, etc. Only those items related to the Scope of Work outlined in SSP 2 will be applicable to this contract.

### **SSP 2 Scope of Work**

Installation of sewer pipe relines, by approved methods, on existing City of Surrey gravity sewer systems, which includes both mains and service connections. A best practice method of lining shall be utilized for services connected directly to manholes to form the best possible seal and reline result.

### **SSP 3 Description of Work**

The work carried out under this Contract may be described generally as the installation of relines, by approved methods, on existing gravity sewer systems, including:

1. Flushing and cleaning sanitary and storm sewers, and as required to permit testing service interfaces as shown on contract maps;
2. Closed Circuit Television (CCTV) inspection and deficiency reporting for sanitary and storm sewers;
3. Digitally video inspect and prepare reports upon completion of all rehabilitation work;
4. Provision for traffic control and traffic diversion in accordance with the General Conditions;
5. Restrict and divert the flow of water or sewage from the sewer main section or service connection being inspected, tested or rehabilitated, as required;
6. Relining of those sections shown on the attached plans and spread sheets; and
7. Any other related works.

### **SSP 4 Limits of Site**

The *Site* is limited to City right-of-ways and the private property covered by property impact statements, or consented to by owners.

### **SSP 5 Completion Date**

The Contractor will provide the goods and services for the period commencing on **February 1, 2017** and terminating on **December 31, 2017**.



**SSP 6 Access**

An overview map will be issued to assist the Contractor with reviewing access to the different manholes and inspection chambers on the given sewer sections. City crews will assist in locating and exposing manholes and inspection chambers as required for the issued Work.

It is the responsibility of the Contractor to ensure vehicles are not parked over the manholes and other sewer appurtenances. The Contractor shall schedule work by posting no parking signs along the street on the day before the scheduled operation. Traffic signs are available from the Engineering Operations Yard, 6651 - 148th Street, Surrey, for collection and must be returned before final payment can be made. Any loss or damage to the sign shall be borne by the Contractor.

The City will locate the inspection chambers for conducting the reline of the service laterals. The Contractor shall be responsible for any damage done to private property during the course of accessing the inspection chambers to conduct the video inspection.

The Contractor shall notify residents prior to accessing easements and rights-of-way adjacent to private property. Permission to access private property shall be obtained from the resident(s) prior to accessing the property. When required, work shall be rescheduled so as not to disturb residents.

The Contractor shall notify the Contract Administrator of any issues pertaining to access to manholes, inspection chambers or private property access problems.

**SSP 7 Traffic Control**

Work shall not be performed on arterial and collector roadways between 6:00 a.m. and 9:00 a.m. or between 3:30 p.m. and 7:00 p.m., unless otherwise approved by the Contract Administrator.

**SSP 8 Supply of Water**

The Contractor may obtain water from the City as detailed below (with 48 hours of notice) by contacting the City's Representative. Supply of Water must be coordinated through the Water Operations section, as permits may be required for water use, through:

- a) Designated Fill Stations or standpipes; or
- b) Fire hydrants

**SSP 9 Requirements of Work & Personnel**

The following units of work defined pertain to sewer inspection and rehabilitation. Only those applicable to this contract will be considered.

## **SSP 9.1 Work Defined**

SEWER LINE CLEANING shall be performed with hydraulically propelled, high-velocity jet, or mechanically powered equipment. Selection of equipment shall be based on field conditions such as access to manholes, quantity of debris, size of sewer, depth of flow, etc.

LATERAL SEWER SEALING shall be accomplished using special techniques and equipment working from the main sewer or an access point.

LATERAL SEWER LINING shall be accomplished from a clean out, from a manhole, or remotely from the mainline.

SEWER LINE SECTION SEALING including lateral connections and manholes shall be accomplished using the flooding method with a net hydrostatic exfiltration head of at least 1.2 m.

SEWER PIPE AND LINING INSERTION shall be performed in mainline sewers. Processes include Cured-in-Place Pipe (CIPP), Fold and Form (Deformed/Reformed), Slipline Pipe, Pipe Sections Insertion, Spiral Wound Liner, and Pipe Bursting.

SEWER MANHOLE SEALING shall be accomplished by structure sealing with chemical grout, cementitious materials, resin-soaked oakum, and manufactured seals; by frame sealing with applied materials or manufactured seals; and by cover sealing.

SEWER MANHOLE REHABILITATION shall be accomplished by application of sealing, plugging, patching, coating, and lining processes and materials that will seal, protect or structurally rehabilitate the manhole. Methods include lining and structural enhancement of the manhole using cast-in-place concrete, spray applied cementitious material, cured-in-place thermoset pipe, profiled PVC (grouted) liners, and prefabricated fiberglass (grouted). Work may include repair of manhole chimney and corbel; by step removal or replacement; and by frame & cover reinstallation or replacement.

SEWER FLOW CONTROL shall be performed as required to comply with these specifications.

TELEVISION INSPECTION shall be required to reveal and document sewer line conditions and/or performed in advance of or in conjunction with pipe testing/sealing, pipe repair, and pipe lining activities.

NOTICE OF CLIENT/OWNER REQUIREMENTS which are relevant to and within the scope of work to be performed under the contract.

MUNICIPAL AND OTHER LICENSES AND PERMITS and assistance in obtaining approvals or consent from utilities or carriers such as the telephone company or other persons or organizations upon whose

property or authority performance of work under the contract might impinge; or a written release from responsibility for the performance of work under the contract if and to the extent such work is precluded by the inability to obtain approvals or consent.

CLEARANCE OF BLOCKAGES OR OBSTRUCTIONS in the sewer system, if any, if such clearance is required for performance of work under the contract and if such clearance is not otherwise provided for within the contract.

LOCATION AND EXPOSURE OF ALL MANHOLES, unless otherwise provided for in the Technical Specifications of the contract. The city will locate and designate all manhole access points open and accessible for the work, and provide rights of access to these points.

A MANHOLE-NUMBERING SYSTEM referenced to a map for all areas of the project and accurate manhole invert elevations when required for performance of the work will be supplied by the city.

THE SHUTDOWN OR MANUAL OPERATION OF PUMP STATIONS if such becomes necessary for performance of the work shall be by the City.

NOTICE TO THIRD PARTIES (such as public utilities and the telephone company) of the Contractor's intent to perform work in an area where such parties may have rights to underground property or facilities, and request for maps or other descriptive information as to the nature and location of such underground facilities or property and assurance of the Contractor's ability to enter upon any public or private lands to which access is required for performance of the work under the contract.

INFORMATION PERTINENT TO THE SITE of the project including reports prepared under previously accomplished studies or surveys and other data relative to the project, including, maps, drawings, construction specifications, sewer system records, etc.

## **SSP 9.2 Occupational Health and Safety**

The Contractor and its employees and the Contractor's sub-contractors and their employees shall conform to all health and safety laws, by-laws, or regulations of the Province of British Columbia including any regulations requiring installation or adoption of safety devices or appliances. The City of Surrey may, on twenty-four (24) hours written notice to the Contractor, suspend the work hereunder as a result of failure to install such devices or because the conditions of immediate danger exist that would be likely to result in injury to any person. Such suspension will continue until the default or failure is corrected.

Without limiting the generality of any other indemnities granted by the Contractor herein, the Contractor shall indemnify and save harmless the City of Surrey against any loss or expense or penalty suffered or incurred

by the City of Surrey by reason of failure of the Contractor, its agents or employees, or any sub-contractors of the Contractor, its agents or employees to comply or ensure compliance with the health and safety laws, by-laws and regulations mentioned above.

Further, the Contractor warrants that it will not produce or discharge in any manner or form, directly or indirectly, chemicals or toxic substances and that all vehicles and equipment used will not pose a hazard to, or harm or adversely affect anyone coming into contact with them and covenants and agrees to provide the City of Surrey with an environmental plan (where applicable), acceptable to the City of Surrey, which plan shall outline the procedures to be followed by the Contractor to prevent the production or discharge of chemicals or toxic substances into the environment.

- (a) The Contractor shall provide all his work in such a manner that it ensures safety, of the public and in accordance with the safety regulations of the Workers' Compensation Board.
- (b) It is required that the Contractor understands and undertakes to comply with all the W.C.B. Industrial Health and Safety Regulations for hazardous materials and substances namely, the new "Workplace Hazardous Materials Information Systems (WHMIS)" Regulations.

If you are unfamiliar with the Industrial Health and Safety Regulations covering hazardous materials and substances, in particular the WHMIS regulations, or if you are uncertain as to how they relate to the work you are performing for the City of Surrey on its premises/work site, we suggest you call the W.C.B. Head Office in Richmond during normal business hours – (8:30 a.m. – 4:30 p.m., Monday to Friday).

WHMIS INFORMATION  
RESEARCH AND STANDARDS DEPARTMENT  
W.C.B. Occupational Safety and Health Division  
6951 Westminster Highway  
Richmond, B.C., V7C 1C6

#### **SSP 10 Unit Price**

The following items relate to payment for all items related to sewer rehabilitation; **ONLY** those applicable to the work of this contract shall apply. All measurements shall be as specified or made by conventional means with accuracies consistent with field conditions and common practice. Should a discrepancy in measurement exist which is greater than 10%, the item in question shall be re-measured by both the Contractor and the Owner's Representative for verification.

## **SSP 11 Notification/Schedule of Work**

During periods when Work has been assigned, but not yet completed, The Contractor shall provide a weekly e-mail status report to the Contract Administrator and the City's Representative containing:

- The anticipated schedule of activities and locations for the upcoming workweek
- A brief summary of the work completed in the previous week (length of sewer inspected/tested, length of sewer relined)
- Any problems or unusual finding encountered the previous week
- Any other issues related to the work progress
- The City shall maintain a spreadsheet of assigned work on the Google Sheets website that the contractor will have access to. The city and the contractor will be responsible for entering pertinent information into the spreadsheet.

E-mail contact information will be provided at the pre-construction meeting.

The hours of work will be from 7:00 a.m. to 7:00 p.m. or as approved by the City.

The Contract Administrator and the City's Representative shall be informed one week in advance of any stoppage or restart of work.

Operation for each of the items may be separate and may involve several mobilizations, setting ups and demobilization. Payment for these services and works is deemed to be included in the Unit Rates bid in the Schedule of Quantities & Prices.

### **SSP 11.1 Resident Letters**

An information letter notifying the residents of the scope of the Contractor's work shall be issued. The Contractor will distribute the letters and other pertinent information to the residents at least 48 hours prior to commencing the Work.

## **SSP 12 Quality of Work Performance**

All sanitary and storm sewers in the designated line to be CCTV inspected shall be cleaned completely of all foreign materials.

Manhole covers shall be reinstated in a firm non-movable position.

The performance demonstration by the Contractor and what is required by the City in addition to this performance demonstration shall be the minimum standard for the level of services to be provided in this Contract.

The Contractor shall follow flushing procedures as outlined in Attachment #6 – Sanitary Sewer Flushing & Cleaning. All damage resulting from the non-compliance of this procedure will be the responsibility of the Contractor. The value of unresolved claims against the Contractor will be deducted from progress payment and held until the claim has been resolved to the satisfaction of the City or its delegate.

