



REQUEST FOR QUOTATIONS

Title: **TEMPORARY FLOW MONITORING SERVICES**

Reference No.: 1220-040-2016-053

FOR THE SUPPLY OF GOODS AND SERVICES

(General Services)

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REQUEST FOR QUOTATIONS

1. INTRODUCTION

The City of Surrey (the "City") invites contractors to provide a quotation on the form attached as Schedule B to Attachment 1 (the "Quotation") for the supply of the goods (if any) and/or services described in Schedule A to Attachment 1 (the "Goods and Services"). The description of the Goods and Services sets out the minimum requirements of the City. 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, also include goods, services or terms that exceed the minimum requirements.

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 B – 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 City by email at: purchasing@surrey.ca.

PDF emailed Quotations are preferred and the City will confirm receipt of emails. Note that the maximum file size the City can receive is 10Mb. If sending large email attachments, Contractors should phone to confirm receipt. A Contractor bears all risk that the City's equipment functions properly so that the City 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 City 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, 5th Floor West
13450 – 104 Avenue, Surrey, B.C., Canada, V3T 1V8

3. DATE

The City would prefer to receive Quotations on or before **July 22, 2016**. The City's office hours are 8:30 a.m. to 4:00 p.m., Monday to Friday, except statutory holidays.

4. INQUIRIES

All inquiries related to this RFQ should be directed in writing to the person named below (the “**City Representative**”). Information obtained from any person or source other than the City Representative may not be relied upon.

Name: Richard D. Oppelt, Purchasing Manager
E-mail: purchasing@surrey.ca
Reference: 1220-040-2016-053

5. ADDENDA

If the City determines that an amendment is required to this RFQ, the City's Representative will issue a written addendum by posting it on the BC Bid Website at www.bcbid.gov.bc.ca (the “BC Bid Website”) and the City Website at www.surrey.ca (the “City Website”) that will form a part of this RFQ. It is the responsibility of Contractor to check the BC Bid Website and the City 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 RFQ 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.

6. 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 City may negotiate changes to any terms of a Quotation, including terms in Attachment 1 and Schedules A and B 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.

7. ACCEPTANCE

A Quotation will be an offer to the City which the City 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 City unless and until both the authorized signatory and the purchasing representative have signed on behalf of the City. Delivery of the signed Quotation by the City may be by fax or pdf email.

8. 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 City or its representatives and consultants, relating to or arising from the RFQ. The City 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.

9. CONTRACTOR'S QUALIFICATIONS

By submitting a Quotation, a Contractor represents that it has the expertise, qualifications, resources, and relevant experience to supply the Goods and Services.

10. 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 City, its elected or appointed officials or employees. The City may rely on such disclosure.

11. 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.

12. CONFIDENTIALITY

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

13. 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 City 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.

14. MULTIPLE CONTRACTORS

The City reserves the right and discretion to divide up the Goods and Services, either by scope, geographic area, or other basis as the City may decide, and to select one or more Contractors to enter into discussions with the City for one or more Contracts to perform a portion or portions of the Goods and Services. If the City exercises its discretion to divide up the Goods and Services, the City will do so reasonably having regard for the RFQ and the basis of Quotations.

In addition to any other provision of this RFQ, Quotations may be evaluated on the basis of advantages and disadvantages to the City that might result or be achieved from the City dividing up the Goods and Services and entering into one or more Contracts with one or more Contractors.

ATTACHMENT 1



DRAFT QUOTATION AGREEMENT

Title: **TEMPORARY FLOW MONITORING SERVICES**

Reference No.: 1220-040-2016-053

FOR THE SUPPLY OF GOODS AND SERVICES

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DRAFT QUOTATION AGREEMENT

Agreement Title: Temporary Flow Monitoring Services

THIS AGREEMENT dated for reference this _____ day of _____, 201__.

AGREEMENT NO. 1220-040-2016-053

BETWEEN:

CITY OF SURREY
13450 - 104 Avenue
Surrey, B.C., Canada, V3T 1V8
(the "**City**")

AND:

(*Insert Full Legal Name and Address of Contractor*)

(the "**Contractor**")

WHEREAS the City wishes to engage the Contractor to provide Goods and Services and the Contractor agrees to provide Goods and Services.

THEREFORE in consideration of the payment of one (\$1.00) dollar and other good and valuable consideration paid by each of the parties to the other (the receipt and sufficiency of which is hereby acknowledged) the City and the Contractor agree as follows:

1. DEFINITIONS AND INTERPRETATION

1.1 In these General Terms and Conditions:

- (a) "Agreement" means this agreement and all schedules attached hereto;
- (b) "City" means the City of Surrey;
- (c) "Contractor" means a contractor whose Quotation has been accepted by the City and who is providing the Goods and Services under this Agreement;
- (d) "Disbursements" means the actual out-of-pocket costs and expenses as identified in Section B to Attachment 1, which the Contractor incurs in providing the Goods and Services;
- (e) "Fees" means the price set out in Section B to Attachment 1, for the provision of the Goods and Services, unless otherwise agreed by the parties in writing, and includes all taxes;
- (f) "Goods" means the equipment or materials (if any) as described generally in Schedule A, to Attachment 1, including anything and everything required to be done for the fulfilment and completion of this Agreement;
- (g) "Indemnities" has the meaning described in Section 11.2;
- (h) "RFQ" means the Request for Quotations;
- (i) "Services" means the services as described generally in Schedule A, to Attachment 1 including anything and everything required to be done for the fulfilment and completion of this Agreement;

(j) "Term" has the meaning described in Section 3.1; and

1.2 This Agreement may be modified only by express and specific written agreement. In the event of a conflict between the provisions of any documents listed below, then the documents shall govern and take precedence in the following order:

- (a) this Agreement;
- (b) Addenda (if any);
- (c) the RFQ; and
- (d) other terms, if any, that are agreed to by the parties in writing.

1.3 The following attached Schedules are a part of this Agreement:

Schedule A – Specifications of Goods & Scope of Services;
Schedule A-1 – Temporary Flow Monitoring Sites; and
Schedule B – Quotation.

2. GOODS AND SERVICES

2.1 The Contractor covenants and agrees with the City to provide the Goods and Services in accordance with this Agreement. The Goods and Services provided will meet the specifications and scope set out in Schedule A, to Attachment 1, and as described in Schedule B, to Attachment 1.

2.2 The City may from time to time, by written notice to the Contractor, make changes in the specifications of Goods and scope of Services. The Fees will be increased or decreased by written agreement of the City and the Contractor according to the rates set out in Schedule B, to Attachment 1.

2.3 The Contractor will, if required in writing by the City, provide additional goods or services. The terms of this Agreement will apply to any additional goods or services, and the fees for additional goods or services will generally correspond to the fees as described in Schedule B, to Attachment 1. The Contractor will not provide any additional goods or services in excess of the specification of Goods and scope of Services requested in writing by the City.

2.4 The Contractor will perform the Services with that degree of care, skill and diligence normally provided by a qualified and experienced practitioner performing services similar to the Services, and on the understanding that the City is relying on the Contractor's experience and expertise. The Contractor represents that it has the expertise, qualifications, resources, and relevant experience to supply the Goods and Services.

2.5 The Contractor will deliver the Goods free and clear of all liens and encumbrances in the manner and to the destination stipulated. In the event of the Contractor's failure to meet this condition, the Contractor will, on written notice from the City, forthwith return all monies paid by the City on account of the Goods and in addition the City may by written notice terminate this Agreement without liability, and in such event, in addition to the above, the Contractor will be liable for any and all expenses or losses incurred by the City resulting from such failure.

