



NEW WESTMINSTER

CORPORATION OF THE CITY OF NEW WESTMINSTER

CONTRACT No. NWIT-21-25

Service Connection Replacement & Point Repair

Updated Instructions to Tenderers

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INVITATION TO TENDER

CORPORATION OF THE CITY OF NEW WESTMINSTER
(THE OWNER)

Contract: **Service Connection Replacement & Point Repair**

Reference No: NWIT-21-25

The Owner invites tenders for:

Cast in Place Pipe point repairs of existing sewer pipe at various locations (ranging in size from 150mm diameter pipe to 600mm diameter pipe). Root cutting within an existing 250mm diameter combined sewer pipe. Open cut sewer pipe external point repairs at various locations and open cut sewer service replacements and inspection chamber installations.

Copies of the Contract Documents are available for download from the City of New Westminister Purchasing site at:

<https://www.newwestcity.ca/business-and-economy/doing-business-with-the-city/request-for-bids-and-proposals-open>

Tenderers can download the video files and information at this link

<https://fileshare.newwestcity.ca/link/IOXX8I5CzOAdr9i8Qa2TD3>

Tenderers are responsible to check for all subsequent addendums/amendments on the City's Purchasing web page and/or BC Bid and respond according to the Invitation to Tender documents.

Tenders are scheduled to close at:

Tender Closing Date: Thursday, December 16, 2021

Tender Closing Time: 3:00 pm (Local Time)

Tenders to be submitted by email to nwpurchasing@newwestcity.ca with Subject "NWIT-21-25 Service Connection Replacement & Point Repair". The City reserves the right to ask any Tenderer to forward a hard copy of the tender and bond after Tender Closing.

A tender shall be accompanied by Bid Security in the amount of ten percent (10%) of the Tender Price payable to the Corporation of the City of New Westminister. The successful tenderer will be required to provide a Performance and Labour and Material Payment Bond each in the amount of fifty percent (50%) of the Tender Price. An Agreement of Surety to bond shall accompany the tender submitted.

Enquiries regarding this tender may be directed to:

Heather Rossi, Intermediate Buyer

City of New Westminister

email: nwpurchasing@newwestcity.ca

The lowest or any Tender may not necessarily be accepted and the City will not be responsible for any cost incurred by the Tenderer in preparing the Tender. Tender award will be contingent on budget approval from the City of New Westminister Council.

INSTRUCTIONS TO TENDERERS

Instructions to Tenderers, Part I

INSTRUCTIONS TO TENDERERS – PART 1

(TO BE READ WITH “INSTRUCTIONS TO TENDERERS - PART II” CONTAINED IN THE EDITION OF THE PUBLICATION “MASTER MUNICIPAL CONSTRUCTION DOCUMENTS” SPECIFIED IN ARTICLE 2.2 BELOW)

CORPORATION OF THE CITY OF NEW WESTMINSTER

(THE OWNER)

Contract: Service Connection Replacement & Point Repair

Reference No: NWIT-21-25

- 1.0 Introduction**
- 1.1 These Instructions apply to and govern the preparation of tenders for this *Contract*. The *Contract* is generally for the following work:
- Cast in Place Pipe point repairs of existing sewer pipe at various locations (ranging in size from 150mm diameter pipe to 600mm diameter pipe). Root cutting within an existing 250mm diameter combined sewer pipe. Open cut sewer pipe external point repairs at various locations and open cut sewer service replacements and inspection chamber installations.
- 1.2 Direct all inquiries regarding the *Contract*, to:
- Heather Rossi, Intermediate Buyer**
City of New Westminister
511 Royal Ave, New Westminister, BC, V3L 1H9
email: nwpurchasing@newwestcity.ca
- 2.0 Tender Documents**
- 2.1 The tender documents, which a tenderer should review to prepare a tender, consist of all of the *Contract Documents* listed in Schedule 1 entitled “Schedule of Contract Documents”. Schedule 1 is attached to the Agreement which is included as part of the tender package. The *Contract Documents* include the drawings listed in Schedule 2 to the Agreement, entitled “List of *Contract Drawings*”, and Schedule 3 “Prime Contractor Designation”.
- 2.2 Portions of the Contract Documents are included by reference. Copies of these documents have not been included with the tender 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”. 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 *Tender Closing Date*. All sections of this publication are by reference included in the *Contract Documents*.

Copies of the Master Municipal Construction Document (Platinum Edition) can be obtained at:

Support Services Unlimited
 #102 – 211 Columbia Street
 Vancouver, BC, V6A 2R5
 604 681-0295

- 2.3 Any additional information made available to tenderers prior to the *Tender Closing Time* 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 tenderers 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.
- Addenda
- 2.4 Should addenda to the tender documents be required for any reason, it is the City's intention not to issue addenda during a period three (3) days prior to the Tender Closing date and time.
- 2.5 All Addenda become part of the Contract Documents.
- 2.6 Failure to acknowledge any Addendum may result in the disqualification of the Tenderer.
- 3.0 Submission of Tenders**
- 3.1 Tenders must be submitted in electronic format, to the email address below and must be received on or before:
- Tender Closing Time: 3:00 pm (Local Time)**
- Tender Closing Date: Thursday, December 16, 2021**
- Address: **Email to: nwpurchasing@newwestcity.ca** with
 Subject "NWIT-21-25 Service Connection Replacement & Point Repair".
- Attention: **Purchasing Manager**
- 3.2 Late tenders will not be accepted or considered, and will be returned unopened.
- 3.3 The City will not open this Tender in public. The City will make the Tender results available to Tenderers within a reasonable period following the Tender Closing Date and Time.

- 4.0 Tender Requirements**
- 4.1 **IT 5.3.4 (amend clause 5.3.4 as follows)**
Add “The Comparable Work Experience listed in Appendix 4 must be comparable in scope and magnitude to the Work of this Tender.”
- 4.2 **IT 5.3 (amend clause 5.3 as follows)**
Add “5.3.6 Appendix 6 – Force Account Labour and Equipment Rates. Insert the hourly rates for Labour and Equipment including allowances for taxes, assessments, benefits, tools, overhead, and profit.”
- Add** “5.3.7 Appendix 7 – Declaration – Living Wage Employer”
- 5.0 Amendment of Tenders**
- 5.1 **IT 12.1 (amend clause 12.1 as follows)**
Delete “or fax,” from the first sentence.
- 6.0 Award**
- 6.1 **IT 15.1 (delete clause 15.1.1 and replace with):**
 15.1.1 Reject any or all Tenders if the City determines, in its sole discretion and after appropriate investigation and evaluation, that:
- a) the comparable work references are, in the opinion of the City, unsatisfactory; **OR**
 - b) information becomes available after Closing Time which significantly changes the scope or extent of the project; **OR**
 - c) the Tender, or all of the Tenders, exceeds the available budget funds; **OR**
 - d) less than three (3) Tenders are received.
- 6.2 **IT 15.5 (add clause 15.5 as follows)**
 In exercising its discretion, the *Owner* will have regard to the information provided by the Tenderer in the Appendices to the Form of Tender as described under IT 5, and may also have regard to any information obtained by the *Owner* in evaluating such tender information, as well as the *Owner’s* previous experience, if any, with the Tenderer. In exercising its discretion the *Owner* may consider, but is not limited to, the following criteria in addition to the Tender Price:
- a) the proven experience of the Tenderer, and any listed subcontractors to do the Work;
 - b) the Tenderer’s ability to complete the Work within the Preliminary Construction Schedule;
 - c) the Tenderer’s ability to work effectively with the *Owner*, its consultants and representatives;
 - d) the Tenderer’s ability to manage and do the work effectively using the named superintendent and submitted contractors and subcontractors;
 - e) the Tenderer’s history on other projects including with respect to quality of work, changes in the work, force account work, and the contract administration costs of the *Owner*;

- f) the nature of any legal proceedings undertaken by the Tenderer, or any officer or director of the Tenderer or affiliate of the Tenderer, directly (or indirectly through another corporation) against the Owner within the previous five years of the Invitation to Tenders;
- g) litigation and on-going unresolved claims;
 - a. in addition to any other provision of this tender document, and without limiting the City's discretion under any other provision of this tender document, the City may, in its absolute discretion, reject a tender if:
 - i. the Tenderer, or any officer or director of the Tenderer, is or has been engaged directly or indirectly in a legal action against the City in relation to any matter; or,
 - ii. the Tenderer has current unresolved extra work claims totalling in excess of \$100,000.00 beyond 90 days of contract substantial completion for any construction project with the City.
 - b. in determining whether or not to reject a tender under this section, the City will consider whether the litigation or unresolved extra work claim is likely to affect the Tenderer's ability to work with the City, its employees, consultants and representatives and whether the City's experience with the Tenderer indicates an unusual risk the City will incur increased staff and legal costs in the administration of the contract if awarded to the Tenderer.

The *Owner* will, following receipt of an acceptable tender, issue in writing a *Notice of Acceptance* to the successful tenderer. This Notice will be given as soon as possible following the closing of tenders and, unless otherwise agreed to by the tenderer, not later than sixty (60) days following the Tender Closing Date.

6.3 **IT 15.6 (add clause 15.6 as follows)**

The *Owner* may, prior to and after Contract Award, negotiate changes to the scope of the Work, the type of materials, the specifications or any conditions with the low tenderer without having any duty or obligation to advise any other tenderer or to allow them to vary their Tender Prices as a result of such changes and the *Owner* shall have no liability to any other tenderer as a result of such negotiations or modifications.

The award of this *Contract* is subject to approval of the *Owner* and to the availability of sufficient funds to complete the Work. The City may delete certain portions of the Work if Tender Prices exceed the available budget.