### **SSP 13 Dump Sites**

All waste that is removed from the Storm and Wastewater sewer system under this contract shall be disposed of by the Contractor at their cost at an approved off-site disposal area. The cost of the removal of the waste material shall be included in the Unit Rates bid in the Schedule of Quantities and Prices

### **SSP 14 Sewer Flow Control**

When the depth of flow in the sewer section exceeds the allowable 1/3 of the pipe diameter, one or more of the following methods shall be used:

- a) Work to be scheduled during off-peak times subject to the approval of the City (Noise By-law shall be complied with during this Contract work. Specifically, 7:00 p.m. - 9:00 a.m., Monday to Saturday). When working during off-peak times, the Contractor will be responsible for notifying residents of the intended work schedule a minimum of 48 hours before commencing the work.
- b) Plugging or Blocking: A sewer line plug may be inserted into the sewer section at a manhole upstream from the section to be inspected. The plug shall be designed such that either all or a portion of the impeded sewage flow can be released. During the inspection, testing and rehabilitation work, flow shall be either shut-off or substantially reduced in order to inspect the pipe at the invert.
- c) All or a portion of the flow shall be diverted from the sewer section by diverting flow from the upstream to the downstream of the sewer section concerned, including all the flow of the service connections to the sewer section concerned if necessary or if diverted.

All temporary work shall be removed upon completion of the work or at the end of each shift as directed by the City.

The Contractor shall take the necessary precaution to prevent any damage to the public and private property.

No separate payment will be made for this work, which shall be deemed to be included in the unit prices bid in the Schedule of Quantities & Prices.

### **SSP 15 Sewer Cleaning**

**This section supersedes MMCD Section 33 01 30.2**

#### **SSP 15.1 Intent**

The intent of sewer line cleaning is to remove foreign materials from the lines and restore the sewer to a minimum of 95% of the original carrying capacity or as required for proper seating of internal pipe joint sealing packers. Since the success of the other phases of work depends a great deal on the cleanliness of the lines, the importance of this phase of the operation is emphasized. It is recognized that there are some conditions such as broken pipe and major blockages that prevent cleaning from being accomplished or where additional damage would result if cleaning were attempted or continued. Should such conditions be encountered, the Contractor will

not be required to clean those specific manhole sections. If in the course of normal cleaning operations, damage does result from pre-existing and unforeseen conditions such as broken pipe, the Contractor will not be held responsible.

### **SSP 15.2 General**

1. Prior to all CCTV inspection, all sewer sections shall be cleaned using hydraulically propelled or high velocity hydro cleaning equipment or any acceptable method of cleaning according to the City's Sanitary Sewer Flushing Procedure.
2. High velocity hydro cleaning equipment shall be capable of delivering 4.0 l/sec (60gpm) at a working pressure of 8273 KPA (1200 PSI) with nozzle capable of producing a scouring action from 15° to 45° in all size sewers designated to be cleaned.
3. All dirt, grit, grease, rocks, and all other foreign materials shall be collected, removed and disposed of from the designated sewers and manholes.
4. Precaution shall be taken to protect the sewers from damage from the cleaning operation. Precaution shall also be taken to prevent any damage or flooding to public or private property served by the sewers section involved.
5. When flushing a sanitary sewer main line, it will be necessary to remove the I.C. lids (where possible) to reduce the chance of pressure fluctuations (back or low pressure) in the house plumbing. If a pressure fluctuation situation does occur, the City shall be notified immediately. The Contractor is fully responsible for any damage caused by pressure fluctuations, and shall be responsible to mitigate the situation with the property owner.

In the event the operator is requested, by the City to clear a sanitary sewer I.C. blockage, it is to be pumped out in order to remove debris, and then flushed after plugging the private side of the sanitary I.C. This is also to eliminate pressure fluctuations.

In the process of flushing, debris such as gravel, etc., when present, must be collected and removed at the down-stream manhole.

The following conditions shall be reported to the City, with pertinent information such as asset type and identifying numbers, address or location, type of problem discovered or encountered, and severity of problem, if known:

- Grease in a main line;
- Roots in a main line;
- Structural damage to a main line;
- Infiltration at a manhole;
- Structural damage in a manhole;
- Inability to locate or access an existing manhole because it is buried or obstructed.



Unless otherwise specified, the Contractor is responsible for and shall adhere to all WCB regulations and Health and Safety regulations, including, but not limited to:

- Traffic control;
- Safety apparel and apparatus;
- Confined space entry;
- Overhead electrical safety;
- Contaminated waste transport and disposal;

6. Payment for this work will be made under Schedule C - Form of Quotation Table 1 and Table 2. No additional payment will be made for additional flushing or cleaning required when performing service interface testing and grouting on lines that have already been cleaned under the contract.

### **SSP 15.3 Cleaning Equipment**

#### **SSP 15.3.1 Hydraulically Propelled Equipment**

The equipment used shall be of a movable dam type and be constructed in such a way that a portion of the dam may be collapsed at any time during the cleaning operation to protect against flooding of the sewer. The movable dam shall be equal in diameter to the pipe being cleaned and shall provide a flexible scraper around the outer periphery to insure removal of grease. If sewer cleaning balls or other equipment, which cannot be collapsed, is used, special precautions to prevent flooding of the sewers and public or private property shall be taken.

#### **SSP 15.3.2 High-Velocity Jet (Hydro cleaning) Equipment**

All high-velocity sewer cleaning equipment shall be constructed for ease and safety of operation. The equipment shall have a selection of two or more high-velocity nozzles. The nozzles shall be capable of delivering 4.0 l/sec (60 gpm) at a working pressure of 8273 KPA (1200 PSI), and capable of producing a scouring action from 15 to 45 degrees, in all size lines designated to be cleaned. Equipment shall also include a high-velocity gun for washing and scouring manhole walls and floor. The gun shall be capable of producing flows from a fine spray to a solid stream. The equipment shall carry its own water tank, auxiliary engines, pumps, and hydraulically driven hose reel.

#### **SSP 15.3.3 Mechanically Powered Equipment**

Bucket machines shall be in pairs with sufficient power to perform the work in an efficient manner. Machines shall be belt operated or have an overload device. Machines with direct drive that could cause damage to the pipe will not be allowed. A power rodding machine shall be either a sectional or continuous rod type capable of holding a minimum of 228 meters of rod. The rod shall be specifically heat-treated steel. To ensure safe operation, the machine shall be fully enclosed and have an



automatic safety clutch or relief valve. (This method is not used on this contract)

#### **SSP 15.3.4 Cleaning Precautions**

During sewer cleaning operations, satisfactory precautions shall be taken in the use of cleaning equipment. When hydraulically propelled cleaning tools (which depend upon water pressure to provide their cleaning force) or tools which retard the flow in the sewer line are used, precautions shall be taken to insure that the water pressure created does not damage or cause flooding of public or private property being served by the sewer. When possible, the flow of sewage in the sewer shall be utilized to provide the necessary pressure for hydraulic cleaning devices. When additional water from fire hydrants is necessary to avoid delay in normal work procedures, the water shall be conserved and not used unnecessarily. No fire hydrant shall be obstructed in case of a fire in the area served by the hydrant

### **SP 16 CCTV Inspection**

**This section supersedes MMCD section 33 01 30.1**

#### **SSP 16.1 General**

1. The Contractor shall use a pan and tilt type camera, and record in colour, in MPEG 2 format. Each entrance and exit manhole shall also be visually inspected, digitally video recorded and digitally photographed.
2. The designated sewer shall be flushed and completely cleaned prior to inspection. Digital Video inspection shall be performed only after sewers have been thoroughly cleaned so that a clear picture of the interior of the sewer can be obtained. Particular emphasis is made to the removal of accumulated grease where standard flushing practices will loosen the material so that cracks and breaks can be observed during digital video inspection. Where the camera is impeded, the Contractor shall immediately notify the City of Surrey who will make arrangements to clear the line. Dewatering the main segment shall not be considered an acceptable line cleaning practice for the purpose of digital video inspections.
3. The Contractor shall be equipped with a blower fan capable of de-misting sewers when required.
4. Reports, Summaries, digital images and videos for each sewer section shall be uploaded to the City within a week of video inspection of that sewer section, as per Attachment #7 - Sanitary Sewer CCTV File Transfer Requirements.
5. Depth of flow in the sewer shall not exceed one-third the pipe diameter during the digital video inspection.
6. Digital Video inspections with submerged or unclear sections longer than 3 meters in total length between consecutive manholes will not be accepted. Videos containing sections of mains or laterals where the camera is not centred

in the pipe (not providing a 360° view) for longer than 1 meter will not be accepted.

7. The travelling speed of the camera in the pipeline shall be limited to:
  - a. 0.1 m/s for pipeline of diameter less than 200 mm.
  - b. 0.15 m/s for diameters exceeding 200 mm but not exceeding 310 mm.
  - c. 0.20 m/s for diameters exceeding 310 mm.
8. If the inspection is abandoned due to an obstruction, manhole access constraints, collapse or water depth, contact the City Representative and inform them of the issue, than an attempt must be made from downstream manhole to complete the inspection.
9. If, during the inspection, a defect that is rated as a 4 or a 5 by the PACP coding system is found, then the City Representative must be contacted immediately. The Contractor must stay on site until the City Representative or a Wastewater Operations Supervisor dispatched by the City Representative is on site and has verified the video of the defect. Failure to follow this procedure may result in the Contractor being held liable for any damages the City or a Home Owner incurs due to the failure of the sewer system at the point of the unreported defect.
10. If attempting to LAMP camera and there is an issue with access at the upstream manhole location then the inspection should be attempted from the downstream access point. If access at both locations is unsuitable to perform the inspection then inform the City Representative immediately and an agreeable solution to conduct the inspections will be determined.
11. Scheduling of all digital video inspections shall be closely coordinated with the City Representative to ensure that the inspections are conducted during low flow periods. The Contractor shall proceed with the requested digital video inspection of a section within 48 hours of receiving notice from the City. The City reserves the right to cancel or alter scheduled inspections without notice. If determined by the City that the flow conditions would impair the quality of the inspection results (due to surcharged conditions) night time inspections may also be required subject to the approval of the City.
12. Weekly totals of sewer lengths digitally video recorded and hours spent within the previous week shall be submitted to the Contract Administrator and the City's Representative every Monday morning.

### **SSP 16.2 Process**

1. A sample of inspection report(s), digital video, and corresponding WMV data file shall be submitted for review by the Consultant to the Wastewater Operations Section, and Contract Administrator accordingly. This submission must satisfy all of the specifications contained herein, and the submitted report submission will be used as a benchmark for subsequent inspection submissions.

No Video Inspection surveys are to be carried out until an acceptable sample inspection report has been approved by the Consultant, or by the City's Representative.

CCTV operator to have received and carefully reviewed all of the *Contract Documents*, including the Instructions for Quote and Specifications and Standard Detail Drawings prior to Contract starting.