3. TERM

- 3.1 The Contractor will provide the Goods and Services for the period commencing on August 5, 2016 and terminating on May 12, 2017 (the "Term").
- 3.2 The parties may extend the Term by mutual agreement. If the Term is extended, the provisions of this Agreement will remain in force except where amended in writing by the parties.

4. TIME

- 4.1 Time is of the essence.

5. FEES AND DISBURSEMENTS

- 5.1 The City will pay the Fees and Disbursements to the Contractor in accordance with this Agreement. Payment by the City of the Fees and Disbursements will be full payment for the Goods and Services and the Contractor will not be entitled to receive any additional payment from the City.
- 5.2 For greater certainty, costs of general management, non-technical supporting services and general overhead are deemed to be covered by the Fees and will not be subject to additional payment by the City. The Fees shall also include without limitation all costs of boxing, packing, crating, and loading and unloading the Goods at the prescribed destination.

6. PAYMENT

- 6.1 Subject to any contrary provisions set out in Schedule B, to Attachment 1, the Contractor will submit a monthly invoice to the City requesting payment of the portion of the Fees and Disbursements relating to the Goods and Services provided in the previous month. Invoices must include the Contractor's name, address and telephone number, the City's purchase order number, the Contractor's invoice number, the names, charge-out rates and number of hours worked in the previous month of all employees of the Contractor that have performed Services during the previous month; the percentage of Services completed and Goods delivered at the end of the previous month; the total budget for the Goods and Services and the amount of the budget expended to the date of the invoice; taxes (if any); and grand total of the invoice.
- 6.2 The Contractor will on request from the City provide receipts and invoices for all Disbursements claimed.
- 6.3 If the City reasonably determines that any portion of an invoice is not payable, then the City will so advise the Contractor.
- 6.4 The City will pay the portion of an invoice which the City determines is payable within 30 days of the receipt of the Invoice, except the City may hold back from payments 10% of the amount the City determines is payable to the Contractor until such time as the Contractor provides its final report to the City; and

- 6.5 If the Contractor offers the City a cash discount for early payment, then the City may, at the City's sole discretion, pay the portion of an Invoice which the City determines is payable at any time after receipt of the Invoice.

Invoices will be submitted by the Contractor by mail to:

Name: _____

Address: _____

- 6.6 Unless otherwise provided, all dollar amounts referred to in this Agreement are in lawful money of Canada.
- 6.7 If the Contractor is a non-resident of Canada and does not provide to the City a waiver of regulation letter, the City will withhold and remit to the appropriate governmental authority the greater of:
- (a) 15% of each payment due to the Contractor; or
 - (b) the amount required under applicable tax legislation.

7. USE OF WORK PRODUCT

- 7.1 The Contractor hereby sells, assigns and transfers to the City the right, title and interest required for the City to use and receive the benefit of all the reports, drawings, plans, designs, models, specifications, computer software, concepts, products, designs or processes or other such work product produced by or resulting from the Services rendered by the Contractor. This section does not give the City the right to sell any such work product to any third party and the City may sell the work product only with the prior approval of the Contractor. The Contractor may retain copies of the work product.

8. PERSONNEL AND SUBCONTRACTORS

- 8.1 The Contractor will provide only personnel who have the qualifications, experience and capabilities to provide the Goods and perform the Services.
- 8.2 The Contractor will provide the Goods and Services using the personnel and sub-contractors as may be listed in the Quotation and the Contractor will not remove any such listed personnel or sub-contractors from the Services without the prior written approval of the City.
- 8.3 If the City reasonably objects to the performance, qualifications, experience or suitability of any of the Contractor's personnel or sub-contractors then the Contractor will, on written request from the City, replace such personnel or sub-contractors.
- 8.4 Except as provided for in Section 8.2, the Contractor will not engage any personnel or sub-contractors, or sub-contract or assign its obligations under this Agreement, in whole or in part, without the prior written approval of the City.
- 8.5 The Contractor will preserve and protect the rights of the City with respect to any Services performed under sub-contract and incorporate the conditions of this Agreement into all

sub-contracts as necessary to preserve the rights of the City under this Agreement. The Contractor will be as fully responsible to the City for acts and omissions of sub-contractors and of persons directly or indirectly employed by them as for acts and omissions of persons directly employed by the Contractor.

9. LIMITED AUTHORITY

- 9.1 The Contractor is not and this Agreement does not render the Contractor an agent or employee of the City, and without limiting the above, the Contractor does not have authority to enter into any contract or reach any agreement on behalf of the City, except for the limited purposes as may be expressly set out in this Agreement, or as necessary in order to provide the Goods and Services. The Contractor will make such lack of authority clear to all persons with whom the Contractor deals in the course of providing the Goods and Services. Every vehicle used by the Contractor in the course of providing the Goods and Services shall identify the Contractor by name and telephone number.
- 9.2 The Contractor is an independent contractor. This Agreement does not create the relationship of employer and employee, a partnership, or a joint venture. The City will not control or direct the details, means or process by which the Contractor performs the Services. The Contractor will determine the number of days and hours of work required to properly and completely perform the Services. The Contractor is primarily responsible for performance of the Goods and Services and may not delegate or assign any Services to any other person except as provided for in section 8.4. The Contractor will be solely liable for the wages, fringe benefits, work schedules and work conditions of any partners, employees or sub-contractors.

10. CONFIDENTIALITY AND DISCLOSURE OF INFORMATION

- 10.1 Except as provided for by law or otherwise by this Agreement, the Contractor will keep strictly confidential any information supplied to, obtained by, or which comes to the knowledge of the Contractor as a result of the provision of the Goods or performance of the Services and this Agreement, and will not, without the prior express written consent of the City, publish, release, disclose or permit to be disclosed any such information to any person or corporation, either before, during or after termination of this Agreement, except as reasonably required to complete the Goods and Services.
- 10.2 The Contractor acknowledges that the City is subject to the *Freedom of Information and Protection of Privacy Act* of British Columbia and agrees to any disclosure of information by the City required by law.
- 10.3 The Contractor agrees to return to the City all of the City's property at the completion of this Agreement, including any and all copies or originals of reports provided by the City.

11. WARRANTIES

- 11.1 The Contractor warrants that the Goods shall be free from defects in design, materials, workmanship and title, shall conform in all respects to the terms of this Agreement, shall be fit and suitable and perform satisfactorily for the purposes and under the conditions made known to the Contractor by the City or which were reasonably inferable. The Goods shall be at least equal to the higher of national standards or codes (such as, by way of illustration, CSA or ASTM), or standards and codes customarily applicable at the place

where the City will use the Goods. The Goods shall be of the best quality, if no quality is specified. This general warranty is independent of and without prejudice to any specific warranty or service guarantee offered by the Contractor or third party manufacturer or supplier of the Goods in connection with the purpose for which the Goods were purchased. The Contractor shall assign to the City any warranty or service guarantee offered by a third party manufacturer or supplier of the Goods. Notwithstanding this assignment, if at any time up to one year from the date of delivery or installation (if applicable) the City determines the Goods or any part do not conform to these warranties, the City shall notify the Contractor within a reasonable time after such discovery, and the Contractor shall then promptly correct such nonconformity at the Contractor's expense. Goods used to correct a nonconformity shall be similarly warranted for one year from the date of installation. The Contractor's liability shall extend to all liabilities, losses, damages, claims and expenses incurred by the City caused by any breach of any of the above warranties.