- 7.0 Prime Contractor Designation**
- 7.1 IT 18.0 (add clause 18.0 as follows)**
Schedule 3 Prime Contractor Designation forms part of the Agreement.
- 8.0 Freedom of Information**
- 8.1 IT 19.0 (add clause 19.0 as follows)**
The City of New Westminster is subject to the Province of British Columbia *Freedom of Information and Protection of Privacy Act*. All documents will be received and held in confidence by the City of New Westminster and the information will not be disclosed, except to the extent necessary for carrying out the City's purposes or as required by law.
- 9.0 Living Wage Information**
- 9.1 IT 20.0 (add clause 20.0 as follows)**
Effective January 1, 2011, the City of New Westminster became a "Living Wage Employer" (see Form of Tender - Appendix 7). As such, the City has established a [Living Wage Policy](#) that requires all firms that are contracted by the City to provide services on City premises, to pay their employees, who perform said service on City property, a Living Wage as calculated by the Living Wage for Families Campaign. The current living wage rate for Metro Vancouver is \$20.52 per hour, assuming no benefits are provided by the employer.

In order to determine an employee's hourly rate with benefits the Living Wage for Families has created a Living Wage Calculator to assist with this determination. Please access the following website to determine your compatibility.

http://www.livingwageforfamilies.ca/living_wage_calculator

The City includes in all its competitive bid documents a Declaration referencing the City's expectations with regards to compliance of the Policy. **Completion and submission of the Declaration is required prior to Contract award** (see Form of Tender - Appendix 7).

In evaluating submissions, the City intends to rely on the Declaration provided by a Respondent and shall have no obligation or duty to investigate the truthfulness of the Declaration.

Please review the City's [Living Wage Page](#) for further information.

- 10.0 Good Neighbour Protocol**
- 10.1 IT 21.0 (add clause 21.0 as follows)**
 This policy is for City-led construction projects and works. The [Good Neighbour Protocol](#) (GNP) provides guidelines to minimize construction related impacts to residents and businesses.
- The successful contractor will be required to adhere to the Good Neighbour Protocol. Please review the City's Good Neighbour Protocol for further information.
- 11.0 Non-Road Diesel Engine Emissions Regulation**
- 11.1 IT 22.0 (add clause 22.0 as follows)**
 All non-road diesel powered equipment that is 25 hp (19 kw) or greater must comply with Metro Vancouver's Non-Road Diesel Engine Emissions Regulation Bylaw No. 1161, 2012 (the Bylaw). The Bylaw requires owners or operators of Tier 0 and Tier 1 non-road diesel engines to register, label, and pay fees in order to operate within Metro Vancouver. Please advise what Engine Tier your proposed equipment meets and if it complies with Metro Vancouver's Bylaw. Provide the engine registration number issued by Metro Vancouver if applicable. The City, at its discretion, may give preference to equipment that meets higher emission standards. To register your equipment call Metro Vancouver for assistance at 604-451-6655 or visit www.metrovancouver.org/nonroaddiesel
- 12.0 COVID 19 Global Pandemic**
- 12.1 IT 23.0 (add clause 23.1 as follows)**
 The City expects the successful contractor to follow the Guidance to construction sites operating during COVID-19 issued by the Provincial Health Officer of BC refer to:
<http://www.bccassn.com/media/Guidance%20to%20Construction%20Sites%20Operating%20During%20COVID19.pdf>
- 12.2 IT 23.0 (add clause 23.2 as follows)**
 Due to the COVID 19 global pandemic, the City may be required or decide to not proceed with the Work or to terminate any contract prior to the Work commencing. If this occurs, the City will only pay for actual costs incurred by the contractor (i.e. bonds, insurance, mobilization).
- 13.0 Tree Protection**
- 13.1 IT 24.0 (add clause 24.0 as follows)**
 The contractor must protect all trees in accordance with City policy. Requirements for tree protection are available on the City's website. The contractor is required to make application and obtain a tree protection permit prior to the start of the work. Final location of the tree protection is to be reviewed with, and approved by the City Arborist.

FORM OF TENDER WITH APPENDICES

- Form of Tender
- Appendix 1: Schedule of Quantities and Prices
- Appendix 2: Preliminary Construction Schedule
- Appendix 3: Experience of Superintendent
- Appendix 4: Comparable Work Experience
- Appendix 5: List of Sub-Contractors
- Appendix 6: Force Account Labour and Equipment Rates
- Appendix 7: Declaration – Living Wage Employer

FORM OF TENDER

CORPORATION OF THE CITY OF NEW WESTMINSTER
(THE OWNER)

Contract: Service Connection Replacement & Point Repair

Reference No: NWIT-21-25

To Owner:

1 WE, THE UNDERSIGNED:

- 1.1 have received and carefully reviewed all of the *Contract Documents*, including the Instructions to Tenderers, the specified edition of the “Master Municipal Construction Documents - General Conditions, Specifications and Standard Detail Drawings” and the following Addenda:

(Addenda, if any)

- 1.2 have full knowledge of the *Place of the Work*, and the *Work* required; and
- 1.3 have complied with the Instructions to Tenderers; and

2 ACCORDINGLY WE HEREBY OFFER

- 2.1 to perform and complete all of the *Work* and to provide all the labour, equipment and material all as set out in the *Contract Documents*, in strict compliance with the *Contract Documents*; and
- 2.2 to achieve Substantial Performance of the *Work* on or before **eight (8) weeks** from the *Notice to Proceed*; and
- 2.3 to do the *Work* for the price, which is the sum of the products of the actual quantities incorporated into the *Work* and the appropriate unit prices set out in Appendix 1, the “*Schedule of Quantities and Prices*”, plus any lump sums or specific prices and adjustment amounts as provided by the *Contract Documents*. For the purposes of tender comparison, our offer is to complete the *Work* for the “*Tender Price*” as set out on Appendix 1 of this Form of Tender. Our *Tender Price* is based on the estimated quantities listed in the *Schedule of Quantities and Prices*, and excludes *GST*.

3 WE CONFIRM:

- 3.1 that we understand and agree that the quantities as listed in the *Schedule of Quantities and Prices* are estimated, and that the actual quantities will vary.
- 3.2 that we acknowledge the presence of the COVID-19 virus in Canada and other jurisdictions.
- 3.3 that we acknowledge the consequences and impacts “Known Impacts” of the COVID-19 Pandemic existing as of the date of this Form of Tender including, without restriction:
- a) orders, directives and recommendations of any Government Authority issued up to and including the date of this Agreement, and respecting public health or other requirements related to response to and prevention of infection by the COVID-19 virus;

Tenderer's Initials _____

- b) impacts to availability of labour or materials required in order to carry out the Work, arising from the COVID-19 Pandemic;
 - c) any the impacts of self-isolation/quarantine or regulated quarantine as regulated by the Province;
- the “Known Impacts”, are known to the Contractor and to the Owner, have been accounted for by the Contractor within the Construction Schedule, as well as the Tender Price.

4 WE CONFIRM:

4.1 that the following appendices are attached to and form a part of this tender:

- 4.1.1 the appendices as required by paragraph 5.3 of the Instructions to Tenderers – Part II; and
- 4.1.2 the *Bid Security* as required by paragraph 5.2 of the Instructions to Tenderers – Part II.

5 WE AGREE:

5.1 that this tender will be irrevocable and open for acceptance by the *Owner* for a period of sixty (60) calendar days from the day following the *Tender Closing Date and Time*, even if the tender of another tenderer is accepted by the *Owner*. If within this period the *Owner* delivers a written notice (“*Notice of Award*”) by which the *Owner* accepts our tender we will:

- 5.1.1 within 15 *Days* of receipt of the written *Notice of Award* deliver to the *Owner*:
 - a) a Performance Bond in the amount of 50% of the Contract Price, issued by a surety licensed to carry on the business of surety ship in the Province of British Columbia, and in a form acceptable to the Owner;
 - b) a Labour and Material Payment Bond in the amount of 50% of the Contract price, the Labour and Material Payment Bond must be a **Broad Form bond**, protecting all companies with a direct contract with the Principal or any sub-contractor of the Principal;
 - c) a *Baseline Construction Schedule*, as provided by GC 4.6.1;
 - d) a “clearance letter” indicating that the tenderer is in WorkSafeBC compliance;
 - e) a copy of the insurance policies as specified in GC 24 indicating that all such insurance coverage is in place; and,
 - f) proof of a valid City of New Westminster or MetroWest Inter-Municipal Business License
- 5.1.2 sign the *Contract Documents* as required by GC 2.1.2.
- 5.1.3 within 2 *Days* of receipt of written “*Notice to Proceed*”, or such longer time as may be otherwise specified in the *Notice to Proceed*, commence the *Work*; and

Tenderer’s Initials _____

6 WE AGREE:

6.1 that, if we receive written *Notice of Award* of this *Contract* and, contrary to paragraph 5 of this Form of Tender, we:

- a) fail or refuse to deliver the documents as specified by paragraph 5.1.1 of this Form of Tender; or
- b) fail or refuse to commence the *Work* as required by the *Notice to Proceed*,

then such failure or refusal will be deemed to be a refusal by us to enter into the *Contract* and the *Owner* upon written notice to us, may award the *Contract* to another party. We further agree that, as full compensation on account of damages suffered by the *Owner* because of such failure or refusal, the *Bid Security* shall be forfeited to the *Owner*, in an amount equal to the lesser of:

- a) the face value of the *Bid Security*; and
- b) the amount by which our *Tender Price* is less than the amount for which the *Owner* contracts with another party to perform the *Work*.