2. A copy of the CCTV operator's current NASSCO certification certificate shall be submitted to the Consultant or the Contract Administrator at least one week prior to the start of the CCTV Inspection operations.

A copy of the CCTV operator's certification must be submitted for each CCTV operator working on the contract.

A copy of the CCTV reviewer's certification must be submitted for each reviewer/inspector working on the contract.

3. Coding accuracy is to be a function of the number of defects or construction features not recorded (omissions), and the correctness of the coding and classification recorded. Coding accuracy must satisfy the following requirements:

<b>Header accuracy</b>	<b>95%</b>
<b>Detail accuracy</b>	<b>90%</b>

The Contractor is to implement a formal coding accuracy verification system, at the onset of the work that is reviewed and approved by the Contract Administrator or the City Representative. The coding accuracy is to be verified by the Contractor on a random basis, on a minimum of 10% of the inspection reports. The Contract Administrator or the City Representative shall be entitled to review the accuracy verification results, and be present when the assessments are being conducted.

A minimum of two accuracy verifications are to be performed and recorded each working week. Coding that does not satisfy the accuracy requirements, are to be recoded, and the accuracy of the inspection report immediately preceding and following the non-compliant inspection are to be verified. This process is to be repeated until the inspections meet the accuracy requirements.

The Contract Administrator or the City Representative reserves the right to request an independent certified reviewer to assess the accuracy of the reports submitted, at the Contractor's expense.

An operator failing to meet the accuracy requirements on two occasions will not be permitted to code on the remainder of the contract until they have successfully re-attended an Operator's Certification course and re-written the NASSCO Pipeline Assessment Certification Program.

4. As per CSA 6.5.3 Camera Speed:  
"The camera must maintain a speed that will allow for the defects to be observed clearly. If the pipe is inspected too fast the picture can appear pixelated and defects can be missed. The speed can vary depending on the pipe diameter smaller than 200mm, 9m/min for pipes with a diameter between 200mm and 300mm, and 12m/min for pipes with a diameter larger than 300mm, or as agreed

to by the owner. The camera should stop and pan special features within the pipe, such as maintenance hole interfaces, taps, and major defects.”

Non-uniform or jerky movement will not be acceptable. The camera shall pause at each defect as listed in Section F and at each service connection.

Clear, well-defined pictures of the defects shall be taken, utilizing 360 degree rotating heads and full pausing capabilities, and the lighting system.

5. Digital video recording shall commence as close as practical to the face of the manhole. The chainage measurement shall reflect the distance from the center of the manhole. All reports and digital video shall consider the length of the main segment being inspected as commencing at the center of the start manhole, and terminating at the center of the end (finish) manhole. A main segment shall be defined as the distance from center to center of successive manholes.

### **SSP 16.3 Recording Equipment**

- a) Digital Video Images and sound shall be recorded in MPEG 2 format at standard speed.

Digital still images shall be recorded in JPG format

Each digital image shall be stored with a unique filename to match the image reference number in the PACP form and PACP data exchange file. The naming convention shall reflect the contract, and the sequence number of the photograph recorded on the data sheet. The exact format requires approval from the Contract Administrator and the City's Representative, prior to commencement of a contract.

- b) All events and defects encountered in the sewer, including manholes, locations, and direction changes, shall be audibly voice labeled in a clear and concise presentation.
- c) Each section of sewer shall be identified verbally and graphically on the video indicating the upstream and downstream manholes, and the date and time of the digital video inspection at the beginning of each main segment being inspected. Only the distance measurement is to be displayed on the digital video during the main segment recording process.
- d) The Contractor shall utilize NASSCO's PACP and LACP to record pipe defects and observations.
- Continuous forward distance readout from the reference manhole and audible notation shall be made at all pipe defects including:
    - The defect description, as described by the NASSCO PACP codes.
    - The forward distance from the center of the reference manhole.

The Contractor shall provide the inspection data in the standard NASSCO PACP and LACP data exchange format. A sample of the data file, complete with pictures (JPEG), and video files (MPEG 2) shall be submitted to

Contract Administrator and the City's Representative prior to commencement of the work, for approval.

#### **SSP 16.4 Safety Equipment**

The Contractor shall be fully equipped for traffic control and manhole (confined space) entry, and employ safety procedures required by the Workers' Compensation Board.

The Contractor will keep on-site, during the duration of the work, all documentation relating to:

- a) Confined Space Entry, including entry and emergency procedures;
- b) Written confirmation of confined space training received by employees; and
- c) Documentation verifying that equipment being used meets applicable WCB requirements.

#### **SSP 16.5 Inspection Reports**

The City of Surrey Utilizes **NASSCO's (<http://www.nassco.org>) Pipeline Assessment Certification Program (PACP)** and **Lateral Assessment Certification Program (LACP)** to code for C.C.T.V.

- A) The required video inspection information shall be recorded on NASSCO'S C.C.T.V. Inspection Forms. See Attachment #7 - Sanitary Sewer CCTV File Transfer Requirements for an example of the forms. Only one sewer section (manhole to manhole) or lateral Inspection (Inspection Chamber to main or main to Inspection chamber) shall be recorded in each data sheet unless otherwise approved.
- B) Each pipe defect record shall be in accordance with NASSCO's PACP or LACP coding.
- C) All field measurements shall be made using the SI unit system.
- D) The City will provide GIS files to upload work order and facility ID information into PACP and LACP databases. An ESRI license will be provided by The City upon request.
- E) The PACP and LACP Inspection table, Media Inspection Table, Media Conditions Table and Custom Fields Table will be populated as per Attachment #7 - Sanitary Sewer CCTV File Transfer Requirements.
- F) Digital images (still photographs) with a minimum 1024 x 768 pixel resolution (in addition to the digital video record) shall be taken of all manholes and pipe defects and observations as defined in NASSCO's PACP.

Photograph pictures shall clearly indicate the sewer section identification (upstream and downstream manholes), distance from reference manhole

(chainage) and picture number, without encroaching or obstructing the subject of the Photograph (defects, etc.).

- G) Database and Report files shall follow the naming convention WO#-<Date>-#. See Attachment #7 - Sanitary Sewer CCTV File Transfer Requirements.
- H) Files are to be uploaded to the Surrey MFTP Site once a week on a specific day that is agreed on by both the City and the Contractor. See Attachment #7 - Sanitary Sewer CCTV File Transfer Requirements for the process of uploading to the City's MFTP site.

### **SSP 16.6 PACP Data Exchange Process**

A PACP database shall not contain multiple asset types (e.g. mainlines and laterals) and assets from multiple work orders.

The Pipe Segment Facility ID will consist of a 10-digit number and will serve as the unique identifier for each of the Sanitary Mainlines and Laterals. This ID will be available on each of the maps that the City of Surrey provides and will, also, be exported by the GIS file into the Inspection table of the PACP and LACP database(s).

The Contractor must ensure that the Pipe Segment Facility ID corresponds with the pipe that is being video inspected by referring to the maps provided by the City before commencing a CCTV inspection. For Laterals the Contractor must also ensure that the property address corresponds to the Pipe Segment Facility ID. Non-compliance will result in a failure to import all observations acquired from the inspection into the City Works Management System.

If a Pipe Segment Facility ID is not provided by the City the Contractor shall attempt to contact the City to obtain the Pipe Segment Facility ID. The asset will not be videoed without the Pipe Segment Facility ID.

If an Asset's Facility ID does not have a work order attached to it by the City, than work cannot be performed on the asset until the work order is attached to it by the City and the proper GIS file has been sent to the Contractor.

### **SSP 16.7 Measurements for Payments**

Payment for the digital video inspection of the sanitary and storm sewer lines, mains and laterals, shall be made under Schedule C – Form of Quotation, and shall include all necessary recording and reporting as per SSP19.

## **SSP 17 Grease Removal**

The removal of normal amounts of grease is included in the payment for Schedule C – Form of Quotation Schedule of Quantities & Prices, Sections 1 and 2. If excessive grease that cannot be removed using hydro cleaning equipment is encountered, the Contractor shall notify the Contract Administrator, and request permission to remove the grease by alternate means. The Contractor shall provide the Contract

Administrator with an hourly rate for excessive grease removal, including equipment, labour, disposal and all other costs for excess grease removal. If the quoted hourly rate is accepted by the Contract Administrator, the Excessive Grease Removal will be paid for under a change order. After receiving the Contract Administrator's approval, the Contractor shall proceed with the grease removal. The Contractor will be responsible for submitting records noting the location and time spent on excess grease removal within 48 hours of the completion of the excessive grease removal work.

No payment will be made for excessive grease removal work without the prior approval of the Contract Administrator, or if the records are submitted later than 48 hours after the completion of the work.

## **SSP 18 Sewer Lining**

**This section supersedes MMCD section 33 05 24**

### **SSP 18.1 Liner Materials**

Acceptable liner technologies are Fold and Form and Cured in Place Pipe (CIPP). The liner technology proposed for point repairs and liners shall be specified on the Product Description form in the Tender Submission Documents.

#### Fold and Form

The formed PVC pipe shall meet the performance requirements of ASTM D 3034, F1504-97, F1871, or latest edition and revision. All test data, whether theoretically extrapolated or actual must be validated by an independent third party qualified in testing these procedures.

The PVC compound / material used for the folded pipe shall conform to ASTM D 1784 classification 12334-B or 12344-B or 12454-B or 12454-C or latest edition and revision.

#### Cured-In-Place Pipe (CIPP)

The Cured-In-Place Pipe (CIPP) shall meet the performance and material requirements of ASTM F1216 or ASTM F1743 or latest edition and revision. All test data, whether theoretically extrapolated or actual must be validated by an independent third party qualified in testing these procedures.

### **SSP 18.2 Liner Design**

The Contractor shall be responsible for preparing designs for all relining and point repairs in the Contract. Liner designs shall be signed and sealed by a Professional Engineer registered in the Province of British Columbia, and submitted to the Contract Administrator prior to commencing the work. No additional payment will be made for the design of the liners. Payment for this work shall deem to be included in the unit prices tendered in the Schedule of Quantities & Prices.



The liner shall be sized such that there is no loss in capacity of the existing sewer. Calculations of pipe flow before and after liner installation shall be submitted to the Contract Administrator for approval. The Contractor shall field measure the internal circumference of the sewers to determine the exact size of liner that is required so that the liner is tight to the wall of the existing pipe.

The length of the liner shall be that deemed necessary by the Contractor to effectively carry out the insertion and sealing of the liner at the inlet and outlet points. The Contractor shall verify the lengths in the field before cutting the liner to length.

Point repairs shall be sized to allow for a minimum 500mm overlap from each end of the noted defect. The estimated length of liner required for each point repair is included in the Point Repair summary in Section F, however the Contractor shall be responsible for determining the actual length of the point repair, including the overlap, by conducting the initial CCTV video inspection.

