



INVITATION TO TENDER No. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY

Tenders will be received in the 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. Vancouver Time (as defined in Note 2 below), Tuesday, April 20, 2010 and registered at 11:00:00 A.M Wednesday, April 21, 2010.

NOTES:

1. Tenders are to be submitted in sealed envelopes or packages marked with the Tenderer's Name and the ITT Title and Number.
2. The 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 8:30 A.M. to 4:30 P.M. Vancouver Time and closed Saturdays, Sundays and holidays.
4. DO NOT SUBMIT TENDERS BY FAX.

All queries related to this ITT shall be submitted
in writing to the attention of:

Alison Hall, C.P.P.
Contracting Specialist

Fax: 604.873.7057 E-mail: purchasing@vancouver.ca

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
TABLE OF CONTENTS

PART A - INTRODUCTION

Page 4

- 1.0 Invitation to Tender
- 2.0 Information Meeting
- 3.0 Administrative Requirements
- 4.0 Conduct of ITT - Inquiries and Clarifications

PART B - INSTRUCTIONS TO TENDERERS

Pages IT 1 - IT 13

- 1.0 Introduction
- 2.0 Tenders
- 3.0 Tender Price
- 4.0 City Council
- 5.0 Contract
- 6.0 Bonds
- 7.0 Insurance
- 8.0 WorkSafe BC
- 9.0 Acceptance of Tenders
- 10.0 Site Examination
- 11.0 Tender Documents
- 12.0 Examination of Tender Documents
- 13.0 Interpretation
- 14.0 Taxes and Fees
- 15.0 Product Approval
- 16.0 Metric Measurements and Co-ordination
- 17.0 Scheduling and Completion
- 18.0 Excavation, Soil Support and Work Areas in Residential Neighbourhoods
- 19.0 Labour Rates
- 20.0 Experience
- 21.0 List of Subcontractors and Suppliers
- 22.0 Non-Resident Withholding Tax
- 23.0 Release, Indemnity and Limitation
- 24.0 Dispute Resolution
- 25.0 Confidentiality and Privacy
- 26.0 Release of Information Restricted
- 27.0 Master Municipal Specifications and Standard Detail Drawings

PART C - FORM OF TENDER

Pages FT 1 - FT 24

- Schedule "A" - Schedule of Quantities and Unit Prices
- Schedule "B" - Preliminary Construction Schedule
- Schedule "C" - Subcontractors and Suppliers
- Schedule "D" - Tenderer's Related Experience
- Schedule "E" - Force Account Labour Rates
- Schedule "F" - Consent of Surety
- Schedule "G" - Proposed Key Project Personnel
- Schedule "H" - Certificate of Existing Insurance
- Schedule "I" - Preliminary Traffic Management Plan
- Schedule "J" - Sustainability and Environmental Impact
- Schedule "K" - Tenderer's Checklist

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
TABLE OF CONTENTS

PART D - FORM OF AGREEMENT Pages AGT 1 - AGT 6

PART E - GENERAL CONDITIONS Pages 1 - 37

- 1.0 Table of Contents
- 2.0 General Conditions

APPENDIX "A" - Prime Contractor Agreement Form Pages (4)

- 1.0 Definitions
- 2.0 Responsibilities
- 3.0 Designation

APPENDIX "B" - Certificate of Project Specific Insurance Pages (1)

PART F - SUPPLEMENTARY GENERAL CONDITIONS Pages 38 - 47

- 1.0 Hours of Work
- 2.0 Work with Engineer
- 3.0 Coordination with Other Work on Site
- 4.0 Progress Payments
- 5.0 Comply with Applicable Law
- 6.0 Truck Safety
- 7.0 Extra Work
- 8.0 Force Account
- 9.0 Release and Indemnification
- 10.0 No Promotion of Relationship with the City or The Olympics
- 11.0 Master Municipal Specifications and Standard Detail Drawings
- 12.0 Protection of City from Environmental Liability for Contaminated Soils
- 13.0 Stakes, Lines and Levels
- 14.0 No Parking Signs
- 15.0 Work Adjacent to Trees
- 16.0 Special Preparation for Tree Beds & Root Barriers
- 17.0 Tree Root Linear Barriers
- 18.0 Curb Ramps
- 19.0 Permits for Work
- 20.0 Provision of Pedestrian and Vehicular Access
- 21.0 Coordination with Other Contractors