7 OUR ADDRESS is as follows:

Phone: _____

Fax: _____

E-mail:: _____

Attention: _____

This Tender is executed this

_____ day of _____, 2021

Contractor:

(full legal name of corporation, partnership or individual)

(Authorized Signatory)

(Authorized Signatory)

Tenderer's Initials _____

FORM OF TENDER – Appendix 1

SCHEDULE OF QUANTITIES AND PRICES

(See paragraph 5.3.1 of the Instructions to Tenderers - Part II)

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

Item	MMCD Ref.	Description	Unit	Qty	Unit Price (\$)	Amount (\$)
Item 1						
	01 33 01	Project Record Documents				
1.1	1.8.1	Project Record Documents	Lump Sum	1	\$	\$
	01 55 00	Traffic Control, Vehicle Access and Parking				
1.2	1.5.1	Traffic Control, Vehicle Access and Parking	Lump Sum	1	\$	\$
	01 57 01	Environmental Protection				
1.3	1.6.1	Environmental Protection	Lump Sum	1	\$	\$
	01 58 01	Project Identification				
1.4	1.3.1	Project Identification	Lump Sum	1	\$	\$
Item 1 Subtotal					\$	
Item 2						
	33 01 30.2	Cleaning of Sewers				
2.1	1.5.4S	Root Cutting at Strand Ave as specified on Contract Drawing 2260-00-C-1114.	Lump Sum	1	\$	\$
Item 2 Subtotal					\$	
Item 3						
	33 05 24.1S	Cured-In-Place Point Repair				
3.1	1.7	Sanitary/Combined Sewer CIPP Point Repair 1 to 2 lineal meters of lining of 150mm pipe diameter as specified on the Contract Drawings	Each	1	\$	\$

Tenderer's Initials _____

Item	MMCD Ref.	Description	Unit	Qty	Unit Price (\$)	Amount (\$)
3.2	1.7	Sanitary/Combined Sewer CIPP Point Repair 1 to 2 lineal meters of lining of 200mm pipe diameter as specified on the Contract Drawings	Each	10	\$	\$
3.3	1.7	Storm Sewer CIPP Point Repair 1 to 2 lineal meters of lining of 200mm pipe diameter as specified on the Contract Drawings	Each	1	\$	\$
3.4	1.7	Sanitary/Combined Sewer CIPP Point Repair 1 to 2 lineal meters of lining of 250mm pipe diameter as specified on the Contract Drawings	Each	6	\$	\$
3.5	1.7	Sanitary/Combined Sewer CIPP Point Repair 1 to 2 lineal meters of lining of 300mm pipe diameter as specified on the Contract Drawings	Each	2	\$	\$
3.6	1.7	Sanitary/Combined Sewer CIPP Point Repair 1 to 2 lineal meters of lining of 450mm pipe diameter as specified on the Contract Drawings	Each	2	\$	\$
3.7	1.7	Sanitary/Combined Sewer CIPP Point Repair 1 to 2 lineal meters of lining of 600mm pipe diameter as specified on the Contract Drawings	Each	2	\$	\$
3.8	1.7	Sanitary/Combined Sewer CIPP Point Repair 2.1 to 4 lineal meters of lining of 200mm pipe diameter as specified on the Contract Drawings	Each	2	\$	\$
3.9	1.7	Sanitary/Combined Sewer CIPP Point Repair 2.1 to 4 lineal meters of lining of 300mm pipe diameter as specified on the Contract Drawings	Each	1	\$	\$
3.10	1.7	Sanitary/Combined Sewer CIPP Point Repair 2.1 to 4 lineal meters of lining of 375mm pipe diameter as specified on the Contract Drawings	Each	1	\$	\$
Item 3 Subtotal					\$	

Tenderer's Initials _____

Item	MMCD Ref.	Description	Unit	Qty	Unit Price (\$)	Amount (\$)
Item 4						
	33 30 01	Sanitary Sewers				
4.1	1.6.3S	Sanitary/Combined Service Replacement 100mm dia. per Standard Drawing S7 including disposal of existing service pipe fittings and dewatering	Each	20	\$	\$
4.2	1.6.8S	Sanitary or Combined Sewer External Point Repair - 200mm diameter PVC pipe in the easement north of Ewen Ave. at 30m downstream of SMH #9042 as specified on Contract Drawing 2260-00-C-1108	Lump Sum	1	\$	\$
4.3	1.6.8S	Sanitary or Combined Sewer External Point Repair - 200mm diameter PVC pipe in the easement north of Ewen Ave. at 45m downstream of SMH #9042 as specified on Contract Drawing 2260-00-C-1108	Lump Sum	1	\$	\$
4.4	1.6.8S	Sanitary or Combined Sewer External Point Repair - 200mm diameter PVC pipe in the easement north of Salter St. as specified on Contract Drawing 2260-00-C-1109	Lump Sum	1	\$	\$
4.5	1.6.8S	Sanitary or Combined Sewer External Point Repair - 450mm diameter vitrified clay pipe on Winthrop St. as specified on Contract Drawing 2260-00-C-1116	Lump Sum	1	\$	\$
4.6	1.6.8S	Sanitary or Combined Sewer External Point Repair - 375mm diameter vitrified clay pipe on E Columbia St. as specified on Contract Drawing 2260-00-C-1120	Lump Sum	1	\$	\$
	33 44 01	Manholes and Catchbasins				
4.7	1.5.2	Inspection Chamber Standard Drawings S9, S10	Each	20	\$	\$
Item 4 Subtotal					\$	

Tenderer's Initials _____

FORM OF TENDER – Appendix 1

SCHEDULE OF QUANTITIES AND PRICES

(See paragraph 5.3.1 of the Instructions to Tenderers - Part II)

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

TENDER SUMMARY

ITEM	DESCRIPTION	TOTAL AMOUNT
1	General Requirements & Shrub and Tree Preservation	\$
2	Root Cutting	\$
3	CIPP Point Repair	\$
4	Service Connection Replacement & External Point Repairs	\$
TENDERED PRICE		\$
5% GST		\$
TOTAL TENDERED PRICE		\$

Tenderer's Initials _____

FORM OF TENDER – Appendix 2

PRELIMINARY CONSTRUCTION SCHEDULE

(See paragraph 5.3.2 of the Instructions to Tenderers - Part II)

Indicate schedule with bar chart with major item descriptions and time

ACTIVITY	CONSTRUCTION SCHEDULE (WEEKS)												
	1	2	3	4	5	6	7	8					

Tenderer's Initials _____

FORM OF TENDER – Appendix 3

EXPERIENCE OF SUPERINTENDENT

(See paragraph 5.3.3 of the Instructions to Tenderers - Part II)
Include name and contact information for references

Name: _____ Years' Experience: _____

Experience:

Date: _____

Project Name: _____

Responsibilities: _____

References: _____

Date: _____

Project Name: _____

Responsibilities: _____

References: _____

Date: _____

Project Name: _____

Responsibilities: _____

References: _____

Tenderer's Initials _____

FORM OF TENDER – Appendix 4

COMPARABLE WORK EXPERIENCE

(See paragraph 5.3.4 of the Instructions to Tenderers - Part II and paragraph 4.1 of the Instructions to Tenderer – Part I – add additional pages as necessary)

Company / Owner's Name: _____

Contact Person: _____ Phone: _____

Email Address _____

Description of Work: _____

Project Date: _____ Approximate Value: _____

Company / Owner's Name: _____

Contact Person: _____ Phone: _____

Email Address _____

Description of Work: _____

Project Date: _____ Approximate Value: _____

Company / Owner's Name: _____

Contact Person: _____ Phone: _____

Email Address _____

Description of Work: _____

Project Date: _____ Approximate Value: _____

Tenderer's Initials _____

FORM OF TENDER – Appendix 5

LIST OF SUBCONTRACTORS

(See paragraph 5.3.5 of the Instructions to Tenderers - Part II)

TENDER ITEM	TRADE	SUBCONTRACTOR NAME	PHONE NUMBER

Tenderer’s Initials _____

FORM OF TENDER – Appendix 6

FORCE ACCOUNT LABOUR AND EQUIPMENT RATES

(See paragraph 4.2 – 5.3.6 of the Instructions to Tenderers - Part I)

Labour and Equipment Classification	Hourly Rate	Overtime Rate
	\$ /hour	\$ /hour
	\$ /hour	\$ /hour
	\$ /hour	\$ /hour
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	\$ /hour	\$ /hour

Tenderer's Initials _____

FORM OF TENDER – Appendix 7

DECLARATION – LIVING WAGE EMPLOYER

(See paragraph 4.2 - 5.3.7 and paragraph 9.1 of the Instructions to Tenderers – Part I)



I, _____ as a duly authorized signing officer of

Company: _____

Address _____

_____, confirm that all employees and sub-contractors under our contract with the City as outlined below, are paid not less than the “Living Wage” as calculated by the Living Wage for Families Campaign.

I understand that this requirement extends only to those employees and sub-contractors’ employees that perform work while on City premises and property for durations in excess of one continuous hour per occasion.

I understand that the City will conduct audits if and when notification of breach of this compliance is received by the City. I understand that in the event any breach of this declaration is found to be true, the City reserves the right to cancel its contract without penalty at any time once said authentication of the breach is made.

Contract Name: _____

Authorized Signatory:

Dated:

Tenderer’s Initials _____

AGREEMENT

- Agreement
 - Schedule 1 – Schedule of Contract Documents
 - Schedule 2 – List of Drawings
 - Schedule 3 – Prime Contractor Designation

AGREEMENT

BETWEEN OWNER AND CONTRACTOR

(FOR USE WHEN UNIT PRICES FORM THE BASIS OF PAYMENT - TO BE USED ONLY WITH THE GENERAL CONDITIONS AND OTHER STANDARD DOCUMENTS OF THE UNIT PRICE MASTER MUNICIPAL CONSTRUCTION DOCUMENTS.)

BETWEEN *OWNER* AND *CONTRACTOR*

This agreement made in duplicate this

_____ day of _____, 2021

Contract: **Service Connection Replacement & Point Repair**

Reference No. **NWIT-21-25**

BETWEEN:

The Corporation of the City of New Westminster
 511 Royal Avenue
 New Westminster, BC, V3L 1H9
 (the “*Owner*”)

AND:

(NAME AND OFFICE ADDRESS OF CONTRACTOR)

(the “*Contractor*”)

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

**Article 1
 The Work Start /
 Completion Dates**

- 1.1 The *Contractor* will perform all *Work*, provide all labour, equipment, and material, and do all things strictly as required by the *Contract Documents*.
- 1.2 The *Contractor* will commence the *Work* in accordance with the *Notice to Proceed*. The *Contractor* will proceed with the *Work* diligently, will perform the *Work* generally in accordance with the construction schedules as required by the *Contract Documents* and will achieve *Substantial Performance* of the *Work* on or before **eight (8) weeks** from the *Notice to Proceed*, subject to the provisions of the *Contract Documents* for adjustments to the *Contract Time*.
- 1.3 Time shall be of the essence of the *Contract*.