### **SSP 18.3 Testing**

The City will arrange for third party laboratory testing of the liner material. The Contractor is responsible for the preparation and submittal of the following samples, representative of the work performed under the same field conditions:

- For each pipe diameter, liner design and liner product used, one (1) segment of point repair lining product approximately 1m in length.
- For each relining project, one (1) segment of lining product approximately 1m in length prepared in the field at the inversion length.
- The contractor shall, for each work assignment, deliver the materials to be tested or inform the contract manager or consultant that testing materials is ready for pick up at the work site.

These samples will be tested to the specified ASTM standards.

If testing discloses non-conformance to these standards, repair work shall be completed at the Contractor's expense. Testing and/or quality assurance completed by other agencies does not relieve the Contractor of responsibilities for documentation of installation conditions, inspection, testing, etc. as required by the Contract.

### **SSP 18.4 Documentation**

The Contractor will document the conditions under which each section of sewer rehabilitation is completed as follows:



### General

- Date and time
- Contractor
- Street Name
- Product (CIPP or Fold and Form Brand Name)
- Diameter
- Standard Dimension Ratio (SDR)
- Spool batch number
- Upstream and downstream Manhole numbers

### Insertion Conditions

- Ambient Air temperature
- Maximum drawing force
- Insertion Rate
- Visual observations (note presence of creases, impregnation poor areas, crazing)

### Processing Parameters (Fold and Form)

- Head and tail temperature readings (start, middle, and end of cook)
- Cook time and average pressure
- Cool-down pressure/temperature
- Cool-down duration

### Processing/Wet-out Process (CIPP)

- Resin type (polyester, vinyl ester or epoxy)
- Resin source and batch numbers
- Vacuum pressure
- Visual observations – evidence of distribution of resin/air entrapment
- Quantity of resin utilized
- Total impregnation time

## **SSP 18.5 Warranty**

The Contractor shall make any necessary repairs and replacements to remedy, in a manner satisfactory to the engineer and at no cost to the owner, any and all defects, breaks, or failures of the work occurring within one (1) year following the date of acceptance of the work due to: Faulty or inadequate materials or workmanship, and for damage or disturbances to other improvements under, within, or adjacent to the work, whether or not caused by settling, washing, or slipping, when such damage or disturbance is caused, in whole or in part, from activities of the Contractor in performing his duties and obligations under this Contract. When such defects or damage occur, within the time period described herein before, in any part of the surface or subsurface improvements not included in the work under the contract, the Contractor shall repair the same and the one-year warranty period required shall, with relation to such required

repair, be extended one (1) year from the date of completion of such repairs.

### **SSP 18.6 Installation**

The Contractor shall be responsible for clearing the line of obstructions such as solids, dropped joints, protruding material (concrete, rocks, etc.) protruding branch connections or broken pipe that will prevent the insertion of the liner. If inspection reveals an obstruction that cannot be removed by normal "no-dig" techniques, the Contractor shall make a point excavation to uncover, remove or repair the obstruction.

For "Pull-in" type installations, the Contractor shall use a recently calibrated Dynamometer with the winch during the installation procedure.

No separate payment will be made for removing line obstructions. The payment for this requirement shall be deemed to be included in the unit prices tendered in the Schedule of Quantities & Prices.

### **SSP 18.7 Liner Retrieval**

If the liner installation is terminated before completion, the Contractor shall be responsible for the retrieval of the liner, at no additional cost. The existing sewer shall be reinstated to a condition equal to or better than before the attempted liner installation.

### **SSP 18.8 Liner Finish**

The finished lining shall be continuous over the entire length of an insertion run and shall be free from visual defects such as foreign inclusions, dry spots, pinholes and delamination. The lining shall be impervious and free of any leakage from the pipe to the surrounding ground or from the ground to the inside of the lined pipe.

Any defects, which will affect the integrity or strength of the linings, shall be repaired at the Contractor's expense.

### **SSP 18.9 Liner End Seals**

The liner ends in the manhole shall be tight fitting. Any lip or obstruction created by the liner shall be gently tapered. The liner ends shall not obstruct sewage flow. A watertight sealing product, compatible with the liner, shall be applied at the terminal points after the liner has fully stabilized.

If, due to broken or misaligned pipe at the access point, the lining fails to make a tight seal, the Contractor shall apply a seal at that point. The seal shall be compatible with the liner and shall make a tight seal.

Each end of point repairs shall be grouted to form a smooth transition from the original pipe to the relined section. End grouting shall be air

tested to a pressure of 5 psi to verify the effectiveness and completeness of the grouting. End grouting that fails to pass the air test shall be re-grouted and retested until the air test is past. The volume of grout used for end grouting shall be recorded.

Liner end work shall not commence until the liner has fully stabilized.

#### **SSP 19 Reline Mainline**

Payment for relining of a sanitary or storm sewer mainline shall be made per each mainline segment, manhole to manhole at the tendered unit prices under Schedule C – Form of Quotation for the appropriate pipe diameter, and shall include flushing and cleaning the sanitary or storm sewer line, degreasing, root cutting, cutting protruding hubs, removing debris, pre/post relining Closed Circuit Television (CCTV) inspection and reporting of the sanitary or storm sewer line, identifying service connection locations, determining actual liner length, liner design and submission of sample for testing, notifying residents, restricting and diverting sewage flow from mainline and service connections if required, provision of traffic control, supply and installation of relining, end grouting and testing, service connection reinstatement including interface grouting and testing, and any other related work.

#### **SSP 20 Reline Service Connections (Sanitary and Storm Laterals)**

Payment for relining sanitary or storm sewer service connections shall be made per each service connection segment, inspection chamber or property line to mainline or manhole at the tendered unit price under Schedule C – Form of Quotation for the appropriate pipe diameter, and shall include flushing and cleaning the sanitary or storm sewer line, degreasing, root cutting, cutting protruding hubs, removing debris, pre/post relining Closed Circuit Television (CCTV) inspection and reporting of the sanitary or storm sewer line, determining actual liner length, liner design and submission of sample for testing, notifying residents, restricting and diverting sewage flow from mainline and service connections if required, provision of traffic control, supply and installation of relining, end grouting and testing, service connection reinstatement including interface grouting and testing, and any other related work. The intent is to utilize a service connection reline system that addresses the interface area to ensure a complete, sealed system. Where possible a lateral and main/lateral connection reline method shall be implemented and the cost reflected in Schedule C – Form of Quotation. This approach shall also be utilized where connections enter directly into a manhole.

#### **SSP 21 Definitions**

In these Special Provisions, unless the context otherwise requires,

“Section” means section of the Specifications or the Conditions of Contract.

“Item” means item of the Schedule of Quantities and Prices.

**ASTM STANDARD:** There are basically two types of ASTM Standards, which apply to pipeline rehabilitation products: “D” standards, which are for testing procedures and material, compound classifications, and “F” standards which are basically

product specific. Within the “F” standards there are two types of documents; material specifications and installation practices.

**CHANGE ORDER:** A written order to the Contractor authorizing an addition, deletion, or revision in the work within the general scope of work of the agreement, or authorizing an adjustment in the agreement price or agreement time.

**CONTRACTOR:** Any individual, firm, partnership, corporation, or combination of any or all jointly submitting a proposal to whom the Contract is awarded by the Owner or its executors, administrators, successors or assigns.

**CONTRACT ADMINISTRATOR:** means the person, firm or corporation appointed by the Owner and identified by the Owner in writing to the Contractor. The Contract Administrator may be the Owner’s Engineer, other employee or officer, or may be and outside consultant.

**CREW:** The number of persons required for the performance of work at a site as determined by the Contractor in response to task difficulty and safety considerations at the time or location of the work.

**DEBRIS:** Soil, rocks, sand, grease, roots, etc., in a sewer line excluding items mechanically attached to the line such as intruding service connections, intruding pipe, joint, materials, and the like.

**EASEMENT:** A liberty, privilege, or advantage without profit, which the owner of one parcel of land may have in the land of another. In this agreement, all land, other than public streets, in which the Owner has sewer system lines or installations and right of access to such lines or installations.

**ENGINEER:** The City Engineer, Commissioner of Public Works, Superintendent of Public Works, or an Engineer of a municipality including such assistants as are authorized to represent him, or the consulting engineer acting through his authorized agents, who represents the Owner during the construction phase activities.

**FLOW CONTROL:** A method whereby normal sewer flows or a portion of normal sewer flows are blocked, retarded, or diverted (bypassed) within certain areas of the sewer collection system.

**HYDRAULIC CLEANING:** Techniques and methods used to clean sewer lines with water, e.g.: water pumped in the form of a high-velocity spray and water flowing by gravity or head pressure. Devices include high-velocity jet cleaners, cleaning balls, and hinged-disc cleaners.

**INFILTRATION:** The water entering a sewer system, including building sewers, from the ground, through such means as defective pipes, pipes joints, connections, or manhole walls. Infiltration does not include, and is distinguished from, inflow.

**INFILTRATION/INFLOW:** A combination of infiltration and inflow wastewater volumes in sewer lines, with no way to distinguish either of the basic sources, and with the same effect of usurping the capacities of sewer systems and facilities.

**INFLOW:** The water discharged into a sewer system, including service connections, from such sources as roof leaders; cellar, yard, and area drains; foundation drains; cooling water discharges; drains from springs and swampy areas; manhole covers; cross connection from storm drain, combined sewers, catch basins; storm waters; surface runoff, street wash waters; or drainage. Inflow does not include, and is distinguished from, Infiltration.

**INSPECTOR:** The Owner's on-site representative responsible for inspection and acceptance, approval, or rejection of work performed as set forth in these specifications.

**INTERNAL PIPE INSPECTION:** The television inspection of a sewer line section. A TV camera is moved through the line at a slow rate and a continuous picture is transmitted to an aboveground monitor.

**INVERT:** The floor, bottom or lowest point of a conduit.

**JOINTS:** The means of connection sectional lengths of sewer pipe into a continuous sewer line using various types of jointing materials. The number of joints depends on the lengths of the pipe sections used in the specific sewer construction work.

**LINEAR METER:** Being one meter. In these specifications used to denote the unit of measurement relating to the length of a sewer line.

**MAJOR BLOCKAGE:** A blockage (structural defect, collapse, protruding service connection, debris), which prohibits manhole-to-manhole cleaning, TV inspection or rehabilitation procedures.

**MANHOLE SECTION:** The length of sewer pipe connecting two manholes.

**MILESTONE DATE:** Means any date specified in the *Contract Documents* for completion of the work, or portion of the work, including the date of substantial performance.

**OVERFLOW:** (1) The excess water that flows over the ordinary limits of a sewer, manhole, or containment structure. (2) An outlet, pipe, or receptacle for the excess water.

**OWNER:** The City, sanitary district or other municipality, corporation, partnership or individual initiating the project, acting through its legally constituted officials, officers or employees.

**SANITARY SEWER:** A sewer intended to carry only sanitary or sanitary and industrial wastewaters from residences, commercial buildings, industrial parks, and institutions.

**STORM SEWER:** A sewer intended to carry only rain water or run off from residences, commercial buildings, industrial parks, and institutions.

**SEWER CLEANING:** The utilization of mechanical or hydraulic equipment to dislodge, transport, and remove debris from sewer lines.