- 11.2 The Contractor warrants and guarantees that Goods and Services delivered under this Agreement do not infringe any valid patent, copyright or trademark, foreign or domestic, owned or controlled by any other corporation, firm or person, and agrees to indemnify and save harmless the City and all of its elected and appointed officials, officers, employees, servants, representatives and agents (collectively the "Indemnitees"), from and against any and all claims, demands, causes of action, suits, losses, damages and costs, liabilities, expenses and judgments (including all actual legal costs) by reason of any claim, action or litigation arising out of any alleged or actual infringement of any patent, copyright or trademark, foreign or domestic, relating to the Goods and Services supplied under this Agreement.

12. INSURANCE AND DAMAGES

- 12.1 The Contractor will indemnify and save harmless the Indemnitees from and against all claims, demands, causes of action, suits, losses, damages and costs, liabilities, expenses and judgments (including all actual legal costs) for damage to or destruction or loss of property, including loss of use, and injury to or death of any person or persons which any of the Indemnitees incur, suffer or are put to arising out of or in connection with any failure, breach or non-performance by the Contractor of any obligation of this Agreement, or any wrongful or negligent act or omission of the Contractor or any employee or agent of the Contractor.
- 12.2 The indemnities described in Sections 11.2, 12.1 and 18.3 will survive the termination or completion of this Agreement and, notwithstanding such termination or completion, will continue in full force and effect for the benefit of the Indemnitees.
- 12.3 The Contractor will, without limiting its obligations or liabilities and at its own expense, provide and maintain throughout this Agreement the following insurances in forms and amounts acceptable to the City from insurers licensed to conduct business in Canada:
- (a) commercial general liability insurance on an occurrence basis, in an amount not less than five million (\$5,000,000) dollars inclusive per occurrence against death, bodily injury and property damage arising directly or indirectly out of the work or operations of the Contractor, its employees and agents. The insurance will include cross liability and severability of interests such that the coverage shall apply in the same manner and to the same extent as though a separate policy had been issued

to each insured. The insurance will include, but not be limited to: premises and operators liability, broad form products and completed operations, owners and contractors protective liability, blanket contractual, employees as additional insureds, broad form property damage, non-owned automobile, contingent employers liability, broad form loss of use, personal injury, and incidental medical malpractice. The City will be added as additional insured;

- (b) automobile liability insurance on all vehicles owned, operated or licensed in the name of the Contractor in an amount not less than three million (\$3,000,000) dollars per occurrence for bodily injury, death and damage to property; and
- (c) contractors equipment insurance in an all risks form covering construction machinery and equipment used for the performance of the Services.

12.4 The Contractor will provide the City with evidence of the required insurance prior to the commencement of this Agreement. Such evidence will be in the form of a completed certificate of insurance acceptable to the City. The Contractor will, on request from the City, provide certified copies of all of the Contractor's insurance policies providing coverage relating to the Services, including without limitation any professional liability insurance policies. All required insurance will be endorsed to provide the City with thirty (30) days advance written notice of cancellation or material change restricting coverage. To the extent the City has an insurable interest, the builder's risk policy will have the City as first loss payee. The Contractor will be responsible for deductible amounts under the insurance policies. All of the Contractor's insurance policies will be primary and not require the sharing of any loss by the City or any insurer of the City.

12.5 The Contractor acknowledges that any requirement by the City as to the amount of coverage under any policy of insurance will not constitute a representation by the City that the amount required is adequate and the Contractor acknowledges and agrees that the Contractor is solely responsible for obtaining and maintaining policies of insurance in adequate amounts. The insurance policy coverage limits shall not be construed as relieving the Contractor from responsibility for any amounts which may exceed these limits, for which the Contractor may be legally liable.

12.6 The Contractor shall place and maintain, or cause any of its sub-contractors to place and maintain, such other insurance or amendments to the foregoing policies as the City may reasonably direct.

12.7 The Contractor hereby waives all rights of recourse against the City for loss or damage to the Contractor's property.

13. CITY RESPONSIBILITIES

13.1 The City will, in co-operation with the Contractor, make efforts to make available to the Contractor information, surveys, and reports which the City has in its files and records that relate to the Goods and Services. The Contractor will review any such material upon which the Contractor intends to rely and take reasonable steps to determine if that information is complete or accurate. The Contractor will assume all risks that the information is complete and accurate and the Contractor will advise the City in writing if in the Contractor's judgment the information is deficient or unreliable and undertake such new surveys and investigations as are necessary.

- 13.2 The City will in a timely manner make all decisions required under this Agreement, examine documents submitted by the Contractor and respond to all requests for approval made by the Contractor pursuant to this Agreement.
- 13.3 If the City observes or otherwise becomes aware of any fault or defect in the delivery of Goods or the provision of Services, it may notify the Contractor, but nothing in this Agreement will be interpreted as giving the City the obligation to inspect or review the Contractor's performance with regards to delivering Goods or the performance of the Services.

14. DEFICIENCIES

- 14.1 The City shall have a reasonable time to inspect and to accept the Goods and Services. The City may reject any Goods or Services not in accordance with this Agreement, whether due to damage resulting from improper packing, loading, unloading or otherwise. The City shall notify the Contractor of rejection of the Goods whereupon the Goods will be held subject to the disposition by the Contractor. Any costs or expenses incurred by the City as a result of the rejection of the Goods or Services are, immediately upon written demand by the City, payable by the Contractor, and may be set off against any payments owing by the City to the Contractor.
- 14.2 The City may hold back from payments otherwise due to the Contractor up to 150% of a reasonable estimate, as determined by the City, on account of deficient or defective Goods or Services. This holdback may be held, without interest, until replacement Goods are received or such deficiency or defect is remedied.

15. DEFAULT AND TERMINATION

- 15.1 In the event the Contractor does not deliver the Goods or perform the Services by the date specified in this Agreement, then:
- (a) the City reserves the right to terminate this Agreement, in whole or in part, and in the event of such termination no payment will be owing by the City on account of this Agreement and the Contractor will be liable for any and all expenses or loss resulting from such failure or delay and will return all monies paid by the City; or
 - (b) if the City does not terminate this Agreement for late delivery or performance, the City may deduct and setoff from any payments owing to the Contractor all additional costs the City reasonably incurs on account of the late delivery or performance.
- 15.2 The City may by written notice at any time cancel this Agreement with respect to Goods which, as of the date of cancellation, have not been shipped.
- 15.3 The City may at any time and for any reason by written notice to the Contractor terminate this Agreement before the completion of all the Goods and Services, such notice to be determined by the City at its sole discretion. Upon receipt of such notice, the Contractor will perform no further Goods and Services other than the work which is reasonably required to complete the Goods and Services. Despite any other provision of this Agreement, if the City terminates this Agreement before the completion of all the Goods and Services, the City will pay to the Contractor all amounts owing under this Agreement for Goods and Services provided by the Contractor up to and including the date of termination, plus reasonable termination costs in the amount as determined by the City in

its sole discretion. Upon payment of such amounts no other or additional payment will be owed by the City to the Contractor, and, for certainty, no amount will be owing on account of lost profits relating to the portion of the Goods and Services not performed or other profit opportunities.