PART G - SUPPLEMENTAL SPECIFICATIONS Pages 48 - 86

PART H - PROJECT SCOPE DRAWINGS Page 87

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART A - INTRODUCTION

1.0 Invitation to Tender

1.1 The City of Vancouver (the "City"), by this Invitation to Tender No. PS10042 (the "ITT"), invites tenders for the construction work related to arterial streets rehabilitation, specifically, 41st Avenue from Cambie to Kingsway. The intent is to maintain the integrity of the road structure and extend the service life by removing and replacing the top surface layer of asphalt pavement (grind & overlay) as well as reconstructing failed sections of roadway, damaged or substandard concrete curbs and sidewalks. The project will also involve permanent restoration of roadway utility cut repairs.

1.2 The Tender Documents are available for viewing at:

Vancouver Regional Construction Association
3636 East 4th Avenue
Vancouver, BC V5M 1M3

2.0 Information Meeting

2.1 No Information Meeting scheduled.

3.0 Administrative Requirements

3.1 It is the sole responsibility of the Tenderer to check the City's website at <http://www.vancouver.ca/fs/bid/bidopp/openbid.htm> regularly for amendments, addenda, and questions and answers related to the ITT.

3.2 All Tenders are to be completed and submitted in accordance with instructions on the front page to the ITT and as provided within this Part A.

4.0 Conduct of ITT - Inquiries and Clarifications

4.1 The City's Manager - Supply Management will have conduct of this ITT, and all communications are to be directed only to the contact person(s) named on the cover page.

4.2 It is the responsibility of the Tenderer to thoroughly examine the ITT documents and satisfy itself as to the full requirements of the ITT. All inquiries are to be in written form only, faxed to 604-873-7057 or e-mailed to **purchasing@vancouver.ca** to the attention of the appropriate contact person shown on the cover page no later than five (5) Business Days prior to the Closing Time. If required, an addendum will be posted on the City's website.

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART B - INSTRUCTIONS TO TENDERERS

1.0 Introduction

The City of Vancouver is inviting Tenders for construction related to arterial streets rehabilitation, specifically, 41st Avenue from Cambie to Kingsway. The work as described in the Tender Documents, include but is not limited to:

- a) Removal and/or reconstruction of PC concrete curbs and gutters;
- b) Removal and/or reconstruction of sidewalks;
- c) Removal and/or reconstruction of grass boulevards;
- d) Removal and/or reconstruction of PC concrete bus pads complete with integral curb;
- e) Removal and/or reconstruction of AC pavement roadway;
- f) Permanent restoration of utility cuts in roadway;
- g) Grind and overlay of AC pavement; and
- h) Painted pavement markings.

1(A) Definitions

The following definitions apply throughout the Tender Documents:

- 1A.1 “City” means the City of Vancouver, a municipal corporation continued pursuant to the *Vancouver Charter*, SBC 1953, c.55;
- 1A.2 “Claims” means any complaints, demands, claims, actions, suits, proceedings, orders and judgments for any injury, loss, damage, liability, deficiency, cost or expense of any kind arising in any way in connection with the ITT, the Contract or the Work;
- 1A.3 “Contract” means a legal agreement between the City and a Tenderer by which a Tenderer, whose Tender the City has accepted, agrees and is required to perform the Work in accordance with the Tender Documents, for which the City will pay monetary remuneration to the Tenderer in accordance with the Tender Documents;
- 1A.4 “Contractor” means a Tenderer whose Tender the City has accepted and to whom the Contract has been awarded;
- 1A.5 “Form of Tender” means the Form of Tender in Part C to the ITT;
- 1A.6 “Information and Privacy Legislation” means the *Freedom of Information and Protection of Privacy Act* (British Columbia) and all other similar legislation in effect from time to time;

