



REQUEST FOR PROPOSAL No. PS10006

CONSULTANT SERVICES - PRV STATION DESIGN AND CONSTRUCTION
MANAGEMENT

Proposals will be received in the City of Vancouver's ("City's") Purchasing Services Office, 3rd Floor, Suite #320, East Tower, 555 West 12th Avenue, Vancouver, British Columbia, Canada, V5Z 3X7 prior to the Closing Time: 3:00:00 P.M., Purchasing Services Office Clock Time (as defined in Note 2 below), Tuesday, March 2, 2010 and publicly opened and registered at 11:00:00 Wednesday, March 3, 2010.

NOTES:

1. Proposals are to be submitted in sealed envelopes or packages marked with the Proponent's Name, the RFP Title and Number.
2. Closing Time and Vancouver Time will be conclusively deemed to be the time shown on the clock used by the City's Purchasing Services Office for this purpose.
3. The City's Purchasing Services Office is open on Business Days from 8:30 am to 4:30 pm Vancouver Time and closed Saturdays, Sundays, and holidays.
4. DO NOT SUBMIT BY FAX OR E-MAIL.

All queries related to this RFP shall be submitted

in writing to the attention of:

Jim Lowood, C.P.P.
Contracting Specialist

FAX: 604.873.7057 E-MAIL: purchasing@vancouver.ca

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PART A - INTRODUCTION

1.0 Overview

1.1 This Request for Proposal ("RFP") identifies a business opportunity for the successful Proponent to provide consultant services for the design and construction management of three (3) new Pressure Regulation Valve ("PRV") stations within the City of Vancouver ("City") at the following proposed locations:

- i) Pender Street and Vernon Drive
- ii) 11th Avenue and Clark Drive
- iii) 37th Avenue and Dunbar Street

The City is requesting Proposals from interested firms with expertise in designing PRV stations and assisting City Waterworks Design Branch staff in managing and directing Contractors to build the stations.

The successful Proponent's work on this Project will consist of the following phases:

- a) Phase I will encompass the preliminary investigation and pre-design.
- b) Phase II will incorporate the complete design for the new PRV stations and will include delivery of the completed plans, cost estimates and detailed specifications for the stations. Working with City staff, this information will become an integral part of the tender documents.
- c) Phase III will consist of the Consultant's involvement in the PRV Station construction bid process.
- d) Phase IV will be the Consulting services during the construction period, commencing at the preconstruction meeting for the Project.

1.2 The City will consider Proposals that meet either all or part of the requirements (the "Requirements" as described in Schedule A - Requirements). The successful Proponent will be the Proponent who offers the best value, which will be assessed as a combination of experience, pricing, scope, duration and level of services offered, proposed innovative design, and operations and maintenance enhancements.

1.3 The City will in good faith attempt to give accurate verbal responses to questions. Proponents are advised that they may only rely on the formal written response/summary to be issued by the City. The formal written response/summary will be issued by the City as soon as possible and will be posted to the City's website as outlined in Part B - Instructions to Proponents.

2.0 Background

2.1 The City of Vancouver

The City of Vancouver, with a population of approximately 560,000 lies in a region of more than two (2) million people. Vancouver is the largest city in the province of British Columbia and the third largest in Canada. As the main western terminus of Canada's transcontinental highway and rail routes, as well as home to the Port of Vancouver, Vancouver is the primary city of western Canada and one of the nation's largest industrial centres.

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Vancouver is consistently rated as one of the most liveable cities in the world and is host city of the 2010 Olympic and Paralympic Winter Games.

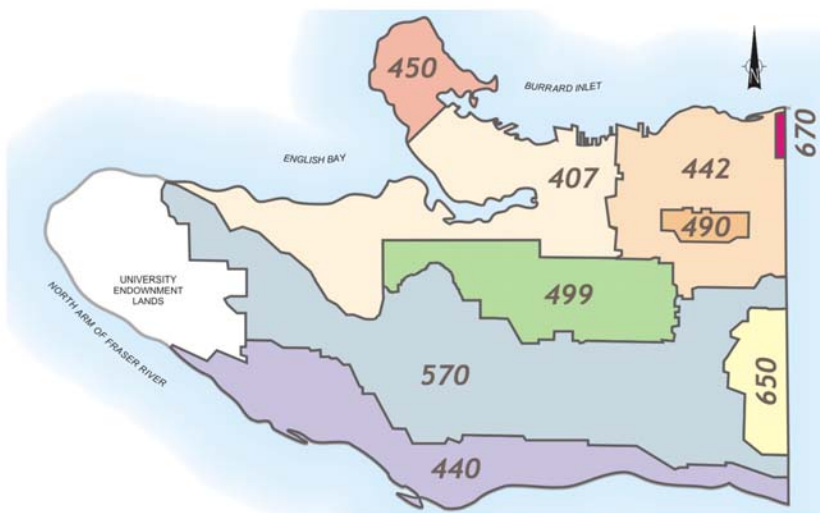
2.2 Purpose

- a) The Waterworks Long Range Plan for the City Waterworks Design Branch outlines PRV Stations recommended for replacement generally due to safety concerns and required upgrades. These PRV stations serve as fire suppression or peak usage PRV stations that are rarely utilized and the intent is that the PRV stations would continue to operate as they currently do when they are completely replaced.
- b) The City is requesting Proposals for engineering consulting services related to design and construction management of the three (3) new PRV stations near Pender Street and Vernon Drive, 11th Avenue and Clark Drive and 37th Avenue and Dunbar Street, to replace the three (3) existing stations at Pender Street and Clark Drive, 12th Avenue and Clark Drive and 37th Avenue and Dunbar Street, respectively.
- c) The source of funding for this project is Government Infrastructure Funding, and the Project has a completion deadline of March 31, 2011.

2.3 Site Description

- a) The existing Pender Street and Clark Drive and 12th Avenue and Clark Drive PRV stations house the stations that currently feed the "407 Zone" from the "442 Zone" (see illustration below). These PRV stations are the only stations that perform this function, and allow for an East to West transfer of water into the City's Downtown Core. The Pender Street and Clark Drive PRV stations seldom open under peak conditions and the 12th Avenue and Clark Drive PRV station is designed to open where extra water pressure would be required for fire suppression needs.
- b) The 37th Avenue and Dunbar Street PRV station currently feeds the "440 Zone" from the "570 Zone" (see illustration below). This PRV station is seldom utilized and is designed to open where extra water pressure would be required for fire suppression needs.

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PART A - INTRODUCTION



The PRV station locations are not easily accessible and require improved access that is away from traffic, but close to appropriate parking and therefore the two existing PRV stations which border the "407 Zone" are being relocated. Since the PRV stations also have undersized chambers that pose confined space entry issues, it is required that larger chambers would be designed to house all PRV components within the chamber. Currently because of size restrictions in the undersized chambers some lines within the stations connect to the City water main outside of the chamber. Since It should also be noted that the telemetry at these stations is poor and needs to be brought up to current City Supervisory Control and Data Acquisition (SCADA) standards.

3.0 Objectives

The purpose of this RFP is to select a Proponent(s) with the capability and experience to efficiently and cost-effectively supply the RFP Requirements as set out in Schedule A - Requirements. The Requirements stated in this RFP are as envisioned by the City at the time of writing, but may change or be refined in the course of the evaluation and award process.

4.0 Contractual Requirements

A sample of the City's Professional Services Agreement outlining the City's contractual requirements for payment, deliverables, professional liability, insurance, WorkSafeBC coverage and compliance, change orders, and all other relevant business issues and risk allocations is attached as Appendix 3. Proponents are requested to review and confirm as part of their proposal that they are agreeable to and can meet the requirements of all of the terms of the sample Professional Services Agreement or if they consider any part of the sample Professional Services Agreement to be inconsistent with their proposal, to suggest alternative contractual language in Schedule C - Deviations and Variations.

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PART B - INSTRUCTIONS TO PROPONENTS

NOTE: The definitions set out in Attachment A - Legal Terms and Conditions of the Proposal Form (Part C) apply throughout this RFP, including this Part B of this RFP, except where otherwise expressly stipulated or the context otherwise requires.

1.0 Administrative Requirements

- 1.1 It is the sole responsibility of all Proponents to check the City's website at: <http://www.vancouver.ca/fs/bid/bidopp/openbid.htm> regularly for amendments, addenda, and questions and answers to this RFP.
- 1.2 Proponents are to submit their Proposal in accordance with instructions identified on the cover page and as provided within this Part B.

2.0 Conduct of RFP - Inquiries and Clarifications

- 2.1 The City's Manager of Supply Management will have conduct of this RFP, and all communications are to be directed only to the contact person named on the cover page.
- 2.2 It is the responsibility of all Proponents to thoroughly examine these documents and satisfy themselves as to the full requirements of this RFP. Inquiries are to be in written form only e-mailed to purchasing@vancouver.ca or faxed to 604.873.7057 to the attention of the contact person shown on the cover page no less than five (5) Business Days prior to the Closing Time. If required, an addendum will be issued and posted on the City's website.

3.0 Contract Requirements

- 3.1 The term of the Contract shall be as per timeline set out in the sample agreement attached as Appendix 4, Section 12.1.
- 3.2 Where the head office of the successful Proponent is located within the City of Vancouver and/or where the successful Proponent is required to perform any work at a site located within the City of Vancouver, the successful Proponent is required to have a valid City of Vancouver business license prior to Contract execution.
- 3.3 The successful Proponent will be requested to enter into a Contract substantially in accordance with the sample agreement provided as Appendix 4. If any of the terms set out in the sample agreement are unacceptable to the Proponent, the Proponent should identify such terms and provide suggested alternatives in its Proposal Form (Schedule C - Deviations and Variations).
- 3.4 While the City is not obligated to accept any alternatives, deviations or variations to the sample Professional Services Agreement, all suggested alternatives will be considered during the evaluation process, but may or may not be acceptable to the City.

4.0 Pricing

- 4.1 Prices quoted are to be exclusive of GST and PST, except where expressly requested.
- 4.2 Pricing shall be held firm for the term of the Contract, unless otherwise expressly agreed to by the City.

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4.3 Prices are to be quoted F.O.B. Destination, including freight, unloading at destination, import duties, brokerage, royalties, handling, overhead, profit and all other costs included.

4.4 Prices are to be quoted in Canadian currency.

5.0 Consortium Proposals

5.1 The City will consider a proposal from two (2) or more persons or companies having no formal corporate links who wish to form a joint venture or consortium solely for the purpose of submitting a proposal in response to this RFP, provided they disclose the names of all members of the joint venture or consortium and all members sign the Proposal Form. While the City will consider such a consortium proposal, the City has a strong preference for proposals submitted by a single firm who would act as a prime contractor and then supplies any required specialist expertise via Sub-Contractors, as the case may be.

5.2 A single person or company is to be identified as the Key Contact Person on the Proposal Form (Part C), and be prepared to represent the consortium to the City. The Key Contact Person will serve as the primary contact and take overall responsibility for all communications with the City during the proposal submission, evaluation, and any negotiation process.

5.3 Consortium proposals are to include proposed contract language describing each consortium member's roles and responsibilities and the proposed legal contract structure.

5.4 The City reserves the right to accept or reject any consortium as proposed or choose to negotiate a contract with individual consortium members separately, or to negotiate for the selection of one consortium member as a prime contractor with the other members acting as Sub-Contractors. Each component of the consortium proposal should be priced out individually.

6.0 Submission of Proposal

6.1 Proponents are to submit three (3) hard copies of their Proposal in three-ring binders, with each section tabbed and including all accompanying schedules, appendices and addenda each binder. Proponents should also submit one (1) electronic copy of their proposal in the same format described above on CD. All copies are to be submitted in a sealed envelope or package marked with the Proponent's name, the RFP title and number, prior to the Closing Time set out on the date and at the location shown on the title page of this RFP.

6.2 Only the English language may be used in responding to this RFP.

6.3 Proposals received after the Closing Time or in locations other than the address indicated, may or may not be accepted and may or may not be returned unopened.

6.4 Amendments to a Proposal are to be submitted in writing in a sealed envelope or package, marked with the Proponent's name and the RFP title and number.

6.5 Proposals may be withdrawn at any time before or after the Closing Time and are to be withdrawn by written notice delivered to the office of the Purchasing Office, #320-555

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West 12th Ave., East Tower, V5Z 3X7 and signed by the authorized signatory for the Proponent.

- 6.6 All costs associated with the preparation and submission of the Proposal, including any costs incurred by the Proponent after the Closing Time, will be borne solely by the Proponent.

7.0 Format of Proposal

- 7.1 Unnecessarily elaborate Proposals, beyond that sufficient to present a complete and effective response, are not required and unless specifically requested, the inclusion of corporate brochures and narratives are discouraged.

- 7.2 Proponents should complete all forms included in this RFP, attaching any additional appendices that may be required. Proposals are to be arranged as follows:

- a) **Title Page:** The title page will show the RFP title and number, Closing Time and Date, Proponent name, address, telephone number and the name and title of the contact person.
- b) **Executive Summary:** A short summary of the key features of the Proposal demonstrating the Proponent understands the scope of the Requirements.
- c) **Proposal Form:** The Proponent is to complete the Proposal Form and attached Attachment A - Legal Terms and Conditions included in this RFP in accordance with the instructions.
- d) **Required Documents:** The Proponent is to attach any required documents described in Section 1.0 - Required Documents of the Proposal Form.
- e) **Schedules:** The Proponent is to complete and provide the information within the respective schedules included in this RFP. If additional space is required to respond to the requirements as outlined, then additional pages can be attached.
- f) **Added Value:** Proponents may submit Added Value services above and beyond the scope of work and are to identify same as additional appendices within their Proposal.

8.0 Bid and Performance Security

- 8.1 Since no irrevocable offer is required under this RFP, no bid security is required.

9.0 Conflict of Interest

- 9.1 Proponent's are to ensure that:

- a) any and all conflicts or potential conflicts;
- b) any and all collusion, or appearance of collusion; and
- c) any and all corporate, individual and other entities affiliated with the Proponent who are registered as lobbyists under any lobbyist legislation in any

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jurisdiction in Canada or the United States of America, are fully and properly disclosed in Section 6.0 of Part C - Attachment A - Legal Terms and Conditions.

- 9.2 Failure to disclose this information may result in the rejection of the Proposal, the associated entity's Proposal, and/or the immediate cancellation of any contract should one be awarded in reliance on the information contained in the submitted Proposal.
- 9.3 If any director, officer, employee, agent or other representative of a Proponent makes any representation or solicitation to any officer, employee, agent or elected official of the City with respect to its Proposal, whether before or after the submission of the Proposal, the City will automatically disqualify such Proponent.

10.0 Opening of Proposals

- 10.1 The City reserves the right to open all proposals in a manner and at the time and place determined by the City.

11.0 Evaluation of Proposals

- 11.1 Proposals will be evaluated by representatives of the City on the basis of the overall best value to the City, based on quality, service, price and any other relevant criteria set out herein including, but not limited to:
 - a) the Proponent's ability to meet the Requirements and the cost /expense for same;
 - b) proven experience in delivering a similar scope of work;
 - c) the Proponent's ability to deliver the Requirements when and where required;
 - d) the proposed plan of approach and work schedule;
 - e) compliance with the City's insurance requirements;
 - f) the Proponent's business and technical reputation and capabilities; experience and where applicable, the experience of its personnel, financial stability, track record, and references of current and former customers;
 - g) environmental issues considered by the Proponent;
 - h) quality of Proposal, including any innovative concepts; and
 - i) any other criteria set out in the RFP or otherwise reasonably considered relevant.
- 11.2 The City may elect to short list Proponents in stages as deemed necessary.
- 11.3 Short-listed Proponents may be asked to provide additional information or details for clarification, which may include attending interviews, making a presentation, supplying sample drawings, performing demonstrations, and/or furnishing additional technical data.
- 11.4 Prior to approval of a Proposal, the City must be satisfied as to the Proponent's financial stability. Proponents may be asked to provide annual financial reports or a set

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of financial statements prepared by an accountant and covering the Proponent's last two (2) fiscal years.

- 11.5 The City may request that any or all Sub-Contractors of the Proponent undergo the same evaluation process.

12.0 Proposal Approval

12.1 Proposal approval may be contingent on funds being approved and the Proposal being approved by Vancouver City Council. Only then may the successful Proponent and the City proceed to settle, draft and sign the necessary legal agreement.

12.2 The City will notify the successful Proponent in writing that its Proposal has been approved in principle and invite the Proponent to proceed with discussions to settle, draft and sign a legal agreement.

12.3 The City is not under any obligation to approve any proposal and may elect to terminate this RFP at any time.

12.5 Notwithstanding any other provision in the RFP documents, the City has in its sole discretion, the unfettered right to:

- a) accept any Proposal;
- b) reject any Proposal;
- c) reject all Proposals;
- d) accept a Proposal which is not the lowest Proposal;
- e) accept a Proposal that deviates from the Requirements, Specifications or the conditions specified in this RFP;
- f) reject a Proposal even if it is the only Proposal received by the City;
- g) accept all or any part of a Proposal; and
- h) split the Requirements between one or more Proposals.

13.0 Quantities - Intentionally Omitted

14.0 Brand Names - Intentionally Omitted

15.0 Alternate Solutions

15.1 If in addition to proposing services which meet the Requirements, the Proponent wishes to offer an alternative, the alternative solution is to be submitted separately as an appendix within the Proposal.

16.0 Environmental Responsibility

16.1 The City is committed to preserving the environment. Proponents are to provide environmentally sensitive products or services wherever possible. Where there is a

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requirement that the Consultant supplies materials, and where such materials may cause adverse effects, the Proponent is to indicate the nature of the hazard in its Proposal.

- 16.2 The Proponent is to advise the City of any known alternatives or substitutes for such materials that would mitigate the effects of any adverse conditions on the environment.

17.0 Freedom of Information and Protection of Privacy Act

- 17.1 Proponents should note that the City of Vancouver is subject to the *Freedom of Information and Protection of Privacy Act* (British Columbia), which imposes significant obligations on the City's Consultants or Contractors to protect all personal information acquired from the City in the course of providing any service to the City.

18.0 Confidentiality

- 18.1 Proponents should note that upon submitting their Proposal Form, they will be legally bound to certain confidentiality obligations not to disclose any City information without the City's prior written consent.
- 18.2 This RFP is the property of the City. Copies may not be made or distributed without the prior written approval of the City's Manager of Supply Management.

19.0 Advertising

- 19.1 The approval of any Proposal and the signing of an Agreement does not allow a Proponent to advertise its relationship with the City, nor with the 2010 Olympics, in any way without the City's prior written authorization.

20.0 Non-Resident Withholding Tax

- 20.1 Please note that the *Income Tax Act* (Canada) requires that payments to non-residents for any services performed in Canada are subject to a Non-resident Withholding Tax of a specified percentage (depending on residency of the contractor). Exemption from this withholding tax is available in some circumstances, but the non-resident must apply directly to the Canada Revenue Agency ("CRA") at least thirty (30) days before commencing the service.

21.0 Legal Terms and Conditions

- 21.1 No part of Part A - Introduction, nor this Part B - Instructions to Proponents, will be legally binding on the City or proponent(s). All legal terms and conditions of the process contemplated by this RFP are contained in Part D - Proposal Form, including without limitation, Attachment A - Legal Terms and Conditions to the Proposal Form.

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PART C - PROPOSAL FORM**

Proponent's Name: _____
"Proponent"

Mailing Address: _____

Cheque Payable/Remit to Address: _____

Telephone No.: _____ Fax No.: _____

Key Contact Person: _____ E-mail: _____

GST Registration No.: _____ Incorporation Date: _____

City of Vancouver Business License Number: _____
(If your office is located in Vancouver)

WorkSafeBC Account Number: _____

Dunn and Bradstreet Number: _____

Attach additional pages immediately behind this page for Sub-Contractors, if applicable.

To the City of Vancouver Supply Management Department,

The Proponent, having carefully examined and read the RFP, including the sample Professional Services Agreement and its Appendices (if any), now submits the following Proposal:

1.0 Required Documents

If the documents listed below do not accompany the Proposal at the time of opening, the Proposal may or may not be put aside and given no further consideration.

Description	Required	Received
Certificate of Existing Insurance completed and signed in the form set out in Appendix 1	Yes	
Letter from Insurer confirming Proponent able to receive signed Appendix 2 and Appendix 3 from Broker/Agent (Certificate of Insurance and Professional Liability Insurance) on award	Yes	

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To be initialled at Proposal Opening:

Manager, Supply Management or designate

Witness

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PART C - PROPOSAL FORM

2.0 Proponent's Declaration and Acknowledgment

The undersigned Proponent confirms that it has read and agreed to the Legal Terms and Conditions attached as Attachment A and agrees to be bound by the same.

IN WITNESS TO THE ABOVE, the Proponent has executed this Proposal Form and submits same with the attached Schedules:

Authorized Signatory for the Proponent Date

Name and Title *(please print)*

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PART C - ATTACHMENT A - LEGAL TERMS AND CONDITIONS

1.0 LEGAL TERMS AND CONDITIONS OF PROPOSAL PROCESS

1.1 Application of These Terms and Conditions

These legal terms and conditions set out the City's and Proponent's/Sub-contractors' legal rights and obligations only with respect to the proposal process. In no event will the legal terms and conditions of this Attachment A apply to the Contract formed between the City and the Contractor following the signing of the Contract (if any).