Article 2
Contract Documents

- 2.1 The “*Contract Documents*” consist of the documents listed or referred to in Schedule 1, 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
- 3.1.1 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
- 3.1.2 all lump sums, if any, as listed in the *Schedule of Quantities and Prices*, for items relating to or incorporated into the *Work*; plus
- 3.1.3 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

- 4.1 Subject to applicable legislation and the provisions of the *Contract Documents*, the *Owner* shall make payments to the *Contractor*.
- 4.2 If the *Owner* fails to make payments to the *Contractor* as they become due in accordance with the terms of the *Contract Documents* then interest calculated at 0% per annum over the prime commercial lending rate of the Royal Bank of Canada on such unpaid amounts shall also become due and payable until payment. Such interest shall be calculated and added to any unpaid amounts monthly.

**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*:

**Corporation of the City of New Westminster
511 Royal Avenue
New Westminster, BC V3L 1H9**

Email:
Attention:

The *Contractor*:

Email:
Attention:

The *Contract Administrator*:

**Associated Engineering (B.C.) Ltd.
#500, 2889 East 12th Ave.
Vancouver, BC V5M 4T5**

Email:
Attention

- 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 by any form of electronic communication, provided that if such day is not a Working Day or if it is received after the end of normal business hours on the date of its transmission at the place of receipt, then it will be deemed to have been received at the opening of business at the place of receipt on the first Working Day following the transmission; or
 - 6.2.3 after five (5) Days from date of posting if sent by registered mail.

- 6.3 The *Owner* or the *Contractor*, at any time, may 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*.
- 6.4 The sender of a notice by fax assumes all risk that the fax is received in hard copy.

**Article 7
General**

- 7.1 This *Contract* shall be construed according to the laws of British Columbia.
- 7.2 The *Contractor*, without the express written consent of the *Owner*, shall not, 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 enure to the benefit of and be binding upon the parties and their successors, executors, administrators and assigns.

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)

(WITNESSED BY SIGNATURE)

(AUTHORIZED SIGNATORY NAME)

(WITNESS NAME)

Owner:

Corporation of the City of New Westminster

(FULL LEGAL NAME OF CORPORATION, PARTNERSHIP OR INDIVIDUAL)

(AUTHORIZED SIGNATORY)

(WITNESSED BY SIGNATURE)

Patrick Shannon, SCMP
Purchasing Manager

(AUTHORIZED SIGNATORY NAME)

(WITNESS NAME)

**Schedule 1
Schedule of Contract
Documents**

The following is an exact and complete list of the *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” edition dated 2009 Platinum. All sections of this publication are included in the *Contract Documents*.

Agreement, including all Schedules;

Schedule 3 – Prime Contractor Designation;

Supplementary General Conditions (included in this document);

General Conditions* (updated to 2016-11-18);

Supplementary Specifications (included in this document);

Specifications*;

Supplementary Standard Detail Drawings (included in this document);

Standard Detail Drawings*;

Executed Form of Tender, including all Appendices;

Contract Drawings listed in Schedule 2 to the Agreement –“List of *Contract Drawings*”;

Instructions To Tenderers - Part I;

Instructions to Tenderers - Part II*;

All MMCD Supplemental Updates

The following Addenda:

The following Enquiries and Responses:

Schedule 2
List of Contract Drawings

TITLE	DRAWING NO.	REVISION NO.	REVISION DATE
POINT REPAIR – COVER	2260-00-C-1101	1	17-Nov-21
POINT REPAIR – GENERAL NOTES AND KEY PLAN	2260-00-C-1102	1	17-Nov-21
POINT REPAIR – SPRUCE ST - NORTH OF EDWORTHY WAY	2260-00-C-1103	1	17-Nov-21
POINT REPAIR – KELLY ST AT HUME LANE - IN HUME PARK	2260-00-C-1104	1	17-Nov-21
POINT REPAIR – SHERBROOKE ST - EAST OF BUCHANAN AVE	2260-00-C-1105	1	17-Nov-21
POINT REPAIR – LANE S OF E 8TH AVE, W OF BUCHANAN AVE	2260-00-C-1106	1	17-Nov-21
POINT REPAIR – WILSON ST - SOUTH OF BRAID ST	2260-00-C-1107	1	17-Nov-21
POINT REPAIR – EASEMENT N OF EWEN AVE, W OF FENTON ST	2260-00-C-1108	1	17-Nov-21
POINT REPAIR – EASEMENT N OF SALTER ST, W OF BOYNE ST	2260-00-C-1109	1	17-Nov-21
POINT REPAIR – ROUSSEAU ST - SOUTH OF BRAID ST	2260-00-C-1110	1	17-Nov-21
POINT REPAIR – KEARY ST - EAST OF RICHMOND ST	2260-00-C-1111	1	17-Nov-21
POINT REPAIR – BUCHANAN AVE - NORTH OF HOSPITAL ST	2260-00-C-1112	1	17-Nov-21
POINT REPAIR – WARD ST	2260-00-C-1113	1	17-Nov-21
POINT REPAIR – STRAND AVE - EAST OF MINER ST	2260-00-C-1114	1	17-Nov-21
POINT REPAIR – CUMBERLAND ST - WEST OF MINER ST	2260-00-C-1115	1	17-Nov-21
POINT REPAIR – WINTHROP ST	2260-00-C-1116	1	17-Nov-21

POINT REPAIR – GARFIELD ST - SOUTH OF HOLMES ST	2260-00-C-1117	1	17-Nov-21
POINT REPAIR – NOOTKA ST	2260-00-C-1118	1	17-Nov-21
POINT REPAIR – LANE EAST OF COLBY ST	2260-00-C-1119	1	17-Nov-21
POINT REPAIR – E COLUMBIA ST - NORTH OF HOLMES ST	2260-00-C-1120	1	17-Nov-21
POINT REPAIR – COMB. HOULT ST - WEST OF E COLUMBIA ST	2260-00-C-1121	1	17-Nov-21
POINT REPAIR – WINTHROP ST - NORTH OF E 8TH AVE	2260-00-C-1122	1	17-Nov-21
POINT REPAIR – CEDAR ST - EAST OF E COLUMBIA ST	2260-00-C-1123	1	17-Nov-21
POINT REPAIR – STRM. HOULT ST - WEST OF E COLUMBIA ST	2260-00-C-1124	1	17-Nov-21
SERVICE CONNECTION REPLACEMENT – LOCATION 1 TO 6	2260-00-C-1201	1	17-Nov-21
SERVICE CONNECTION REPLACEMENT – LOCATION 7 TO 12	2260-00-C-1202	1	17-Nov-21
SERVICE CONNECTION REPLACEMENT – LOCATION 13 TO 18	2260-00-C-1203	1	17-Nov-21
SERVICE CONNECTION REPLACEMENT – LOCATION 19 & TYPICAL DETAILS	2260-00-C-1204	1	17-Nov-21

Schedule 3
Prime Contractor Designation

Prime Contractor Designation

This Schedule forms part of the agreement between the Corporation of the City of New Westminster (the “City”) and _____ (the “Contractor”) respecting **NWIT-21-25 Service Connection Replacement & Point Repair** (the “Agreement”).

1. DEFINITIONS

1.1 In this Prime Contractor Designation schedule:

- (a) “**Agreement**” means the agreement entered into between the City and the Contractor on [date] in relation to [description of services] for the Project;
- (b) “**Hazardous Materials Report**” means a report prepared by a qualified person in accordance with s. 20.112 of the *OH&S Regulation*;
- (c) “**Owner**” means the City, which is the owner of the Project;
- (d) “**Project**” means NWIT-21-25 Service Connection Replacement & Point Repair;
- (e) “**Project Manager**” means the City’s designate with responsibility to liaise with the Contractor for the purpose of managing, overseeing, coordinating or in any other way administering the Project

2. PRIME CONTRACTOR DESIGNATION

2.1 The Contractor agrees to assume the responsibilities of Prime Contractor for the Project, as set out in the *Workers Compensation Act* and the *OH&S Regulation*.

3. CONTRACTOR RESPONSIBILITIES AS PRIME CONTRACTOR

3.1 As Prime Contractor for the Project, the Contractor will:

- (a) ensure that the activities of employers, workers and other persons at the Project 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 at the Project with the *Workers Compensation Act* and the *OH&S Regulation*.