15.4 The City may terminate this Agreement for cause as follows:

- (a) If the Contractor is adjudged bankrupt, or makes a general assignment for the benefit of creditors because of its insolvency, or if a receiver is appointed because of its insolvency, the City may, without prejudice to any other right or remedy the City may have, terminate this Agreement by giving the Contractor or receiver or trustee in bankruptcy written notice; or
- (b) If the Contractor is in breach of any term or condition of this Agreement, and such breach is not remedied to the reasonable satisfaction of the City within 5 days after delivery of written notice from the City to the Contractor, then the City may, without prejudice to any other right or remedy the City may have, terminate this Agreement by giving the Contractor further written notice.

15.5 If the City terminates this Agreement as provided by Section 15.4 then the City may:

- (a) enter into contracts, as it in its sole discretion sees fit, with other persons to complete the Goods and Services;
- (b) withhold payment of any amount owing to the Contractor under this Agreement for the performance of the Goods and Services;
- (c) set-off the total cost of completing the Goods and Services incurred by the City against any amounts owing to the Contractor under this Agreement, and at the completion of the Goods and Services pay to the Contractor any balance remaining; and
- (d) if the total cost to complete the Goods and Services exceeds the amount owing to the Contractor, charge the Contractor the balance, which amount the Contractor will forthwith pay.

16. CURING DEFAULTS

- 16.1** If the Contractor is in default of any of its obligations under this Agreement, then the City may without terminating this Agreement, upon 5 days written notice to the Contractor, remedy the default and set-off all costs and expenses of such remedy against any amounts owing to the Contractor. Nothing in this Agreement will be interpreted or construed to mean that the City has any duty or obligation to remedy any default of the Contractor.

17. DISPUTE RESOLUTION

- 17.1** 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.
- 17.2** 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.
- 17.3** Mediation: If all or any portion of a Dispute cannot be resolved by good faith negotiations within 30 days, either party may by notice to the other party refer the matter to mediation.

Within 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.

- 17.4 Litigation: If within 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.

18. WCB AND OCCUPATIONAL HEALTH AND SAFETY

- 18.1 The Contractor agrees that it shall, at its own expense, procure and carry, or cause to be procured, carried and paid for, full Workers' Compensation Board coverage for itself and all workers, employees, servants and others engaged in or upon any work or service which is the subject of this Agreement. The Contractor agrees that the City has the unfettered right to set off the amount of the unpaid premiums and assessments for the Workers' Compensation Board coverage against any monies owing by the City to the Contractor. The City shall have the right to withhold payment under this Agreement until the Workers' Compensation Board premiums, assessments or penalties in respect of the work done or service performed in fulfilling this Agreement have been paid in full.
- 18.2 The Contractor shall provide the City with the Contractor's Workers' Compensation Board registration number and a letter from the Workers' Compensation Board confirming that the Contractor is registered in good standing with the Workers' Compensation Board and that all assessments have been paid to the date thereof prior to the City having any obligations to pay monies under this Agreement.
- 18.3 Without limiting the generality of any other indemnities granted by the Contractor in this Agreement, the Contractor shall indemnify and hold harmless the City, its elected and appointed officials, employees and agents, from all manner of claims, demands, costs, losses, penalties and proceedings (including all actual legal costs) arising out of or in any way related to unpaid Workers' Compensation Board assessments owing from any person or corporation engaged in the performance of this Agreement or arising out of or in any way related to the failure to observe safety rules, regulations and practices of the Workers' Compensation Board, including penalties levied by the Workers' Compensation Board.
- 18.4 The Contractor agrees that it is the "prime contractor" for the work as defined in the *Workers' Compensation Act*, R.S.B.C. 1996, c. 492 as amended and will ensure compliance with the *Workers' Compensation Act* and Regulations in respect of the workplace. Without limiting its responsibilities under the legislation, the Contractor will coordinate the activities of employers, workers and other persons at the workplace relating to occupational health and safety. The Contractor shall have a safety program acceptable to the Workers' Compensation Board, shall provide first aid services, and shall ensure that all Workers' Compensation Board safety rules and regulations are observed during the performance of this Agreement, not only by the Contractor, but by all sub-contractors, workers, material personnel and others engaged by the Contractor in the performance of this Agreement. The prime contractor shall appoint a qualified coordinator for the purpose of ensuring the coordination of health and safety activities for the workplace. Prior to

commencement of Construction, the Contractor shall complete and file a "Construction Notice of Project" with the Workers' Compensation Board and shall provide a copy of the same to the City confirming that the Contractor shall be the prime contractor responsible for coordination of safety and health under Part 3 of the *Workers' Compensation Act* and Part 20 of the WCB Occupational Health and Safety Regulations. That person will be the person so identified in this Agreement, and the Contractor will advise the City immediately in writing if the name or contact number of the qualified coordinator changes.

- 18.5 The Contractor will ensure compliance with and conform to all health and safety laws, by-laws or regulations of the Province of British Columbia, including without limitation any regulations requiring installation or adoption of safety devices or appliances.
- 18.6 The Contractor shall fulfill all its duties, obligations, and responsibilities in such a manner that it ensures the safety of the public and in accordance with the safety regulations of the Workers' Compensation Board and shall install signs and barriers as required to ensure the safety of the public and of its employees in the use of the City facilities.
- 18.7 The Contractor understands and undertakes to comply with all the WCB Occupational Health and Safety Regulations for hazardous materials and substances, and in particular with the "Workplace Hazardous Materials Information System (WHMIS)" Regulations. All "Material Safety Data Sheets (MSDS)" shall be shipped along with the Goods, materials, products and any future MSDS updates will be forwarded.

19. BUSINESS LICENSE

- 19.1 The Contractor will obtain and maintain throughout the term of this Agreement a valid City of Surrey business license.

20. GENERAL PROVISIONS FOR GOODS

- 20.1 Documentation for shipments of Goods from outside Canada shall be provided by a Contractor by airmail and shall include all documents as required by law or customary practice. All packages shall be marked as follows:

"Upon arrival, please contact customs broker:
Livingston International Inc.
Telephone: +1-604-685-3555
Fax: +1-604-605-8231
Email: cst19@livingstonintl.com"

- 20.2 If this Agreement pertains to the fabrication, assembly or other processing of the Goods, representatives of the City shall be permitted free access at all reasonable times for the purpose of inspection, testing or obtaining information as to the progress of the fabrication, assembly or processing.
- 20.3 The City may require that shop drawings be submitted by the Contractor for review prior to the delivery of the Goods. The City may require that a qualified registered professional engineer stamp and approve a shop drawing prior to submission. Any review of shop drawings by the City will not relieve the Contractor from its obligation to deliver Goods in full compliance with all requirements of this Agreement.

21. COMPLIANCE

- 21.1 The Contractor will provide the Services in full compliance with all applicable laws, building codes and regulations.
- 21.2 The Contractor will, as a qualified and experienced practitioner, interpret applicable codes, laws and regulations applicable to the performance of the Services. If an authority having jurisdiction imposes an interpretation which the Contractor could not reasonably have verified or foreseen prior to entering into this Agreement, then the City will pay the additional costs, if any, of making alterations so as to conform to the required interpretation.