1.2 Definitions

In this Attachment A, the following terms have the following meanings:

- a) "City" means the City of Vancouver, a municipal corporation continued pursuant to the Vancouver Charter.
- b) "Contract" means any legal agreement, if any, entered into between the City and the successful proponent following the conclusion of the RFP process, approval of the Contract by the City, and the settlement, execution and delivery of same by each party to the Contract.
- c) "Losses" means in respect of any matter all
 - (i) direct or indirect, as well as
 - (ii) consequential,claims, demands, proceedings, losses, damages, liabilities, deficiencies, costs and expenses (including without limitation all legal and other professional fees and disbursements, interest, penalties and amounts paid in settlement whether from a third person or otherwise).
- d) "Project" means the Consultant Services - PRV Station Design and Construction Management.
- e) "Proponent" means the legal entity(ies) who has (have) signed and delivered this Proposal Form, and "proponent" means any proponent responding to the Instructions to Proponents, excluding or including the Proponent, depending on the context.
- f) "Proposal" means the package of documents consisting of this Proposal Form, as well as all Schedules, once completed and submitted to the City by the Proponent, and "proposal" means any proposal submitted by any other proponent, excluding or including the Proponent, depending on the context.
- g) "RFP" means the documents issued by the City as "Request for Proposal No. PS10006, Consultant Services - PRV Station Design and Construction Management" including all addenda.
- h) "Services" means the services and work noted in Section 6.0 Project Tasks and Section 7.0 Communications of Schedule A - Requirements, that the Consultant will provide under the Contract.
- i) "Sub-contractors" includes any or all third parties listed in Schedule D of this Proposal Form.

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PART C - ATTACHMENT A - LEGAL TERMS AND CONDITIONS

All other terms (capitalized or not) have the meanings given to them in the RFP.

2.0 GENERAL TERMS AND CONDITIONS OF PROPOSAL PROCESS

2.1 No Legal Obligation Assumed by City

Despite any other term of this Proposal Form (except only (where applicable) Section 4.3 - Limitation, Section 4.4 - Dispute Resolution, Section 5.2 - Proponent's Submission Confidential, and Section 5.5 - Declaration of Confidentiality), the City assumes no legal duty or obligation in respect of this RFP or unless and until the City enters into a Contract. This RFP process is at all times contingent on funds being approved by the City and a Contract being signed by the City.

2.2 Legal Rights and Obligations Suspended

Despite any other term of this Proposal Form (except only (where applicable) Section 5.2 - Proponent's Submission Confidential, and Section 5.5 - Declaration of Confidentiality), the City and Proponent agree that all of their respective rights and obligations at law and in equity, in contract and in tort, in all matters relating to the RFP and this Proposal will be absolutely and unconditionally subject to Section 4.0 - Protection of City Against Lawsuits, and the following:

a) No Duty

The City has no legally enforceable duty or obligation to the Proponent unless and until the City signs a Contract with the Proponent.

b) Proponent's Risk

The Proponent acknowledges that the City is a public body required by law to act in the public interest. Accordingly, in no event does the City owe to the Proponent (as opposed to the public):

- (i) a contract or tort law duty of care, fairness, impartiality or procedural fairness in the proposal process; or
- (ii) any contract or tort law duty to preserve the integrity of the RFP process,

and the Proponent now waives and releases the City from all such duties and expressly assumes the risk of all Losses arising from participating in the proposal process on this basis.

c) Proponent's Cost

The Proponent now assumes and agrees to bear all costs and expenses incurred by the Proponent in preparing its Proposal and participating in the proposal process.

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PART C - ATTACHMENT A - LEGAL TERMS AND CONDITIONS

3.0 EVALUATION OF PROPOSALS

3.1 Compliance/Non-Compliance

Any proposal which contains an error, omission or misstatement, which contains qualifying conditions, which does not fully address all of the requirements or expectations of the RFP, or which otherwise fails to conform to the RFP may or may not be rejected by the City at the City's sole discretion.

3.2 Reservation of Complete Control over Process

The City reserves the right to retain complete control over the RFP and proposal process at all times until the execution and delivery of a Contract. Accordingly, the City is not legally obligated to review, consider or evaluate the proposals and need not necessarily review, consider or evaluate the proposals in accordance with the procedures set out in this RFP and the City reserves the right to continue, interrupt, cease or modify its review, evaluation and negotiation process on any or all proposals at any time without further explanation or notification to any of the proponents subject only to the express legal terms and conditions which bind the City, which terms and conditions are expressly limited to those set out in Section 4.3 - Limitation, Section 4.4 - Dispute Resolution, Section 5.2 - Proponent's Submission Confidential, and Section 5.5 - Declaration of Confidentiality.

3.3 Discussions/Negotiations

The City may, at any time prior to signing a Contract, discuss/negotiate changes to the scope of the RFP, or any of the terms or conditions of the RFP with any one or more of the proponents without having any duty or obligation to advise the Proponent or to allow the Proponent to vary its Proposal as a result of discussions or negotiations with other proponents or changes to the RFP, and, without limiting the general scope of Section 4.0 - Protection of City Against Lawsuits, and by way of example only, the City will have no liability to the Proponent as a result of such discussions, negotiations or changes.

4.0 PROTECTION OF CITY AGAINST LAWSUITS

4.1 Release

Except only and to the extent that the City is in breach of Section 5.2 - Proponent's Submission Confidential, or Section 5.5 - Declaration of Confidentiality, the Proponent now releases the City from all liability for any Losses in respect of:

- a) any alleged (or judicially imposed) breach by the City of the RFP (it being acknowledged and agreed that to the best of the parties' knowledge, the City has no obligation or duty under the RFP which it could breach (other than wholly unanticipated obligations or duties merely alleged or actually imposed judicially));
- b) any unintentional tort of the City occurring in the course of conducting this RFP process;
- c) the Proponent preparing and submitting its Proposal;

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- d) the City accepting or rejecting its Proposal or any other submission;
- e) the manner in which the City:
 - (i) reviews, considers, evaluates or negotiates any proposal,
 - (ii) deals with or fails to deal with any proposal or proposals, or
 - (iii) decides to enter into a Contract or not enter into any Contract; and
- (f) the proponent(s), if any, with whom the City enters a Contract.

4.2 Indemnity

Except only and to the extent that the City breaches Section 5.2 - Proponent's Submission Confidential or Section 5.5 - Declaration of Confidentiality, the Proponent now indemnifies and will protect and save the City harmless from and against all Losses, in respect of any claim or threatened claim by the Proponent or any of its Sub-contractors or agents alleging or pleading

- a) any alleged (or judicially imposed) breach by the City or its officials or employees of the RFP (it being agreed that, to the best of the parties' knowledge, the City has no obligation or duty under the RFP which it could breach (other than wholly unanticipated obligations or duties merely alleged or actually imposed judicially)),
- b) any unintentional tort of the City or its officials or employees occurring in the course of conducting this RFP process, or
- c) liability on any other basis related to this RFP or the proposal process.

4.3 Limitation

In the event that, with respect to anything relating to the RFP or this proposal process (except only and to the extent that the City breaches Section 4.3 - Limitation, Section 4.4 - Dispute Resolution, Section 5.2 - Proponent's Submission Confidential, or Section 5.5 - Declaration of Confidentiality), the City or its officials, officers, agents or employees are found to have breached (including fundamentally breached) any duty or obligation of any kind to the Proponent or its Sub-contractors or agents whether at law or in equity or in contract or in tort, or are found liable to the Proponent or its Sub-contractors or agents on any basis or legal principle of any kind, the City's liability is limited to a maximum of one hundred dollars (\$100), despite any other term or agreement to the contrary.

4.4 Dispute Resolution

Any dispute relating in any manner to this RFP or the proposal process (except only and to the extent that the City breaches Section 4.3 - Limitation, Section 4.4 - Dispute Resolution, Section 5.2 - Proponent's Submission Confidential, or Section 5.5 - Declaration of Confidentiality, and also excepting any disputes arising between the City and any proponent with whom the City has entered a Contract) will be resolved by arbitration in accordance with the *Commercial Arbitration Act* (British Columbia), amended as follows:

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- a) The arbitrator will be selected by the City's Director of Legal Services.
- b) This Section 4.0 - Protection of City against Lawsuits will:
 - (i) bind the City, Proponent and the arbitrator; and
 - (ii) survive any and all awards made by the arbitrator.
- c) The Proponent will bear all costs of the arbitration.

5.0 ACCESS/OWNERSHIP OF PROPOSAL INFORMATION

5.1 Proposal Documents Remain/Proposal Becomes - City's Property

- a) All RFP packages and addenda provided to the Proponent by the City remain the property of the City and must be returned to the City upon request.
- b) The documentation containing the Proposal, once submitted to the City, becomes the property of the City, and the City is under no obligation to return the Proposal.

5.2 Proponent's Submission Confidential

Subject to the applicable provisions of the *Freedom of Information and Protection of Privacy Act* (British Columbia) and the City's full right to publicly disclose any and all aspects of the Proposal in the course of publicly reporting to the Vancouver City Council on the proposal results or announcing the results of the proposals to the proponent(s), the City will treat all material and information expressly submitted by the Proponent (and the City's evaluation of it) in confidence in substantially the same manner as it treats its own confidential material and information.

The Proponent now irrevocably waives all rights it may have by statute, at law or in equity, to obtain any records produced or kept by the City in evaluating its Proposal (and any other submissions) and now agrees that under no circumstances will it make any application to the City for disclosure of any records pertaining to the receipt, evaluation or selection of its Proposal (or any other submissions) including, without limitation, records relating only to the Proponent.

5.3 All City Data/Information is Confidential

The Proponent will not divulge or disclose to any third parties any information concerning the affairs of the City which may be communicated to the Proponent at any time (whether before or after the closing date and time of this RFP process). Recognizing the need for confidentiality of the City's data, files and other confidential information, the Proponent will not use, exploit or divulge or disclose to third parties any confidential or proprietary information of the City of which the Proponent may gain knowledge in connection with or in the course of discussions or negotiations with the City.

All material and information that has or will come into the Proponent's possession or knowledge in connection with this proposal process is confidential and may not be disclosed or utilized in any way except in accordance with the Instructions to Proponents and this Proposal Form.

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5.4 Disclosure Requires Prior Consent

The Proponent may not divulge any information respecting the proposal process to any third party without the prior written consent of the City, which consent may be arbitrarily withheld unless it is information which the City has already made public or has been required to disclose pursuant to the *Freedom of Information and Protection of Privacy Act* (British Columbia).

5.5 Declaration of Confidentiality

The Proponent now declares and agrees that, except for the information disclosed by the City in the course of publicly reporting to the Vancouver City Council or any public proposal opening:

- a) the information supplied by the Proponent in response to the RFP is expressly provided in strict confidence;
- b) any records made of the evaluation of this Proposal and all other submissions will be the property of, and private to, the City and will not be disclosed to the Proponent nor anyone else;
- c) the disclosure of the information in items (a) and (b) above to anyone outside of the City's staff would reveal the Proponent's trade secrets or proprietary commercial information concerning its private business affairs; and
- d) the disclosure of the information in items (a) and (b) above, could reasonably be expected to harm the Proponent's competitive position, harm the City's ability to engage in competitive procurement of goods and services, and result in undue financial loss to the Proponent and/or the City.

6.0 DECLARATION - NO CONFLICT OF INTEREST / NO COLLUSION

6.1 Declaration as to no Conflict of Interest in RFP Process

The Proponent now confirms and warrants that there is no officer, director, shareholder, partner or employee or other person related to the Proponent's or Sub-contractor's organizations (a "person having an interest") or any spouse, business associate, friend or relative of a person having an interest who is:

- a) an elected official or employee of the City; or
- b) related to or has any business or family relationship with any elected official or employee of the City, such that there would be any conflict of interest or any appearance of conflict of interest in the evaluation or consideration of this Proposal by the City,

except as set out below:

[The Proponent is conclusively deemed to have declared "none" unless the Proponent deletes this note and describes any or all relationships which might give rise to a conflict of interest or an appearance of a conflict of interest].

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6.2 Declaration as to no Conflict of Interest Respecting Proposed Services

The Proponent now confirms and warrants that neither the Proponent nor its proposed Sub-contractors

- a) are currently engaged in providing (or are proposing to provide) Consultant Services - PRV Station Design and Construction Management of any kind to the Federal Government, Provincial Government, the Greater Vancouver Regional District (aka Metro Vancouver), or any member local governments of Metro Vancouver,
- b) such that entering into the Professional Services Agreement pursuant to this RFP would create a conflict of interest or the appearance of conflict of interest between the Proponent's duties to the City and the Proponent's or its Sub-Contractors' duties of loyalty to the organizations noted in (a) above, except as set out below:

[The Proponent is conclusively deemed to have declared "none" unless the Proponent deletes this note and describes any or all relationships which might give rise to a conflict of interest or an appearance of a conflict of interest].

6.3 Declaration as to Collusion

The Proponent now confirms and warrants that:

- a) the Proponent has no affiliation, whether legal or financial, with any other entity which is in the business of providing the same type of goods or services which are the subject of this RFP; and
- b) the Proponent is not competing within this RFP process with any entity which it is legally or financially associated or affiliated,

except as set out below:

[The Proponent is conclusively deemed to have declared "none" unless the Proponent deletes this note and describes any and all affiliations or relationships which might give rise to collusion or an appearance of collusion].

6.4 Declaration as to Lobbyist Status

The Proponent now confirms and warrants that neither it nor any officer, director, shareholder, partner, or employee of the Proponent or any of its proposed Sub-Contractors is registered as a lobbyist under any lobbyist legislation in any jurisdiction in Canada or in the United States of America, except as set out below:

[The Proponent is conclusively deemed to have declared "none" unless the Proponent deletes this note and describes any or all lobbyist registrations of the type described above]

7.0 NO PROMOTION OF OLYMPIC RELATIONSHIP

- 7.1 The successful proponent must not disclose or promote its relationship with the City, including by means of any verbal declarations or announcements and by means of any

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sales, marketing or other literature, letters, client lists, press releases, brochures or other written materials, without the express prior written consent of the City (except as may be necessary for the successful proponent to perform the successful proponent's obligations under the terms of the Contract). The successful proponent undertakes not to use "VANOC", "Vancouver 2010", the official emblem, logo or mascot of the 2010 Games or any reference or means of promotion or publicity, without the express prior written consent of the City. Furthermore, the successful proponent undertakes not to disclose or promote its relationship with the City in any communication or manner whatsoever as a basis to create an association, express or implied, between the successful proponent and the International Olympic Committee, the Olympics or the Olympic Movement.

8.0 SURVIVAL/LEGAL EFFECT OF PROPOSAL CONTRACT

- 8.1 All of the terms of this Attachment A to this Proposal Form which by their nature require performance or fulfilment following the conclusion of the proposal process will survive such issuance and will remain legally enforceable by and against the Proponent and City.

AS EVIDENCE OF THE PROPONENT'S INTENT TO BE LEGALLY BOUND BY THIS ATTACHMENT A, THE PROPONENT HAS EXECUTED AND DELIVERED THIS ATTACHMENT A AS AN INTEGRAL PART OF ITS PROPOSAL FORM IN THE MANNER AND SPACE SET OUT BELOW:

Authorized Signatory for the Proponent

Date

Name and Title (*please print*)

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SCHEDULE A - REQUIREMENTS

This Schedule identifies the Requirements to which the City is seeking a solution or a response. Proponents are to address, but are not limited in their response to, the respective issue(s). Proponents may submit their solution or response on a separate sheet. However, the same number sequence is to be used.

1.0 Company Profile

- 1.1 Provide a description of the Proponent's company, purpose and history of successes including number of years in business, major projects, and what is most responsible for the Proponent's success to date. Include a company brochure or resume for each member of any consortium as well as each key personnel employed by any named proposed Sub-Contractor to the Proponent.

2.0 Key Personnel

- 2.1 Identify and provide resumes for the key personnel in the Proponent's proposed team and outline what their roles will be in servicing this Project.
- 2.2 Include a list of at least three (3) relevant and successfully completed Projects, with references and telephone numbers for each. By submitting a Proposal, the Proponent consents to the City contacting these references at its discretion, and consents to the City also contacting any other organization for the purposes of evaluating the Proposal.
- 2.3 Include an organization chart for the Proponent's proposed Project team, identifying the team leader or Project Manager, and all roles and areas of responsibility.
- 2.4 Preference will be given to Proponent's consulting teams that demonstrate knowledge and experience involving design and construction management of Pressure Regulating Valve ("PRV") Stations. Proponents must state the knowledge and experience of each proposed team member. For team members with limited or no knowledge and experience, Proponents must describe these team members' roles in the Project, and how the rest of the team will support these team members.

3.0 Project Timeline

- 3.1 Proponents must develop a schedule to ensure that the Project is completed by **March 31, 2011**.
- 3.2 The following table outlines an estimated schedule for the PRV Station Design and Construction Management process. All stations are required to be completed and operational by March 31, 2011.

Event	Completion Date
Request for Proposal Closing	March 2, 2010
Proposal Evaluation	March 4 - March 12, 2010
Notification to Proponent on Proposal Approval	March 18, 2010
Contract Signing/Start of Service Delivery	March 24, 2010
Construction and Commissioning Complete	March 31, 2011

- 3.3 No additional payments will be made to the Consultant as a result of any delays in implementing the Project.

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4.0 Requirements Overview

- 4.1 The City has identified key requirements, which the Proponent is to address in its Proposal.
- 4.2 Although it is necessary that the Proponent submit a detailed response to the following requirements, including, but without limitation to, a work program and maximum total fee for the scope of services described in this RFP, the City is interested in proposals that will add value to the Project. Innovative and practical ways of reducing long term operations and maintenance costs will be favourably considered in evaluating all proposals.

5.0 General Methodology and Work Program

- 5.1 Section 6.0 - Project Tasks describes the scope of the Proponent's work for the PRV Station Design and Construction Management as contemplated by the City. Proposal submissions should comment on the scope of work, indicate any proposed changes, and outline the resources expected to be devoted by the Consultant.
- 5.2 Proponents are to provide a detailed plan of approach and description of the services proposed, including the details of the services that the Proponents intend to obtain by using Sub-Contractors.
- 5.3 Proponents are to include in their Proposal an itemized work program grouped by Project Task (as hereinafter defined) with a description of each task and City approval proposed. Project Tasks must include all of the tasks outlined in Section 6.0 below. Activities identified in this section should be carried forward to a Gantt chart and task/cost schedule, to be included in the "Schedule and Financial Proposal" sections of the submission.
- 5.4 In the Proposal, the Proponent is to provide the following:
 - a) a breakdown of the sub-tasks necessary to complete each of the Project Tasks as described in Section 6.0 and a detailed plan of approach and description of the services proposed;
 - b) a work schedule outlining milestone dates for completion of each sub-task and each Project Task as described in Section 6.0, as well as all dates of meetings, workshops and consultations described in this RFP or referred to in the Proponent's proposal. The work schedule should incorporate a one (1) calendar week review period for City staff to provide comments on draft versions of all deliverables, unless noted elsewhere in this Schedule A;
 - c) a description of the methods to be employed to perform and co-ordinate the work, and to control the scope, quality, schedule and cost of the services provided by the Consultant for the Project; and
 - d) a brief indication of special challenges or considerations foreseen by the Proponent and proposed solutions for each.
- 5.5 Proponents are to identify activities that the City is expected to undertake in the description of each Project Task.

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6.0 Project Tasks

The following are the specific issues that the City requires the Consultant to investigate as part of the Project to be provided by the Consultant. These issues are the Project Tasks (the "Project Tasks", individual "Project Task"), and the City expects that completing each Project Task will require a combination of review of existing data and field investigations.

The Consultant will be required to provide all engineering services, including the engagement of the geotechnical and structural Sub-Contractors, as necessary, for the design and construction of the three (3) new PRV Stations, including the inflow and outflow piping, and the radio telemetry systems. The Consultant will be required to coordinate the Programming and radio installation for the telemetry systems.

In their Proposals, Proponents should state their understanding of the Project Tasks and comment on the feasibility of meeting the City's objectives and requirements.

6.1 Introduction

- a) The Consultant will act as the "City's Consultant" with respect to all construction Contracts for the duration of the Project. This review will include a high level cost and performance analysis. The cost analysis will include both initial capital construction costs as well as long-term maintenance cost impacts.
- b) The PRV Station Design and Construction Management Project will be comprised of the following phases where the services of a Consultant will be required:
 - i) Phase I - Preliminary investigation and Pre-design.
 - ii) Phase II - Final Design, Engineers' cost estimate and detailed specifications, including contributing with staff of the Waterworks Design Department of the City ("Waterworks Design") the complete review of tender documents.
 - iii) Phase III - With Waterworks Design and City of Vancouver Supply Management ("Supply Management") staff, participating in the construction tender process.
 - iv) Phase IV - During construction of the PRV Stations, performing activities including General Engineering Services, Inspection Services, and Record Services.
- c) The three (3) new PRV Stations are proposed to be located at:
 - i) Pender Street and Vernon Drive
 - ii) 11th Avenue and Clark Drive
 - iii) 37th Avenue and Dunbar Street
- d) For information on existing Facilities please see drawings and specifications in Appendix 7 "PRV Drawings and Specifications".