3.2 Without limiting the generality of the foregoing, the Contractor will:

- (a) prior to beginning demolition or construction work on the Project, meet with the Project Manager to review and complete the Pre-Job Meeting Form, to review and discuss the information in the City’s Known Hazards Form and the Contractor’s pre-work hazard identification documents, and to review and discuss the Hazardous Materials Report (if any);
- (b) conduct all necessary and appropriate inquiries of all relevant City staff and City records to ensure the Contractor is not missing any information from the City that is relevant to safety at the Project;

- (c) review, plan to address, and address all hazards identified in the City's Known Hazards Form, the Contractor's pre-work hazard identification documents, any Hazardous Materials Report, and any hazards or risk identified in the *Workers Compensation Act* or the *OH&S Regulation*;
- (d) maintain and make available the documents listed on the Pre-Job Meeting Form, as appropriate;
- (e) inform all other employers working on the Project that the Contractor is designated as the Prime Contractor for the Project;
- (f) establish and maintain a system or process that will ensure compliance with the *OH&S Regulation* when visitors (i.e. couriers, inspectors, suppliers, etc.) enter the Project, which shall include site orientation and hazard communication to such visitors by the Contractor or the Contractor's designate;
- (g) maintain a current list of persons that each employer at the Project has designated to be responsible for that employer's health and safety activities at the Project;
- (h) ensure appropriate first aid resources are available for workers at the Project at all times work is being performed, in accordance with and as required by the *OH&S Regulation*;
- (i) if required by the *OH&S Regulation*, submit a Notice of Project to WorkSafeBC in accordance with the *OH&S Regulation*, and comply with all requirements of the *OH&S Regulation* concerning the Notice of Project;
- (j) if required by the *OH&S Regulation*, the Contractor will appoint a Qualified Coordinator for the purpose of ensuring the coordination of health and safety activities for the Project, and the Contractor shall ensure that any Qualified Coordinator so appointed is qualified to perform the responsibilities of his or her position and carries out the roles and responsibilities of a Qualified Coordinator as set out in the *OH&S Regulation*;
- (k) provide the following information, in an always updated form, in a readily available location at the Project;
 - (i) the name of any Qualified Coordinator appointed to the Project;
 - (ii) a site drawing, which must be posted, showing project layout, first aid location, emergency transportation provisions, and the evacuation marshalling station; and
 - (iii) a set of construction procedures designed to protect the health and safety of workers at the Project, developed in accordance with the requirements of the *OH&S Regulation*;
- (l) immediately notify the City of the identity of any Qualified Coordinator appointed by the Contractor at the Project, from time to time.

4. HAZARDOUS MATERIALS

- 4.1 If during demolition or construction work on the Project the Contractor discovers or has reason to believe that there are hazardous materials at the Project that were not set out in any Hazardous Materials Report, the Contractor will;
- (a) immediately notify the Project Manager;
 - (b) take all reasonably appropriate measures to ensure the safety of workers at the Project; and
 - (c) take all reasonably appropriate measures to ensure the safety of the general public.

- 4.2 Upon notification by the Contractor of additional hazardous materials or suspected hazardous materials at the Project not set out in any Hazardous Materials Report, the City, in accordance with the *OH&S Regulation*, will obtain an updated Hazardous Materials Report, and will share such updated report with the Contractor. If the scope of work of the Project is changed as a result of the updated Hazardous Materials Report, the Project Manager will meet with the Contractor to discuss how the Project may be completed in a safe and cost effective manner.

5. GENERAL

- 5.1 In the event of a conflict between the Agreement and the *Workers Compensation Act* or the *OH&S Regulation*, the legislative requirement(s) will apply.
- 5.2 If any part of this schedule is held to be unenforceable by a court or tribunal of competent jurisdiction, that part shall be severed and the remaining parts of this schedule shall remain in full force and effect.
- 5.3 If the Contractor violates any of the requirements of this schedule or of the *Workers Compensation Act* or the *OH&S Regulation*, the City may treat such violation as a breach of the Agreement resulting in possible termination or suspension of the Agreement and/or any other actions deemed appropriate at the discretion of the City.
- 5.4 No failure or delay by either party to this schedule in exercising any power, right or privilege provided in this schedule will operate as a waiver, nor will any single or partial exercise of such rights, powers or privileges preclude any further exercise of them or the exercise of any other right, power or privilege provided in this schedule.
- 5.5 This schedule may be terminated in accordance with the terms of the Agreement.

SUPPLEMENTARY GENERAL CONDITIONS

- Supplementary General Conditions

SUPPLEMENTARY GENERAL CONDITIONS

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SUPPLEMENTARY GENERAL CONDITIONS

(TO BE READ WITH "GENERAL CONDITIONS" CONTAINED IN THE PLATINUM EDITION OF THE PUBLICATION
"MASTER MUNICIPAL CONSTRUCTION DOCUMENTS" SPECIFIED IN "INSTRUCTIONS TO TENDERERS" IT - 2.2)

DEFINITIONS

1

- 1.79 ***"(amend clause X.XX as follows)"*** preceding a supplementary clause means this clause modifies or provides additional information or restrictions to the referenced clause in the Master Municipal Construction Documents Platinum Edition, Volume II.
- 1.80 ***"(add new clause X.XX as follows)"*** preceding a supplementary clause means this clause provides additional requirements or information not found in the Master Municipal Construction Documents Platinum Edition, Volume II.
- 1.81 ***"(delete clause X.XX and replace as follows)"*** preceding a supplementary clause means this clause replaces the referenced clause in the Master Municipal Construction Documents Platinum Edition, Volume II in its entirety.

CONTRACTOR Control of Work

4

- 4.1 4.1.3 ***(add clause 4.1.3 as follows)***
The *Contractor* shall take precautions to reduce nuisance caused from mud or dust by clean-up, sweeping, sprinkling with water or other means as necessary to accomplish results satisfactory to the *Contract Administrator*. If the *Contractor* fails to maintain the site tidy or refuses to remove waste and debris as directed by the *Contract Administrator*, the *Owner*, at its own discretion, may proceed to clean the site, remove waste and debris from site, and deduct from any payment due the *Contractor* the cost of such cleaning or removing materials.

Protection of Work, Property and the Public

4.3

- 4.3.1 ***(Delete the following from the last sentence of G.C.4.3.1 as follows)***
... except for damage, which, in the Performance of the Work, the *Contractor* could not reasonably avoid.
- 4.3.4 ***(amend clause 4.3.4 as follows)***
(a) expose and determine conclusively the location in the field all underground utilities and structures whether or not indicated on the *Contract Documents* as being at the *Place of the Work*. The *Contractor* shall also be responsible to consult with all utility corporations that provide electricity, communication, gas or other utility services in the area of the *Place of the Work*, to locate in three dimensions all underground utilities for which they have records. The *Contractor* shall also locate in three dimensions any other utilities or underground structures that are reasonably apparent in an inspection

of the *Place of the Work*. The *Contractor* shall provide Fortis BC with three weeks' notice for relocation of any gas mains or services if it is required when crossing the gas lines.

- (b) The *Contractor* shall contact BC One Call at least forty eight (48) hours prior to excavating to advise of the *Work*.

4.3.6 (*Delete 4.3.6 entirely*)

4.3.7 (*add new clause 4.3.7 as follows*)

The *Contractor* shall locate, mark, and protect from damage or disturbance, any and all stakes, survey pins, monuments and markers at the *Place of the Work*. All survey stakes, survey pins, monuments, or markers that are damaged or disturbed shall be made good following construction by a registered B.C. Land Surveyor. Such repairs shall become part of the *Work* and shall be at the *Contractor's* expense.

4.3.8 (*add new clause 4.3.8 as follows*)

Contractor to submit, fourteen (14) calendar days prior to the start of construction, a Traffic Management Plan (TMP) provided by a qualified traffic management company, and prepared in accordance with the "Traffic Control Manual for Work in Roadways". Road closures will not be allowed without prior approval from the City of New Westminster. The cost of the TMP will be incidental to payment of work described in other sections.

The *Contractor* shall ensure that single lane traffic movement is available in each direction at all times and shall minimize impact to on-street parking and pedestrian access to commercial and residential properties during working hours.

The *Contractor* shall carry out the work such that access to commercial and residential properties is maintained at all times. The *Contractor* shall provide a minimum one week advance written notice to all property owners prior to construction, and shall also provide a minimum two (2) working days' notice to individual property owners prior to commencing work affecting individual property access.

The *Contractor* shall give due notice to local police and fire department prior to beginning construction and shall comply in all respects with their requirements.

The *Contractor* shall comply with the requirements of the appropriate authority concerned with closure of streets or highways and shall post proper notices and/or signals, and

provide necessary barriers, guards, lights, flagmen or watchmen as may be necessary for proper maintenance of traffic and protection of persons and property from injury or damage. All costs involved in respect of the above requirements will be deemed to be included in the *Contract Price*.

Where existing streets or roads are not available as detours, all traffic shall be permitted to pass through the *Work* with as little inconvenience and delay as possible unless otherwise provided or authorized. If half the street only is under improvement, the other half shall be conditioned and maintained as detour.

Where construction is to be carried out on highways or properties other than those of the *Owner* it shall be the responsibility of the *Contractor* to familiarize himself with the requirements of the owners or controllers of these properties which pertain to traffic safety or control of the construction operation and to carry out his work in accordance with these requirements.

Construction Schedule

4.6

4.6.8 (*add new clause 4.6.8 as follows*)

The *Contractor* may carry out the *Work* as per the applicable Bylaws of the *Owner*, or as instructed by the *Owner* in the *Contract Documents*.

4.6.9 (*add new clause 4.6.9 as follows*)

The *Contractor* shall not schedule work that will require inspection beyond an eight-hour day without the *Contract Administrator's* prior approval. Any extra cost incurred by the *Owner* for work done outside of normal office hours may be deducted from the *Contractor's* monthly payments.

4.6.10 (*add new clause 4.6.10 as follows*)

On the infrequent occasion that the *Contractor* finds it necessary to work on Saturday, Sunday or Statutory Holiday, the *Contractor* shall obtain the *Contract Administrator's* approval forty-eight (48) hours in advance. Work on Sundays or Statutory Holidays will also require the City's approval, with a minimum two weeks' notice. The *Contractor* shall also be charged a working day and may be charged the overtime inspection costs incurred by the *Owner*. Such costs shall be deducted from monthly progress payments.