**SEWER PIPE:** A length of conduit, manufactured from various materials and in various lengths, that when joined together can be used to transport wastewaters from the points of origin to a treatment facility. Types of pipe: Acrylonitrile-butadiene-styrene (ABS); Asbestos-Cement (AC); Brick Pipe (BP); Concrete Pipe (CP); Cast Iron Pipe (CIP); Polyethylene (PE); Polyvinylchloride (PVC); Reinforced Concrete (RC); Reinforced Plastic Mortar (RPM); Steel Pipe (SP); Vitrified Clay (VC).

**SITE:** Any location where work has been or will be done.

**SITE ACCESS:** An adequately clear zone of a size sufficient to accommodate personnel and equipment required at the location where work is to be performed, including roadway or surface sufficiently unobstructed to permit conveyance of vehicles from the nearest paved roadway to the work location.

**SUBCONTRACTOR:** An individual, firm, or corporation having a direct contract with the Contractor or with a lower-tier Subcontractor for performance of part of the work.

**SURCHARGE:** When the sewer flow exceeds the hydraulic carrying capacity of the sewer line.

**SWALE (DIP, SAG, BELLY):** A significant deviation in pipe grade such as to cause entrapment of solids, semisolids, and liquids, thereby impeding the accuracy and/or effectiveness of flow measurements, cleaning, and internal inspection.



Schedule B – Appendix 3  
*Contract Drawings (Project)*

**SCHEDULE B - APPENDIX 3**

**List of Contract Drawings (Project)**

The following pdf Contract Drawings (Project) are included in the RFQ documents:

DRAWING NUMBER SPECIFICATION	DATE	REVISION NO.	REVISION DATE
NONE AT THIS TIME	n/a	n/a	n/a





**SCHEDULE C - QUOTATION**

**RFQ Title: SEWER RELINE AND POINT REPAIR PROGRAM**

**RFQ No: 1220-040-2017-034**

**CONTRACTOR**

Legal Name: \_\_\_\_\_

Address: \_\_\_\_\_

Phone: \_\_\_\_\_

Fax: \_\_\_\_\_

Email: \_\_\_\_\_

TO:

Owner Representative: Richard D. Oppelt, Purchasing Manager

Address: Surrey City Hall  
Finance & Technology Department – Purchasing Section  
Reception Counter 5<sup>th</sup> Floor West  
13450 – 104 Avenue, Surrey, B.C., Canada, V3T 1V8

Email for PDF Files: [purchasing@surrey.ca](mailto:purchasing@surrey.ca)

1. If this Quotation is accepted by the *Owner*, a contract will be created as described in:
  - (a) the Agreement;
  - (b) the RFQ; and
  - (c) other terms, if any, that is agreed to by the parties in writing.
2. Capitalized terms used and not defined in this Quotation will have the meanings given to them in the Agreement and RFQ. Except as specifically modified by this Quotation, all terms, conditions, representations, warranties and covenants as set out in the Agreement and RFQ will remain in full force and effect.
3. I/We have reviewed the sample Form of Agreement (Schedule B). If requested by the *Owner*, I/we would be prepared to enter into the sample Form of Agreement, amended by the following departures (list, if any):

**Section**

**Requested Departure(s) / Alternative(s)**

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4. The *Owner* requires that the successful *Contractor* have the following in place **before providing the Work**:

- (a) Workers' Compensation Board coverage in good standing and further, if an "Owner Operator" is involved, personal operator protection (P.O.P.) will be provided,  
Workers' Compensation Registration Number \_\_\_\_\_;
- (b) Prime Contractor qualified coordinator is Name: \_\_\_\_\_  
and Contact Number: \_\_\_\_\_;
- (c) Insurance coverage for the amounts required in the proposed Agreement as a minimum, naming the *Owner* as additional insured and generally in compliance with the *Owner's* sample insurance certificate form available on the *Owner's* Website at [www.surrey.ca](http://www.surrey.ca). search [Standard Certificate of Insurance](#);
- (d) City of Surrey or Inter-municipal Business License: Number \_\_\_\_\_;
- (e) If the *Contractor's* goods and services are subject to GST, the *Contractor's* GST Number is \_\_\_\_\_; and
- (f) If the *Contractor* is a company, the company name indicated above is registered with the Registrar of Companies in the Province of British Columbia, Canada, Incorporation Number \_\_\_\_\_.

As of the date of this Quotation, we advise that we have the ability to meet all of the above requirements **except as follows** (list, if any):

**Section**

**Requested Departure(s) / Alternative(s)**

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5. The *Contractor* acknowledges that the departures it has requested in Sections 3 and 4 of this Quotation will not form part of the Contract unless and until the *Owner* agrees to them in writing by initialing or otherwise specifically consenting in writing to be bound by any of them.

**Changes and Additions to Specifications and Scope:**

6. In addition to the warranties provided in the Form of Agreement, this Quotation includes the following warranties:

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7. I/We have reviewed the RFQ, Schedule A – Scope of Work and Contract Drawings. If requested by the *Owner*, I/we would be prepared to meet those requirements, amended by the following departures and additions (list, if any):

**Requested Departure(s) / Alternative(s) / Addition(s)**

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**Schedule of Prices**

8. The *Contractor* offers to supply to the City of Surrey the Goods and Services for the *Contract Price*, as follows:

**Schedule of Prices** (see paragraph 5.3.1 of the Instruction to Tenderers – Part II):

(All prices and Quotations including the *Contract Price* shall include all taxes, but shall not include the GST. GST shall be shown separately.)

**TABLE 1: Reline (Sanitary Mainlines)**

Pipe Size	Cost per Meter							Cover (m)
	Reline Length (range)							
	4-10m	11-30m	31-50m	51-70m	71-90m	91-110m	>110m	
100								≥0.75
150								≥0.75
200								≥0.75
250								2
250								3
250								4
300								2
300								3
300								4
350								2
350								3
350								4
375								2
375								3
375								4
400								2
400								3
400								4
450								2
450								3
450								4
500								2
500								3
500								4
525								2
525								3
525								4
600								2
600								3
600								4
675								2
675								3
675								4
750								2
750								3
750								4
900								2
900								3
900								4
1050								2
1050								3
1050								4
1200								2
1200								3
1200								4

**TABLE 2: Reline (Sanitary Laterals)**

Reline Length (m)	Cost per Meter					
	Pipe Size (mm)					
	100	150	200	250		
	Cover ≥.75m	Cover ≥.75m	Cover ≥.75m	Cover ≥ 2m	Cover ≥ 3m	Cover ≥ 4m
0 – 2.0						
2.1 – 4.0						
4.1 – 6.0						
6.1 – 8.0						
8.1 – 10.0						
10.1 – 12.0						
12.1 – 14.0						
14.1 – 16.0						
16.1 – 18.0						
18.1 – 20.0						
20.1 – 22.0						
22.1 – 24.0						
24.1 – 26.0						
26.1 – 28.0						
28.1 – 30.0						
30.1 – 32.0						
32.1 – 34.0						
34.1 – 36.0						
36.1 – 38.0						
38.1 – 40.0						

**TABLE 3: T-Liner Reline of Sanitary Laterals (Trelleborg, LMK, or Equivalent)**

Reline Length (m)	Cost per Meter				375
	Host Main Pipe Size (mm)				
	200	250	300	350	
0 – 2.0					
2.1 – 4.0					
4.1 – 6.0					
6.1 – 8.0					
8.1 – 10.0					
10.1 – 12.0					
12.1 – 14.0					
14.1 – 16.0					
16.1 – 18.0					
18.1 – 20.0					
20.1 – 22.0					
22.1 – 24.0					
24.1 – 26.0					
26.1 – 28.0					
28.1 – 30.0					
30.1 – 32.0					
32.1 – 34.0					
34.1 – 36.0					
36.1 – 38.0					
38.1 – 40.0					

**TABLE 4: Point reline (Sanitary Mainlines and Laterals)**

Pipe Size	Cost per Point Reline				Cover (m)
	Length of Reline				
	1m	2m	3m	4m	
100					≥0.75
150					≥0.75
200					≥0.75
250					2
250					3
250					4
300					2
300					3
300					4
350					2
350					3
350					4
375					2
375					3
375					4
400					2
400					3
400					4
450					2
450					3
450					4
500					2
500					3
500					4
525					2
525					3
525					4
600					2
600					3
600					4
675					2
675					3
675					4
750					2
750					3
750					4
900					2
900					3
900					4
1050					2
1050					3
1050					4
1200					2
1200					3
1200					4

**TABLE 5: Relines (Storm Mainlines)**

Pipe Size	Cost per Meter						Cover (m)	
	Reline Length (range)							
	4-10m	11-30m	31-50m	51-70m	71-90m	91-110m	>110m	
100								≥0.75
150								≥0.75
200								≥0.75
250								2
250								3
250								4
300								2
300								3
300								4
375								2
375								3
375								4
450								2
450								3
450								4
525								2
525								3
525								4
600								2
600								3
600								4
675								2
675								3
675								4
750								2
750								3
750								4
900								2
900								3
900								4
1050								2
1050								3
1050								4
1200								2
1200								3
1200								4
								2
								3
								4
								2
								3
								4
								2
								3
								4



**TABLE 6: Relines (Storm Laterals)**

Reline Length (m)	Cost per Meter					
	Pipe Size (mm)					
	100	150	200	250		
	Cover ≥.75m	Cover ≥.75m	Cover ≥.75m	Cover ≥ 2m	Cover ≥ 3m	Cover ≥ 4m
0 – 2.0						
2.1 – 4.0						
4.1 – 6.0						
6.1 – 8.0						
8.1 – 10.0						
10.1 – 12.0						
12.1 – 14.0						
14.1 – 16.0						
16.1 – 18.0						
18.1 – 20.0						
20.1 – 22.0						
22.1 – 24.0						
24.1 – 26.0						
26.1 – 28.0						
28.1 – 30.0						
30.1 – 32.0						
32.1 – 34.0						
34.1 – 36.0						
36.1 – 38.0						
38.1 – 40.0						

**TABLE 7: Point Repairs (Storm Mainlines and Laterals)**

Pipe Size	Cost per Point Repair				Cover (m)
	Length of Reline				
	1m	2m	3m	4m	
100					≥0.75
150					≥0.75
200					≥0.75
250					2
250					3
250					4
300					2
300					3
300					4
375					2
375					3
375					4
450					2
450					3
450					4
525					2
525					3
525					4
600					2
600					3
600					4
675					2
675					3
675					4
750					2
750					3
750					4
900					2
900					3
900					4
1050					2
1050					3
1050					4
1200					2
1200					3
1200					4
					2
					3
					4
					2
					3
					4
					2
					3
					4
					2
					3
					4

**TABLE 8: T-Liner Reline of Storm Laterals (Trelleborg, LMK, or Equivalent)**

Reline Length (m)	Cost per Meter				375
	Host Main Pipe Size (mm)				
	200	250	300	350	
0 – 2.0					
2.1 – 4.0					
4.1 – 6.0					
6.1 – 8.0					
8.1 – 10.0					
10.1 – 12.0					
12.1 – 14.0					
14.1 – 16.0					
16.1 – 18.0					
18.1 – 20.0					
20.1 – 22.0					
22.1 – 24.0					
24.1 – 26.0					
26.1 – 28.0					
28.1 – 30.0					
30.1 – 32.0					
32.1 – 34.0					
34.1 – 36.0					
36.1 – 38.0					
38.1 – 40.0					

**List of Separate Prices:**

9. The following is a list of Separate Price(s) and forms part of this RFQ, upon the acceptance of any or all of the Separate Price(s).