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6.2 Schedule and Key Milestones

- a) All PRV Stations must be installed and fully functional to the satisfaction of the Project Manager by March 31, 2011.
- b) The Consultant will be required to develop and maintain a Project schedule. This schedule of activities will incorporate all interrelated and interlocking items such as design, specialist services, tendering and procurement of labour, material and equipment, construction, inspection, documentation and commissioning of the Project. Once approved, progress on the schedule will be reported to the appointed City Engineering Department representative who is responsible for the execution of the Project on behalf of the City ("Project Manager"). The Project schedule will be updated regularly by the Consultant to ensure that Project milestones are met.
- c) As part of the Proponent's Proposal, the Proponent is required to state the proposed target dates for completion for key milestones using the schedule below. The schedule must be consistent with the Project being completed by March 31, 2011.

Project Schedule	Target Date for Completion
Award of Contract / Start of Service Delivery	March 24, 2010
Project kick off meeting with City Staff	To be determined by Proponent ("TBD")
Complete Pre-Design Report	TBD
Approval of Pre-Design Report by City Staff	TBD
Submission of fifty percent ("50%") Preliminary Design Review	TBD
Complete Preliminary Design Review	TBD
Design Meeting with Waterworks Design staff to discuss 50% Preliminary Design	TBD
Submission of ninety percent ("90%") Final Drawings	TBD
Completion of 90% Final Design Review	TBD
Design Meeting to discuss 90% Preliminary Design	TBD
Submit Final Complete Drawings	TBD
Final City Approval of Drawings	TBD
Tender Document publicly advertised for fabrication, piping and contracted	TBD

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services	
Tender Document closes	TBD
Contract is awarded	TBD
Construction begins	TBD
Substantial Completion of Construction	TBD
Substantially Complete Overall Construction	TBD
Final Construction Completion	March 31, 2011

Please allow the City five (5) working days to perform a review of the 90% Preliminary Design and Final Complete Drawings.

6.3 Project Standards

- a) The Project will be required to be carried out in accordance with the applicable City Engineering Department Standards and Guidelines including:
 - i) the City of Vancouver Specifications Section 2742; please see Appendix 8 "City of Vancouver Waterworks Specifications Section 2742"; and
 - ii) the City of Vancouver Streets Restoration Manual (available to Proponents at: <http://vancouver.ca/ENGsvcs/streets/design/pdf>).
- b) The Project will be required to be carried out in accordance with the applicable Construction Codes and Standards and Municipal, Provincial and Federal Bylaws, including but not limited to, the Codes and Standards set by the agencies listed below:
 - i) Fire Commissioners of Canada;
 - ii) National Fire and Protection Agency; and
 - iii) National Fire Code

6.4 City's Responsibilities for Project

After award of the Contract to the Consultant and the start of Service delivery, the City's responsibilities will include:

- a) providing copies of the City of Vancouver drawings of the site, showing existing structures and services. It will be the Consultant's responsibility to verify the existing structures and services through a site survey;
- b) providing copies of previously issued City construction tender document forms and general conditions to the Consultant;
- c) management of the tender process including preparing the legal documents and general conditions for the tender document package(s) and the contract(s);

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- d) producing copies of the tender document(s) package(s), advertising tenders, and receiving tenders;
- e) registering tenders, and with the Consultant evaluating and shortlisting the Tenderers(s); the City will award the Contract(s);
- f) issuing all payments to the Contractor based on reviewed claims, suggested for approval forwarded by the Consultant; and
- g) based in part on the Consultant's advice, and in part on the Consultant's role as payment certifier, reviewing and approving or rejecting Change Orders to the construction contract.

6.5 Consultant's Responsibilities for Pre-Design Services - Phase I

- a) The Consultant will be required to prepare a report to clearly establish the viability of the PRV Stations through addressing various issues and will be required to work closely with City staff on all aspects of the pre-design and research throughout this phase. The Consultant will explore alternatives where required to ensure that the City's sustainability objectives are met.
- b) The following issues and information are to be noted and addressed:
 - i) Site servicing requirements - the Consultant will be required to inspect the site with particular emphasis on the Project scope of work and location of the proposed construction and how the new PRV Stations would tie into existing services and facilities. The Consultant will be required to make advance arrangements with the City Engineering Department for these inspections.
 - ii) Existing services - the Consultant will be required to verify the location of existing surface and underground services, facilities and installations specifically related to the scope of the work for the proposed PRV Station locations.
 - iii) Geotechnical Investigations - the Consultant will be required to confirm soil, seismic and ground water conditions for each site soil investigation. The Consultant will be required to carry out soils investigation work compiling all necessary information required to assist in final design and specifications for the proposed construction and completion of pre-design alternatives. The soils investigation is to include a minimum of the following tasks:
 - A. Determine test hole locations and organize to have a Contractor dig the test holes in the number required to adequately determine material types and amounts required for the Project. The locations of the test holes and the types of material encountered at specific depths will be required to be reviewed by City staff in design drawings. The Contractor will be required to re-establish test locations to original conditions and remove any debris. Allow for at least two (2) test holes or pits per PRV station location.

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- B. Determine the depth of the water table and any problems that could be encountered as a result of this information.
 - C. List any assumptions made with respect to site, soil conditions, existing services, and possible future expansion plans, etc.
 - D. List any additional data required to complete preliminary and final designs such as surveys, further soils investigations, studies, etc.
- iv) Chamber - the Consultant will be required to establish footprint size and land requirement for each PRV Station. There are to be a minimum of two (2) pressure regulating valves located at each station, with one valve serving as the low duty valve. The stations will be located completely underground in "cast-in-place" reinforced concrete chambers and will be designed taking into account the following criteria:
- A. safe and easy access;
 - B. minimize the impairment of existing aesthetics;
 - C. minimize the construction impact on local traffic;
 - D. minimize the interference to existing utilities; and
 - E. minimize the existing trees and other horticulture to be removed and any other landscape issues.
- v) Access hatches - the Consultant will be required to ensure that access hatches will be provided of sufficient size to allow valve removal without removing the chamber roof slab. Aluminium Bilco or "City of Vancouver approved equivalent" access hatches will be required.
- vi) Chamber Environment - the Consultant will be required to ensure that lighting and electrical heat will be provided in the chamber and that drainage will be provided to keep the chamber floor dry. Each chamber will be required to meet Worksafe BC confined space access requirements.
- vii) Utility Confirmation - If required, the Consultant is to determine test hole locations and organize to have a Contractor dig the test holes to verify the location and elevation of existing underground utilities where needed. If required, the Consultant is to identify and propose options for resolving utility conflicts for PRV station chambers.
- viii) Utility Relocations - the Consultant will be required to resolve, design, and coordinate any utility and service relocations with assistance from the City.
- ix) Right of Way ("ROW") - the Consultant will be required to identify all areas where ROW agreements will be required. The City will obtain consent from property owners for all ROW issues.

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- x) Existing station locations and pressure flow - the Proponent will be required to review the existing and proposed PRV locations and corresponding pressures in the table below and determine if there are any specific issues related to this information. Flow information will be provided to the Consultant after award of the Contract.

Existing PRV Location	Proposed PRV Location	Existing Valve 1 (per inch)	Existing Valve 2 (per inch)	Normal upstream pressure (in PSI)	Normal downstream pressure (in PSI)	Existing Pilot Settings (in PSI)
12th and Clark	11 th and Clark	12	N/A	110	90	76
Pender and Clark	Pender and Vernon	10	18	138	119	102-107
37 th and Dunbar	37 th and Dunbar	8	N/A	120	75	50

- xi) Chamber piping and fitting - The PRV Stations are required to use standard schedule steel piping except in cases where specific piping is required. In these cases the piping required will be welded steel, fusion bonded and epoxy lined. The flange is to be "Steel Class 125" and the connecting pipe ductile is to be "Iron Class 52". The "Iron Class 52" will be supplied by the City.
- xii) Isolating Valves - The PRV Stations are required to use "O S & Y" double-disc wedge type, ductile iron gate valves for valves sized ten (10) inches and smaller. A butterfly valve is required to be used for valves twelve (12) inches and larger. All valves are to be supplied by the City.
- xiii) Control System Features - the list of Control System Features below is required for each station.
- A. PRV pilot control (to be supplied by the City)
 - B. Dual Y-Type strainers
 - C. Pilot system shut off
 - D. Open speed control
 - E. Closing speed control
 - F. Safety override valve
- xiv) Telemetry and Metering - Each PRV Station will be required to have a telemetry system connected to the City's Manitoba Works Yard, located at 250 West 70th Avenue, Vancouver, B.C., V5X 2X1. It will be necessary to adapt the standard design for the installation of the three (3) stations. The telemetry and metering equipment will be supplied by the City and the system will transmit upstream and downstream pressures and flow data from each station. Flow measurements will be achieved with a magnetic flowmeter to be installed by the construction Contractor on the inflow piping to each

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station. Programming and radio installation for the system is required to be coordinated by the Consultant. The SCADA system will still require the use of circular charts, and all hardware and software will be supplied by the City, which will in part comprise of the following:

- A. Motorola ACE 3600 RTU
- B. Proficy iFix Runtime Version 5.0
- xv) Existing City mains - the Consultant will be required to be responsible for the conceptual and detailed design and any piping realignments to accommodate the new PRV station locations.
- xvi) Reroutings - the Consultant will be required to be responsible for designing any pipe rerouting of existing ductile iron or cast iron pipe required for construction. The City will be responsible for all tie-ins.
- xvii) Preliminary Construction Schedule - the Consultant will be required to provide a Preliminary Construction schedule with milestones and dates.
- xviii) Maintenance - the Consultant will be required to provide information on how maintenance costs are affected by the design of the PRV Stations. It is important to note that any pressure regulating valve large than eight (8) inches will need an "I-beam" along the centerline so the valve can be hooked and slid to the access hatch.
- xix) Components - the Consultant will be required to describe and confirm all components of the new PRV Stations.
- xx) Standards - during Phase I and Phase II the Consultant will be required to investigate and consider the requirements of Worksafe BC and the Fire Commissioners of Canada, the National Fire and Protection Agency and the National Fire Code and verify that each and any alternatives or options meets or exceeds their standards.
- xxi) Submission - the Consultant will be required to submit five (5) copies of the Pre-Design Report of findings and recommendations to the Project Manager.

6.6 Consultant's Responsibilities for Preliminary and Final Designs - Phase II

The Consultant will be required to prepare plans, specifications, and construction cost estimates. The Consultant will be required to work closely with City staff on all aspects of the preliminary and final design process throughout the phase. Layout plans and costing estimates will be submitted to City staff for review at the fifty percent (50%) and ninety percent (90%) stages of the design process. The Consultant will be required to prepare a detailed step by step implementation/commissioning manual that identifies how each component will be commissioned.

- a) Development of Preliminary Design - the Consultant will be required to develop a preliminary design sufficient to provide firm guidelines for final design and contract documents. The Consultant will consult with the Project Manager as necessary to confirm design content and direction. The preliminary design will

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be based upon the approved Pre-Design Report, and will include at a minimum the following:

- i) the location of existing facilities, services, major structures and other Projects at the sites affecting the PRV Stations on Site Plan Drawings;
 - ii) the plan and profile of the water system;
 - iii) a typical cross-section of the waterline and excavation and shoring;
 - iv) drawings showing details and elevations of fire hydrants, pipe connections, etc; and
 - v) specifications for all water appurtenances.
- b) Submission and Cost Estimate of Preliminary Design - The Consultant will be required to select the most cost-effective method of construction, keeping in mind long term operational and maintenance costs. The Consultant will be required to show the basis of selection and will complete the following:
- i) The Consultant will be required to submit two (2) full size sets of the fifty percent (50%) completed preliminary drawings and outline specifications by courier to the Project Manager at the completion stage. The Consultant will be required to attend a meeting with Waterworks Design office approximately one (1) week after the submission and be responsible for recording the minutes of the meeting, documenting the action items and distributing the minutes of the meeting.
 - ii) The Consultant will be required to submit two (2) full size sets of the ninety percent (90%) completed preliminary drawings and outline specifications to the Project Manager for approval. The Consultant will be required to attend a meeting with City Waterworks Design staff approximately one (1) week after the submission to discuss any required modifications and is to be prepared to discuss the draft of the specifications at this meeting. The Consultant will then be responsible for recording the minutes of the meeting, documenting the action items and distributing the minutes of the meeting.
 - iii) The Consultant will be required to prepare an estimate based upon the completed and approved preliminary design and outline specifications ("Class "B" Estimate") of the cost of the Project.
- c) Development of the Final Design and Cost Estimate (Phase II)
- The Consultant will be required to:
- i) Prepare working drawings in accordance with the requirements, the approved preliminary drawings and outline specifications. All drawings will be prepared meeting City Engineering Department standards.
 - ii) Contract specifications will be required to be prepared in accordance with City of Vancouver standards. The Consultant may review bid specifications and related documents developed for previous PRV

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Stations and make modifications to suit. The Consultant will be required to review the detailed cost estimate based upon the approved contract documents, final designs and specifications ('Class "A" Estimate'). The Consultant will be required to assist in preparing scope of work and requirements for inclusion in the tender documents. The tender process will be conducted by the City of Vancouver Supply Management Department.

d) Submission of the Final Design and Class "A" Estimate (Phase II)

The Consultant will be required to:

- i) Submit five (5) copies of the completed working drawings and specifications for approval, in the following format:
 - A. Single sided unbound hard copies, specification set sized to eight and one half inches by eleven inches (8.5" X 11").
 - B. Electronic files in Word format.
 - C. Electronic files of all plans and drawings in Autodesk AutoCAD DWG format.
 - D. All electronic files will be submitted in two (2) CDs (or DVDs if necessary), organized into folders by file type.
- ii) Revise the drawings and specifications as required with input from the Waterworks Design staff.
- iii) With Waterworks Design staff, prepare pipe fabrication tender requirements and specifications. Send for review and approval by Project Manager.
- iv) Following Project Manager approval of completed drawings and specifications, complete the relevant portions of the tender documents for review by the Project Manager.
- v) Prepare and submit to the Project Manager a detailed Project construction schedule, in Gantt chart form, identifying the estimated sequence and duration of the various stages of the Project, organized to minimize interruptions to the existing facilities and services.
- vi) Based on the approved drawings and specifications, prepare a Class "A" Estimate of the cost of the Project. This estimate will include any quantity surveying services that may be required.

6.7 Consultant's Responsibilities for Pre-Construction Services - Phase III

After review of Phase II by the Project Manager, the Consultant will be required to participate in Phase III. The responsibilities in Phase III are proposed to be:

- a) Pre-Construction Services - The Consultant will be required to act as the "City's Consultant" for the tendering of the construction of the PRV Stations. The City

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will manage the tendering process, including issuing the tender. The Consultant's duties will at a minimum include the following:

- i) with City staff, participating in the preparation of tender requirements and contract documents;
- ii) with City staff, reviewing the entire tender document package(s);
- iii) being listed as the City's Consultant in the tender documents and attending and documenting all site meetings required in the tender process(es);
- iv) with City staff, responsibility for all technical specifications, special conditions, design drawings and any other technical concepts in the tender documents, including addenda for distribution by Supply Management;
- v) responding to all technical questions presented by Supply Management staff from interested parties during the tender process(es); and
- vi) participating in the evaluation of all tender submissions and with City staff reviewing tender evaluation report and participating in determining award.

6.8 Consultant's Responsibilities for Engineering Services, Inspection Services, Record Services - Phase IV

After review of Phase III by the Project Manager, the Consultant will be required to participate in Phase IV. The Consultant will be required to provide General Engineering Services for the Project including pre-construction and construction services to ensure that construction is in accordance with the drawings and specifications. The Consultant will be required to ensure that the progression and performance of the work is in accordance with the provisions of the contract, through various methods including providing regular field inspection. This will at a minimum include the following:

- a) Pre-Construction Services
 - i) Attend all pre-construction meetings with the Contractor(s) and City of Vancouver representatives. The Consultant will be required to record the minutes of the meeting, note the action items and distribute the minutes of the meeting.
 - ii) Identify potential problems with the Project and advise the Project Manager prior to construction.
- b) Construction Services
 - i) Perform Project site visits to ensure the progress and the execution of the construction conforms with the scope and intent of the construction contract.
 - ii) Provide qualified on site project inspection and testing staff and be responsible for their performance and confirm that these staff and the

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- Consultant's Sub-Contractors comply with all City of Vancouver procedures and regulations, as well as Worksafe requirements.
- iii) Ensure that the construction Contractors establish a detailed schedule within five (5) calendar days after award of the construction Contract and regularly monitor and update such schedule, with summaries made available to the Project Manager.
 - iv) Review and make recommendations from requests by the Contractor for substitutions or alternatives for specified materials, subject to City Waterworks Design staff approval or rejection.
 - v) Review specifics of Project for general conformity with the construction contract, and approve or return for correction shop drawings, product samples, etc., as necessary to complete the Project within five (5) days. Provide the Project Manager with two (2) copies thereof.
 - vi) Be available to answer technical inquiries during construction.
 - vii) Immediately advise Project Manager and take appropriate action (after approval of Project Manager) with Contractor to rectify any possible overrun of estimated costs and quantities.
 - viii) Act as payment certifier, to recommend monthly, interim and final payments to the construction Contractor and obtain statutory declarations from the Contractor. Submit the progress claims recorded on "Details of Estimate" forms to the Project Manager for approval.
 - vix) Recommend to the Project Manager any necessary changes or alternatives during construction and prepare "Requisitions for Change" for approval by the Project Manager, including obtaining written quotations from the Contractor for any contract changes.
 - x) Make recommendations regarding any claims outside of any contractual agreements submitted by the construction Contractor.
 - xi) Regularly forecast final construction costs and promptly advise the Project Manager if the forecast of final construction costs will exceed the Contract amount.
 - xii) Carry out final inspections with the Project Manager and identify deficiencies to ensure that the work is acceptable and in good operating condition prior to acceptance by the Project Manager and the City of Vancouver Engineering Department.
 - xiii) Attend all interim and final acceptances at the site.
 - xiv) As payment certifier, prepare certificates certifying that deficiencies have been rectified and that all installations have been completed and tested for compliance as required by the construction Contract. Submit this information to the Project Manager for review and approval.

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- xv) Prepare five (5) Operation and Maintenance operating manuals. Ensure that all operating manuals and instructions are complete and accurate as called for in the construction Contract and are delivered to the Project Manager before the stations are commissioned.
 - xvi) Ensure that the “as built” drawings are updated on a weekly basis. Upon completion of construction, the Contractor must submit a complete set of drawings revised to record all changes to be labeled “as built” and signed by the Consultant. The Consultant must submit record drawings prior to the Contractor being issued Substantial Completion Notice(s).
 - xvii) Ensure that all deliverables outlined in PRV Station Contract document are complete and delivered to the Project Manager following completion of construction, including electronic copies within five (5) days of the completion of all construction contracts.
 - xviii) Oversee the commissioning of the new PRF Stations and coordinate all equipment start up with the Consultant’s staff, sub-Consultants, suppliers’ representatives and Waterworks Design Staff to ensure the PRV Stations meet operating requirements.
- c) Inspection Services
- i) The Consultant will be required to provide qualified Project inspection staff (“Field Staff”) on the Project site as required and be responsible for their performance and ensure that they comply with all safety, security and operational procedures and regulations.
 - ii) The Field Staff personnel and assigned tasks required by the Consultant will vary during the different stages of the Project. The Consultant will be required to be responsible for organizing their Field Staff to meet the needs of the construction phases in an effective and efficient manner.
 - iii) The following are key personnel and these positions must be identified by the Consultant and approved by the Project Manager. The Consultant will be required to notify and obtain the approval of the Project Manager of any changes in composition of the Field Staff personnel.
 - A. Construction Inspector - This person is preferred to be a registered Professional Engineer or have equivalent experience, including extensive field experience in inspecting the construction of water distribution and supply systems. A person who is not a registered Engineer will be considered for inclusion by the Project Manager where exceptional work history and experience has been obtained. The duties and responsibilities will include, but will not be limited to, those included in Appendix 6 “Construction Inspector Duties and Responsibilities”.
 - B. Electrical Inspector or Firm - The Consultant will provide a qualified and competent person or firm for electrical

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- inspection. The person performing the tasks will either be a Certified Engineering Technologist or an Electrical Engineer.
- C. Survey Instrument Person - The Survey Instrument Person will be required to have extensive experience with the layout and grade control for water distribution and sanitary sewer systems.
- D. Materials Testing- These persons or selected firm will be required to have extensive experience in materials testing for backfill, concrete, and piping. The major responsibilities are to perform all materials tests in the testing schedule within the required time as designated by the Construction Inspector.
- iv) The City of Vancouver will provide a Construction Inspector to ensure its objectives in quality control are met during the construction period. The City's inspector will work in conjunction with the Consultant to maximize the effectiveness of the Consultant's services.
- d) Additional Services and Changes
- i) Additional Services - As and when required by the Project Manager, the Consultant will be required to engage and be responsible for any additional professional or technical services required, including investigations, surveys, inspections, etc.
- ii) Changes - The Consultant will be required to make themselves fully aware of the Project requirements and current construction codes, as well as changes to standards, new products, etc. Any changes throughout the Project which may thus become necessary will be part of the Consultant's normal services and not considered extra work except where expressly agreed in writing by the Project Manager. Only written changes to the City of Vancouver's requirements will be considered extra work.
- e) Record Services
- i) In addition to the documentation described in the preceding sections the Consultant will be required to maintain the following records for submission to the Project Manager in a Project Wrap-up Report:
- A. Minutes (or a decision record) of each meeting
- B. Daily Project diary by personnel on the site
- C. Construction progress photographs
- D. Correspondence file
- E. Records of material tests
- F. File of field memos and transmittal slips
- G. "Notices of Change" and "Change Orders"

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- H. All approved schedules
 - I. All time and material work slips
 - J. Soil sampling and density tests
 - K. Concrete placing records
 - L. Shop drawings and materials lists
 - M. Summaries of Project Tasks and all investigations and findings
 - N. Summary and explanation of all Project expenditures compared to the budget
 - O. A detailed written summary of the Project
 - P. Appendices
- ii) Following completion of the Construction Contract, the Consultant will be required to provide supporting details as a record document for inclusion in the Project Wrap-Up Report. These supporting details will at a minimum include:
- A. Project costs including Consultant costs
 - B. Contractor's performance
 - C. Problems encountered and resolutions of problems
 - D. List of Contractors and Sub-Contractors
 - E. Final payment summary
 - F. Contractor's interim and final statutory declaration
 - G. Construction "Acceptance Board Reports"
 - H. Engineer's "Interim and Final Certificates"
 - I. Construction permits and certificates from governing agencies
 - J. Guarantees and Warranties
 - K. Summary of approved extra work and copies of all "Change Order" documentation
 - L. Copies of all material test results and performance tests
 - M. Shop drawings
 - N. Construction Contract

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- O. Detailed specifications and Addenda
- P. Operating manual and maintenance schedule for stations

iii) The Consultant will be required to:

Submit five (5) copies of the completed Project Wrap-Up Report including the supporting details in the following format:

- A. Unbound single sided hard copies, specification set sized to eight and one half inches by eleven inches (8.5" X 11").
- B. Electronic files in Word format.
- C. Electronic files of all plans and drawings in Autodesk AutoCAD DWG format.
- D. All electronic files will be submitted in two (2) CDs (or DVDs if necessary), organized into folders by file type.