Survey Layout and As-Constructed Information	4.17	<p>4.17.1 (<i>add new clause 4.17.1 as follows</i>)</p> <p>The <i>Contractor</i> is responsible for all survey required for construction layout and for record drawings associated with this contract. The <i>Contractor</i> shall be responsible for recording of all field survey information pertaining to the as-constructed drawings. The <i>Contractor</i> shall provide, at no charge, a completed set of legible, marked-up as-constructed prints to the <i>Contract Administrator</i> on completion of the <i>Work</i>. The <i>Contractor</i> shall provide any additional information as requested to enable the <i>Contract Administrator</i> to prepare and submit as-constructed record drawings to the Municipality or the <i>Owner</i> for their records.</p>
City Industrial Health and Safety Program	4.18	<p>4.18.1 (<i>add new clause 4.18.1 as follows</i>)</p> <p>4.18.1 All <i>Contractors</i> working for the City of New Westminster are required to be aware of the City's Industrial Health and Safety Program. It is the <i>Contractor's</i> responsibility to perform the job in compliance with the City's safety standards. The <i>Contractor</i> is responsible for the compliance of all employees for whom he is primarily responsible, with all WorkSafeBC Industrial Health and Safety Regulations, as well as all other applicable Regulations.</p>
VALUATION OF CHANGES AND EXTRA WORK	9	
Valuation Method	9.2.1	<p>9.2.1.1 (<i>add to clause</i>)</p> <p>; subject to final approval of available funding by the <i>Owner</i>.</p>
Quantity Variations	9.4	<p>9.4.1 (<i>delete clause 9.4.1 and replace as follows</i>)</p> <p>The <i>Contractor</i> shall hold firm all unit prices submitted in the <i>Schedule of Quantities and Prices</i> regardless of the increase or decrease in quantities.</p>
DELAYS	13	
Delay by Owner or Contract Administrator	13.1	<p>13.1.2 (<i>add clause 13.1.2 as follows</i>)</p> <p>The <i>Owner</i> or <i>Contract Administrator</i> will not be liable for claims of delay caused by BC Hydro, TELUS, Fortis BC, Metro Vancouver, telecommunication companies, <i>Owner's</i> forces, or other utility corporations arising out of or connected to the <i>Work</i>.</p>
Unavoidable Delay	13.3.1	<p>13.3.1 (<i>add to clause</i>)</p> <p>After <i>Abnormal Weather</i> add "Global Pandemic,"</p>

13.3.2 13.3.2 (*add new clause 13.3.2 as follows*)

The parties acknowledge that the *Contract* has been entered into during the on-going COVID-19 *Pandemic* (the "*Pandemic*"). The *Contractor* advises that it is able to proceed with the *Work* under the *Pandemic* conditions and *Restrictions* (collectively the "*Pandemic Restrictions*") as they exist as of the date of this *Contract*. The parties acknowledge that *Pandemic Restrictions* may change so as to cause unavoidable interruptions or interference to the *Contractor's* performance of the *Work*. The parties confirm:

- (a) notwithstanding the known existence of the *Pandemic*, GC 13.3.1 will apply to new *Pandemic Restrictions*, which arise after the date of this *Contract*, whether anticipated or not, that reasonably interfere with the *Contractor's* performance of the *Work*, such that upon giving required notice the *Contractor* shall be entitled to an extension of the *Contract Time*, but shall not be entitled to reimbursement of any costs;
- (b) notwithstanding any such new *Pandemic Restrictions*, the *Contract* will remain valid and in force, subject to the terms of the *Contract* including, without limitation, GC 13.7 (*Contractor to Mitigate*) and GC 4.2 (*Safety*);
- (c) if new *Pandemic Restrictions* occur that cause or threaten *Work* interruptions the *Contractor* will, as required by GC 13.6 (*Notice of Delay*) give the *Contract Administrator* and *Owner* immediate notice, and a written plan of the interim steps the *Contractor* will take, if any, during the *Work* interruption, and when *Pandemic Restrictions* permit, provide the *Owner* with a written plan for the resumption of the *Work*.

Unforeseeable Market Conditions13.4.1 *Delete 13.4.1 entirely***PAYMENT****18****Supporting Documentation**18.2.2 18.2.2 (*amend clause 18.2.2 as follows*)

If requested in writing by the *Owner*, the *Contractor* shall, as a precondition to the issuance of the *Payment Certificate*, provide a sworn declaration in the form of a signed and properly sealed CCDC 9A-2001 Statutory Declaration to the *Contract Administrator* that all amounts relating to the *Work*, due and owing as of the end of the month covered by the *Payment Certificate* to third parties including all subcontractors and suppliers, have been paid.

	18.2.3	18.2.3 (<i>add clause 18.2.3 as follows</i>) The <i>Owner</i> retains the right to obtain proof of payment, in the form of a signed and properly sealed CCDC 9A-2001 Statutory Declaration, of all sub-trades and material suppliers from the <i>Contractor</i> prior to making final payment.
WORKERS COMPENSATION REGULATIONS	21	
Contractor is “Prime Contractor”	21.2.1	Delete “Substantial Performance” and Replace with “Total Performance”
INSURANCE	24	
Required Insurance	24.1	24.1 (<i>amend 24.1 as follows</i>) 24.1.1 (1) Limits: \$5,000,000 inclusive per occurrence for bodily injury, death, and damage to property. 24.1.1(2) (<i>add to 24.1.1(2) as follows</i>) The following shall be named as additional insured on the Contract: <ul style="list-style-type: none"> • Corporation of the City of New Westminster • Associated Engineering (B.C.) Ltd 24.1.7 (<i>add new 24.1.7 as follows</i>) Should the <i>Contractor</i> neglect to obtain and/or maintain insurance as aforesaid, or deliver such policy or policies to the <i>Owner</i> , then the <i>Owner</i> shall obtain and/or maintain such insurance and the <i>Contractor</i> hereby appoints the <i>Owner</i> its true and lawful attorney to do all things necessary for this purpose. All monies expended by the <i>Owner</i> for Insurance premiums under the provisions of this clause shall be charged to the <i>Contractor</i> .
MAINTENANCE PERIOD	25	
Correction of Defects	25.1	25.1.4 (<i>add clause 25.1.4 as follows</i>) The <i>Owner</i> is authorized to make repairs to defects or deficiencies if, ten days after giving written notice, the <i>Contractor</i> has failed to make or undertake with due diligence the required repairs. However, in the case of emergency where, in the opinion of the <i>Owner</i> , delay is not reasonable, repairs may be made without notice being sent to the <i>Contractor</i> . All expenses incurred by the <i>Owner</i> in connection with repairs made pursuant to GC 25 shall be paid by the <i>Contractor</i> and may be deducted from the Maintenance Security, or other holdbacks. The <i>Contractor</i> shall promptly pay any shortfall.

**Commencement of
Maintenance Period**

- 25.2 25.2.2 (*amend clause 25.2.2 as follows*)
All warranties under this *Contract* commence from the date of *Substantial Performance* of the *Contract*, regardless of whether any *Subcontractor* achieves *Substantial Performance* of its Subcontract prior to *Substantial Performance* of the *Contract*.

SUPPLEMENTARY SPECIFICATIONS

- Supplementary Specifications

SUPPLEMENTARY SPECIFICATIONS

City of New Westminster Supplementary Specifications and Detail Drawings can be obtained [here](#).

The Supplementary Specifications herein contains additions, amendments, and deletions to the Master Municipal Construction Documents - Platinum Edition (2009).

SUPPLEMENTARY SPECIFICATIONS TO MMCD

Section	Sub-Section	Title	Supplementary Specification
33 01 30.2 – Cleaning of Sewers	1.5	Measurement for Payment	Delete and replace Measurement and Payment Clause 1.5.4 with the following: <i>“Payment for root cutting will be at the lump sum price per specified location identified on the Contract Drawings.”</i>
33 05 24.1S – Cured-In-Place Point Repair			Add new Section 33 05 24.1S – Cured-In- Place Point Repair. See attached.

Section	Sub-Section	Title	Supplementary Specification
33 30 01 – Sanitary Sewers	1.6	Measurement for Payment	<p>Delete and replace Measurement and Payment Clause 1.6.3 with the following:</p> <p><i>“Payment for service connections includes tee or wye to the main line and all related fittings and components specified and/or shown on Standard Detail Drawings S7. Payment includes all material and equipment needed for saw cut pavement, trench excavation, disposal of surplus excavated material, dewatering, bracing and sheeting, removal and disposal of existing service connections and fittings, supply and installation of pipe, fittings and related material, connections to sewer mains, supply and placement of bedding, supply and placement of imported backfill, bypass and/or pumping to maintain sewer flow to cause the least amount of disruption to home owners, compaction above the pipe zone up to subgrade, rock and boulder removal and disposal, all surface restoration as specified under Section 31 23 01 – Excavating, Trenching and Backfilling – 3.6, including permanent pavement restoration, sub-base, base, sidewalks, curb and gutter, and all other work incidental thereto.</i></p> <p><i>Measurement for service connection will be for each complete service installed, excluding the inspection chamber which is covered under 1.6.4 of this Section, with no regard to length of service pipe installed.”</i></p>

Section	Sub-Section	Title	Supplementary Specification
	1.6	Measurement for Payment	<p>Add Measurement and Payment Clause 1.6.8S as follows:</p> <p><i>“.1 Payment for Sanitary or Combined Sewer External Point Repairs will be made at the lump sum price per specified spot repair as shown on the Contract Drawings and stated in the Schedule of Quantities and Prices.</i></p> <p><i>.2 Price includes all material and equipment needed for saw cut pavement, trench excavation, disposal of surplus excavated material, dewatering, bracing and sheeting, removal and disposal of existing sewer pipes and fittings, supply and installation of pipe, fittings and related material, connections of sewer services to sewer mains, supply and placement of bedding, supply and placement of imported backfill, bypass and/or pumping to maintain sewer flow to cause the least amount of disruption to home owners, compaction above the pipe zone up to subgrade, rock and boulder removal and disposal, CCTV inspection as per Section 33 01 30.1 – CCTV Inspection of Pipelines following installation, all surface restoration as specified under Section 31 23 01 – Excavating, Trenching and Backfilling – 3.6, including permanent pavement restoration, sub-base, base, sidewalks, curb and gutter, and all other work incidental thereto.”</i></p>

1.0 GENERAL

- .1 Section 33 05 24.1S refers to Cured-In-Place Pipe (CIPP) point repair specifications for sewers. A CIPP point repair is a short length of CIPP installed at a location between identified manholes of a gravity sewer
- .2 The work shall include notification to the public, Closed Circuit Television (CCTV) inspections, determining sewer diameter and point repair length, validating point repair design parameters, design of the liner with an appropriate resin, flow control and bypass pumping, cleaning and preparation of the sewer for the CIPP point repair, installation and curing of the CIPP point repair, reinstatement of sewer service connections if necessary, returning sewer to regular service and any other incidental work required. This section must be referenced and interpreted simultaneously with all other sections pertinent to the works described herein.