22. JURISDICTION OF COUNCIL AND NON-APPROPRIATION

- 22.1 Nothing in this Agreement limits or abrogates, or will be deemed to limit or abrogate, the jurisdiction of the Council of the City in the exercise of its powers, rights or obligations under any public or private statute, regulation or by-law or other enactment.
- 22.2 The Contractor recognizes and agrees that the City cannot make financial commitments beyond the City's current fiscal year. The City will annually make bonafide requests for appropriation of sufficient funds to cover all payments covered by this Agreement. If City Council does not appropriate funds, or appropriates insufficient funds, the City will notify the Contractor of its intention to terminate or reduce the services so affected within 30 days after the non-appropriation becomes final. Such termination shall take effect 30 days from the date of notification, shall not constitute an event of default and shall relieve the City, its officers and employees, from any responsibility or liability for the payment of any further amounts under this Agreement.

23. WAIVER

- 23.1 Any failure of the City at any time or from time to time to enforce or require the strict keeping or performance of any of the terms and conditions contained in this Agreement shall not constitute a waiver of the terms and conditions and shall not affect or impair the terms or conditions in any way or the City's right at any time to avail itself of any remedies as the City may have for any breach of the terms and conditions.

24. APPLICABLE LAW

- 24.1 This Agreement shall be governed by and construed in accordance with the laws of the Province of British Columbia. The City and the Contractor accept the jurisdiction of the courts of British Columbia and agree that any action under this Agreement shall be brought in such courts.

25. NOTICES

- 25.1 Any notice, report or other document that either party may be required or may wish to give to the other must be in writing, unless otherwise expressly provided for, and will be deemed to be validly given to and received by the addressee:
- (a) by hand, on delivery;
 - (b) by facsimile, on transmission; or
 - (c) by mail, five calendar days after posting.

- 25.2 The addresses for delivery will be as shown in the Quotation. In addition, the City may give notice to the Contractor by email at the Contractor's email address as shown in the Quotation, which email will be deemed to be validly given and received by the Contractor on transmission. The Contractor may not give notice to the City by email.

26. MERGER AND SURVIVAL

- 26.1 The representations, agreements, covenants and obligations set out in this Agreement shall survive the delivery of the Goods and performance of the Services and payment of the Fees and Disbursements.

27. ENTIRE AGREEMENT

- 27.1 This Agreement, including the Schedules and any other documents expressly included by reference in this Agreement, contains the entire agreement of the parties regarding the provision of the Goods and Services, and no understandings or agreements, oral or otherwise, exist between the parties except as expressly set out in this Agreement. This Agreement supersedes and cancels all previous agreements between the parties relating to the Goods and Services.

- 27.2 In the event that the Contractor issues an invoice, packing slip, sales receipt, or any like document to the City, the City accepts the document on the express condition that any terms and conditions in it which constitute terms and conditions which are in addition to or which establish conflicting terms and conditions to those set out in this Agreement are expressly rejected by the City.

28. SIGNATURE

- 28.1 This Agreement shall be signed by a person authorized to sign on behalf of the Contractor.
- 28.2 This Agreement may be executed in or one or more counterparts all of which when taken together will constitute one and the same Agreement, and one or more of the counterparts may be delivered by fax transmission or as a PDF file.

29. FUEL EMISSIONS DATA

- 29.1 As of January 1, 2013, the City requires contractors to report the quantity of fuel used to operate vehicles, equipment and machinery as part of the delivery of operating (non-capital) services defined as "Traditional Services" in the Carbon Neutral Workbook.v2 as part of the BC Climate Action Charter. Typical data to be submitted would include the following for each calendar year:
- Type of vehicle/vehicle class used to deliver the contracted services;
 - Type of fuel consumed by each vehicle class; and
 - Litres of fossil fuels consumed in relation to the service delivered under the contract.
- 29.2 Fuel consumption associated with the provision of these services must be provided to the City within thirty (30) days of the end of the calendar year or the termination of the contract, whichever is earlier. An excel-based Fuel Use Reporting template will be provided by the City. The most current version of the workbook is located on the Climate

Action Toolkit website for your reference at <http://toolkit.bc.ca/carbon-neutral-government>.

30. NON ROAD DIESEL ENGINE EMISSION REGULATION

- 30.1 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.
- 30.2 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.
- 30.3 The City may, at its discretion, give preference to equipment that meets higher emission standards.
- 30.4 Contact Metro Vancouver staff at 604-451-6655, visit www.metrovancouver.org/nonroaddiesel or email nonroaddiesel@metrovancouver.org for more information about the Bylaw, the rebate program, and for assistance with the registration process.

- END OF PAGE -

31. ENUREMENT

31.1 This Agreement shall enure to the benefit of and be binding upon the respective successors and permitted assigns of the City and the Contractor.

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

CITY OF SURREY

by its authorized signatory:

(Signature of Authorized Signatory)

(Print Name and Position of Authorized Signatory)

CONTRACTOR

by its authorized signatories:

(Legal Name of Contractor)

(Signature of Authorized Signatory)

(Signature of Authorized Signatory)

(Print Name and Position of Authorized Signatory)

(Print Name and Position of Authorized Signatory)

SCHEDULE A

SPECIFICATIONS OF GOODS AND SCOPE OF SERVICES

1. PURPOSE

- 1.1 The City invites Quotations from experienced and qualified Contractors for the provision of flow monitoring Services on City sanitary sewer collection systems, data collection and supply and maintenance of associated equipment necessary for flow monitoring. The flow monitoring is part of a continued inflow and infiltration ("I&I") reduction program and is required at the sites specified under Section 2, for a period of six (6) months, starting October 1, 2016 to March 31, 2017. The Contractor shall provide to the City the draft final report no later than April 28, 2017 and the final report and deliverables no later than May 12, 2017.

2. SPECIFICATIONS OF GOODS AND SCOPE OF SERVICES

2.1 SCOPE OF SERVICES

- 2.1.1 The Contractor shall monitor, collect, record, quality assure, analyze and report to the City in a format acceptable to the City and as described in this document, the sanitary sewer flow data at an interval of five (5) minutes for the following sites:

No.	Station Name	Catchment Area	Facility ID	Node ID	Size, Material & Slope*
1	BC7	Bear Creek 7	1000118907	1438608548	400 Conc, 1.39%
2	BC7.1	Bear Creek 7.1	1000114042	1452108832	400 Conc, 0.64%
3	BC7.1.2	Bear Creek 7.1.2	1000114113	1489008832	300 AC, 1.04%
4	F1	Fleetwood 1	1000119441	1483408234	450 PVC, 1.38%
5	F1.1	Fleetwood 1.1	1000119281	1483208477	300 PVC, 5.08%
6	CC3	City Centre 3	1000107012	1325310980	450 Conc, 1.8%
7	NS3	North Surrey 3	1000118449	1499211311	400 AC, 4.21%
8	NS2.7	North Surrey 2.7	1000118541	1488611422	350 AC, 0.48%
9	NS2.2	North Surrey 2.2	1000116078	1368311418	200 AC, 2.19%
10	NS4	North Surrey 4	1000114729	1424911385	250 PVC, 0.59%
11	NS5	North Surrey 5	1000109712	1456911121	600 Conc, 0.24%
12	NCC10.9	Cloverdale 10.9	1000110781	1918405724	300 PVC, 2.94%
13	BP1.1	Boundary Park 1.1	1000108196	1196005679	500 AC, 0.4%
14	BP1.2	Boundary Park 1.2	1001150881	1200505512	300 PVC, 1.09%
15	SS1	South Surrey 1	1000103330	1258302768	200 AC, 5.27%
16	SS2	South Surrey 2	1000103689	1247402740	200 AC, 0.53%

*Information listed here and/or on as-built drawings may not be accurate. The Contractor is responsible for onsite measurements and verifications and will not rely on as-built drawings for the determination of pipe geometry or slopes or any required data for the success of this project. **Site locations can be found in Schedule A-1 - Temporary Flow Monitoring Sites.**

2.1.2 The following sites are on arterial roads or major collectors and will require traffic control for the installation of, inspection of, data retrieval from and removal of the flow monitoring devices: Bear Creek 7.1, Bear Creek 7.1.2, North Surrey 4, Cloverdale 10.9, Boundary Park 1.1 and Boundary Park 1.2.