7.0 Health and Safety

- 7.1 The Consultant will be responsible for the health and safety of all the Consultants' and Sub-Contractors' staff, either directly or indirectly. The Consultant will develop a health and safety plan for the Project and specify health and safety requirements.

8.0 Communications

- 8.1 The Consultant will provide regular updates to the City's Project Manager throughout the Project. These updates will be through various means including phone conversations, written communications, face-to-face meetings and the like.
- 8.2 For all meetings, the Consultant will be required to prepare written meeting minutes for the City's review prior to distribution to participants.
- 8.3 The Consultant will provide written results of each Project Task to the City for approval prior to proceeding to the next Project Task, unless otherwise agreed to in writing by the City.

9.0 Value Added Services

- 9.1 Within its response to Schedule A, the Proponent has the opportunity to offer and describe any value added services, products or items not specifically asked for and detail as to what the Proponent is prepared to supply as part of the Contract. Unless otherwise stated, it is understood that there are no extra costs for these services; however, if there are any additional costs pertaining thereto, the summary and explanation of those costs should be appended to the Schedule B - Pricing Sheet.

10.0 Insurance Requirements

- 10.1 Proponents are to submit with their Proposals a Certificate of Existing Insurance (in the form set out as Appendix 1) duly completed and signed by their insurance agent or

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broker as evidence of their existing insurance, along with a letter from their insurance broker or agent indicating whether or not (and if not then to what extent) they will be able to comply with the insurance requirements set out in this section should they be selected as the successful Proponent.

- 10.2 The successful Proponent will be required to file certificates of insurance with the City showing proof of all insurance requirements described utilizing the "Certificate of Professional Liability Insurance" attached as Appendix 2 and "Certificate of Insurance" attached as Appendix 3. These certificates must be received and reviewed and approved by the City prior to or concurrently with the City entering into any Contract with the successful Proponent.

10.3 Required Types/Amounts

Prior to commencing the Services, the Consultant will obtain at its own expense:

- a) a Professional (Errors and Omissions) Liability insurance policy with limits of not less than two million dollars (\$2,000,000) per occurrence with an aggregate of not less than three million dollars (\$3,000,000) and a deductible of not more than fifty thousand dollars (\$50,000), protecting the Consultant against all claims for loss or damage arising out of any wrongful act or error or omission of the Consultant or Consultant's Personnel in the performance of the Services.
- b) a Comprehensive General Liability insurance policy with limits of not less than two million dollars (\$2,000,000) per occurrence, with an aggregate of not less than three million dollars (\$3,000,000) and a deductible of not more than five thousand dollars (\$5,000), protecting the Consultant and Consultant's Personnel against all claims for personal injury, death, bodily injury or property damage arising out of the operations of the Consultant or the actions of the Consultant or Consultant's Personnel. The policy will contain a cross liability clause in favour of the City and will name the City and City's Personnel as additional insured.
- c) a standard owner's form automobile policy for licensed vehicles providing third party liability and accident benefits insurance as provided by the Insurance Corporation of British Columbia (Autoplan) in accordance with the Automobile Insurance Act, RSBC 1979, Ch. 204, the minimum limits as follows:
 - i) Bodily injury and property damage (third party limit) inclusive limit is five million dollars (\$5,000,000).

10.4 Required Policy Terms

All required insurance policies will remain in full force and effect at all times until completion of the Services and for a period of not less than two (2) years following the completion of the Services and will:

- a) be obtained and issued by insurance companies authorized to carry on business in British Columbia, on terms satisfactory to the City's Director of Risk Management;
- b) be primary insurance in respect to the City and any insurance or self-insurance maintained by the City will be in excess of this insurance and will not

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contribute to such policies;

- c) contain a provision that such insurance coverage will not be cancelled without the insurer giving the City at least thirty (30) days' prior written notice by registered mail;
- d) contain a clause that waives the insurer's right of subrogation against the City and City's Personnel.
 - i) The Consultant and each of its Sub-Contractors will provide at its own cost any additional insurance which it is required by law to provide or which it considers necessary.
 - ii) Neither the providing of insurance by the Consultant or Sub-Contractors in accordance with this Agreement, nor the insolvency, bankruptcy or the failure of any insurance company to pay any claim accruing will be held to relieve the Consultant from any other provisions of the Contract Documents with respect to liability of the Consultant or otherwise.

10.5 Insurance Certificate

Prior to the Effective Date, the Consultant will provide the City's Project Manager with evidence of all required insurance to be taken out in the form of the General Certificate of Insurance supported by a certified copy(s) of the policy(s). The General Certificate of Insurance will identify the Contract title, number, policyholder and scope of work and must not contain any qualifications or disclaimers. Proof of insurance, in the form of a General Certificate of Insurance or certified copies of all insurance policies will be made available to the City's Director of Risk and Emergency Management at any time during the performance of the Services immediately upon request. The General Certificate of Insurance will not contain any disclaimer whatsoever.

10.6 Sub-Contractor's Insurance

The Consultant will provide in its agreements with its Sub-Contractors clauses in the same form as in this Agreement. Upon request, the Consultant will deposit with the City's Manager of Supply Management detailed Certificates of Insurance for the policies it has obtained from its Sub-Contractors and a copy of the applicable insurance clauses from its Sub-Contractors agreements.

11.0 WorkSafeBC Requirements

11.1 Maintain WorkSafeBC Coverage - General

The Consultant will carry and pay for full WorkSafeBC coverage for itself and all personnel engaged in or on the Services, failing which the City has the unfettered right to set off the amount of any unpaid premiums and assessments for such WorkSafeBC coverage against any amounts owing by the City to the Consultant. The City will have the right to withhold payment under this Agreement until WorkSafeBC premiums, assessments or penalties in respect of the Services have been paid in full.

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11.2 Provide Evidence of WorksafeBC Coverage - General

The Consultant will provide the City with the Consultant's WorkSafeBC registration number and a letter from WorkSafeBC confirming that the Consultant is registered in good standing with WorkSafeBC and that all assessments have been paid to date prior to the City having any obligation to pay any invoice under this Agreement. The Consultant will indemnify the City and hold harmless the City from all manner of Losses arising out of or in any way related to unpaid WorkSafeBC assessments owing from any person or corporation engaged in the performance of the Services or arising out of or in any way related to the failure to observe safety rules, regulations and practices of WorkSafeBC, including penalties levied by WorkSafeBC.

11.3 Special WorkSafeBC Requirements Where Services Are Provided on City of Vancouver Sites

- a) Prior to commencing any Services on any City Site, the Consultant must provide updated evidence to the City's Project Manager that it is in good standing with WorkSafeBC. The Consultant is responsible for having the City Site secured in accordance with WorkSafeBC regulations and ensure the safety of the City Site during the performance of the Consultant's and their Sub-Contractor's Services on the City Site.
- b) The Consultant is now appointed and now accepts appointment as the Prime Contractor for the purpose of this Agreement during the performance of the Consultant's and their Sub-Contractor's Services on the City Site, and as such, has the responsibility to
 - i) ensure the Services are performed in a safe manner that complies with all WorkSafeBC regulations,
 - ii) direct and coordinate the work activities related to the health and safety of all of the Consultant's Personnel and any other workers within the City Site, and
 - iii) obtain from the City written information on hazards and conditions and the methods to address the hazards and conditions and circulate this information to all workers within the City Site.
- c) Prior to the Consultant and their Sub-Contractors commencing any Services on the City Site, the Consultant must
 - i) have its own safety program and have written safe work procedures specific to the Services being performed available at the City Site, and
 - ii) ensure the safety program meets the requirements of WorkSafeBC Regulations.
- d) During the performance of the Consultant's and their Sub-Contractor's Services on the City Site, the Consultant must also,
 - i) advise the City of any accidents or incidents at the City Site that must be reported to WorkSafeBC, and

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- ii) inform all personnel performing the Services on the City Site of the health and safety requirements at that workplace.

- e) At all times the Consultant will ensure that its personnel, and the Sub-Contractor's personnel, and all other workers engaged or indirectly engaged by the Consultant coming onto the City Site will comply with
 - i) WorkSafeBC Regulations;
 - ii) the Consultant's safety program; and
 - iii) all work site safety requirements.

12.0 Dun & Bradstreet

12.1 The Consultant should provide the City with the Consultant's D-U-N-S registration number.

13.0 References

13.1 The Proponent is to describe the Proponent's relevant experience with similar engagements for similar work over the last two (2) years as well as references for same by completing the table below. The Proponent may, at its own discretion, expand on the number of references and information that it deems necessary to support its Proposal. By submitting a Proposal, the Proponent consents to the City contacting these references, and consents to the City also contacting any other organization for the purposes of evaluating the Proponent's company and Proposal.

Name and Address of Company	Contact Name and Telephone Number	Brief Description of Work and Date Performed

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SCHEDULE B- PRICING**

1.0 Pricing

1.1 The Proponent should provide the following information:

- a) a total maximum fee for the Services, inclusive of all disbursements and taxes (except GST, which is to be shown separately), showing all costs associated with the Project Tasks and deliverables as outlined in Schedule A - Requirements;
- b) the hourly charge out rates for Project team members;
- c) a breakdown of the total maximum Project fee into the costs associated with each team member, inclusive of fees, disbursements and taxes (except GST);
- d) a description of all disbursements, including a maximum amount for each;
- e) a description of all costs associated with Sub-Contractors; and
- f) a description of all costs, organized as above, for any additional proposed scope of work related to this Project. For example, where additional meetings are requested by the City, describe how these would be charged to the City.

1.2 The Proponent should copy and customize the Pricing Table set out below for inclusion in their RFP submission:

Estimated Fees/Disbursements						
Work Task/Phase/ Deliverable	Team Members	Activity/Role	Estimated Hours	Hourly Rate	Estimated Fee	Estimated Disbursements
Phase I Preliminary Investigation Pre-Design						
Phase II Final Design						
Phase III Construction Bid Process						
Phase IV General Engineering, Inspection and Record Services						
Maximum Fees/Disbursements (Proponents to note Article 5.0 of sample PSA, Basis of Payment to Consultant)						

The Consultant shall submit invoices on or before the 10th day of each month, for work completed up to the end of the previous month, indicating the percent of work completed.

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SCHEDULE B- PRICING

1.3 Miscellaneous Expenditures - Please indicate all expenditures not noted above in a separate table with totals included. This table will include, but will not be limited to, the following:

- a) Commercial transportation charges
- b) Taxi
- c) Parking
- d) Special vehicle costs
- e) Long distance telephone, data charges, express charges, translation
- f) Reproduction directly applicable to the work, such as white printing, and extra copies of documents
- g) Courier services, when requested by the City.
- h) Rental of equipment directly applicable to the work, and any other miscellaneous expenditures which have been approved in writing by the Project Manager
- i) Subcontractors' fees for drilling etc., as approved by PM.

2.0 Terms of Payment

2.1 The City's standard payment terms are Net thirty (30) days after receipt of approved invoice; however and discounts or more favourable terms which may be offered by the Proponent will be taken into consideration in the financial evaluation. Please indicate in your response if other than Net thirty (30).

2.2 Describe if Electronic Fund Transfer (EFT) is available.

3.0 Alternative Pricing Solutions

3.1 Proponents may offer alternative pricing options.

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SCHEDULE C - DEVIATIONS AND VARIATIONS

Proponent(s) should use this Schedule C to detail any deviations and/or variations from the terms and conditions set out in this RFP and if applicable, detail proposed amendments.

Where the Proponent is proposing the use of contract language or clauses other than those set out in the sample Professional Services Agreement (Appendix 4), such clauses should be attached to this Schedule C. The City will assume such clauses are in addition to those in the sample Professional Services Agreement unless otherwise indicated by the Proponent.

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SCHEDULE D - SUB-CONTRACTORS**

The Sub-Contractors shown below are the Sub-Contractors that the Proponent proposes to use to carry out the Requirements. The City expects that the Proponent will engage the listed Sub-Contractors and no others in their stead without prior written authorization of the City. (For contractual requirements, Proponents should note the relevant sections of the sample Professional Services Agreement.)

The City reserves the right to object to any of the Sub-Contractors listed in a Proposal. If the City objects to a listed Sub-Contractor then the City will permit a Proponent to, within seven (7) calendar days, propose a substitute Sub-Contractor acceptable to the City. A Proponent will not be required to make such a substitution and, if the City objects to a listed Sub-Contractor, the Proponent may, rather than propose a substitute Sub-Contractor, consider its Proposal rejected by the City and by written notice withdraw its Proposal.

If no Sub-Contractors will be used, indicate "Not Applicable".

Company Name, Address	Contact Name and Telephone Number	Area of Responsibility



**CERTIFICATE OF EXISTING INSURANCE
TO BE COMPLETED AND APPENDED TO THE PROPOSAL/TENDER**

Section 2 through 8 – to be completed and executed by the Insurer or its Authorized Representative

1. **THIS CERTIFICATE IS ISSUED TO:** City of Vancouver, 453 W 12th Avenue, Vancouver, BC, V5Y 1V4
and certifies that the insurance policy (policies) as listed herein has/have been issued to the Named Insured and is/are in full force and effect.

NAMED INSURED (must be the same name as the proponent/bidder and is either an individual or a legally incorporated company)

BUSINESS TRADE NAME or **DOING BUSINESS AS**

BUSINESS ADDRESS

DESCRIPTION OF OPERATION

3. **PROPERTY INSURANCE (All Risks Coverage including Earthquake and Flood)**

INSURER _____	Insured Values (Replacement Cost) -
TYPE OF COVERAGE _____	Building and Tenants' Improvements \$ _____
POLICY NUMBER _____	Contents and Equipment \$ _____
POLICY PERIOD From _____ to _____	Deductible Per Loss \$ _____

4. **COMMERCIAL GENERAL LIABILITY INSURANCE (Occurrence Form)**

Including the following extensions:	INSURER _____
√ Personal Injury	POLICY NUMBER _____
√ Property Damage including Loss of Use	POLICY PERIOD From _____ to _____
√ Products and Completed Operations	Limits of Liability (Bodily Injury and Property Damage Inclusive) -
√ Cross Liability or Severability of Interest	Per Occurrence \$ _____
√ Employees as Additional Insureds	Aggregate \$ _____
√ Blanket Contractual Liability	All Risk Tenants' Legal Liability \$ _____
√ Non-Owned Auto Liability	Deductible Per Occurrence \$ _____

5. **AUTOMOBILE LIABILITY INSURANCE** for operation of owned and/or leased vehicles

INSURER _____	Limits of Liability -
POLICY NUMBER _____	Combined Single Limit \$ _____
POLICY PERIOD From _____ to _____	<i>If vehicles are insured by ICBC, complete and provide Form APV-47.</i>

6. **UMBRELLA OR** **EXCESS LIABILITY INSURANCE** **Limits of Liability (Bodily Injury and Property Damage Inclusive) -**

INSURER _____	Per Occurrence \$ _____
POLICY NUMBER _____	Aggregate \$ _____
POLICY PERIOD From _____ to _____	Self-Insured Retention \$ _____

7. **PROFESSIONAL LIABILITY INSURANCE**

INSURER _____	Limits of Liability
POLICY NUMBER _____	Per Occurrence/Claim \$ _____
POLICY PERIOD From _____ to _____	Aggregate \$ _____
	Deductible Per Occurrence/Claim \$ _____

If the policy is in a "CLAIMS MADE" form, please specify the applicable Retroactive Date: _____

8. **OTHER INSURANCE**

TYPE OF INSURANCE _____	Limits of Liability
INSURER _____	Per Occurrence \$ _____
POLICY NUMBER _____	Aggregate \$ _____
POLICY PERIOD From _____ to _____	Deductible Per Loss \$ _____

TYPE OF INSURANCE _____	Limits of Liability
INSURER _____	Per Occurrence \$ _____
POLICY NUMBER _____	Aggregate \$ _____
POLICY PERIOD From _____ to _____	Deductible Per Loss \$ _____

SIGNED BY THE INSURER OR ITS AUTHORIZED REPRESENTATIVE

_____ Dated _____
PRINT NAME OF INSURER OR ITS AUTHORIZED REPRESENTATIVE, ADDRESS AND PHONE NUMBER

PROFESSIONAL LIABILITY INSURANCE CERTIFICATE

Section 4 – City staff to select the required # of days Written Notice before sending out for completion
 Section 2, 3 & 4– to be completed and executed by the Insurer or its Authorized Representative

1. **THIS CERTIFICATE IS ISSUED TO:** City of Vancouver, 453 W 12th Avenue, Vancouver, BC, V5Y 1V4
and certifies that the insurance policy as listed herein has been issued to the Named Insured(s) and is in full force and effect as of the effective date of the agreement described below.
2. **NAMED INSURED:** *[must be the same name as the Permittee/Licensee or Party(ies) to Contract and is/are either an individual(s) or a legally incorporated company(ies)]*

MAILING ADDRESS:

LOCATION ADDRESS:

DESCRIPTION OF OPERATION/CONTRACT:

3. PROFESSIONAL LIABILITY INSURANCE

	LIMITS OF LIABILITY:	
INSURER: _____	Per occurrence/claim:	\$ _____
POLICY NUMBER: _____	Aggregate:	\$ _____
POLICY PERIOD: From _____ to _____	Deductible per occurrence/claim:	\$ _____
<i>If the policy is in a "CLAIMS MADE" form, please specify the applicable Retroactive Date:</i> _____		

4. POLICY PROVISIONS:

Where required by the governing contract, agreement, permit or license, it is understood and agreed that SIXTY (60) days written notice of cancellation or material change resulting in reduction of coverage with respect to the policy listed herein, either in part or in whole, will be given by the Insurer to the Holder of this Certificate. The exception is cancellation for non-payment of premiums in which case the applicable statutory conditions will apply.

SIGNED BY THE INSURER OR ITS AUTHORIZED REPRESENTATIVE

Dated: _____

PRINT NAME OF INSURER OR ITS AUTHORIZED REPRESENTATIVE, ADDRESS AND PHONE NUMBER

GENERAL CERTIFICATE OF INSURANCE

Section 8 b) – City staff to select the required # of days Written Notice before sending the certificate out for completion
 Section 2 through 8 – to be completed and executed by the Insurer or its Authorized Representative

1. **THIS CERTIFICATE IS ISSUED TO:** City of Vancouver, 453 W 12th Avenue, Vancouver, BC, V5Y 1V4
and certifies that the insurance policies as listed herein have been issued to the Named Insured(s) and are in full force and effect as of the effective date of the agreement described below.
2. **NAMED INSURED:** *[must be the same name as the Permittee/Licensee or Party(ies) to Contract and is/are either an individual(s) or a legally incorporated company(ies)]*

MAILING ADDRESS: _____

LOCATION ADDRESS: _____

DESCRIPTION OF OPERATION, CONTRACT, AGREEMENT, LEASE, PERMIT OR LICENSE: _____

3. **PROPERTY INSURANCE** naming the City of Vancouver as a Named Insured and/or Loss Payee with respect to its interests and shall contain a waiver clause in favour of the City of Vancouver.