1.1 Related Work

Traffic Control, Vehicle Access and Parking	Section 01 55 00
Environmental Protection	Section 01 57 01
Excavation, Trenching and Backfill	Section 31 23 01
Sanitary Sewers	Section 33 30 01
CCTV Inspection of Pipelines	Section 33 01 30.1
Cleaning of Sewers	Section 33 01 30.2

1.2 References

- .1 Reference Standards, specification or publications.
 - .1 ASTM D790 Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Material
 - .2 ASTM D2990 Standard Test Method for Tensile, Compressive, and Flexural Creep and Creep-Rupture of Plastics
 - .3 ASTM E1252 Standard Practice for General Techniques for Obtaining Infrared Spectra for Qualitative Analysis
 - .4 ASTM F1216 Standard Practice for Rehabilitation of Existing Pipelines and Conduits by the Inversion and Curing of a Resin-Impregnated Tube
 - .5 ASTM F1743 Standard Practice for the Rehabilitation of Existing Pipelines and Conduits by Pulled-in-Place Installation of Cured-in-Place Thermosetting Resin Pipe (CIPP)
 - .6 ASTM F2019 Standard Practice for the Rehabilitation of Existing Pipelines and Conduits by the Pulled in Place

Installation of Glass Reinforced Plastic (GRP) Cured-in-Place Thermosetting Resin Pipe (CIPP)

- .7 ASTM F2599 The Sectional Repair of Damaged Pipe by Means of An Inverted Cured-In-Place Liner
- .8 ASTM D5813 Standard Specification for Cured-In-Place Thermosetting Resin Sewer Piping Systems
- .9 ASTM D1682 Test Methods

1.3 Material Certification

- .1 All materials to conform to this specification, to the latest edition of the appropriate specifications of the American Society for Testing and Materials (ASTM) or other standards expressly specified. All provisions in ASTM and other specified standards pertaining to materials, workmanship, finish, inspection and rejection form part of these specifications as far as they are applicable and providing that they are not inconsistent with this specification. This specification takes precedence over the ASTM specifications in case of a discrepancy or conflict. Materials incorporated into the Work but not specifically covered in the specifications are to be obtained from the Contract Administrator prior to installation.

1.4 Submissions

- .1 The Contract Administrator shall supply the following information for the Contractor to review.
 - .1 Location or list of locations identified by street name and GIS based identifiers.
 - .2 CCTV Inspection records identifying the defect(s) requiring a CIPP point repair.
 - .3 Basic sewer data which will include, but not be limited to, pipe material, pipe diameter, length of sewer section, depth of sewer section, approximate distance from upstream manhole to defect(s), and approximate length of repair.
 - .4 Contract Administrator will identify any special resin requirements based on sewage type or environmental concerns.
- .2 If, for bidding purposes, the Contractor requires further inspection information to properly assess the work, the Contractor will be responsible to perform the additional inspection. Permission to enter the City's sewer system for inspection purposes shall be obtained from the City.
- .3 Contractor to submit the following construction process information at least seven days prior to initiation of the rehabilitation work:

- .1 Structural design calculations for the liner based on the design criteria provided in this specification and on ASTM F1216 Appendix XI.
 - .2 Calculated values for maximum inversion pressure, curing pressure and allowable tensile strength for each section of CIPP point repair liner.
 - .3 Resin curing schedule including anticipated temperature and cure times for the various stages of installation reflecting the proposed liner length, thickness and diameter
 - .4 Resin volume calculations for each section of liner.
 - .5 Written confirmation of safety training for field crews.
 - .6 Site sketch indicating proposed layout of bypass pumping system where necessary.
 - .7 Project schedule detailing a work plan timeline.
 - .8 Traffic management plan.
 - .9 Safety procedures and certificate of satisfactory first aid training.
- 1.5 Site Investigations**
- .1 The Contractor shall be responsible to investigate each proposed point repair site to determine existing conditions and identify any obstructions or challenges that may affect the completion of the point repair. Additional payment will not be made on account of difficulties to complete the work because the Contractor failed to investigate the site prior to the commencement of the work.
- 1.6 Scheduling**
- .1 Schedule work to minimize interruptions to existing services.
 - .2 Hours to work to comply with noise restriction bylaw unless granted exemption
- 1.7 Measurement and Payment**
- .1 Payment for Trenchless Sewer Main CIPP Point Repairs will be made at the price per point repair length, pipe diameter, and utility type as shown in the Contract Drawings.
 - .2 Price includes all the work described in this section and all work incidental thereto.
- 1.8 Inspection**
- .1 Contractor to provide Contract Administrator free access to inspect the materials and wet-out procedure.
 - .2 Contractor to provide City 72 hours advance notice of wet-out operation.
 - .3 Physical property values used in submitted design calculations must be met or exceeded prior to release of progress and final payments.

- .4 Digital copy of the Curing Process Summary Sheet to be presented prior to release of interim payments.
- 2.0 PRODUCTIONS**
 - .1 The Trenchless Sewer Main CIPP point repair shall be a one-piece construction that, once cured, will provide a close fit liner with the existing sewer that shall not move within the pipe during normal sewer operations including cleaning, maintenance and inspections operations
 - .2 The finished liner shall be such that it will restore the structural integrity of the pipe and eliminate the potential for infiltrating ground water and exfiltration of contents. The completed liner shall contain only materials capable of withstanding the effects of conventional sanitary and storm sewage, the gases produced there from, grits and other materials normally transported in sanitary and storm sewage pipelines.
- 2.1 CIPP Technology**
 - .1 Trenchless Sewer Main CIPP point repair shall be according to the following standards:
 - .1 ASTM F1216
 - .2 ASTM F1743
 - .3 ASTM F2019
 - .4 ASTM F2599
- 2.2 Liner Material**
 - .1 Minimum material requirements for CIPP liners to conform to ASTM D5813.
 - .2 All liner tube shall be made of virgin material. No rework except that obtained from the manufacturer's own production of the same formulation shall be used.
 - .3 Liner material to have a minimum tensile strength of 5 MPa (750 psi) in both longitudinal and transverse directions when tested in accordance with the requirements of ASTM D 1682 Test Methods for Breaking Load and Elongation of Textile Fabrics.
- 2.3 Resin**
 - .1 Resin used for impregnation to be consistent with the product in proposal submission at the time of tender.
 - .2 Volume of resin in the CIPP point repair shall meet the requirements of the applicable ASTM standard.
- 3.0 EXECUTION**
 - 3.1 Hydrant Use**
 - .1 Contractor must obtain a "Hydrant Use Permit" from the City prior to the use of any hydrant. The Contractor will ensure that water being used is conserved and not being used

unnecessarily. Fire hydrants will remain unobstructed in case of a fire in the area served by the fire hydrant. At all times, backflow preventers shall be employed when drawing water from a hydrant and proper ramps must be put in place to accommodate vehicles and pedestrians.

- 3.2 Weather** .1 Contractor shall review the Environment Canada weather forecast prior to commencement of any CIPP point repair installation. Where the anticipated forecast may exceed the Contractors bypass pumping capacity or may cause potential basement flooding due to the CIPP point repair blocking lateral services, construction shall be delayed until the weather is favourable.
- 3.3 Excavations** .1 In the event that equipment becomes lodged in the sewer and retrieval is required by open cut excavation, the Contractor shall provide the equipment, labour and materials for excavation, maintaining flow, retrieval of equipment and subsequent repair, backfill and restoration. Any excavation shall be performed by an approved sub-contractor and shall be performed to City standards and specifications.
- .1 If equipment is lodged in a sewer for which no previous CCTV inspection or advice was provided to the Contractor by the Contract Administrator, then the Contract Administrator will pay the Contractor for 75% of the above noted work. The Contract Administrator will not entertain any other associated cost related to the work.
- .2 If it is necessary to excavate for any reason such as a failed CIPP point repair, reinstatement of a lateral service, bypass of flow or repair of a pipe broken during the work, the Contractor shall provide the equipment, labour and materials to excavation, repair, backfill and restore to original condition. Dependent on the reason why an excavation is required and at the discretion of the Contract Administrator, additional payment for such work may be negotiated with the Contractor. An excavation shall not proceed without the approval of the Contract Administrator prior to the work.
- 3.4 Design Requirements** .1 CIPP Point repairs to be designed in accordance with Requirements Appendix XI of ASTM F1216 as a gravity pipe in a fully deteriorated pipe condition and the supplemental requirements noted herein. The required design condition (fully deteriorated) for each repair location is noted in the design drawings.

- .2 Engineered designs for each CIPP point repair shall bear the seal and signature of an Engineer licensed in the Province of British Columbia. Alternately, the Contract Administrator could approve a single design bearing the seal and signature of an Engineer that covers a range of CIPP point repair installations.
- .3 CIPP point repair designs shall be submitted to the Contract Administrator for approval. No CIPP point repair shall be installed without an approved design.
- .4 Design Parameters for CIPP Point Repair:
 - .1 Design Method: Most recent version of ASTM F1216.
 - .2 Design Life: 50 years.
 - .3 Sewer Condition: Fully deteriorated.
 - .4 Safety Factor: 2.0 for all equations.
 - .5 Ovality: 3% or actual ovality of sewer, whichever is greater.
 - .6 External Hydrostatic Pressure: Ground water table assumed at ground surface.
 - .7 External Earth Load: Based on 2.0 m over the top of pipe or the actual depth of cover that exists, whichever is greater.
 - .8 Live Load: AASHTO HS-20 or actual live load that exists, whichever is greater. If the liner crosses under train tracks, the minimum live load shall be based on the Cooper E-80 distributed load calculation.
 - .9 Soil Weight: 18.85 KN/m³ (1920 kg/m³).
 - .10 .Soil Modulus: 6.89 MPa.
 - .11 .Flexural Modulus used for design: The flexural modulus used for design shall be the long-term flexural modulus for the design life. The long-term flexural modulus shall be the amount of short-term flexural modulus (as per ASTM D790) retained for the design life. The short-term flexural modulus used shall be the value that will be reliably and repeatably achieved in CIPP point repair installations. The retention factor shall be derived from long term testing (as per ASTM D2990) and be appropriate for stress and stress duration in the installed CIPP point repair. Independent third-party test data is required to substantiate the short term and long-term values used in design. The design must identify the short term and long-term values. Minimum short-term value shall be 2,413 MPa.
 - .12 Flexural Strength used for design: The flexural strength used for design shall be the long-term flexural strength for the design life. The long-term flexural strength shall be the amount of short-term flexural strength (as per ASTM D790) adjusted downwards by a retention factor for the design life.