2.1.3 The Contractor shall provide:

- (a) All necessary equipment and services to complete the flow monitoring and data collection;
- (b) Installation, commissioning, and maintenance of flow monitoring and/or data collection equipment;
- (c) Hydraulic analysis to support proper placement of monitoring equipment;
- (d) Hydraulic analysis of the performance data collected;
- (e) Quality assurance programs and procedures to support data integrity, accuracy, and data collection uptime;
- (f) All necessary analysis tools/software and data processing/analysis to produce and provide the results and reports requested by the City;
- (g) Total integration and management of all phases and services related to the successful performance of the project;
- (h) Frequent collection and review of data to ensure any data collection issues are resolved in a timely manner and significant times of no data or poor data do not occur;
- (i) Monthly reports including all flow data collected along with data quality narratives and flow monitoring site maintenance logs;
- (j) All performance information generated during the assessment period both in electronic and hard copy formats; and
- (k) At the end of the project all the above data and information on a Digital Video Disc (DVD).

2.2 FLOW MONITORING REQUIREMENTS

2.2.1 Remote/wireless monitoring of the project sites is not required provided the Contractor conducts regular field visits to ensure quality assurance/quality control can be accomplished. The City has not investigated the availability of adequate cellular coverage at the project sites. If feasible, provide estimates for wireless and non-wireless monitoring separate.

2.2.2 The City expects synchronous monitoring of all project sites over the project term. All flow monitoring works are expected to abide by the prescribed parameters below.

2.2.3 Depth Sensing

- (a) It is recommended that the depth meters employed utilize ultrasonic depth sensing or pressure depth sensing technology.
- (b) If weirs are used for depth measurements the Contractor shall employ an independent electronic depth measurement device that is capable of working under surcharged conditions, **in addition** to the weir. The Contractor shall provide weir rating curves for each weir type, to validate data collected. Also, the Contractor shall install supplementary equipment and collect data **beyond the hydraulic influence of the weir**. This supplementary site must be **approved by the City** prior to installation. The Contractor must identify one of the equipment

as the primary method of depth measuring and the other as supplementary except in the case of surcharge condition. Data collected from the primary device will be validated against data collected from the supplementary device. In the case of surcharge condition, the independent electronic equipment will be the primary monitoring equipment.

- (c) Mounting and depth sensors shall be sufficiently streamlined to minimize flow disruption.

2.2.4 Velocity Measurements

- (a) It is recommended that the velocity meters employed utilize ultrasonic Doppler type sensing or magnetic velocity sensing technology.
- (b) Mountings and all velocity sensors is expected to be of low profile and sufficiently streamlined to minimize flow disruption.

2.2.5 Monitoring Site Assessment

- (a) All project sites are to be field inspected for hydraulic suitability and monitoring efficiency by the Contractor. The Contractor is responsible for on-site measurements and will not rely on as-built drawing for the determination of pipe geometry or slopes or any required data. The Contractor will coordinate the preliminary investigations with the City staff as required. The City will provide free and liberal access to the sites.
- (b) If a site is deemed unsuitable for monitoring, the Contractor shall coordinate with the City the investigation of up to two alternate sites. Alternate sites will be catalogued and identified by the Contractor using the City's existing sewer collection GIS system. All alternate sites must be approved by the City.
- (c) The site assessment is expected to be illustrated in a *Flow Monitoring Site Assessment* document, separate for each site, be submitted to the City for review and acceptance within fifteen (15) calendar days of the project initiation meeting. This document may contain sketches, site photographs, notes on site conditions, data collection and analysis methods, proposed monitoring equipment to be installed at the site, installation and set-up documentation, traffic control requirements, and maintenance log for site specific calibration.

2.2.6 Instrumentation and Data Collection

- (a) Depth and velocity meters and other necessary equipment shall be installed within five (5) business days of the City approval of the *Flow Monitoring Site Assessment* document outlined in Section 2.2.5. The flow monitoring/data recording may begin immediately.
- (b) The Contractor will abide by the following requirements with respect to installation, calibration and maintenance of the flow monitoring/data collection equipment:
 - (1) Maintain the equipment in optimum working order for the duration of the project free of debris and other obstruction to ensure that data loss is reduced to minimum and within the specified limits under this document and accuracy is maintained;
 - (2) Replace damaged or defective equipment with a new or equivalent model within 24 hours so there is minimal disruption to the study data;

- (3) Provide all consumables involved in the installation, maintenance and removal of the flow, depth and velocity meter units and related equipment;
 - (4) Complete all works with adherence to the City or prescribed standards and addendums as currently available, if any, and abide by all confined space safety requirements;
 - (5) Conduct all field activities in a manner consistent with the requirements in the current edition of the Ministry of Transportation and Highway's *Traffic Control Manual for Work on Roadways* document and all other applicable Provincial Standards; and
 - (6) Validate metered results with manual field measurement verifications and by comparing them against previous metered data (provided by the City when applicable).
- (c) An installation report is expected to be provided to the City within fifteen (15) calendar days from the date of completion of the monitoring equipment installation at all monitoring sites. For each monitoring location comprehensive site documentation is to be completed including at a minimum:
- (1) Site map and address;
 - (2) Pipe size and material;
 - (3) Manhole number (Facility ID and Node ID);
 - (4) Manhole layout showing meter or sensor location;
 - (5) Flow channel condition; and
 - (6) Site hydraulics and siltation.
- (d) It is required that the contractor collects comprehensive data sets for the sites monitored including:
- (1) Depth data; and
 - (2) Velocity data.
- (e) All raw data accuracy for the field-monitoring component of this project must be **at least +/-10%**. The accuracy will be determined with any available independent additional measuring device or with manual readings taken as per the requirements specified under this project. Raw data will be assessed in relation to the data continuity, site calibration, site logs and aggregate velocity-depth scatter plots. Throughout the flow monitoring period "data collection uptime" of 90% or more shall be maintained.

2.3 DATA ANALYSIS AND QUALITY ASSURANCE

2.3.1 Data Analysis Requirements

- (a) Flow monitoring data is considered a valuable asset by the City, and ensuring the integrity of the data is of high importance. The quality and reliability of the depth and velocity readings/data determine the accuracy of the calculated flow data. The depth and velocity readings can be affected by local hydraulic conditions, malfunctioning sensors, downstream blockages, slow or sluggish flows, shallow flows, incorrect meter installation, etc.
- (b) The Contractor shall keep data reconstitution to a minimum for any lost or erroneous data by timely response of field crews to rectify problems with

monitoring equipment. Any data corrections shall be made as necessary to provide an accurate representation of flow readings. Documentation of corrections made and reasons for corrections shall be provided in the final report with the data. All corrected data will be reviewed and approved by the City before the data is considered final data.