**Description of Separate Price Items**

<b>SP-1</b>	Service Interface Sealing		
	a. Pipe Size 100mm	\$[	]
	b. Pipe Size 150mm	\$[	]
<b>SP-2</b>	Cut Protruding Hub	\$[	]

**Force Account Labour and Equipment Rates:**

10. *Contractors* should complete the following tables setting out the all-inclusive hourly labour rates including overhead and profit for approved extras/credits for all applicable categories of labour (use the spaces provided and/or attach additional pages, if necessary):

**Table 1 – Schedule of Labour Rates:**

Labour Category	Straight Time/hr. (Plus GST)	Overtime Rate/hr. (Plus GST)
.1 Superintendent	\$	\$
.2 Foreman	\$	\$
.3 Journeyman	\$	\$
.4 Apprentice	\$	\$
.5 Skilled Labourer	\$	\$
.6	\$	\$
.7	\$	\$
.8	\$	\$

**Table 2 – Schedule of Equipment Rates:**

No.	Equipment Description	Hourly Equipment Rate
.1	Grease Cutting	\$
.2	Root Cutting	\$
.3	Flushing	\$
.4	Grouting	\$
.5		\$
.6		\$
.7		\$
.8		\$

**Metro Vancouver’s Non-Road Diesel Engine Emissions Regulation By-law No. 1161, 2012 (the Bylaw)**

11. *Contractor* should confirm they are in compliance with By-law (if applicable)  
 Applicable as follows     Not applicable to this project

No.	Equipment Description	Engine Tier Designation	Engine Registration Number as Issued by Metro Vancouver
.1		<input type="checkbox"/> Tier 0 or <input type="checkbox"/> Tier 1	
.2		<input type="checkbox"/> Tier 0 or <input type="checkbox"/> Tier 1	
.3		<input type="checkbox"/> Tier 0 or <input type="checkbox"/> Tier 1	
.4		<input type="checkbox"/> Tier 0 or <input type="checkbox"/> Tier 1	
.5		<input type="checkbox"/> Tier 0 or <input type="checkbox"/> Tier 1	

**Disposal Site**

12. Proposed Disposal Site: \_\_\_\_\_

**Key Personnel & Subcontractors** (see paragraphs 5.3.3. and 5.3.5 of the Instructions to Tenderers – Part II):

13. *Contractor* to provide information on the background and experience of all key site personnel (e.g., construction project manager, site superintendent, etc.,) proposed for the performance of the Work (use the spaces provided and/or attach additional pages, if necessary):

**Key Personnel**

Name: \_\_\_\_\_  
 Experience: \_\_\_\_\_  
 Dates: \_\_\_\_\_  
 Project Name: \_\_\_\_\_  
 Responsibility: \_\_\_\_\_

14. *Contractor* to provide the following information on the background and experience of all proposed *subcontractors* and material suppliers for the divisions or sections of the work/or supply listed below: (use the spaces provided and/or attach additional pages, if necessary): [Note: It is not necessary for *Contractor* to list all *subcontractors* and material suppliers that the *Contractor* proposes to use – only those for the divisions or sections of work / supply listed below

Description Of Work/supply	Subcontractor & Material Supplier Names	Years Of Working With Contractor	Telephone Number and Email

The *Owner* reserves the right of approval for each of the *subcontractors* and material suppliers. The *Contractor* will be given the opportunity to substitute an acceptable *subcontractor* and material supplier, if necessary.

**Experience and References** (see paragraph 5.3.4 of the Instructions to Tenderers – Part II):

15. *Contractor's* relevant experience and qualifications for the performance of the Work similar to those required by the Agreement (use the spaces provided and/or attach additional pages, if necessary):

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16. *Contractor's* references for work performed by your firm of a similar nature and value (name and telephone number) (use the spaces provided and/or attach additional pages, if necessary). The *Owner's* preference is to have a minimum of three references. Previous clients of the *Contractor* may be contacted at the *Owner's* discretion.

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17. I/We the undersigned duly authorized representatives of the *Contractor*, having received and carefully reviewed the RFQ and the Agreement, submit this Quotation in response to the RFQ.

This Quotation is executed by the *Contractor* this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

**CONTRACTOR**

I/We have the authority to bind the *Contractor*.

---

(Legal Name of *Contractor*)

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(Signature of Authorized Signatory)

---

(Print Name and Position of Authorized Signatory)

**ATTACHMENT #1  
PRIME CONTRACTOR DESIGNATION  
LETTER OF UNDERSTANDING**

As per the requirements of the *Workers' Compensation Act* Part 3, Division 3, Section 118 (1-3), which states:

**Coordination of multiple-employer workplaces**

**118 (1) In this section:**

**"multiple-employer workplace"** means a workplace where workers of 2 or more employers are working at the same time:

**"prime contractor"** means, in relation to a multiple-employer workplace,

- (a) the directing contractor, employer or other person who enters into a written agreement with the owner of that workplace to be the prime contractor for the purposes of this Part, or
  - (b) if there is no agreement referred to in paragraph (a), the owner of the workplace.
- (2) The prime contractor of a multiple-employer workplace must
- (a) ensure that the activities of employers, workers and other persons at the workplace relating to occupational health and safety are coordinated, and
  - (b) do everything that is reasonably practicable to establish and maintain a system or process that will ensure compliance with this Part and the regulation in respect to the workplace.
- (3) Each employer of workers at a multiple-employer workplace must give to the prime contractor the name of the person the employer has designated to supervise the employer's workers at that workplace.

**By signing this Agreement, the Contractor accepts all responsibilities of a prime contractor as outlined in the Workers' Compensation Act, and Worksafe BC OH&S Regulation.**

As a Contractor signing this Prime Contractor Designation form with the City of Surrey (the "owner"), you are agreeing that your company, management staff, supervisory staff and workers will comply with the Workers' Compensation Board (WCB) Occupational Health and Safety Regulation and the *Workers' Compensation (WC) Act*.

Any WorksafeBC OH&S violation by the prime contractor may be considered a breach of contract resulting in possible termination or suspension of the agreement and/or any other actions deemed appropriate at the discretion of the City.

Any penalties, sanctions or additional costs levied against the City, as a result of the actions of the prime contractor are the responsibility of the prime contractor.

The Contractor acknowledges having read and understood the information above.

By signing this Prime Contractor Designation form, the Contractor agrees as a representative of the firm noted below, to accept all responsibilities of the prime contractor for this project.

**The Contractor understands and accepts the responsibilities of the prime contractor designation in accordance with the *Workers' Compensation Act* while contracted by the City of Surrey for project and will abide by all Workers' Compensation Board Regulation requirements.**

Project File No.: 1220-040-2017-034

Project Title and Site Location: \_\_\_\_\_

Prime Contractor Name: \_\_\_\_\_

Prime Contractor Address: \_\_\_\_\_

Telephone/Fax Numbers: Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

Name of Person in Charge of Project: \_\_\_\_\_

Name of Person Responsible for Coordinating Health & Safety Activities: \_\_\_\_\_

Phone: \_\_\_\_\_

Prime Contractor Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Please return a signed copy of this memo to the City of Surrey, Finance & Technology Department, Purchasing Section, 13450 – 104 Avenue, Surrey, British Columbia, V3T 1V8

If you have any questions, please contact the City of Surrey, Manager Occupational Health & Safety at 604-591-4658.

## **ATTACHMENT #2 CONTRACTOR HEALTH & SAFETY EXPECTATIONS**

### **RESPONSIBILITY OF CONTRACTOR(S)**

The City of Surrey strives to maintain a safe work environment for employees and contractors and insists upon the enforcement of safe practices and procedures in all premises and in all work activities. It is essential that all contractors and their employees and sub-contractor(s) perform in the same manner. It is every employers and contractors responsibility to ensure that staff and public are protected from workplace hazards.

As a contractor to the City of Surrey, you are expected to conform to the requirements of the Workers' Compensation Act, the WCB Occupational Health and Safety Regulation and to all federal, provincial and local laws and regulations. The City of Surrey Building Owner, Project Manager, and the Manager, Occupational Health & Safety or designate have the authority to order an unsafe act to cease or to have an unsafe piece of equipment removed from the premises or, in extreme situations, to shut down a job entirely. Any City of Surrey Employee that observes a safety infraction by a contractor performing work for the City of Surrey should bring it to the attention of a manager immediately or Occupational Health & Safety (604-591-4131).

The following information is provided as typical City of Surrey requirements, but does not relieve the contractor from complying with all applicable local, provincial and federal laws, regulations and bylaws.

### **PERSONNEL**

1. You are expected to inform your employees of any potential hazard in the workplace and advise of appropriate action to be taken should a hazard be found or a fire or accident occur.
2. Contractors will restrict persons invited on the premises to employees only. No families or friends are permitted.
3. The contractor will advise the City of any on-site accidents involving the contractor's employees, or injuries to others caused by the contractor's business.

### **SAFETY MANAGEMENT SYSTEM**

1. Contractors will ensure their employees utilize proper safety equipment and clothing as required for job site activities.
2. Contractors must follow and have on site proper written safe work procedures for hazardous work, e.g. Fall protection, confined space entry, hot work, lockout, excavations and shoring, traffic management, etc.
3. Contractor must Identify workplace risk and implement suitable controls.
4. Contractor must provide safety training and education to staff and have training records available for review.
5. Contractor must have a health & safety program for its workers and sub-contractors
6. Contractor will provide appropriate First-Aid coverage for their workers and subcontractors.
7. Contractor must forward a weekly work task list prior to work commencement.
8. The qualified safety coordinator must participate in the City of Surrey OHS Orientation or attend the Prime Contractor's Orientation.



## **WORK AREAS –City Facilities**

No work by contractors shall occur in any area without prior consent of the City of Surrey Manager, Civic Facilities or his designated representative. Work during normal business hours of the City shall not create undue noise, smells or otherwise unduly disturb the work of City of Surrey staff or the public. If an activity requires that a disturbance is likely, the contractor shall whenever possible only do that work outside normal business hours.

All activities that create a hazard (i.e. work from a ladder, removal of a floor tile, emission of VOC's, etc.) to persons outside the contractor's supervision shall have warning devices, delineation or barriers, sealed spaces, etc. as would normally be required to protect any person from that hazard.

## **SAFETY ATTITUDE**

Your safety record and attitude are important criteria used to judge your qualification for future bidding on solicitations with the City of Surrey.

You can help ensure employee safety and your eligibility for future business with the City if you exhibit and practice a "Safe Work - Safe City" attitude.