The short-term flexural strength used shall be the value that will be reliably and repeatably achieved in CIPP point repair installations. The retention factor shall be derived from long term testing (as per ASTM D2990) and be appropriate for stress and stress duration in the installed CIPP point repair. Independent third-party test data is required to substantiate the short term and long-term values used in design. The design must identify the short term and long-term values. Minimum short-term value shall be 34.5 MPa.

- .5 The Contractor shall confirm that design values identified by the Contract Administrator meet the actual field conditions for each CIPP point repair to be installed. The field conditions to check include the depth to invert, existing ovality of the sewer pipe, and live load situation.
 - .1 If the existing design is not sufficient for field conditions the design will be adjusted accordingly and submitted to the Contract Administrator for approval.
 - .2 If the adjusted design requires a thicker CIPP point repair to be installed, any additional costs involved shall be according to available Contract Prices or negotiated with the Contract Administrator.
- .6 No CIPP point repair shall be installed that does not meet the requirements for actual field conditions.

3.5 Bypass Pumping

- .1 Contractor shall install as necessary a temporary bypass pumping system around the designated sewer sections in accordance with pre-submitted arrangement.
- .2 Pumps and bypass lines shall be of adequate capacity to accommodate existing flows.
- .3 Contractor must maintain on site both a primary bypass pump and a stand-by pump of equal or better capacity.
- .4 Bypass pumps shall be installed prior to any work being initiated on the sewer section receiving the CIPP point repair and shall remain in place until lateral services have been reinstated and/or the post installation CCTV inspection is complete.
- .5 All bypass pumps and related equipment shall be silenced equipment or contained within an acceptable sound reduction structure.

- 3.6 CCTV Inspection**
- .1 CCTV Inspection shall be performed as outlined in Section 33 01 30.1 – CCTV Inspection of Pipelines.
 - .2 CIPP point repair will require three separate CCTV Inspections:
 - .1 The first CCTV Inspection will be required prior to cleaning or preparing the sewer section. Defect coding will not be required for this inspection. The CCTV Inspection will be from manhole to manhole and the intention is to record the initial condition of the sewer section and confirm that the design criteria are accurate. The design criteria will be considered different if:
 - .1 The condition prevents a CIPP point repair from being installed.
 - .2 The condition requires an unexpected excavated repair prior to the installation of a CIPP point repair.
 - .3 The condition requires a design change in the thickness of the CIPP point repair.
 - .4 Any other condition that, in the Contract Administrator’s opinion is a significant change condition.
 - .2 The second CCTV Inspection will be required following the Sewer Cleaning and Preparation and prior to the installation of the CIPP point repair. The intention of this inspection is to ensure that the sewer is properly cleaned, free of protruding lateral services, sewer debris or anything that may interfere with the installation of the CIPP point repair or affect the finished product. Defect coding is not required for this CCTV inspection.
 - .3 The third and final CCTV Inspection will be required following the installation of the CIPP point repair. The intention of this CCTV Inspection is to confirm the location of the CIPP point repair is correct, the fit and finish meets requirements and any service laterals that need to be reinstated have been completed. If there is a deficiency with the CIPP point repair that requires repair or remediation, the third CCTV inspection shall be redone following the remediation or repair at the Contractors expense.
- 3.7 Sewer Preparation**
- .1 The sewer shall be cleaned with a hydro pressure cleaner to remove all foreign debris for the entire length of the CIPP point repair and at least 2.0 metres past each end of the CIPP point repair. Contractor shall take caution to not flood public or private property, or damage the sewer pipe during any phase of the cleaning or reaming.

**3.8 CIPP Point
Repair
Installation**

- .2 All sludge, dirt, sand, rocks, grease and other solid or semi-solid material shall be removed. Debris shall be collected at the immediate downstream manhole, removed and disposed of appropriately as per the City bylaw. Any material such as deposits, roots, or protrusions that cannot be removed by hydro pressure cleaning equipment, shall be removed by sewer reaming, cutting or grinding.
- .3 Where a protruding lateral service will interfere with the installation of the CIPP point repair or impact the performance of the CIPP point repair, the protruding lateral shall be trimmed sufficiently to remove the interference or negative impact. After trimming, the lateral shall be free of any sharp edges. The method used to trim the protruding lateral service shall not damage the lateral or the adjacent sewer pipe. The Contractor shall be responsible to repair any damage to the lateral or sewer pipe caused by inappropriate trimming.
- .4 Deposits, roots or other protrusions located within the CIPP point repair and at least 2 metres past each end will be removed to within 10 mm of the existing host pipe.
- .5 Pre-measure and document the location of service connections within the sectional repair limits. Record distance, clock position and diameter of connection. Confirm that services are either live or abandoned and only reinstate the live services. Abandoned services shall not be reinstated.
- .1 The CIPP point repair installation shall be according to the bid submission. Any proposed deviation from the submitted procedure shall be re-submitted, with explanation, to the Contract Administrator for approval. The re-submission shall include the approval from the supplier or manufacturer.
- .2 The sewer line and affected lateral services shall be disrupted no more than 4 hours during the entire rehabilitation process including inspection, cleaning, preparation, CIPP point repair installation, and any required service reconnection.
- .3 The Contractor shall ensure that all required equipment for the installation is on site and in satisfactory working condition prior to starting the installation of a CIPP point repair.
- .4 Approximate lengths and locations for CIPP point repairs are provided on the Contract Drawings. The Contractor is responsible to ensure that the CIPP point repair is installed at the correct location so that the CIPP point repair completely

covers the sewer defect that is to be repaired including sufficient distance beyond the end of each defect.

- .5 The Contractor must provide a notice, approved by the City and Contract Administrator, to all affected person or business that will be affected by the CIPP point repair 2 weeks in advance of the works. The Notice will explain the process and provide local contact information for daytime and after hours. In the event that the CIPP point repair date is to change the Contractor shall provide immediate notification stating the delay and providing the new installation date. The Contractor shall notify the affected person or business once the lateral service has been reinstated.
- .6 Lateral services that are covered by a CIPP point repair shall be reinstated to their full diameter immediately following the curing process.

3.9 Workmanship & Finish

- .1 The finished CIPP point repair shall conform to ASTM D5813 Clause 6.2 Workmanship.
- .2 The CIPP point repair thickness shall meet the submitted design thickness based on the measurement method and analysis outlined in ASTM D5813.
- .3 The finished CIPP point repair shall be a close fit to the existing sewer pipe. Any space of gap that exceeds 1.0 mm between the host pipe and the CIPP point repair will be considered deficient.
- .4 The CIPP point repair shall be free of bulges, ribs, ripples, folds, delaminations or other irregularities, except those due to the defect being addressed by the point repair such as an offset joint, protrusion, bump, or missing pipe pieces.
- .5 The start and end of the CIPP point repair shall extend a minimum of 500mm beyond the defect being addressed. If a service lateral is located with the 500mm section, the point repair will extend 500mm past the service lateral.
- .6 The start and end of the CIPP point repair shall taper towards and into the host pipe so that the point repair ends will not impede flows. The ends will not have a shoulder or lip that could result in sedimentation or debris build up, or any irregularity that could affect maintenance operations such as cleaning or inspection.

3.10 Field Cured Samples

- .1 Place designated plate samples in appropriate location or in simulated on-site curing environment.
- .2 Remove CIPP pipe samples and present to Contract Administrator following each liner installation.
- .3 Contractor shall provide one (1) plate sample when required.
- .4 The Contractor shall provide for testing of CIPP Repair samples at an independent testing agency. The testing agency shall be subject to the approval of the Contract Administrator.
- .5 The samples shall be tested for flexural modulus and flexural strength according to ASTM D790 and thickness according to ASTM D5813. If tested samples do not meet submitted design parameters, the Contractor shall perform a post design with test results to ensure the sectional repair meets design requirements.
- .6 The testing reports shall be delivered within 10 days of delivery of the samples to the testing agency.
- .7 Contractor shall provide one (1) control sample of uncatalyzed resin direct from manufacturer to testing agency when required.
- .8 When required the Contract Administrator will take three (3) 200ml on site samples of uncatalyzed resin as required. The Contractor shall assist in the taking of these samples. The Contract Administrator may have these samples undergo an IR analysis and compare the resulting spectrograph to the spectrograph submitted with the Bid.

4.0 DEFICIENCIES

- .1 Where any deficiencies identified in the work or in the result of the work, the contractor shall advise the Contract Administrator of the deficiencies within 24 hours including the rectified deficiencies.
- .2 The Contractor shall resolve, correct or rectify the deficiencies to the satisfaction of the Contract Administrator.
- .3 Depending on the nature of the deficiency, the Contract Administrator may request the Contractor to provide with a method statement, subject to the Contract Administrator's approval, for the repair of the deficiency.
- .4 Where in the Contract Administrator's opinion, repair or correction is not satisfactory, the Contract Administrator may require removal and replacement of the CIPP Repair or request an alternate resolution at the Contractor's cost.

END OF SECTION 33 05 24.1S