(All Risks Coverage including Earthquake and Flood)

INSURER: _____
 TYPE OF COVERAGE: _____
 POLICY NUMBER: _____
 POLICY PERIOD: From _____ to _____

INSURED VALUES: (Replacement Cost)

Building and Tenants' Improvements: \$ _____
 Contents and Equipment: \$ _____
 Deductible Per Loss: \$ _____

4. **COMMERCIAL GENERAL LIABILITY INSURANCE (Occurrence Form)**

Including the following extensions:

- Personal Injury
- Products and Completed Operations
- Cross Liability or Severability of Interest
- Employees as Additional Insureds
- Blanket Contractual Liability
- Non-Owned Auto Liability

INSURER: _____
 POLICY NUMBER: _____
 POLICY PERIOD: From _____ to _____

LIMITS OF LIABILITY: (Bodily Injury and Property Damage Inclusive)

Per Occurrence: \$ _____
 Aggregate: \$ _____
 All Risk Tenants' Legal Liability: \$ _____
 Deductible Per Occurrence: \$ _____

5. **AUTOMOBILE LIABILITY INSURANCE** for operation of owned and/or leased vehicles

INSURER: _____
 POLICY NUMBER: _____
 POLICY PERIOD: From _____ to _____

LIMITS OF LIABILITY:

Combined Single Limit: \$ _____
If vehicles are insured by ICBC, complete and provide Form APV-47.

6. **UMBRELLA OR** **EXCESS LIABILITY INSURANCE**

INSURER: _____
 POLICY NUMBER: _____
 POLICY PERIOD: From _____ to _____

LIMITS OF LIABILITY: (Bodily Injury and Property Damage Inclusive)

Per Occurrence: \$ _____
 Aggregate: \$ _____
 Self-Insured Retention: \$ _____

7. **OTHER INSURANCE** (e.g. Boiler & Machinery, Business Interruption, Crime, etc.) – Please specify Name of Insurer(s), Policy Number, Policy Period, and Limit

8. **POLICY PROVISIONS:**

Where required by the governing contract, agreement, lease, permit or license, it is understood and agreed that:

- a) *The City of Vancouver, its officials, officers, employees, servants and agents have been added as Additional Insureds with respect to liability arising out of the operation of the Named Insured pursuant to the governing contract, agreement, lease, permit or license;*
- b) *SIXTY (60) days written notice of cancellation or material change resulting in reduction of coverage with respect to any of the policies listed herein, either in part or in whole, will be given by the Insurer(s) to the Holder of this Certificate; the exception is cancellation for non-payment of premiums in which case the applicable statutory conditions will apply;*
- c) *The insurance policy (policies) listed herein shall be primary with respect to all claims arising out of the operation of the Named Insured. Any insurance or self-insurance maintained by the City of Vancouver shall be in excess of this insurance and shall not contribute to it.*

SIGNED BY THE INSURER OR ITS AUTHORIZED REPRESENTATIVE

PRINT NAME OF INSURER OR ITS AUTHORIZED REPRESENTATIVE, ADDRESS AND PHONE NUMBER _____ Dated: _____



PROFESSIONAL SERVICES AGREEMENT

THIS AGREEMENT made as of the ____ day of _____, 2010__ (the "Effective Date"),

BETWEEN:

CITY OF VANCOUVER
453 West 12th Avenue
Vancouver, British Columbia
V5Y 1V4

(the "City")

AND:

[CONSULTANT NAME AND ADDRESS]

(the "Consultant")

(The City and the Consultant are hereinafter sometimes referred to individually as "Party"
and collectively as "Parties")

BACKGROUND:

- A. The City requires the professional services described herein, and desires to engage the Consultant to perform said services.
- B. The Consultant has agreed to perform the said services in accordance with the terms and conditions of this Agreement.

NOW THEREFORE, in consideration of the mutual covenants and promises made by the Parties and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Parties hereby agree as follows:

INTERPRETATION

- 1.1 In this Agreement, including the recitals, schedules and appendices to this Agreement, the following words and terms, unless the context otherwise requires, shall have the meanings set out below:
- 1.1.1 **"Agreement"** means this agreement inclusive of all schedules, appendices or exhibits attached hereto, as amended from time to time;
- 1.1.2 **"Applicable Laws"** means all statutes, regulations, by-laws, codes, rules, notices, orders, directives, standards and requirements of every competent federal, provincial, regional, municipal and other statutory authority applicable to the Consultant, any Sub-Contractor and the Services, including the Vancouver Building By-law, the British Columbia Building Code, and the British Columbia Fire Code, all as may be in force from time to time;
- 1.1.3 **"City's Site"** means any land and/or premises owned by the City on which or in respect of which the Services are performed by the Consultant;
- 1.1.4 **"City's Project Manager"** means the City's employee, or his/her delegate, who is authorized in writing to deal with the Consultant on behalf of the City in connection with the Services, or to make decisions in connection with this Agreement;
- 1.1.5 **"Confidential Information"** has the meaning set out in Article 15;
- 1.1.6 **"Contract Documents"** means this Agreement, the Proposal and the RFP;
- 1.1.7 **"Deliverables"** has the meaning set out in Article 17;
- 1.1.8 **"GST"** means the tax payable and imposed pursuant to Part IX of the *Excise Tax Act* (Canada), as amended, and any successor legislation thereto;
- 1.1.9 **"Project Team"** has the meaning set out in subsection 2.2.3;
- 1.1.10 **"Proposal"** means the proposal submitted by the Consultant in response to the RFP, a copy of which is attached hereto as Appendix B;
- 1.1.11 **"PST"** means provincial sales tax administered under the *Social Services Tax Act* (British Columbia) and any successor tax or levies therefor in force from time-to-time;
- 1.1.12 **"RFP"** means Request for Proposal PS10006 **"Consultant Services - PRV Station Design and Construction Management"** and all addenda;
- 1.1.13 **"Services"** has the meaning set out in Section 2.1;
- 1.1.14 **"Sub-Contractor"** has the meaning set out in Section 4.1; and
- 1.1.15 **"Term"** means the term of this Agreement as specified in Section 12.1.

- 1.2 The terms and conditions of the Contract Documents, whether or not attached to this Agreement will be deemed to be incorporated into this Agreement. The Contract Documents are complementary and what is called for by any one will be as binding as if called for by all. In the event of any conflict or inconsistency between or among any of the Contract Documents, the Contract Documents will be interpreted in the following order of priority, from highest to lowest:
- 1.2.1 this Agreement, excluding Appendix B;
 - 1.2.2 the RFP; and
 - 1.2.3 the Proposal.
- 1.3 In this Agreement, including the recitals, schedules and appendices to this Agreement, except as expressly stated to the contrary or the context otherwise requires:
- 1.3.1 the recitals and headings to sections, schedules and appendices are for convenience and reference only and will not affect the interpretation of this Agreement;
 - 1.3.2 the terms "this Agreement", "hereof", "herein", "hereunder" and similar expressions refer, unless otherwise specified, to this Agreement taken as a whole (including any and all attached appendices) and not to any particular section, subsection or other subdivision;
 - 1.3.3 each reference to a statute is deemed to be a reference to that statute and any successor statute, and to any regulations, rules, policies and criteria made under that statute and any successor statute, each as amended or re-enacted from time to time;
 - 1.3.4 each reference to a rule, guideline, policy, regulation or directive is deemed to be a reference to any successor or replacement of such rule, guideline, policy, regulation or directive;
 - 1.3.5 words importing the singular include the plural and vice versa and words importing gender include all genders;
 - 1.3.6 references to time of day or date mean the local date or time in Vancouver, British Columbia;
 - 1.3.7 all references to money mean lawful currency of Canada;
 - 1.3.8 the word "written" includes printed, typewritten, faxed, e-mailed or otherwise capable of being visibly reproduced at the point of reception and "in writing" has a corresponding meaning; and
 - 1.3.9 the words "include" and "including" are to be construed as meaning "including, without limitation".

ARTICLE. 2 **CONSULTANT'S SERVICES TO THE CITY**

- 2.1 The Consultant will provide and be fully responsible for the following services (the "Services"):
- 2.1.1 the services described in the RFP;
 - 2.1.2 the services which the Consultant agreed to provide in the Proposal; and
 - 2.1.3 all services not specifically included in Articles 2.1.1 and 2.1.2 but which are necessary or incidental to the completion of the Services.
- 2.2 The Consultant will be fully responsible for:
- 2.2.1 coordinating the Services with the City's Project Manager, or her delegate, and ensuring that the performance of the Services does not adversely impact the design or construction schedule for the project or the work and/or services provided by the City's other consultants;
 - 2.2.2 taking all steps required in placing, effecting and maintaining insurance and providing evidence of insurance as set out in Appendix A - *Insurance Requirements*;
 - 2.2.3 acting as payment certifier for all Contractors and Sub-Contractors for the duration of the construction, up to total performance of the construction work, as set out in Schedule A - 6.8 b) viii) and in Schedule A - 6.8 b) xiv).
 - 2.2.4 maintaining and supervising its employees and Sub-Contractors (the "Project Team") described in Section 3.1.
- 2.3 The Consultant represents and warrants to the City that the Consultant possesses the necessary skills, knowledge, qualifications and experience to perform the Services to the reasonable satisfaction of the City.
- 2.4 The Consultant will perform the Services:
- 2.4.1 with that degree of care, skill and diligence normally applied in the performance of services of a similar nature and magnitude to those contemplated by this Agreement at the time and place the Services are rendered;
 - 2.4.2 in accordance with sound current professional practices and design standards; and
 - 2.4.3 in conformance with any and all Applicable Laws.
- 2.5 The Consultant will commence the Services promptly and will use every reasonable effort to carry out the Services in accordance with:
- 2.5.1 the requirements and appendices of this Agreement, or
 - 2.5.2 where no date is specified for the provision of any component of the Services by this Agreement, such completion dates as are reasonably specified from time to time by the City.

- 2.6 The Consultant will not permit, do or cause anything to be done at any time which could allow any lien, certificate of pending litigation, judgment or certificate of any court or any mortgage charge, conditional sale agreement, personal property security interest or encumbrance of any nature to be imposed or to remain on title to the City's Site or any other City property.

ARTICLE. 3 PROJECT TEAM

- 3.1 Subject to Section 3.2 below, the Consultant will utilize only the Project Team members noted in the Proposal.
- 3.2 Except for substitutions required by circumstances not within its reasonable control, the Consultant may not make substitutions of Project Team members without the prior written consent of the City, which consent will not be unreasonably withheld, delayed or conditioned.
- 3.3 For the purposes of this Section 3, "substitutions required by circumstances not within its reasonable control" means substitutions required by virtue of illness, death, injury, pregnancy, medical leave, or termination of employment or contract, but expressly excludes situations where the Project Team member is called upon to perform services for another client of the Consultant, its Sub-Contractor or their affiliates.
- 3.4 The City may, with stated reasons and acting reasonably, request that the Consultant replace a Project Team member. The Consultant will, subject to scheduling and staffing considerations, make commercially reasonable efforts to replace the individual with someone of substantially similar competency and experience.
- 3.5 Regardless of whether or not the City consents to a substitution, or requests a substitution, the City will not be liable to pay additional compensation to the Consultant for any replacement Project Team member.

ARTICLE. 4 SUB-CONTRACTORS

- 4.1 Unless expressly permitted pursuant to Section 3 above, the Consultant may not engage any contractor or consultant (in each case a "Sub-Contractor") for the performance of any part of the Services, unless the Consultant has first obtained the written consent of the City, which consent may be arbitrarily withheld.
- 4.2 The Consultant will administer, coordinate, and manage all Services provided by any Sub-Contractors, and will assume full responsibility to the City for all work performed by the Sub-Contractors in relation to the Services and will pay all fees and disbursements of all Sub-Contractors, subject to reimbursement by the City where the City has expressly agreed in this Agreement that such reimbursement is to be separate from and additional to the fees and disbursements payable to the Consultant.
- 4.3 Where a Sub-Contractor is used by the Consultant under this Agreement, the Consultant will legally bind the Sub-Contractor to comply with this Agreement.
- 4.4 Nothing in this Agreement will create any contractual relationship between a Sub-Contractor and the City.

ARTICLE. 5 BASIS OF PAYMENT TO THE CONSULTANT

- 5.1 In consideration of the Services performed by the Consultant to the satisfaction of the City and in strict conformity with the terms hereof, the City will pay the Consultant the fees and reimbursable expenses prescribed herein, plus GST and/or PST, as applicable.
- 5.2 Subject to Section 5.3, payment to the Consultant will be based on hours worked by employees of the Consultant or by the Sub-Contractors multiplied by the applicable hourly charge-out rates in the Proposal.
- 5.3 If there are limiting amounts for fees and disbursements indicated below for the Services or parts thereof, then notwithstanding anything to the contrary in this Agreement the maximum fees and disbursements to be paid by the City to the Consultant for the Services or portions of the Services will not exceed those amounts. Where additional fees are to be paid by the City to the Consultant for increases in the scope of the Services provided by the Consultant, they will not exceed the amount of said fees mutually agreed upon under Article 6. This limit on the fees to be paid by the City to the Consultant will in no way diminish the duties and obligations of the Consultant to provide the Services covered by this Agreement.

The fees for the Services are set out in [reference section of the Proposal or schedule to this Agreement]. Subject to Article 6, the total professional fees payable to the Consultant for the Services (not including GST or disbursements) will not exceed \$_____.

Subject to Article 6, the total disbursements for which the City will reimburse the Consultant in respect of the Services will not exceed \$_____ (the "Fixed Disbursement Amount").

Notwithstanding anything to the contrary contained in this Agreement, save for Article 6, the maximum liability of the City hereunder (the "Maximum Fees and Disbursements") will be \$_____, plus GST, as applicable.

- 5.4 If the Consultant has engaged Sub-Contractors, then the Consultant will make full payment to said Sub-Contractors for work performed in relation to the Services. Subject to Section 5.3, the City will reimburse the Consultant for payments made to Sub-Contractors at amounts equal to such actual payments without any additions for overhead and profit to the Consultant.
- 5.5 The Consultant will submit invoices to the City on or before the 10th day of each month. Each invoice will list the names, hours worked and pay rates of all employees of the Consultant and Sub-Contractors that have worked on the Services during the previous month, the total amount of previous payments made by the City, and the percentage of the Services that are complete. Each invoice will show separately the amount of GST applicable.

Attached to each invoice will be:

- 5.5.1 copies of invoices for all disbursements claimed;

- 5.5.2 confirmation of payments made to Sub-Contractors for the previous month; and
- 5.5.3 a brief report detailing work completed to date, work completed during the month covered by the invoice and work outstanding to complete the Services.

Notwithstanding anything to the contrary contained in this Agreement, the City will never be obligated to pay the Consultant a greater percentage of the Maximum Fees and Disbursements than the degree of percentage completion of the total of the Services.

- 5.6 If the City does not approve of or wishes to further review, audit or otherwise seek clarification concerning the Consultant's invoices, for whatever reason, the City will not be liable for interest charges in respect of that invoice for the period from the date the invoice is submitted until the date that the invoice is paid, provided however, the City will use reasonable efforts to have the review, audit or clarification resolved within a sixty (60) day period. The City will, if it approves the amount of such invoices, cause the respective invoices to be paid within thirty (30) days of approval.
- 5.7 The Consultant will keep proper accounts and records of all costs and expenditures forming the basis of any billing to the City, including but not limited to hours worked, details of all disbursements and percentage amounts of work completed. The City will be entitled to verify the accuracy and validity of all billings and payments made by auditing and taking extracts from the books and records of the Consultant and by such other means as will be reasonably necessary or advisable.

ARTICLE. 6 CHANGES TO SCOPE OF SERVICES

- 6.1 The City's Project Manager may, from time to time and at any time on prior written notice to the Consultant, vary the scope of Services to be provided by the Consultant. In that case and where this Agreement contains delivery dates and/or limits as to the Maximum Fees and Disbursements to be paid to the Consultant pursuant to Section 5.3 for all or any part of the Services, such delivery dates and/or limits will be adjusted as agreed to by both Parties in writing, and failing agreement, as reasonably determined by the City's Project Manager.
- 6.2 Should the Consultant consider that any request or instruction from the City's Project Manager constitutes a change in the scope of Services, the Consultant will provide the City's Project Manager with notice in writing within ten (10) days of such request or instruction. If the Consultant does not deliver written notice to the City within the time period specified, the City will not be obligated to make any payments of additional fees, disbursements or out of pocket expenses to the Consultant.
- 6.3 The City's Project Manager will consider the Consultant's written notice within a further ten days of receipt of the Consultant's notice and determine and advise as to whether the request constitutes a change in the scope of the Services and, if necessary, the method by which the variation will be scoped and reimbursed. If the City determines that the professional fees payable to the Consultant should be increased due to an increase in the scope of the Services then any such increases will be based on the hourly rates set out in Section ___ of the Proposal.

ARTICLE. 7 RELEASE AND INDEMNIFICATION

- 7.1 The Consultant now releases the City, its officials, officers, employees and agents from all costs, losses, damages and expenses, including those caused by personal injury, death, property damage, loss and economic loss arising out of, suffered or experienced by the Consultant, its Sub-Contractors, and their respective officers, employees and agents in connection with their performance of the Services under this Agreement.
- 7.2 In undertaking the Services, the Consultant acknowledges that the Consultant has inspected the City's Site, agrees to accept the City's Site "as-is" and undertakes to take all precautions necessary to ensure the safety of all persons employed or contracted by the Consultant to perform the Services.
- 7.3 Despite the provision of insurance coverage by the City, the Consultant hereby agrees to indemnify and save harmless the City of Vancouver and its successors, assigns and authorized representatives and each of them (in each case an "Indemnified Party") from and against all costs, losses, claims, damages, actions, and causes of actions (collectively referred to as "Claims") that an Indemnified Party may sustain, incur, suffer or be put to at any time either before or after the expiration or termination of this Agreement, that arise out of errors, omissions or negligent acts of the Consultant, its Sub-Contractors, or their respective officers, employees or agents under this Agreement excepting always that this indemnity does not apply to the extent, if any, to which the Claims are caused by errors, omissions or negligent acts of an Indemnified Party.
- 7.4 This indemnity will not affect or prejudice the City from exercising any other rights that may be available to it at law or in equity.
- 7.5 The release and indemnity set out above will survive the expiry or sooner termination of this Agreement.

ARTICLE. 8 INSURANCE

- 8.1 The Consultant will comply with the insurance requirements set out in Appendix A - *Insurance Requirements*.

ARTICLE. 9 WorkSafeBC

- 9.1 The Consultant agrees that it will procure and carry and pay for, full WorkSafeBC 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 Consultant agrees that the City has the unfettered right to set off the amount of the unpaid premiums and assessments for such WorkSafeBC coverage against any monies owing by the City to the Consultant. The City will have the right to withhold payment under this Agreement until the WorkSafeBC premiums, assessments or penalties in respect of work done or service performed in fulfilling this Agreement have been paid in full.

- 9.2 The Consultant will provide the City with the Consultant's and each Sub-Contractor's WorkSafeBC registration number and clearance letters from WorkSafeBC confirming that the Consultant and each Sub-Contractor are registered in good standing with WorkSafeBC and that all assessments have been paid to the date thereof prior to the City having any obligation to pay monies under this Agreement. The Consultant will indemnify the City and hold harmless the City from all manner of claims, demands, costs, losses, penalties and proceedings arising out of or in any way related to unpaid WorkSafeBC assessments owing from any person or corporation engaged by the Consultant 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 WorkSafeBC, including penalties levied by WorkSafeBC.
- 9.3 Whenever the Consultant is required or permitted to perform any Services on any City sites, the Consultant is now appointed and now accepts appointment as the Prime Contractor in connection with such Services.

ARTICLE. 10 CITY INFORMATION/APPROVALS

- 10.1 No reviews, approvals or inspections carried out or information supplied by the City will derogate from the duties and obligations of the Consultant (with respect to designs, reviews, inspections, approvals or otherwise), and all responsibility related to the Services will be and remain with the Consultant. For greater certainty, any information provided by the City to the Consultant, whether under the RFP or under this Agreement, including any studies, reports, plans, drawings, or specifications, is provided to the Consultant for information purposes only and may not be relied upon by the Consultant.

ARTICLE. 11 COMMUNICATION BETWEEN CONSULTANT AND CITY

- 11.1 The City appoints _____ as the City's Project Manager for the purposes of this Agreement.

In the event of the revocation in writing of _____'s appointment as the City's Project Manager by the City, _____ will have no further authority under this Agreement, except as may be specifically designated in writing by the City and agreed to in writing by _____, and all references to the City's Project Manager in this Agreement will thereafter be deemed to be a reference to the City or to such other person designated in writing by the City to the Consultant.

The City's Project Manager may from time to time delegate to a representative the performance of or the authority to perform the duties, responsibilities, rights and obligations of the City in respect of which the City's Project Manager has been designated and appointed its sole and exclusive agent.

- 11.2 The Consultant appoints _____ as its representative for the purposes of this Agreement (the "Consultant's Project Manager").
- 11.3 Unless otherwise agreed to in writing by the Parties, all material communication between the Consultant and the City regarding this Agreement, including performance of the Services, will be between the City's Project Manager and the Consultant's Project Manager.

ARTICLE. 12 TERM OF AGREEMENT

- 12.1 This Agreement will commence on the Effective Date and will expire on the completion of the Services, which Services must be completed by March 31, 2011 (the "Term").