- (c) Data analysis relative to depth, velocity and flow will be performed on all data collected from monitoring sites. The Contractor will analyze at a minimum:
 - (1) Base or dry weather infiltration component;
 - (2) Peak wet weather flow, velocity and depth of surcharge on a site;
 - (3) Diurnal flow, depth and velocity for each location on a monthly basis against monitored rainfall; and
 - (4) Data set discrepancies, determined by the Contractor and their expertise in sewer data collection.

2.3.2 Software Solution for Data Analysis

- (a) The Contractor may use a software application for data analysis of velocity, depth, flow, and other data as it relates to sewer collection systems and the City's project goals provided that it is within prescribed industry standards. The software may either be commercially available or privately developed, but the Contractor must own or have access to license for the software for its use during the project term. The Contractor shall provide all necessary proprietary software to the City upon request, for data extraction processing and data analysis by the City. The software will be returned upon completion of the project or as needed by the Contractor. All monitoring data must be provided in files suitable for importing into Microsoft® Excel® format. File names shall indicate station name, node ID, month, and year of data contained within and should be consistent from month to month. Files will contain homogenous month-long data records, starting at the first day of the each month at 00:00:00 and ending on the last day of each month at 23:55:00. All data shall be recorded at five (5) minutes intervals. An example for the reported monitoring data for the CSV file follows: **Station Name, YYYY-MM-DD HH:MM, Depth (mm), Velocity (m/s), Flow (L/s).**

2.3.3 Quality Assurance/Quality Control

- (a) Quality assurance and quality control are systems of routine technical activities to ensure the quality of the data is being generated during the flow metering period. Field verifications are a critical part of ensuring data quality. Field verifications will consist of taking manual depth and velocity measurements and comparing these readings with real-time readings from installed meters/equipment. Field verifications are used to independently validate the accuracy of the flow meters/equipment and to generate depth-velocity relationships that could be used in flow calculations or data analysis. These verifications also help ensure that the equipment are installed and remain in valid positions and not subjected to drifting or misalignment over a period of time.
- (b) Field verifications may be taken at all sites, regardless of the type of metering equipment. At a minimum, the field verification measurements will be taken at the time of installation, at each site visit, and any time a sensor is moved or replaced. The nature of the verification procedure will vary depending on the depth of the flow at the site and the site hydraulic conditions. Where manual

velocity measurements are difficult or impossible to obtain due to shallow flows, the Contractor is responsible to find an alternative method to verify the meter readings.

- (c) Manual field verification of the flow will be performed twice a week for the first month of the monitoring program and on a monthly basis thereafter, unless the Contractor can demonstrate an equitable, alternative approach to verification. All verification data is to be recorded in a suitable maintenance log with erroneous data clearly identified within the data record. Field Verification logs must be kept for each site and is expected to be made available to the City by the last calendar day of each month or the first business day thereafter.
- (d) In addition to field manual verification, the Contractor is expected to abide by the following prescribed actions for quality control:
 - (1) Create velocity versus depth profiles/scatter graphs for all sites on a weekly basis in conjunction with site log information that will form the basis for the assessment of overall site data accuracy.
 - (2) Record all maintenance activities including but not limited to: battery replacement, battery power levels, calibration checks, probe/sensor cleaning for submission in a monthly technical memorandum to the City.
 - (3) Address all service outages within 24 hours of the identification of the metering error or failure. No adjustment to the raw data record shall be made except a note in the maintenance log. It is expected that the Contractor will keep downtime to a minimum during visits.
- (e) It is the responsibility of the Contractor to:
 - (1) Conduct data collection, processing, editing and analysis in accordance with standard operating procedures and work instructions, and in accordance with quality assurance protocols or similar quality management programs;
 - (2) Review site installation, field verification and maintenance reports to identify conditions that would affect the collected data;
 - (3) Clearly distinguish between raw data, processed data, and final data;
 - (4) Keep a record of all raw unedited data for submission in a final report;
 - (5) Provide a monthly data quality summary for each site that will include a narrative or commentary on the data collected during the month, the data quality rating, the extent of data loss and a data review and editing comments; and
 - (6) Ensure that the placement and maintenance of flow monitoring equipment does not create flow restrictions or result in any blockages may result in backups or sewer overflows. Any cleanup or repairs required or endured by the City as a result of the Contractor's flow monitoring placement or lack of maintenance of metering equipment, such as debris accumulation, will be solely the responsibility of the Contractor.

2.4 REPORTING

2.4.1 General and Monthly Reporting

- (a) Reporting under this project will include, but not be limited to, the following project milestone based reports and correspondence:

- (1) After three (3) weeks of monitoring from the beginning of the project, the City requires a progress meeting to ensure that all sites are working correctly. After this initial review meeting, bi-monthly meetings will be required to review the data and work performed.
- (2) Meeting minutes are to be prepared and submitted to the City within five (5) business days of all scheduled meetings.
- (3) Monthly reports organized by site to be submitted within ten (10) calendar days of ending of the monthly data collected and containing the following:
 - i. Brief commentary or narrative (bullet form is acceptable) on the performance data for the month including comments from the previous months as reference. This will include discussions on data gaps, back-ups, surcharges, backwatering effects, debris accumulations, possible data reconstitution requirements, comparisons against previous month's data, response to rainfall, scattergraph results, data anomalies, etc.
 - ii. Scattergraphs of depth (mm) and velocity (m/s).
 - iii. Hydrographs depicting depth (mm), velocity (m/s) and flow (L/s) and associated rainfall data (provided by the City). Same scales for each site shall be used from month to month to allow for easy visual comparisons.
 - iv. Field maintenance record/log and verification tracking.
- (4) Upon City request, data for any and/or all sites must be provided in Excel or CSV format within 48 hours of the request.

2.4.2 Final Data Reporting

- (a) The Contractor shall present the City with a final project data report presenting the data collected during the entire monitoring period. The report shall include all previous correspondence and analysis and provide a brief narrative summary of observed flow conditions supported by a graphical and tabular presentation of depth, velocity, and flow data. All quantitative data, where applicable, shall be reported in standard metric units. The project data report shall specifically include the following items for each flow monitor site:
 - (1) Commentary – A brief summary of general hydraulic conditions recorded from monitoring service and maintenance during the monitoring period.
 - (2) Scatter graph Report – A graphical plot of flow depth vs. velocity data recorded during the flow monitoring period.
 - (3) Hydrograph Report – A graphical time-series plot of hourly average flow, as well as associated rainfall data (to be provided by the City) recorded during the flow monitoring period. A hydrograph shall be provided for each consecutive monthly portion and for each consecutive seven (7) day portion of the flow monitoring period.
 - (4) Tabular Report – A table of hourly average flow, as well as associated hourly total rainfall data (to be provided by the City) recorded during each consecutive seven (7) day period of the flow monitoring period.
 - (5) Installation Report – A brief summary of the installation details associated with each flow monitoring location, including a color image of the general location of the manhole in which the monitor is installed, a color image of a

plan view of the manhole interior as viewed from the manhole opening, and a color image of the sensor installation as viewed from the manhole bench and channel. This may be completed for every sensor installed including any velocity and depth sensors.