The City of Surrey is concerned about the health, safety and wellbeing of all employees and contractors. It is essential we maintain a healthy, safe and productive work environment.

### **All Employees & Contractors:**

It is everyone responsibility to:

- ❖ know and comply with WCB regulations and
- ❖ follow established safe work procedures
- ❖ immediately report any work related injury to his/her supervisor; and to the city representative
- ❖ not remain on the work site while his/her ability to work is in any way impaired
- ❖ report unsafe acts and conditions to their supervisor
- ❖ correct unsafe conditions immediately whenever it is possible to do so
- ❖ take reasonable care to protect your health & safety and the health and safety of other persons who may be affected by your act's or omissions at work



An employee must refuse to work if continuing to do so would endanger the health and safety of the employee, fellow employees or others. The worker must immediately report the circumstances of the unsafe condition to his or her supervisor or manager. If the unsafe condition is not remedied or the issue is not resolved the Manager, Occupational Health & Safety must be contacted.

**A common sense approach usually resolves the issue.**

## GENERAL RULES

1. For all secured worksites, contracted workers are required to sign in and sign out each day
2. (Access cards may be issued – a worker may need to provide an Identification document (i.e. Driver's License) in exchange).
3. Personal protective equipment, as determined by the City, through consultation with the Contractors Health and Safety Representatives must be worn when and where required. (Hard Hats, Safety Footwear, Safety Vests and Safety Glasses must be worn on active construction sites. Hearing Protection must be worn when noise levels are above 85dBA.)
4. Horseplay, gambling and the use of alcohol or narcotics will not be tolerated.
5. No Smoking within 7.5M of a City owned buildings door exits, windows and vents.
6. Report **ALL** injuries to your supervisor immediately and notify the City's site representative.
7. Report any unsafe conditions, including someone under the influence or hazards, which may allow an injury to occur to you, a fellow worker, or others on the worksite.
8. Report any property damage, regardless of how minor.
9. Restricted and controlled products will be labeled, used and stored in accordance with the associated regulations, e.g. WHMIS. Follow all procedural instructions when using or handling hazardous materials/controlled products and ensure that all containers of hazardous/controlled product materials are properly labelled and stored in designated areas.
10. Obey all posted signs and notices. Do not venture into areas that you are not authorized to enter.
11. Always use the correct posture when lifting and get assistance if the weight is excessive.
12. Do not work within the limits of approach to high voltage equipment.
13. If working at heights greater than 10 feet a Fall Protection system must be in place. The appropriate Fall Protection equipment must be worn at all times.
14. **Housekeeping** (Orderliness and good housekeeping are basic requirements and must be maintained at all times):
  - a) Aisles are to be kept clear at all times.
  - b) Individual work areas are to be kept clean and tidy.
  - c) All materials, tools, products and equipment are to be kept in their designated areas.
  - d) Liquid spills are to be cleaned up immediately to prevent slips and falls.
  - e) Accumulation of oily rags, combustible refuse or similar fire hazards will not be tolerated.
15. **Fire Prevention:**
  - a) Become familiar with Surroundings and emergency exit.
  - b) Ensure aisles and exits are not blocked at any time.
  - c) Anytime a fire extinguisher is used, report it immediately to your supervisor, so that it can be recharged.
16. **Equipment Operation** (Any equipment, which could create a hazard, must be maintained in good condition):
  - a) Equipment must not be repaired, adjusted or operated unless by a "competent person" who understand the safe operating procedures.

- b) Always be aware of the use and location of the "EMERGENCY STOP" button, if equipment is so equipped, before using the equipment.
- c) Loose clothing, jewelry and long hair must be secured to prevent becoming entangled with equipment.
- d) The Operator must check all safety devices on equipment before operation.
- e) All equipment must be turned off and the appropriate "lock-out" procedure followed, prior to repairs, cleaning, adjustment or lubrication.
- f) Radio/Walkman/I-pod Head phones are not allowed to be worn during regular work operations.
- g) All ladders must be of an approved type and length. Unacceptable ladders must be removed immediately from the premises.
- h) All vehicles and equipment on City property must be kept in safe mechanical condition at all times, and be operated only by persons with a valid driver's license and/or proper training and qualifications.
- i) Contractors will not operate any equipment, valves, switches, etc., which are part of the City's operation, unless specific permission is received from the Department Representative.

17. **Ground Disturbance** –Every time you dig in the ground, with a shovel or mechanized equipment, you run the risk of loss of life or damage to property if you hit any of the many buried cables, conduits, gas or oil pipelines and/or other underground facilities that serve our city, **BC One Call Must be called and a ticket obtained prior to commencing any ground disturbance activities.**

<b>Issued By:</b>	<b>Occupational Health &amp; Safety Section - Contractor Coordination Program</b>
<b>Date:</b>	<b>Revised: January 14, 2015    Original: August 15, 2014</b>
<b>Distributed:</b>	<b>Via Email &amp; Posted on Intranet: January 16, 2015 :<u>August 15, 2014</u></b>

**This document does not replace the Workers' Compensation Act or WorkSafeBC OH&S regulation. Each individual Contractor must have specific health and safety safe work rules and procedures that apply to their work tasks. Each Contractor must comply with the Workers' Compensation Act and WorkSafeBC Occupational Health & Safety Regulation and to all federal, provincial and local laws and regulations. If a contractor is unable to comply they must bring this to the attention of their qualified safety representative and to the Prime Contractor safety representative immediately.**

**Authorized Signature:** \_\_\_\_\_

**Name:** \_\_\_\_\_

**(Please Print)**

**Date:** \_\_\_\_\_

**ATTACHMENT #3  
COMPLIANCE TO SAFETY PROCEDURE  
ENTRY PROCEDURE FOR CONFINED SPACE**

This procedure shall be used as a guideline only. The *Contractor* shall be responsible for familiarization with this and all WCB requirements.

**THERE MUST BE A MINIMUM OF TWO MEN  
- ONE MAN ALWAYS ON THE SURFACE, AND  
- ONE MAN IN THE WELL  
MAN LIFT/RETRIEVAL DEVICES MUST BE USED**

1. a) Open manhole lids, turn on blower/fan to ventilate wet well for approximately two to three minutes.  
b) Leave fan running until job is completed.  
c) Manhole must be circulated by a blower fan to allow fresh air into the confined space. Check levels on gas detector by lowering into well. If levels are not safe, portable fans **MUST** be used.
2. Turn gas detector "ON":
  - Oxygen levels should read between 20.0 to 21.0
  - H<sub>2</sub>S levels should read 000
  - LEL levels should read 000

NOTE: - Readings shall be taken before entering well.  
- Record gas levels on "Confined Entry Space" forms and hand in daily.

3. a) Lower gas detector by rope/cord into lower portion of wet well where work shall be performed.  
b) Pull detector to surface and check gas levels. If levels are safe, entry into well is permitted.
4. Gas detector **MUST** be left "ON" and brought down into well with person(s) entering.
5. Check levels on gas detector when in well. Proceed with washing/repairing of station.
6. If at any time the gas detector goes "OFF" (ringing), **EXIT WET WELL IMMEDIATELY** and check levels.

**ATTACHMENT #4  
COMPLIANCE TO SAFETY PROCEDURE  
WORKING IN CONFINED SPACE**

Where work is to be carried out, in any confined space where harmful atmosphere may develop, the following procedures must be followed:

- a) The space must be ventilated continuously.
- b) Gas detection equipment must be calibrated in an atmosphere that is known to be safe.

Tests for harmful or explosive substances and oxygen deficiency shall be made and recorded immediately prior to entry, after any interruptions in the work procedure and at intervals to ensure the continuing safety of the worker in the confined space.

If a harmful atmosphere develops, the worker will immediately evacuate the space and will not re-enter until it has been tested and found to be safe to do so.

- c) A safety belt or harness of a type which will keep the worker in a position to permit rescue, will be worn.
- d) A life line will be attached to the belt or harness which is tended at all times by another person stationed outside the entrance to the confined space, who shall be equipped for and capable of effecting rescue.

I, the undersigned, acknowledge having read and understand the information above.

By signing this Agreement, I agree as a representative of the firm noted below, to accept all responsibilities and compliant to all the Workers' Compensation Board regulation requirements.

Project File No.: 1220-040-2017-034

Company: \_\_\_\_\_.

Project Title: **Sewer Reline and Point Repair Program**

Signed: \_\_\_\_\_  
(Company Owner)

Date: \_\_\_\_\_

Witness: \_\_\_\_\_

Date: \_\_\_\_\_

**ATTACHMENT #5**  
**SANITARY SEWER MAIN FLUSHING & CLEANING - BACK-PRESSURE AVOIDANCE**  
**AND PROBLEM REPORTING PROCEDURE**

**Back-Pressure Avoidance**

A Back-Pressure situation can develop when there is a significant change in pressure, either positive or negative, within the sewer system caused by the sewer flushing and cleaning. This change in pressure can force water and air towards the private plumbing system displacing water in toilets and p-traps within the building and impact private property.

To avoid a Back-Pressure situation it is critical that operators and contractors take precautions and follow the procedures outlined below:

- ❖ To reduce the chance of a Back-Pressure occurring in the building's plumbing system the operator or Contractor flushing and cleaning the sewer must remove the Inspection Chamber lid(s) of the service connection(s) connected to the section of main (manhole to manhole) being flushed. Manhole covers, upstream and downstream of the main section being flushed must also be removed.
- ❖ The City documents and tracks these Back-Pressure occurrences in their Work Management System to ensure that a reoccurrence does not take place. This back-pressure list is updated when the list changes and is distributed to all contractors on the City's Hire Equipment and Contract lists. The operator or Contractor is responsible to obtain the most recent and up to date Back-Pressure information and take the required precautions to avoid a Back-Pressure reoccurrence.
- ❖ The operator or Contractor must be aware of the water pressure being applied and utilize the appropriate pressure to effectively clean the sewer system without using excessive pressure.
- ❖ The operator or Contractor must ensure that they are maintaining and replacing their flushing equipment (nozzles, hoses, etc.) on a frequent basis. Worn or damaged sewer flushing equipment can cause an increase in both water discharged and air pressure when flushing and cleaning sewer systems.
- ❖ If a Back-Pressure situation occurs, the operator and Contractor must immediately notify the City's Dispatch at 604.590.7226.
  - The Contractor is fully responsible for any damage caused by the Back-Pressure situation, and shall be responsible to mitigate the situation with the property owner, including compensation.
- ❖ In the event the operator or Contractor is requested by the City to clear a sanitary sewer inspection chamber blockage, the inspection chamber is to be vacuumed out in order to remove debris, and then flushed after plugging the private side of the sanitary inspection chamber. These steps will eliminate Back-Pressure and protect private property.