ARTICLE. 13 TERMINATION

- 13.1 The City at any time, in its sole judgment, may, whether or not cause exists, terminate the services of the Consultant in whole or in part by giving 10 days prior written notice (signed by the City's Project Manager) to the Consultant. If termination is not for cause, the Consultant will be paid for all Services properly performed to the date of the delivery of the said notice (subject to the terms of this Agreement) plus all necessary and reasonable wind up costs incurred, if any, in closing out the Services or the part terminated.
- 13.2 Despite Section 13.1, in no event and under no circumstances will the Consultant's "necessary and reasonable wind up costs incurred" pursuant to Section 13.1 exceed \$ [insert amount] (including all taxes).

ARTICLE. 14 ASSIGNMENT

- 14.1 The Consultant will not assign this Agreement in whole or in part except with the prior written consent of the City, which consent will not be unreasonably withheld, delayed or conditioned. Any attempt to assign this Agreement without such consent will be void and of no effect. However, the Consultant will be permitted to assign this Agreement to any entity into, by or with which the business or assets of the Consultant have been merged, acquired, consolidated or re-organized, or any entity which purchases all or substantially all of the business or assets of the Consultant, provided always that the Consultant first provides the City with:

14.1.1 reasonable particulars of the transaction (permitting the City to independently verify the nature of the transaction); and

14.1.2 a legally enforceable covenant from the new entity confirming that it is legally bound to the City to perform this Agreement.

ARTICLE. 15 CONFIDENTIALITY

- 15.1 In the course of or for the purpose of performing the Services, the Consultant will obtain or have access to information, including but not limited to technical information, financial information and business information, which is confidential to the City, and is the exclusive, world-wide property of the City and/or its suppliers and customers (collectively "Confidential Information"). Excluded from the definition of Confidential Information is:

15.1.1 information which is in, or becomes part of, the public domain, not due to the Consultant's breach of this Agreement or the Consultant's actions;

15.1.2 information which was previously in the Consultant's possession and did not originate from the City; and

15.1.3 information which lawfully becomes available to the Consultant from a third party not under an obligation of confidence to the City regarding such information.

- 15.2 The Consultant will not use or reproduce the Confidential Information other than as reasonably required for the performance of the Services under this Agreement. The Consultant will not, without the prior written consent of the City given on such terms and conditions as it prescribes in its sole discretion, disclose or allow access to the Confidential Information to any person, except to only those of its own employees who have a need to know the Confidential Information solely for the provision of the Services, and who have been advised of its confidential nature and have agreed to be bound by the confidentiality and restricted use provisions in this Article 15. The Consultant will take all reasonable precautions against the Confidential Information being used by or disclosed to any unauthorized person.
- 15.3 If the Consultant is required by any law, legal proceeding, or court or government order, to disclose any Confidential Information, the Consultant shall limit its disclosure of such Confidential Information to the extent and purpose legally required, provided that prior to any disclosure the Consultant will promptly notify the City in writing of the existence and the terms, and conditions of the required disclosure and, at the City's request and expense, co-operate in obtaining a protective order or other assurance that confidential treatment and restricted use will be accorded such Confidential Information.
- 15.4 The City is subject to the *Freedom of Information and Protection of Privacy Act* (British Columbia), which imposes significant obligations on the City's contractors to protect all personal information acquired from the City in the course of providing services to the City. The Consultant confirms and acknowledges its obligations to comply with all obligations imposed on it pursuant to the *Freedom of Information and Protection of Privacy Act* (British Columbia) with respect to all personal information received from the City whether as part of the Confidential Information or otherwise.
- 15.5 The Consultant acknowledges that in the event of a breach by the Consultant or any of its employees of their respective confidentiality obligations pursuant to this Article 15, damages alone would not be an adequate remedy. The Consultant therefore agrees with the City that, in addition to and without limiting any other right or remedy it may have, the City will have the right to an immediate injunction or other available equitable relief in any court of competent jurisdiction enjoining any threatened or actual breach of such obligations.
- 15.6 The Consultant shall return all copies of the Confidential Information to the City, in all tangible forms and media, and delete all Confidential Information resident in any databases or systems, upon the earliest of the following dates:
- 15.6.1 completion of the Services;
 - 15.6.2 expiration or earlier termination of this Agreement; and
 - 15.6.3 written request of the City for return of the Confidential Information; provided that the Consultant shall have the right to retain one copy of the Confidential Information solely for archival purposes or as otherwise may be required by law, subject to its ongoing confidentiality and restricted use obligations.
- 15.7 This Article 15 shall survive the expiration or earlier termination of this Agreement.

ARTICLE. 16 NO PROMOTION OF RELATIONSHIP

- 15.1 The Consultant will not disclose or promote its relationship with the City, including by means of any verbal declarations, announcements, sales, marketing or other literature, letters, client lists, websites, internet domain names, press releases, brochures or other written materials (the "Communications") without the express prior written consent of the City (except as may be necessary for the Consultant to perform its obligations under this Agreement).
- 15.2 Furthermore, the Consultant undertakes and will cause all of its Sub-Contractors to undertake not to disclose or promote its relationship with the City in any Communications in a manner which could suggest or create an association, express or implied, between the Consultant and the City, the International Olympic Committee ("IOC"), the 2010 Olympic and Paralympic Winter Games, the Olympic Movement or the Vancouver Organizing Committee for the 2010 Olympic & Paralympic Winter Games ("VANOC"). Without limiting the generality of the foregoing, the Consultant will not refer to "VANOC", "Vancouver 2010", the "2010 Games", the "Games", the "IOC", "Host City", "Olympic Village", "Athlete's Village", the "Village" or "Olympics" and will not use any website, domain name, official emblem, logo or mascot of the City of Vancouver, VANOC, or the 2010 Olympic and Paralympic Winter Games in any Communications, without the express prior written consent of the City.

ARTICLE. 16 DELIVERABLES

- 17.1 As a result of or as part of providing the Services, the Consultant may receive, create, produce, acquire or collect one or more of the following:
- 17.1.1 products, goods, equipment, supplies, models, prototypes and other materials;
 - 17.1.2 information and data;
 - 17.1.3 reports, drawings, plans, designs, depictions, specifications and other documentation; and
 - 17.1.4 any other items identified in this Agreement as deliverables;
- (collectively, the "Deliverables").
- 17.2 Deliverables are deemed not to include;
- 17.2.1 any item not required to be produced by the Consultant or supplied to the City as part of or together with the Services, provided that if the City has paid or is liable to pay for any portion of such item's creation, production, acquisition or collection then such item shall be deemed to be a Deliverable;
 - 17.2.2 any item produced as a result of the Services, which is specified in this Agreement as being excluded from the Deliverables category; and

- 17.2.3 any item which pre-existed the effective date of this Agreement, that is owned by a third party or that is used by the Consultant as part of the services provided to any of its other customers (the "Pre-Existing Materials").
- 17.3 All Deliverables will be owned solely by the City unless otherwise expressly provided herein. The City shall have the complete and unfettered right to use and deal with the Deliverables for its own benefit in any way it sees fit without limitation, and without accounting in any way to the Consultant.
- 17.4 The Consultant will keep accurate records and provide regular reports to the City about the Deliverables as they are created or acquired, and grant to the City access to the Deliverables at all times on reasonable notice. The Consultant will treat each Deliverable as subject to the confidentiality provisions set out in Article 15 unless advised otherwise by the City.
- 17.5 Each Deliverable, as to the whole or that portion of the Deliverable then existing, will be delivered by the Consultant to the City on the earliest of each of the following events:
- 17.5.1 the date specified in this Agreement for the delivery of such Deliverable;
- 17.5.2 immediately on the date of expiration or sooner termination of this Agreement;
or
- 17.5.3 the date specified by written notice of the City requesting delivery of all or any part of the Deliverable.
- 17.6 The Consultant transfers to the City, free of all liens and encumbrances, ownership of each Deliverable, and assigns all of its world-wide present and future rights, title and interest in and to each Deliverable, including copyright, effective as of the date of creation or acquisition of such Deliverable by the Consultant. The Consultant irrevocably waives, in favour of the City, all moral rights in the Deliverables. The Consultant will obtain from its employees and any independent contractors, all required assignments and releases of intellectual property, and waivers of moral rights, in the Deliverables. The Consultant will not assert any rights to or interests in, or apply for or register any copyright or other rights or interests in, the Deliverables, or assist any other person in doing so. The Consultant shall provide to the City, during and after the term of this Agreement, any reasonable assistance required for the City to obtain, perfect and enforce its ownership of and rights in the Deliverables, including without limitation execution of assignments and transfers of the Deliverables. This Section does not apply to Pre-Existing Materials.
- 17.7 The Consultant will not incorporate any Pre-Existing Materials in any Deliverable without first:
- 17.7.1 advising the City, in writing, of the nature of the Pre-Existing Materials and their

proposed use and obtaining the City's written consent to do so;

17.7.2 acquiring from each third-party owner of such Pre-Existing Materials, a fully paid-up, perpetual, non-exclusive license, in writing, for the City to use the Pre-Existing Materials as part of the Deliverable; and

17.7.3 granting, in writing, to the City with respect to such Pre-Existing Materials that the Consultant owns, a fully paid-up, perpetual, non-exclusive license to use the Pre-Existing Materials as part of the Deliverable.

17.8 The Consultant represents and warrants that the Deliverables will not infringe, misappropriate or misuse any copyright, patent, trade-mark, trade secret, or confidential or proprietary information of a third party. The Consultant shall defend, indemnify and hold the City harmless from and against any and all damage, liability, cost and expense incurred by the City in connection with any claim by a third party that a Deliverable infringed, misappropriated or misused its copyright, patent, trade-mark, trade secret, or confidential or proprietary information.

ARTICLE. 17 NOTICES

18.1 Any notice required or permitted to be given to the Consultant will be sufficiently given if delivered in writing by the City's Project Manager to the Consultant's Project Manager personally or, if mailed, by registered mail to the last known address of the Consultant.

18.2 Any notice required or permitted to be given to the City will be sufficiently given if delivered in writing by the Consultant's Project Manager to the City's Project Manager personally or, if mailed, by registered mail to City of Vancouver at 453 West 12th Avenue, Vancouver, B.C., V5Y 1V4 (addressed to the attention of the City's Project Manager).

ARTICLE. 18 NO CONFLICT OF INTEREST

18.1 The Consultant agrees that during the Term the Consultant will not engage in any conduct which would or might put the interests of the City into conflict with the interests of any other person, whether or not a client of the Consultant's. Without limiting the general scope of this Section 18.1 and by way of example only, the Consultant is prohibited from and will not provide any services which assist or could be seen to be assisting any person in responding to a request for proposal or invitation to tender, or otherwise giving that person an unfair competitive advantage over other proponents or tenderers responding to a request for proposal or invitation to tender by the City. The Consultant now acknowledges that a breach of this Section 18.1 could constitute not only a breach of this Agreement but also a violation of the *Competition Act* (Canada) and *Criminal Code of Canada*, and accordingly, could be punishable as a crime (as well as a breach of contract).

18.2 The Consultant now confirms and warrants that there is no officer, director, shareholder, partner or employee or other person related to the Consultant's organization (a "person having an interest") or any spouse, business associate, friend or relative of a person having an interest who is (a) an elected official or employee of the City or (b) related to or has any business or family relationship with an elected official or employee of the City, such that there would be any conflict of interest or any appearance of a conflict of interest in the administration of this Agreement or the performance of the Services.

ARTICLE. 19 **NON-RESIDENT WITHHOLDING TAX**

19.1 If the Consultant is, at any time, a non-resident of Canada, within the meaning of the *Income Tax Act* of Canada as amended, then, and the Consultant hereby so agrees, the City may deduct from all monies payable under this Agreement and remit to the Receiver-General of Canada, the Government of Canada or Canada Revenue Agency, as applicable, sums not greater than the greater of:

19.1.1 25% of all monies payable under this Agreement; and

19.1.2 sums required to be withheld and remitted by the *Income Tax Act* of Canada as amended.

The City will receive full credit under this Agreement for monies withheld as of and from the date of the withholding (regardless of when or whether remitted) and no interest will be payable by the City on sums withheld, not remitted as aforesaid, and later paid directly to the Consultant.

ARTICLE. 20 **COMPLIANCE WITH LAW**

20.1 The Consultant will comply with the City of Vancouver License By-law and maintain a valid business license throughout the duration of this Agreement.

20.2 The Consultant agrees that it will during the Term comply with all Applicable Laws.

ARTICLE. 21 **GOVERNING LAW**

21.1 This Agreement will be governed by the laws of the Province of British Columbia and the courts of British Columbia will have exclusive jurisdiction to determine all disputes arising under this Agreement and the Parties now irrevocably agree to submit all disputes to the courts of British Columbia for resolution.

ARTICLE. 22 **INDEPENDENT CONSULTANT**

22.1 This Agreement is a contract for services and the Consultant, its permitted Sub-Contractors, and the officers, directors, shareholders, partners, personnel, affiliates and agents of the Consultant and its permitted Sub-Contractors are not, nor are they to be deemed to be, partners, appointees, employees or agents of the City.

22.2 The Consultant will not represent to anyone that the Consultant has any authority to bind the City in any way or that the Consultant is an employee or agent of the City.

ARTICLE. 23 **INDEPENDENT LEGAL ADVICE**

23.1 The Consultant acknowledges that the Consultant has been given the opportunity to seek independent legal advice before executing this Agreement.

ARTICLE. 24 **TIME FOR PERFORMANCE**

24.1 Time of the Essence. Time shall be of the essence of this Agreement.

- 24.2 Unavoidable Delay. Notwithstanding Section 24.1, except for the performance of obligations to pay money, the time periods for the City and the Consultant to perform under this Agreement will be extended for periods of time during which their performance is delayed or prevented due to an Unavoidable Delay. For the purposes of this Section, an "Unavoidable Delay" means any circumstances beyond the reasonable control of the party trying to perform (such as, for example, strikes/lockouts, acts of God, war or other strife or governmental action) but expressly excludes any and all delays caused by the Consultant's lack of financial resources or insolvency or strikes, lockouts or other withdrawals of services arising out of a labour dispute (including a strike, lockout, or other labour dispute involving the Vancouver Board of Parks and Recreation and/or the City of Vancouver and their respective employees) or labour affiliations of the Consultant's employees or Sub-Contractor's employees, or governmental action taken in the enforcement of law specifically against the Consultant or its Sub-Contractor. If an Unavoidable Delay occurs, the non-performing party will, as soon as possible after the occurrence of the Unavoidable Delay, give written notice to the other party describing the circumstances preventing continued performance and the efforts being made to resume performance of its obligations under this Agreement.

ARTICLE. 25 GENERAL

- 25.1 No Waiver. No action or failure to act by the City shall constitute a waiver of any right or duty under this Agreement, or constitute an approval or acquiescence in any breach thereunder, except as may be specifically agreed in writing by the City.
- 25.2 Severability. The invalidity, illegality or unenforceability of any portion or provision of this Agreement or the occurrence of any event rendering any portion or provision of this Agreement void shall in no way affect the validity or enforceability of any other portion or provision of this Agreement. Any void portion or provision shall be deemed severed from this Agreement and the balance of this Agreement shall be construed and enforced as if this Agreement did not contain the particular portion or provision held to be void. The Parties further agree to amend this Agreement to replace any stricken provision with a valid provision that comes as close as possible to the intent of the stricken position.
- 25.3 Remedies Cumulative. The remedies of the Parties provided for in this Agreement are cumulative and are in addition to any remedies available to the Parties at law or in equity. No remedy will be deemed to exclude or restrict the right of a Party to any other remedies against the other Party and a Party may from time to time have recourse to one or more of the remedies specified in this Agreement or at law notwithstanding the termination of this Agreement.
- 25.4 Further Assurances. Each Party shall execute such further and other documents and instruments and do such further and other acts as may be necessary to implement and carry out the provisions and intent of this Agreement.
- 25.5 Entire Agreement. The Contract Documents constitute the entire agreement between the Parties with respect to the subject matter hereof, and supersede all previous communications, representations and agreements, whether oral or written, with respect to the subject matter hereof.
- 25.6 Amendment. This Agreement shall not be amended except as specifically agreed in writing by both the City and the Consultant.

- 25.7 Joint and Several Liability of Joint Venture Participants. If the Consultant is a joint venture of two or more entities, it is understood and agreed that the grants, covenants, provisos, claims, rights, powers, privileges and liabilities of the entities who comprise the Consultant shall be joint and several.
- 25.8 Schedules and Appendices. The schedules and appendices attached hereto are incorporated by reference in and form an integral part of this Agreement.
- 25.9 Set-Off. The City may at its option, withhold and set-off against any amount owing to the Consultant (whether under this Agreement or otherwise) any amounts payable by the Consultant to the City (whether under this Agreement or otherwise) and the amount of any damages suffered or claims made or to be made by the City as a result of any other claim it may have against the Consultant, whether such claim is at law or in equity or tort or on any other basis.
- 25.10 Enurement. This Agreement shall enure to the benefit of and be binding upon the City and the Consultant and their respective successors and permitted assigns.

As evidence of their agreement to be bound by the above contract terms, THE CITY and THE CONSULTANT each have executed this Agreement as of the day and year first above written.

CITY OF VANCOUVER

BY: _____
Director of Legal Services

[CONSULTANT]

BY: _____
Authorized Signatory

Print Name & Title

SAMPLE

SAMPLE

PRIME CONTRACTOR AGREEMENT FORM**1.0 DEFINITIONS**

- (a) **"OH&S Regulation"** means the Occupational Health & Safety Regulation (British Columbia Regulation 296/97) enacted pursuant to the WCA, and any successor legislation, all as such Regulation is amended or re-enacted from time to time;
- (b) **"Owner"** means City of Vancouver;
- (c) **"Place of the Work"** means the work site at [LOCATION ADDRESS OF THE WORK SITE REQUIRED];
- (d) **"Prime Contractor"** means the Contractor, who is designated pursuant to Article 3 below by the Owner to be the Prime Contractor for the Project with respect to occupational health and safety for the purposes of WCB Legislation;
- (e) **"Project"** means [INSERT DESCRIPTION OF THE PROJECT] at [INSERT STREET LOCATION], as contemplated by the Contract Documents, and includes all the Work;
- (f) **"WCA"** means the *Workers Compensation Act*, R.S.B.C. 1996, Chapter 492, and any successor legislation, as such Act is amended or re-enacted from time to time;
- (g) **"WCB"** means the Worker's Compensation Board of British Columbia; and
- (h) **"WCB Legislation"** means the WCA and all regulations thereto including the OH&S Regulation, and all rules, regulations and requirements of WorkSafeBC, and any successor legislation, rules, regulations and requirements, all as amended or re-enacted from time to time; and
- (i) **"WorkSafeBC"** means the British Columbia Provincial governmental organization by that name which is responsible, inter alia, for promoting workplace health and safety for the workers and employers of British Columbia, and for working with the affected parties to provide return-to-work rehabilitation, compensation, health care benefits and a range of other services, in the event of work-related injuries or diseases suffered by workers in British Columbia.

All other capitalized terms used in this Prime Contractor Agreement have the meanings given to them in the Contract Documents of which this Prime Contractor Agreement is a part, as applicable.

2.0 PRIME CONTRACTOR'S RESPONSIBILITIES

Proof of Qualification to act as Prime Contractor

- The Prime Contractor is to provide a current copy of its WorkSafeBC "Clearance Letter", a signed copy of this Prime Contractor Agreement and all other documents requested by the Owner prior to commencement of the Work.
- The Prime Contractor is to notify the Owner of any changes of status with WorkSafeBC or the WCB during the course of the Project.

After the Prime Contractor has been designated and before Work has commenced, the Prime Contractor shall:

- Conduct all necessary and appropriate inquiries of all relevant Owner staff and records in order to verify in writing to the Owner that the Owner has given to the Contractor all information known to the Owner that is necessary to identify and eliminate or control hazards to the health and safety of persons at the Place of the Work.
- Conduct a pre-contract hazard assessment and carefully review, and plan to address, all hazards identified in that assessment.
- Inform all other employers whose employees are providing services for the Project at the Place of the Work, that it is the Prime Contractor.
- Establish and maintain a system or process to ensure all employers, employees and visitors at/to the Place of the Work comply with the WCA, the OH&S Regulation and the requirements of WorkSafeBC. The Prime Contractor will thus be responsible for site orientation and hazard communication.
- Review and complete a "Pre-Job Meeting Form" if the Owner requests.
- For construction projects, post the Notice of Project on the Place of the Work and deliver a copy to WorkSafeBC at least twenty-four (24) hours before construction commences.
- Comply with Section 20.2 of the OH&S Regulation in respect of the Notice of Project.
- Identify and set expectations for each subcontractor's safety contact.
- Coordinate all safety-related activities, from site orientations to safety committee meetings and toolbox talks, to inspections and incident reviews.
- Inform employers and workers of the workplace hazards associated with the Place of the Work.
- At the Place of the Work, provide the information listed in Section 20.3(4) of the OH&S Regulation.
- In all other respects strictly comply with, and strictly enforce compliance by others, as applicable, with, the WCA, the OH&S Regulation, the requirements of WorkSafeBC, the safety policies and procedures of the Owner and the terms and conditions of the Contract Documents applicable.

Throughout the term of the Project, the Prime Contractor shall:

- Ensure that all hazards are promptly and appropriately identified and addressed.
- Ensure the health and safety of the workers on the Project.