2.4.3 Final Analysis Reporting

- (a) The Contractor shall present the City with a final project analysis report which shall contain the following:
 - (1) **Hydraulic Performance Evaluation** – A narrative interpretation of hydraulic performance recorded at each flow monitoring location as determined using a scatter graph of flow depth and velocity data. The scatter graph interpretation shall evaluate the ability of each flow monitoring location to accommodate flow quantities observed during average dry weather and maximum wet weather conditions observed during the flow monitoring period.
 - (2) **Capacity Indicators** – A tabular summary of capacity indicators including the ratio of maximum observed dry weather flow rate to as-built or designed full-pipe flow rate, the ratio of maximum observed wet weather flow rate to as-built or designed full-pipe flow rate, the ratio of maximum observed dry weather flow depth to diameter, the ratio of maximum observed wet weather flow depth to diameter, calculation of percent backwater, number of days in which a surcharge condition was observed during both dry weather and wet weather periods, the ratio of maximum observed silt depth to diameter, and the average dry day velocity.
 - (3) **Recommendations** – A narrative summary and discussion of recommendations based on the flow monitoring data and associated analysis performed during the flow monitoring period. Recommendations shall include operation and maintenance considerations, modifications to the existing flow monitoring strategy, and/or further investigative needs identified for consideration by the City.
 - (4) The entire project data and the final analysis report shall be provided to the City on a DVD in a format compatible with Adobe® Acrobat Reader®/portable document format (pdf). The report shall be provided to the City within six (6) weeks following the conclusion of the flow monitoring period.

2.5 PROJECT MANAGEMENT

- 2.5.1 The Contractor shall manage the project team efforts to satisfy the project scope and requirements, and to remain within budget and the prescribed time schedule. It is the responsibility of the Contractor to ensure quality control and maintain consistency throughout the project, and between them and any sub-contractors' efforts. The Contractor shall submit draft reports for review by City staff and address all queries before the final submission. The Contractor shall attend all project related meetings with the City and if required with third parties like Metro Vancouver.

SCHEDULE A-1 – TEMPORARY FLOW MONITORING SITES

Site Locations may be viewed and/or downloaded from the City of Surrey Managed File Transfer (MFT) Service.

Hostname: <https://mft.surrey.ca>

Login ID: surreybid

Password: Welcome

Locate Folder: 1220-040-2016-053



SCHEDULE B - QUOTATION

RFQ Title: **Temporary Flow Monitoring Services**

RFQ No: 1220-040-2016-053

CONTRACTOR

Legal Name: _____

Address: _____

Phone: _____

Fax: _____

Email: _____

CITY OF SURREY

City Representative: Richard D. Oppelt, Purchasing Manager

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

E-mail for PDF Files: purchasing@surrey.ca

1. If this Quotation is accepted by the City, a contract will be created as described in:
 - (a) the Agreement;
 - (b) the RFQ; and
 - (c) other terms, if any, that are 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 RFQ Attachment 1 – Draft Agreement. If requested by the City, I/we would be prepared to enter into that Agreement, amended by the following departures (list, if any):

Section

Requested Departure(s) / Alternative(s)

4. The City requires that the successful Contractor have the following in place **before providing the Goods and Services**:

- (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 City as additional insured and generally in compliance with the City's sample insurance certificate form available on the City's Website [Standard Certificate of Insurance](#);
- (d) City of Surrey or Intermunicipal 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):

Requested Departure(s) / Alternative(s)

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

SECTION B-1

Changes and Additions to Specifications:

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

7. I/We have reviewed the RFQ Attachment 1, Schedule A – Specifications of Goods and Scope of Services, to Attachment 1. If requested by the City, 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)

SECTION B-2

Fees and Payments

8. The Contractor offers to supply to the City of Surrey the Goods and Services for the prices plus applicable taxes as follows:

F.O.B. Destination, Freight Prepaid	Payment Terms: A cash discount of ____% will be allowed if invoices are paid within ____ days, or the ____ day of the month following, or net 30 days, on a best effort basis.	Ship Via:
The Contractor will provide all labour, plant, materials, tools and equipment necessary for Temporary Flow Monitoring Services:		
Item #	Item Name	Total Amount
1	Project preparation (including traffic management plan and traffic obstruction permits submissions to the City) and site assessment, for all sites	\$
2	Equipment installation, for all sites	\$
3	On-going data collection, analysis and quality assurance, for all sites	\$
4	Decommissioning and Final Reporting, for all sites	\$
Note: All costs related to traffic control, confined space entries, overheads, General Conditions and Profit are to be included in the above amounts.		
CURRENCY: Canadian		Subtotal: \$
		GST 5%: \$
		TOTAL QUOTATION PRICE: \$

SECTION B-3

Time Schedule:

9. Contractors should provide an estimated schedule, with major item descriptions and times indicating a commitment to provide the Goods and perform the Services within the time specified (use the spaces provided and/or attach additional pages, if necessary).

 MILESTONE DATES _____

ACTIVITY	SCHEDULE									
	1	2	3	4	5	6	7	8	9	10

SECTION B-4

Technical Details:

Contractors should provide the following additional technical information which will describe in detail how the Contractor's systems comply with each specification requirement:

10. The Contractor's interest in the project and an understanding of the City's objectives:

11. The Contractor's proposed methodology and approach for executing the work:

12. The details describing services and products to be utilized in the project, including types of meters, monthly reporting and on-line monitoring programs:

13. Technical summaries explaining graphs, charts, tables and related information deliverables that will be provided at the conclusion of the project:

14. Documentation substantiating certification of data processing and analysis systems used to convert data into reports:

15. Documentation substantiating quality control procedures for equipment installation and maintenance to ensure accuracy:

16. Documentation outlining the methodology for completing the data analysis requirements:

17. Documentation substantiating quality assurance procedures for maintaining accuracy and data uptime:

18. All monitoring and related equipment, analysis tools and software used in the project may be listed giving references of manufacturer, make, model and version. These may utilize industry standards, comparable in techniques and technology, and comply with requirements specified in this project:

19. Details of all software to be used in the analysis and reporting of the work; the Contractor's experience in using the software for data analysis and reporting purposes:

20. Commitment of time and resources expected from the City:

Key Personnel & Sub-Contractors:

21. Contractor should provide information on the background and experience of all key personnel proposed to provide the Goods and Services. An organizational chart of the Contractor's project team including the Contractor's project manager who will assume responsibility for managing all project deliverables and act as the Contractor's main contact with the City (use the spaces provided and/or attach additional pages, if necessary):

Key Personnel

Name: _____

Experience: _____

Dates: _____

Project Name: _____

Responsibility: _____

22. Contractor should provide the following information on the background and experience of all sub-contractors and material suppliers proposed to undertake a portion of the Goods and Services (use the spaces provided and/or attach additional pages, if necessary):

<i>Description Of Goods & Services</i>	<i>Sub-Contractors & Material Suppliers Names</i>	<i>Years Of Working With Contractor</i>	<i>Telephone Number And Email</i>

SECTION B-5

Experience and References:

23. Contractor's relevant experience and qualifications in delivering Goods and Services similar to those required by the Agreement (use the spaces provided and/or attach additional pages, if necessary):

24. Contractor's relevant references (name and telephone number) (use the spaces provided and/or attach additional pages, if necessary). The City's preference is to have a minimum of three references. Previous clients of the Contractor may be contacted at the City's discretion.

Metro Vancouver's Non-Road Diesel Engine Emissions Regulation By-law:

25. 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	

26. 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 offered by the Contractor this _____ day of _____, 201_.

CONTRACTOR

I/We have the authority to bind the Contractor

(Legal Name of Contractor)

(Signature of Authorized Signatory)

(Signature of Authorized Signatory)

(Print Name and Position of Authorized Signatory)

(Print Name and Position of Authorized Signatory)