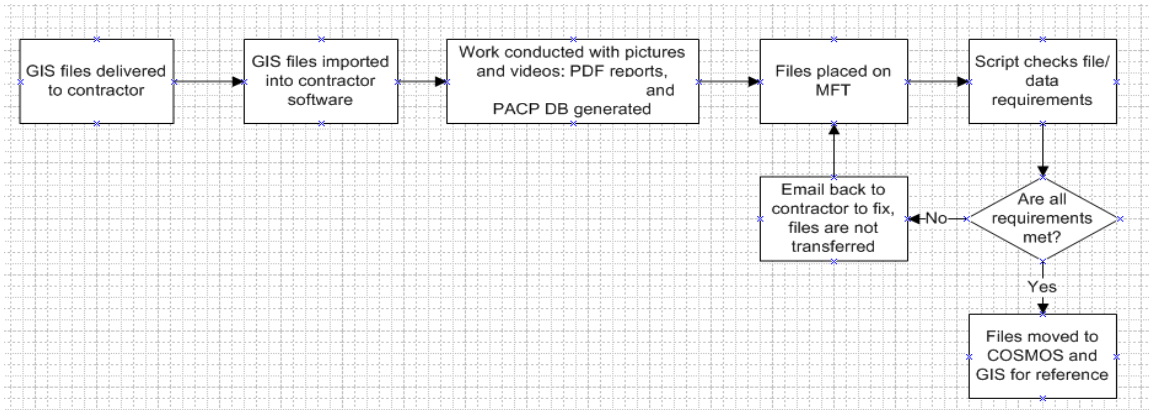
**Other Flushing and Reporting Procedures**

- ❖ In the process of flushing, debris such as gravel, etc. must be collected and removed (vacuumed) at the down-stream manhole and not released into the downstream system.
- ❖ The following conditions shall be reported to the City immediately, with pertinent information, such as asset type and identifying numbers, address or location, type of problem discovered or encountered and severity of problem, if known:
  - Grease in line;
  - Roots in line;
  - Blockages in line;
  - Large amounts of gravel, rocks or other debris;
  - Structural damage to line;
  - Infiltration at a manhole;
  - Structural damage in manhole;
  - Inability to locate or access an existing manhole or inspection chamber because it is buried or obstructed.
  - Damage to an inspection chamber and missing lids.

## ATTACHMENT #6 SANITARY SEWER CCTV FILE TRANSFER REQUIREMENTS

### A. PROCESS OVERVIEW

Starting immediately, Sanitary Sewer contractors will be required to send PACP databases, PDF reports (one detailed for each main and one summary for all), videos and pictures of inspected mains and/or laterals to the City, daily, via our Managed File Transfer (MFT, replacing the City's current FTP).



### B. CONTRACTOR REQUIREMENTS

- 1) **No manual data entry** of WO# and FacilityIDs into your PACP databases. Instead, the City will provide extracted GIS files with work order and FacilityID data for you to upload into your PACP databases to help eliminate human error on data entry. The City will provide an ESRI license upon request.

The GIS file will be a file geodatabase (ESRI product), named by Contractor and contained within a parent folder or zip file named by work order number. Your system (Contractor's) should be set up to handle this process.

- 2) The **PACP db** should be named with the WO# followed by a dash character followed by the CCTV date in the format YYYYMMDD, for example 2170605-20160113.mdb

No DVD # is required.

- 3a) In the PACP db, use **Inspections** table for PACP inspections

- The WorkOrder field should contain the WO# (provided in step 1). If the PACP database is an older version and does not have the WorkOrder field, then store the WO# into the PO\_Number field instead.
  - If valid WO#(s) are not provided then it will result in an error when the City's processing scripts run and an email will be sent to the Contractor to provide a newer version of the PACP db (with a different name, with a -Seq# appended to its filename) with valid WO#(s).
- The Pipe\_Segment\_Reference field should contain the Facility ID (FID) (provided in step 1), which is a ten digit unique identifier for the asset.
  - If additional assets were found in the field that were not originally identified in step 1 then use the string UM followed by a 3 digit sequence# for the FID value (e.g. UM001 or UM099) and please add your comments to the Additional\_Info field that describes the asset found, preferably, including its location, type, size, length and other description attributes.
  - If valid FID(s) are not provided then it will result in an error when the City's processing



scripts run and an email will be sent to the Contractor to provide a newer version of the PACP db with valid FID(s).

- The Date field must be populated with the date of the CCTV inspection.

3b) In the PACP db, use **LACP\_Inspections** for LACP inspections

- The WorkOrder field should contain the WO# (provided in step 1). If the PACP database is an older version and does not have the WorkOrder field, then store the WO# into the PO\_Number field instead.
  - If valid WO#(s) are not provided then it will result in an error when the City's processing scripts run and an email will be sent to the Contractor to provide a newer version of the PACP db with valid WO#(s).
- The Lateral\_Segment\_Reference field should contain the Facility ID (FID) (provided in step 1), which is a ten digit unique identifier for the asset.
  - If additional assets were found in the field that were not originally identified in step 1 then use the string UL followed by a 3 digit sequence# for the FID value, (e.g. UL001 or UL099) and please add your comments to the Additional\_Info field that describes the asset found, preferably, including its location, type, size, length and other description attributes.
  - If valid FID(s) are not provided then it will result in an error when the City's processing scripts run and an email will be sent to the Contractor to provide a newer version of the PACP db with valid FID(s).
- The Date field must be populated with the date of the CCTV inspection.

4) In the PACP db, **Media\_Inspections** table

- The VideoName field must contain the name(s) of the video file(s). We recommend for the best quality and smallest files size (reduced upload times and easier storage), that the video file be in Windows Media Video format. We also support Mpegs if required. Any other file formats must be vetted and tested by the City prior to submission.
  - Each video file provided needs to have a record in the Media\_Inspections table. If the video names are not provided in the Media\_Inspections table then it will result in an error when the City's processing scripts run and an email will be sent to the Contractor to please provide a newer version of the PACP db with video names.  
We use the video name information so that we can map it to an Inspection record to get the WO# and FID then we rename the video file(s) into the format WO#- FID-Seq#.

5) In the PACP db, **Media\_Conditions** table

- The Image\_Reference field must contain the name(s) of the picture file(s).
  - Each picture file provided needs to have a record in the Media\_Conditions table. If the picture file names are not provided in the Media\_Conditions table then it will result in an error when the City's processing scripts run and an email will be sent to the Contractor to please provide a newer version of the PACP db with picture file names. We use the picture file name information so that we can map it to an Inspection record to get the WO# and FID then we rename the picture file(s) into the format WO#-FID-Seq#.

6) In the PACP db, **Custom\_Fields** table

- The Custom\_Field\_One field must contain the Structural Quick Rating.
  - If Structural Quick Rating(s) are not provided then it will result in an error when the City's processing scripts run and an email will be sent to the Contractor to please provide a newer version of the PACP db with Structural Quick Rating(s).
- The Custom\_Field\_Two field must contain the O&M Quick Rating.
  - If O&M Quick Rating(s) are not provided then it will result in an error when the City's processing scripts run and an email will be sent to the Contractor to please provide a newer version of the PACP db with O&M Quick Rating(s).



7) **Summary PDF report**

- The Summary PDF report needs to follow the same naming convention as it's associated PACP db, see item 2) where it should be named with WO# followed by a dash character followed by the CCTV date in the format YYYYMMDD, for example 2170605-20160113.pdf
  - If the Summary PDF report cannot be matched to a PACP db with the same file name then it will result in an error when the City's processing scripts run and an email will be sent to the Contractor to inform them of this. The Summary PDF filename needs to match its associated PACP db filename so that our scripts can look into its associated PACP db to determine which assets are in the Summary PDF.

8) **Detailed PDF reports**

- The Detailed PDF reports should be named with the FID followed by a dash character followed by the CCTV date in the format YYYYMMDD, for example 1000086460-20160113.pdf (where 1000086460 is the FacilityID of the main or lateral and 20160113 is the date Jan 13, 2016) and there should only be one pipe asset in each detail pdf report. In other words, there should be a separate Detail pdf report for each asset. In the unlikely scenario where we have more than one Detail pdf report for a particular asset, then they should be named same as above but with a dash 2 digit sequence number appended to its filename, for example 1000086460-20160113-01.pdf and 1000086460-20160113-02.pdf
  - If the FID of the Detailed PDF report filename is not valid then it will result in an error when the City's processing scripts run and an email will be sent to the Contractor to please provide another file with a valid FID.

9) **All files to be placed on the MFT site** (see section C) grouped into folders named with the WO# followed by a dash character followed by the CCTV date in the format YYYYMMDD, for example 2170605-20160113, no later than 10 PM.

10) **ERROR HANDLING AND RESPONSE:**

It is expected that the errors be fixed by the Contractor and the files reloaded within a business day. It is also expected that the City be notified of any changes to contact emails.

It is required that all file names provided be unique, as a file cannot be submitted that has already been submitted previously, except for when it is within the same business day. For example, if a file was submitted but then later on in the day, determined that the file provided was incorrect and you would like to make a change to it, then you may provide another file with the same name through the MFT site within the same day, which will overwrite the file that was previously provided earlier in the day.

In the case where a PACP db has been received by us and processed and a new version of the PACP db is being requested for fixes, then name the new PACP db file exactly the same as previously, but with a dash Seq# appended. For example, if the original PACP db was named 2170605-20160113.mdb and a newer PACP db is being provided to fix the errors, then name the new PACP db 2170605-20160113-2.mdb

Assumptions:

- Work will not be performed on an asset (Facility ID), and imported through this process that does not have a work order number associated with it (with the asset attached to the work order).
- Contractor is using the most recent defect Rating Scores available (the software is up to date).

**C. MANAGED FILE TRANSFER CONTRACTOR INSTRUCTIONS**

CCTV files upload requirements for City of Surrey

- 1) A valid user id and password provided by City of Surrey.

- 2) A SFTP client such as WSFTP Pro, SmartFTP, WinSCP to connect to City of Surrey SFTP site.
- 3) City of Surrey SFTP site info:

Please select "yes" to store the server's rsa host key in the registry cache if you are prompted by the SFTP client

Host/Site name: MFT.SURREY.CA File protocol: SFTP  
Port number: 22

- 4) Daily upload must be completed prior to 10:00PM. If for any reason the upload is not completed prior to 10:00PM, it may be necessary to upload that same report the following day. For best performance, upload prior to 8:00am or after 6:00pm. It is recommended that the Contractor use a client that has scheduling functionality so the upload is automated at a specified time.
- 5) Reports for on demand work shall be submitted within 5 working days of completion in the field. Program items to be uploaded once weekly on assigned day to be provided by the City.
- 6) Provide your e-mail address so the system could send you an e-mail alert when a file fails to upload.

Depending on the average daily upload size, please use table provided below to determine your upload speed requirements. For example, if you need to upload 5GB of data per day, you should have an Internet Service Provider (ISP) with a minimum **upload** speed of 15Mbps to keep the uploading time under one hour.

	Transfer Rate
Upload Speed (Mbps)	GB / hour
10	4.5
15	6.75
20	9

See section D for official ISP recommendation for optimal performance.

**D. INTERNET SERVICE PROVIDER RECOMMENDED SPECS**

It is recommended for ease of access and reasonable upload times that your internet meets the following specifications: 30 Mbps Symmetrical Fibre Gateway

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