-
- Maintain a current list of persons that each sub-trade (employer) has designated to be responsible for that employer's health and safety activities.
 - Ensure provision of first aid equipment and services as required by the OH&S Regulation.
 - Coordinate all occupational health and safety activities for the Project.
 - Prepare, and communicate to all workers on the Place of the Work, an emergency response plan, taking into account the number of people onsite, the people who work outside regular hours and the types of emergencies that may arise. This plan should also describe subcontractor and individual worker responsibilities (e.g. responding to a fire) and provide for any necessary training and equipment, including first aid supplies as work processes change over the course of the Project, this emergency response plan must be updated as appropriate.
 - Make and maintain detailed notes and reports in respect of the initial site safety meeting, safety committee meetings, reviews of contractors' safety systems, inspection and incident investigations, first aid records and orientation and training.
 - On any site where workers of two (2) or more employers are working at the same time and the combined workforce is greater than five (5), identify and designate a "Qualified Coordinator" to coordinate health and safety activities.
 - In all other respects strictly comply with, and strictly enforce compliance by others, as applicable, with, the WCA, the OH&S Regulation, the requirements of WorkSafeBC, the safety policies and procedures of the Owner and the terms and conditions of the Contract Documents applicable.

Prime Contractor's Qualified Coordinator, if applicable, (Construction Only) responsibilities:

- Comply with all requirements listed in Section 20.3(3) of the OH&S Regulation and on page 13 of the Owner's Multiple Employer Workplace/Contractor Coordination Program (2003).
- Coordinate all health and safety activities for the Project.
- Post workplace drawings showing where first aid is located, the emergency transportation system for injured workers and evacuation marshalling points.
- Ensure that regular workplace safety meetings are held and documented.
- Know who all other contractors' "Qualified Persons" are.
- Ensure that all workers at the Place of the Work are informed of workplace hazards, from both the pre-contract hazard assessment and from ongoing work activities of all employers at the Place of the Work, and ensure that hazards are properly and punctually addressed throughout the duration of the Project.

3.0 DESIGNATION AS PRIME CONTRACTOR

By signing this Prime Contractor Agreement, the undersigned Contractor accepts all responsibilities of a **Prime Contractor** as outlined above and in the Owner's Contractor Coordination Program (2003), Part III of the WCA and the OH&S Regulation, as well as any other responsibilities required by WorkSafeBC.

As a Contractor signing this Prime Contractor Agreement with the Owner, the undersigned company agrees that the company and its management staff, supervisory staff and workers will comply with the all WorkSafeBC requirements, the OH&S Regulation and Part III of the WCA.

Any violation of a requirement of WCB Legislation by the Prime Contractor may be considered a breach of the Contractor's Contract with the Owner resulting in possible termination or suspension of the Contract and/or any other actions deemed appropriate at the discretion of the Owner.

Any penalties, sanctions or additional costs levied against the Owner, as a result of an action or inaction of the Prime Contractor in its capacity as such, are the sole responsibility of the Prime Contractor, as set out in the Contract.

I, the undersigned, acknowledge that I have read and understand the information above. By signing this Prime Contract Agreement, I agree as an authorized representative of the Contractor to accept all responsibilities of the **Prime Contractor** for this Project.

Date

Contract #

Name of Contractor

Qualified Coordinator's Name

(Construction Only)

Signature of Authorized
Representative

Print Name and Title

1.0 INSPECTION PERSONNEL - DUTIES AND RESPONSIBILITIES

- 1.1 The Construction Inspector is the Consultant's full-time on-site Field Representative responsible to ensure construction is in accordance with the contract drawings and specifications.

The City of Vancouver's policy is that there be a continued emphasis by Inspection Staff on quality control rather than on quality assurance whereby the Inspection staff plays a *major* role in controlling the construction process rather than simply assuring the conformance of the final product. The major duties and responsibilities include, but are not limited to:

- a) Directing and coordinating the activities of the Consultant's other on-site staff including any sub Contractors, to ensure timely inspection at all relevant stages of construction work
- b) Answering technical inquiries throughout construction
- c) Ensuring that all construction permits and inspection certificates are obtained and their provisions adhered to.
- d) Providing coordination between the City of Vancouver, the construction Contractor and governing inspection agencies working at the site.
- e) Issuing all significant communications to the Contractor in writing.
- f) Compiling a daily progress report for each construction Contract on the forms provided by the Project Manager. The report is to be a summary of each day's activity and is to be couriered to the Project Manager daily.
- g) Scheduling regular weekly meetings with the Contractor and recording and distributing minutes to all participants, with copies couriered to the Project Manager. Providing the Project Manager with a schedule of meetings.
- h) Advising the Project Manager daily of the Contractor's construction plans and notifying him immediately if any unplanned disruptions of service occur.
- i) Inspecting materials, workmanship and procedures, and arranging for testing to ensure compliance with the construction Contract, paying particular attention to underground utilities including water mains and ducts, concrete work including formwork, reinforcing and pouring, placing and compaction of granular materials and backfill, building construction including structural components, exterior finishing, interior finishing and installation of equipment. Tests will be taken in the numbers shown on the Test Schedule by the Quality Control Technician or firm as directed and the Construction Inspector to verify that the Contractor is utilizing proper equipment and

procedures to construct the work in accordance with the construction Contract.

- j) Witnessing water main flushing, pressure tests, chlorination, and final flushing to ensure they are in accordance with the construction Contract and testing residual chlorine levels to ensure the main is sanitized in accordance with the construction Contract.
- k) Ensuring that the Contractors are provided with survey control points and benchmarks and checking that all work is constructed in the correct location and elevation in accordance with the Construction Contract, with particular attention paid to underground installations. The Construction Inspector is responsible for directing the Survey Instrument Person in carrying out all survey work including, but not limited to, the following:
 - i) Checking elevations and locations for all existing facilities that will be tied into the new construction.
 - ii) Checking elevations and locations of all storm sewers, sub-drains, manholes and catch basins prior to backfilling.
 - iii) Checking elevations and locations of the sub grade, sub base and base prior to placement of subsequent work.
- l) Preparing adjustments to the design grades of new facilities as necessary for tie-ins to existing facilities
- m) Facilitating the coordination of construction work and minimizing conflicts between various Contractors on site including, but not limited to:
 - i) adjustments to construction schedules;
 - ii) conflicts of work areas;
 - iii) shutdowns of services, such as power, water, etc.; and
 - iv) tie-ins of construction by one Contractor or to construction by other Contractors, including any necessary adjustments to design grades, etc.
- n) Immediately taking action to rectify any non-compliance with the construction Contract documents. This would include, but would not be limited to, enforcing Contract completion times, minimum production rates and safety.
- o) Promptly notifying the Contractor and the Project Manager of any noncompliance with the construction Contract.
- p) Recommending any necessary changes or alternatives during construction, and preparing change order documentation for City of Vancouver approval.

- q) Making recommendations regarding claims for extras submitted by the Construction Contractor.
- r) Ensuring that the quantities to be paid on a unit-price basis are measured, calculated and recorded on summary sheets.
- s) On an ongoing basis, monitoring unit-price quantities and comparing to estimated quantities to determine any overruns or underruns which may exceed five percent (5%) of the estimated total. Immediately reporting any forecast overrun or underrun items to the Project Manager.
- t) Compiling and processing Details of Estimates, Contractor's claims and all necessary reports.
- u) Compiling "as built" information daily and maintaining proper records to verify "as built" location measurements and calculations for each item to be paid for under unit price measure. Transferring these records to Supporting Detail drawings for presentation on and in support of each unit price quantity.
- v) Attending the Interim and Final acceptances at the construction site.

NOTE: The City of Vancouver will also provide a Construction Inspector to ensure its objectives in quality control are met during the construction period.

PRV DRAWINGS AND SPECIFICATIONS

To be downloaded by Proponents at:

<http://vancouver.ca/fs/bid/bidopp/RFP/documents/PS10006-Appendix7-PS10006.pdf>

CITY OF VANCOUVER SPECIFICATIONS	WATERWORKS	SECTION 02742 PAGE 1 2000
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|------------|---|----|--|---------------|
| 1.0 | GENERAL | .1 | Section 2742 refers to those portions of the Work that are unique to the supply and installation of watermains up to 450mm diameter, hydrants, valves and valve boxes, service connections and related appurtenances. This Section must be referenced to and interpreted simultaneously with all other sections pertinent to the works described herein. | |
| | | .2 | All details of waterworks facilities not specifically covered in this Section to comply with the latest edition of the appropriate American Water Works Association (AWWA) standards, unless otherwise directed by the Engineer. | |
| 1.1 | Related Work | .1 | Excavating, Trenching, Backfilling
and Surface Restoration | Section 02223 |
| | | | Cast-in-Place Concrete | Section 03300 |
| 1.2 | Material Certification | .1 | All materials to conform to this specification, to the latest edition of the appropriate specifications of the AWWA and of the American Society for Testing and Materials (ASTM) or to other standards expressly specified. All provisions in the AWWA, ASTM or other specified standards pertaining to materials, workmanship, finish, inspection and rejection form part of these specifications as far as they are applicable and not inconsistent. This specification takes precedence over the AWWA or ASTM specifications in the case of a discrepancy or conflict. Materials incorporated into the Work but not specifically covered in the specifications to be of good quality. Permission for use of these materials to be obtained from the Engineer prior to installation. | |
| | | .2 | If requested by the Engineer and at least 2 weeks prior to commencing work, submit manufacturer's recent test data and certification that materials to be incorporated into the Works are representative and meet the requirements of this section. Include manufacturer's drawings where pertinent. | |
| | | .3 | Material delivery and storage to meet the requirements of the manufacturer. Materials damaged during transportation or through rough handling to be repaired to the satisfaction of the Engineer prior to installation. If, in the opinion of the Engineer, the damaged material cannot be satisfactorily repaired, then the damaged material will be removed from the job site and replaced with new material. | |
| 1.3 | Shop Drawings and
Technical Data | .1 | Submit shop drawings and technical data, as requested by the Engineer, in accordance with General Condition 12. | |
| 1.4 | Record Drawings | .1 | Provide record drawings, including locations of pipes, valves, hydrants, bends, cathodic protection test points and all other appurtenances and inverts of pipes, fittings, valves and valve chambers. | |
| | | .3 | Provide connection change-over sheets for each block as shown in the example included in the standard drawings. Blank copies of this form are available from the Engineer. | |

- .4 Provide a completed work order slip for any work done on an individual service other than a change-over. Blank forms are available from the Engineer.
- 1.5 Scheduling**
- .1 Notify affected residents and businesses at least 2 weeks prior to construction of the scope and timing of work. Submit notification to Engineer for approval prior to distribution.
- .2 Schedule work to minimize interruptions to existing services. Service interruptions limited to customers served off of the main being replaced, unless otherwise approved by Engineer.
- .3 Submit schedule and details of expected service interruptions to the Engineer for approval and adhere to approved schedule. Schedule and details to include:
- .1 Methods for temporary servicing.
 - .2 Timing and duration of any temporary servicing.
 - .3 Tie-in sequence, method and timing.
- .4 Notify any affected residences and businesses, in writing, a minimum of 48 hours in advance of any interruption in service. Notices and corresponding distribution area to be approved by the Engineer prior to distribution.
- .5 Do not interrupt water service for more than 3 hours and confine this period between 0900 and 1600 hours unless otherwise approved by the Engineer. Provide temporary servicing to those customers who cannot accommodate a service interruption during this period, in the opinion of the Engineer, such as restaurants, hair salons, hospitals, educational institutions, daycares, process industries, and photo labs, or schedule work so as to minimize disruption.
- .6 Notify Fire Department at 604-665-6031 and the City Waterworks Dept. at 604-323-4800 of any planned or accidental interruption of water supply to hydrants and label these hydrants "Out of Service" or "Not in Use".
- 1.6 Measurement For Payment**
- .1 All units of measurement for payment will be as specified herein unless shown otherwise in the Form of Tender.
- .2 Form of Tender describes separate payment items for various sections of watermain consistent with pipe diameters and location of mains shown on the Contract Drawings.
- .3 Measurement for payment for watermain will be made in a lump sum for each payment item described in the Form of Tender.
- .4 Payment for watermain will include excavation, disposal of surplus excavated material, bedding, supply and installation of all pipe and fittings, all thrust blocking, encasement and support concrete, bolts, gaskets and tie-rods, imported fill, cleaning, pressure and leakage testing, flushing, disinfection, service connections, services replacement, and all other work and

materials necessary to complete the installation as shown on the Contract Drawings and specified herein.

- .5 Hydrants, including lateral connections from watermain to hydrants, valve and adjustable valve box, will be measured in units installed.
 - .6 Payment for service connections, including scope defined in 1.6.4 and mainline saddles where specified, corporation stops, curb stops, and all related fittings and appurtenances specified or shown on Standard 301 Section 3, will be incidental to payment for watermain installation. Any additions or deletions to service connections from the Waterworks Connection Database Service List and the Contract Drawings will be measured in units installed.
 - .7 Mainline valves, including valves, valve boxes and support or anchor blocks will be measured in units installed.
 - .8 Payment for air-release / air-vacuum and combination air valves, chambers and apparatus will be incidental to payment for watermain installation.
 - .9 Payment for polyethylene encasement as shown on drawings will be incidental to payment for watermain installation.
 - .10 Miscellaneous fittings and appurtenances not specifically identified on the Contract Drawings, and not included in the described separate payment items in the Form of Tender, are deemed to be included in described payment items.
 - .11 Payment for abandoning old watermain, removal of old valves and hydrants, including scope defined in item 3.6 will be incidental to payment for watermain installation.
- 1.7 Inspection and Testing**
- .1 Engineer will arrange for testing other than that specified in Part 3.0, Execution, to be performed by Contractor.
 - .2 Contractor to accommodate soil resistivity testing by City crew during excavation of trench and prior to laying pipe at least once per block, or as directed by the Engineer. Engineer will arrange for testing.
- 2.0 PRODUCTS**
- 2.1 Mainline Pipe, Joints And Fittings**
- .1 Ductile Iron Pipe:
 - .1 Ductile iron pipe to conform to current AWWA Standards 151/A12-51-86, thickness Class 52, double cement mortar lined to AWWA C104/A21.4-90 with the added requirement that the lining not exceed a maximum thickness of 1/4" (6.4 mm) for 100-300 mm pipe, and 3/8" (9.5 mm) for 450 mm pipe.
 - .2 Unless otherwise specified, the exterior surface of all pipes shall be coated in accordance with AWWA Standard C151/A21.51-86. The material shall be smooth,

- durable and water resistant. It shall be tough and well bonded to the pipe surface.
- .3 The nominal laying length of the pipe, as defined in AWWA C151/A21.51-86, Section 51-4 shall be 18 or 20 feet (5.5 or 6.0 m).
- .2 Joints:
- .1 Pipe shall be "Tyton" push-on bell and spigot type joints or mechanical bell and spigot joints in accordance with AWWA C111/A21.11-85. Restrained joint pipe shall conform to the design of "MJ-TJ" pipe as manufactured by "Pacific States Cast Iron Pipe", or City of Vancouver approved equal.
- .2 Gaskets shall be manufactured from Nitrile type (Acrylonitrile Butadiene, NBR) materials, in conformance with AWWA Standard C111/A21.11-85, excluding Section 11-7.4.1 and 11-8.3.1.
- .3 All gasket lubricant shall meet the specifications set out in AWWA C111/A21-11-85 Section 11-8-4.
- .3 Fittings:
- .1 All fittings shall be ductile iron and shall conform to AWWA C110/A21.10-87 suitable for pressure rating of 350 psi (2410 kPa), double cement mortar lined to AWWA C104/A21.4-90. The maximum cement lining thickness shall not exceed the specified minimum "double thickness" by more than 150 percent.
- .2 Flanged ends shall conform to American Standard Association (ASA) B16.1, Class 125 with drilling and dimension to ANSI B16.1, for cast iron flanges Class 125, unless otherwise specified by the Engineer.
- .3 "Tyton" push-on bell and spigot ends or mechanical bell and spigot ends shall conform to AWWA Standard C111/A21.11-85.
- .4 Bolts and nuts used with mechanical joints shall be made of high tensile strength (60,000 psi, 400 MPa) low alloy steel (Corten) conforming to Section 11-7.5, AWWA C111-85 composition specification.
- .5 Gaskets and lubricant shall be in accordance with Sections 2.1.2.2 and 2.1.2.3 respectively.
- .6 Couplings shall be mechanical type and shall be Dresser Style 38 or 162 Robar or approved equal, suitable for 150 psi (1034 kPa) pressure class and 50% surge, with ends suitable for the piping materials used. Flanged adapters shall be Dresser Style 128 Robar or approved equal, with flanges conforming in drilling and dimension to ANSI B16.1 for cast iron flange Class 125, unless otherwise specified by the Engineer.
- .7 Tie rods shall be in accordance with Section 2.1.3.4 and shall be sized in accordance with Waterworks Standard 415-5-1. No tie rods are permitted on installations requiring cathodic protection.
- .8 Wedge Action Restraints shall be Uni-Flange Series 1400 for ductile iron pipe, as manufactured by Ford Meter Box

Co., or Engineer approved equal. Wedge Action Harness shall be Uni-Flange Series 1450 for ductile iron pipe, as manufactured by Ford Meter Co., or Engineer approved equal.

- 2.2 Valves And Valve Boxes**
- .1 Isolating valves and accessories shall conform to the latest edition of AWWA Standard C509-94, "Resilient Seated Gate Valves for Water Supply Service" and C111 A21.11-85 "Rubber Gasket Joints for Ductile Iron and Grey Iron Pressure Pipe and Fittings" or as otherwise expressly indicated in this specification. Isolating valves shall be located on all sides of each intersection, in line with adjacent property lines, or where otherwise required by the Engineer.
- .2 The body and bonnet of valves shall be made of ductile iron. AWWA C509 shall determine wall thickness of the valves. Valves shall be of the resilient wedge, non-rising stem and with "Tyton" push-on, mechanical or flanged ends as specified in the Contract Drawings.
- .3 Valves shall be designed for a working pressure of 200 psi (1380 kPa)
- .4 Bolts, studs and nuts shall be cadmium plated ASTM A307 Grade B.
- .5 The stem nuts, glands and bushings for NRS valves and the followers or glands on OS&Y valves shall be made of grade 1 bronze as specified in AWWA C509 and ASTM B62. The tensile strength must not be less than 30,000 psi (207 MPa) and yield strength of not less than 14,000 psi (96 MPa).
- .6 The stem shall be of the non-rising type and made of manganese bronze to ASTM B132 Grade B or ASTM B147-8A. The tensile strength must not be less than 65,000 psi (448 MPa) and yield strength of not less than 25,000 psi (172 MPa).
- .7 Where flanged end valves are used, unless otherwise specified, flanges shall conform in dimensions and drilling to ANSI B16.1 Class 125 and shall conform to the latest edition of ASTM A105 Grade 2.
- .8 All joint accessories (M.J. Glands, bolts and nuts, O-ring, gaskets, gasket lubricant etc.) shall be in accordance with appropriate Sections in this specification. Gaskets shall be nitrile.
- .9 Air release valves shall be Apco Combination Air Valve model 143C, 1-inch diameter(25 mm), or approved equal.
- .10 Valve boxes and lids shall be Telescopic, grey iron castings and conform to City of Vancouver, Waterworks Standards 407/1/1-4 and 407/4/1-2. Valve boxes and lids may be picked-up by the Contractor from the City of Vancouver Central Stores. The City will furnish the valve boxes and lids at no charge to the Contractor. Co-ordinate pick-up of materials with Engineer.
- 2.3 Service Connection**
- .1 No water services shall be installed or transferred to the

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watermain without approval of the Engineer. Pre-servicing in anticipation of future development will not be permitted. All services must be designed and located in accordance with "City of Vancouver Building Trades: City Water Information", available from Waterworks Design Office, City Hall.

- .2 Service pipe shall be certified 'K' type copper tube and shall conform to the latest edition of the ASTM Standard Specifications for Seamless Copper Tube, designation B88.
- .3 Service line valves (corporation stops and curb stops) and fittings shall conform to AWWA Standard C800-89 for underground service line valves and fittings. All valves and fittings shall withstand static pressure of 300 psi.
- .4 Saddles for service connections (where required , see section 3.12.4) shall conform to City of Vancouver, Waterworks Standard 415-4-1.
- .5 If cathodic protection of watermain is required, insulating main stop shall be used for each service connection, in accordance with Waterworks Standard 413-4-3.
- .6 The depth of the installed water service must be 2.5' (.75m) minimum.

2.4 Fire Hydrants

- .1 Fire hydrants shall be low head loss, dry, short barrel and compression type with two 2-1/2-inch (62.5 mm) ports and one 4-inch (100 mm) (I.D.) pump port conforming to AWWA Standard C502-85 for Dry-barrel Fire Hydrants and City of Vancouver, Waterworks Standard 409/1/1-4. The threads of the ports shall meet the specifications shown in City of Vancouver Waterworks Standard 409/2/2. Fire hydrants shall be Terminal City model C71PLT, Mueller model A442 or **AVK dry barrel hydrant series 2789**.
- .2 Fire hydrants shall be equipped with a (6-inch 150 mm) nominal diameter mechanical joint inlet connection, conforming to AWWA Standard C110/A21.10-87 complete with two closed type lugs for 7/8" (22 mm) diameter tie rods provided on the horizontal centreline of the inlet connection, capable of resisting a horizontal force of 6,000 lbs each. The mechanical joint shall include the gland and nitrile gasket.
- .3 Fire hydrants shall be painted in the following manner:
 - .1 The bonnet and port caps shall be painted in accordance with the City of Vancouver colour coding (see Waterworks Standard 218-1-1) system for hydrant capacity using oil or acrylic enamel paint as per Waterworks Standard 409/1/4.
 - .2 The exterior of the hydrant barrel above ground shall be painted red. The paint shall be oil or acrylic enamel.
 - .3 The exterior of the hydrant barrel below ground line shall be painted with one coat of coal tar enamel.

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- .4 Fire hydrants shall be designed for a 1.0 m depth of bury, in accordance with City of Vancouver, Waterworks Standard 301-2-2, and shall be capable of extension with flanged barrel sections in 150 mm multiples (150, 300, 450 mm, etc.).
- .5 Hydrants shall be subjected to hydrostatic pressure test of 300 psi. The pressure test shall be certified by the manufacturer.
- 3.0 EXECUTION**
- 3.1 General**
- .1 Pipe bedding details, including granular surround (pipe cushion) and material specifications, to be as shown on Contract Drawings.
- 3.2 Pipe Storage and Preparation**
- .1 Pipe must be stacked using timbers to keep bottom tiers off the ground. Pipe must be stored to prevent dirt and debris from entering the pipe.
- .2 Thoroughly clean pipes, fittings, valves, hydrants, and appurtenances of debris and water before installation. Carefully inspect materials for defects before installing. Remove defective materials from site.
- 3.3 Utility Clearance**
- .1 Install watermain with 300mm minimum clearance from all utilities and service connections, with the exception of gas services having a diameter of 20mm or less where the minimum clearance will be 100mm. Gas services larger than 20mm will require 300mm minimum of clearance.
- 3.4 Trenching**
- .1 Do trenching in accordance with Section 02223 - Excavating, Trenching, Backfilling and Surface Restoration.
- .2 Trench alignment and depth as shown on Contract Drawings.
- .3 Trench depth to provide cover over pipe of not less than 0.9m from finished grade unless shown otherwise on Contract Drawings.
- 3.5 Granular Bedding**
- .1 Fill over-excavation below design elevation of bottom of specified bedding with approved granular bedding placed and compacted in accordance with Section 02223 - Excavating, Trenching, Backfilling and Surface Restoration and Contract Drawings.
- .2 Place granular bedding material across full width of trench bottom in uniform layers to depth shown on Contract Drawings.
- .3 Shape bed true to grade to provide continuous uniform bearing surface for pipe. Do not use blocks when bedding pipe.
- .4 Shape transverse depressions in bedding as required to suit joints.
- .5 Compact each layer across full width of bed to minimum 95% Modified Proctor Density in compliance with ASTM D1557. (All following references to density imply compliance with ASTM

D1557).

- .6 Place ductile iron watermain pipe and copper water services in trench and backfill with approved imported material and compact as specified. Use hand tools to compact material under 'haunch' area of pipe and around fittings and other materials.
- 3.6 Abandonment of Old Watermains**
- .1 Abandoned watermains are to be plugged with a wooden plug at any point where an open abandoned watermain exists.
- .2 Once the old main has been taken out of service, each grey iron telescopic valve box, top, bottom and lid (refer Standard Water Drawing 301-1-6), and fire hydrants must be removed. Backfill the barrel extending to the valve nut and restore the surface to match established standards in Section 02223 and 02230.
- .3 Salvaged valve box castings and lids and hydrants to be returned to the City of Vancouver works yard at 70th Avenue and Manitoba Street. Arrange delivery times through the Engineer.
- .4 No salvaged fittings or pipe to be used on the work without prior Engineer's approval.
- .5 Remove abandoned watermains at locations shown on Construction Drawings and dispose at Engineer approved disposal area.
- 3.7 Pipe Installation**
- .1 Handle pipe in accordance with pipe manufacturer's recommendations. Do not use chains or cables passed through pipe bore so that weight of pipe bears on pipe ends.
- .2 Install pipe in accordance with the manufacturer's instructions and AWWA C600 except as noted in this specification. In the case of conflicting specifications, the order of precedence, from highest to lowest, is the COV Waterworks Specification, AWWA C600 and then the manufacturer's instructions.
- .3 Horizontal tolerance is ± 50 mm from specified alignment. Vertical tolerance is ± 25 mm from specified grade.
- .4 Lay pipes on prepared bed, true to line and grade. Ensure barrel of each pipe is in contact with shaped bed throughout its full length.
- .5 Face bell ends of pipe in direction of laying.
- .6 Do not exceed 3^o (three degrees) joint deflection specified in AWWA C600.
- .7 Prevent groundwater, dirt and other foreign materials from entering the watermain during construction. Cap the watermains with a watertight plug at open ends as per AWWA C651, except for the addition of other pipes to the system, to prevent the entry of water and foreign materials. If contamination occurs in a watermain that is not connected to the existing system, the

Contractor must immediately stop construction and flush the mains with clean water, chlorinate and test as per AWWA C651. If contamination occurs in a watermain that is in service or already connected to the existing system, the Contractor must stop construction, and immediately take the main out of service, flush the main, chlorinate and test as per AWWA C651.

- .8 Position and join pipes with equipment and methods specified in 3.7.2.
- .9 Cut pipes as required, and as recommended by pipe manufacturer, without damaging pipe or coating and leaving smooth ends at right angles to the axis of the pipe. For tyton joints, bevelling of cut pipe shall be done to resemble manufacturer's bevel.
- .10 Joints:
- .1 Install gaskets as recommended by manufacturer.
 - .2 Support pipes with hand slings or crane as required to minimize lateral pressure on gasket and maintain concentricity until gasket is properly positioned.
 - .3 Align pipes carefully before joining.
 - .4 Maintain pipe joints free from mud, silt, gravel and other foreign material.
 - .5 Avoid displacing gasket or contaminating with dirt or other foreign material. Remove disturbed or dirty gaskets; clean, lubricate and replace before joining is attempted.
 - .6 Complete each joint before laying next length of pipe.
 - .7 Minimize joint deflection (no more than 3⁰) after joint has been made to avoid joint damage.
 - .8 Apply sufficient pressure in making joints to ensure that joint is complete as outlined in manufacturer's recommendations.
- .11 Ensure completed joints are restrained by compacting bedding material alongside and over installed pipe or as specified otherwise.
- .12 When any stoppage of work occurs, restrain pipes in an approved manner to prevent "creep" during down time.
- .13 Recheck components assembled above ground after placing in trench to ensure that no movement of joints has taken place.
- .14 Test and/or bleed points consisting of Corporation cocks, sized to achieve minimum flushing velocities of 0.8 m/s in accordance with AWWA C651, to be provided where shown on Contract Drawings or as required by Contractor for pressure testing and flushing.
- 3.8 Valve Installation**
- .1 Install valves in accordance with 301-1-6 and to manufacturer's recommendations at locations shown on Contract Drawings.

- .2 Valves located in valve boxes or valve chambers are to be supported by either concrete or pressure treated and end treated wood blocks, located between valve and solid ground. Valves shall not be supported solely by water pipe. The minimum length of pipe on each side of a valve shall be 1 m.
- .3 Air valves shall be installed in an underground chamber and vented to atmosphere in accordance with Waterworks Standards 301-9-2 and 407-6-1.
- 3.9 Valve Boxes**
- .1 Use precast units as shown on Contract Drawings. Precast units to be in accordance with City of Vancouver, Waterworks Standard 407 Section 4 - "Grey Iron Castings - Valve Boxes and lids".
- .2 Construct units as shown on Contract Drawings, plumbed and centred over valve nut, true to alignment and matching desired grade level.
- .3 Installation of the precast units shall be in accordance with Waterworks Standard 301-1-6. The 10-inch diameter riser pipe shall be SDR 64 PVC with minimum 1/8-inch wall thickness. Valve boxes to line up with the direction of the watermain, or, if on a service, in line with the service main.
- .4 The valve box shall be set centrally over the valve nut. The valve box and its appurtenances shall be set and backfilled within 24 hours of setting appurtenance.
- 3.10 Service Connection Installation**
- .1 Replace water services as shown on Contract Drawings.
- .2 No water services shall be installed or transferred to the watermain without approval of the Engineer. Pre-servicing in anticipation of future development will not be permitted.
- .3 Install service connections to Section 3.7 and in accordance with "City of Vancouver Building Trades: City Water Information" (Refer Standard Water drawings 301-3-1, 301-3-2, 301-3-3.)
- .4 Construct service connections at right angles to watermain unless otherwise directed (see 3.12.5). Locate curb stops as shown on Contract Drawings.
- .5 Tappings in ductile iron may be threaded without saddles, subject to the limitations below. Service saddles with galvanised malleable iron bodies and neoprene gaskets cemented in place may be used. Tappings in ductile iron pipe to conform to ANSI/ASME B1.20.1 for 3 to 4 threads shown as Appendix A to AWWA C151.
- .6 Services that are 100 mm or larger require a tee or tap tee off of the watermain as follows:

Pipe Diameter (mm)	Maximum Tap Without Saddle (mm)	Maximum Tap With Saddle (mm)
100	20	50
150	20	50
200	25	50
250	25	50
300	40	75

- .7 Tap main at 2:00 o'clock or 10:00 o'clock position only; not closer to a joint nor closer to adjacent service connections than recommended by manufacturer, or 1 m whichever is greater.
- .8 Leave corporation stop valves fully open.
- .9 In order to relieve strain on connections, install service pipe in "goose neck" form "laid over" into horizontal position. **Looping of services is not permitted.**
- .10 Install curb stop, Ford Model BH41-233Q, B41-344Q, B41-666, B41-777 or Engineer approved equivalent, with valve riser and cap on services 50 mm or less in diameter. Equip larger services with a gate valve and cast iron box. Set box plumb over stop and adjust top flush with final grade elevation. Leave curb stop valves fully closed.
- .11 During connection installation and/or connection rehook, locate curb stop valve and measure long length from the street or lane and measure a short length from the opposite property line. These measurements will be transferred to the change-over sheet.
- .12 Place temporary location marker at ends of plugged or capped unconnected water lines. Each marker to consist of 38 x 89 mm (1.5 by 3.5 inch) stake extending from pipe end at pipe level to 600 mm (2 feet) above grade. Using black paint, mark exposed portion of stake with the description "WATER" and depth from top of stake to service in metres.

3.11 Hydrants

- .1 Install hydrant assemblies at locations shown on Contract Drawings.
- .2 Install hydrant assemblies in accordance with AWWA Manual of Practice and in accordance with Waterworks Standard 301-2-2.
- .3 Set hydrants plumb, with hose nozzles parallel with edge of pavement or curb line, with pumper nozzle facing roadway at right angles to road centreline and with body flange set at elevation 50 to 150 mm (2-6 inches) above final grade.
- .4 To provide proper draining for each hydrant, excavate a pit as shown in section 301-2-2 and backfill with coarse gravel or

crushed stone to a level 150 mm (6 inch) above drain holes.

- .5 Place appropriate sign on installed hydrants indicating whether or not they are in service during construction.
- 3.12 Thrust Blocks**
- .1 Place concrete thrust blocks between valves, tees, plugs, caps, bends, changes in pipe diameter, reducers, hydrants and fittings and undisturbed ground as shown on Contract Drawings or as directed by Engineer. Concrete shall be placed so that pipe and fitting joints are accessible for repair. Bolts on flanged fittings are to remain accessible and extractable.
- .2 Size of bearing area for thrust blocks as per Standard Water drawings 301-6-1 to 301-6-4.
- .3 Keep joints and couplings free of concrete.
- .4 Do not backfill over concrete within 24 hours of placing, unless otherwise approved by the Engineer.
- .5 Minimum size of thrust blocks to be as shown on Contract Drawings. No thrust blocks shall be permitted in disturbed or unstable soils such as peat or loose fills. Restrained joint designs in accordance with section 2.0.2.1 will be required.
- 3.13 Pipe Surrounding**
- .1 Upon completion of pipe laying and after the Engineer has inspected work in place, surround and cover pipes as shown on Contract Drawings.
- .2 End dumping (dumping fill out of a dump truck directly into an excavation) is not acceptable. Native material (such as the material in the excavation wall) must be kept out of the fill material and fill must be placed in a uniform manner that prevents voids.
- .3 Compact each layer from pipe invert to underside of backfill to minimum 95% Modified Proctor Density, as shown on Contract Drawings and Standard Waterworks drawing 305-1-4.
- 3.14 Cleaning and Preliminary Flushing**
- .1 Before flushing and testing, ensure waterworks system is completely finished except tie-ins to existing watermains and make arrangements for scheduling of testing and disinfection of mains.
- .2 Contractor may obtain water from the City as specified below:
- .1 Water may be supplied from fire hydrants upon application for a Hydrant Use Permit and presentation of valid test certificate for reduced pressure principle backflow prevention device conforming to AWWA C506. All hydrants to be used must be accompanied by an approved backflow preventive device.
- .2 Contractor may obtain water from a metered water connection, provided Contractor pays cost of connection fee plus cost of water used.
- .3 Remove foreign material from pipe and related appurtenances by flushing with water. In case of

groundwater penetration refer to Section 3.7.8. Main to be flushed at water velocities as high as can be obtained from available water sources. Minimum velocity to be 0.8 m/s, (2.6 fps) and/or in accordance with AWWA C651. Flushing water will not be discarded through storm sewers, water courses or ditches that discharge into natural waterways. Flushing water shall be discarded into storm or combined sewers that have sufficient capacity to carry flow. Use of a combined sewer is subject to approval by the Engineer. If in the event that a combined or storm sewer is not available, the flushing water must be shipped from the site to a suitable dump site. Flushing to continue at least until flow from most distant point has reached discharge point and until water discharged is clean and clear.

- 3.15 Testing Procedure**
- .1 All testing to be done by a reputable, independent testing firm approved by the Engineer under the direction of the Contractor. Testing costs are to be included in the Contract Price.
 - .2 Contractor to be in attendance during hydrostatic testing.
 - .1 Before pipe is filled with water, pipe bedding, concreting of all valves and fittings and backfilling to be completed as required in this specification. Each section of pipe to be filled and allowed to remain full of water for a period of at least 24 h prior to commencement of any pressure tests. All corporation cocks are to be closed during the test.
 - .2 Before applying the specified test pressure, air shall be expelled completely from the pipe, valves, and hydrants. If permanent air vents are not located at all high points, the Contractor shall install corporation cocks at such points so that the air can be expelled as the line is filled with water. After all the air has been expelled, the corporation cocks shall be closed and the test pressure applied. At the conclusion of the pressure test, the corporation cocks shall be removed and plugged or left in place at the discretion of the Engineer. Any exposed pipe, fittings, valves, hydrants, and joints shall be examined carefully during the test. Any damaged or defective pipe, fittings, valves, hydrants, or joints that are discovered following the pressure test shall be repaired or replaced with sound material, and the test shall be repeated until it is satisfactory to the Engineer.
 - .3 Leakage shall be defined as the quantity of water that must be supplied into the newly laid pipe or any valved section thereof to maintain pressure within 5 psi (35 MPa or 0.35 bar) of the specified test pressure after the pipe has been filled with water and the air has been expelled. Leakage shall not be measured by a drop in pressure in a test section over a period of time.
 - .4 No pipe installation will be accepted if the leakage is

greater than that determined by the following formula:

$$L = \frac{SD\sqrt{P}}{133,200}$$

Where:

- L = allowable leakage, in U.S. gallons per hour.
- S = length of pipe tested, in feet
- D = nominal diameter of the pipe, in inches
- P = average test pressure during the leakage test, in pounds per square inch (gauge).

In metric units,

$$L = \frac{SD\sqrt{P}}{2,816}$$

Where:

- L = allowable leakage, in litres per hour
- S = length of pipe tested, in metres
- D = nominal diameter of the pipe, in inches
- P = average test pressure during the leakage test, in bars

- .3 The pipeline is to be submitted to a test pressure of 1550 kPa (225 psi or 15.5 bars) applied at highest elevation in each section, for a minimum duration of 2.0 hours.
 - .4 No additional leakage allowance will be made when testing against closed metal seated valves.
 - .5 When hydrants are in the test section, they shall be included in the pressure test.
 - .6 Acceptance shall be determined on the basis of allowable leakage. If any test of laid pipe discloses leakage greater than that specified in Sec.3.19.2, the Contractor shall, at his/her own expense, locate and make approved repairs as necessary until the leakage is within the specified allowance.
 - .7 All visible leaks are to be repaired, regardless of the amount of leakage.
 - .8 Submit a certificate from the testing firm confirming that the pressure and leakage tests have been successfully carried out to the Engineer.
- 3.16 Disinfection, General**
- .1 All disinfection and testing to be done by Contractor, using an independent testing firm approved by the Engineer, at the Contractor's cost.
 - .2 After Engineer has certified that pipes and appurtenances have passed water pressure test, pipes and appurtenances shall be flushed and disinfected.

- .3 Disinfection and flushing procedures in accordance with Section 3.17 following.
- 3.17 Disinfection And Flushing Procedure**
- .1 Disinfection procedure to include retaining water containing not less than 50 mg/L free chlorine in water system for a period of at least 24 h, in accordance with AWWA C651, Continuous Feed Method with liquid chlorine. An outline of proposed disinfection procedure accompanied by marked up schematic drawing to be submitted for approval 48 h in advance of commencement of disinfection.
- .2 Water from the existing distribution system, isolated by reduced pressure principle backflow prevention device or other approved source of supply shall be made to flow at a constant, measured rate into the newly laid watermain. In the absence of a meter, the rate may be approximated by methods such as placing a Pitot gauge in the discharge, measuring the time to fill a container of known volume, or measuring the trajectory of the discharge and using the formula presented in AWWA C651.
- .3 At a point not more than 3 m downstream from the beginning of the new main, water entering the new main shall receive a dose of chlorine fed at a constant rate such that the water will have not less than 50 mg/L free chlorine. To assure that this concentration is provided, measure the chlorine concentration at regular intervals as specified in AWWA C651.
- .4 Flow of water containing chlorine not to cease until entire main, all service connections, extremities and hydrants to be treated are filled with 50 mg/L chlorine solution. To ensure that this concentration has been attained throughout, free chlorine residual to be measured at a number of points and extremities along main. Chlorinated water to be retained in main for at least 24 h during which time all valves, curb stops and hydrants in section treated to be operated in order to disinfect them thoroughly.
- .5 At end of this 24 h period, treated water to contain no less than 25 mg/L free chlorine throughout main. If chlorine content is less than 25 mg/L the chlorination procedure is to be repeated until specifications are met.
- .6 After completion of chlorination, heavily chlorinated water to be flushed from system, hydrants and services until chlorine concentration in remaining water is less than 0.3 mg/L chlorine residual, or is equal to the source water residual. Chlorinated water flushed from mains shall be discharged into a **sanitary** sewer, or be treated in such a manner that does not pose a threat to aquatic life in receiving water. Obtain approval of Fisheries and Oceans Canada and BC Fish and Wildlife Authority and implement dechlorination procedures as required prior to discharge of chlorinated water anywhere other than into a sanitary sewer.
- .7 Bacterial samples can be collected one (1) hour after the watermain was flushed if clean dry construction procedure have

- been followed. However, if contamination of the main (such as groundwater) occurred during construction, the clear water must remain in the main at least sixteen (16) hours before sampling. One water sample per City block from the new watermain, and one sample from the source to be collected for bacterial tests (total and fecal coliforms). No sample shall be collected from fire hydrants.
- .8 Submit to the Engineer a certificate from the testing firm confirming the chlorination tests have been successfully carried out. Laboratory results for bacterial results must be approved by the Engineer before acceptance and before connections to existing watermains, or transfer of existing water services, will be permitted.
- .9 Fittings, valves and sleeves required to complete the tie-in from existing to proposed watermains will be swabbed with a 1 percent hypochlorite solution as per AWWA C651. Swabbing only applies for sections less than 3 pipe lengths and for sections that tie a new system to an old system.
- .10 Upon completion of disinfection and flushing, Contractor to remove and backfill test and bleed point apparatus, and complete any other work required for placing of waterworks system in service.
- 3.18 Servicing Fire Hydrants** .1 Immediately following completion, all hydrants installed as part of the Work will be inspected by City crews. All repair costs (parts and labour) to remedy defective parts or installation will be charged to Contractor.
- 3.19 Restoration of Service** .1 Once all tie-ins, chlorination and pressure testing are complete and the new water piping is ready to be put into service, the contractor will ensure that all valves, including hydrant valves are in good operational order and are in the open position unless otherwise stated in the drawings and specifications. **Contractor is required to maintain a log book for the closing and opening of valves. City crews and contractor will conduct joint inspections of the valves prior to substantial completion. Each valve found to be in its incorrect position at the time of this inspection will incur a charge of \$200.00 per valve to the contractor.**
- 3.20 Polyethylene Encasement** .1 Encase watermain in polyethylene tubes in areas shown on the Contract Drawings or as directed by the Engineer.
- .2 Install polyethylene tubes in accordance to ANSI / AWWA C105 / A21.5 Standard – Installation Method A.
- .3 Addition and deletions to polyethylene bagging will be measured in lineal meters and paid or deducted at the bid price specified in the Tender Form.

**CITY OF
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END OF SECTION