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART B - INSTRUCTIONS TO TENDERERS

- 1A.7 “Notice of Award” means a written notice from the City to a Tenderer that the City accepts the Tenderer’s Tender;
- 1A.8 “Notice to Proceed” means a written notice from the City to a Tenderer to whom a Notice of Award has been delivered, directing the Tenderer to proceed with the Work in accordance with the Tender Documents;
- 1A.9 “Tax Legislation” includes the *Income Tax Act* (Canada), *Excise Tax Act* (Canada), and all other similar legislation in effect from time to time;
- 1A.10 “Tender” means a tender submitted to the City in response to the ITT;
- 1A.11 “Tender Contract” means a contract between the City and any Tenderer in relation to the tender process contemplated by the ITT formed on the City’s receipt of a Tender from the Tenderer in response to the ITT;
- 1A.11 “Tender Documents” mean all the documents listed in the Table of Contents hereto, all other specifications and drawings for the Work referred to in the Tender Documents and any addenda thereto;
- 1A.12 “Tenderer” means any person(s) or entity(ies) submitting a Tender in response to the ITT;
- 1A.13 “Tender Price” means the total monetary amount of all prices proposed in a Tender, including all applicable taxes;
- 1A.14 “Work Site” means the area or areas on and about the City property where the Work is to be carried out.

2.0 Tenders

- 2.1 Each Tenderer will be given one copy of the Tender Documents. In submitting a Tender, a Tenderer must complete, as required hereby, and package, seal and return to the City, the Form of Tender and Schedules thereto and at the same time furnish the City with a Bid Bond as hereinafter described.
- 2.2 Unless otherwise stipulated, Tenders should be made on the Form of Tender;
- 2.3 Tenders should be enclosed in a sealed plain envelope, clearly marked:

“INVITATION TO TENDER No. PS10042 Arterial Streets Rehabilitation for 41st Avenue;
Cambie to Kingsway”, with the Tenderer’s name in the upper left hand corner.
- 2.4 Each Tender should be signed in longhand by or on behalf of the Tenderer, with the signatory’s name printed clearly and legibly directly below the signature. Tenders by partnership should be signed by at least two (2) of the partners or by an authorized representative of each of at least two (2) partners, followed by the signatories’ names

**INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART B - INSTRUCTIONS TO TENDERERS**

and designations printed clearly and legibly directly below their respective signatures. Tenders by companies should specify the full legal name of the company followed by the signatures of the duly authorized signing officer(s) and should have the company's seal affixed. Each page of the Form of Tender, including the Schedules should bear the initials of all persons who have signed the Form of Tender.

- 2.5 All blank spaces in the Form of Tender should be completed. All prices and notations should be typewritten or printed legibly in ink. Erasures, interlineations and other corrections should be initialled by all persons signing the Tender.
- 2.6 Tenderers must include as indicated on Schedule A to the Form of Tender, a breakdown of the Tender Price. These breakdown or, if requested, the "unit" prices will be used to calculate interim progress payments. Tenderers should ensure that the prices submitted accurately reflect the costs for each item. Tenderers may be required to justify the submitted breakdown.
- 2.7 Tenderers should submit a price for each item listed in the Form of Tender and any Schedules or other attachments thereto. Prices for items not specifically described, will be placed with the items that most fittingly describe them. Failure by the Tenderer to submit a complete breakdown may result in an incomplete Tender and may be cause for rejection.
- 2.8 Tenders will be all inclusive and will be without qualification or condition.

3.0 Tender Price

- 3.1 The Tender Price is to be entirely in Canadian currency and will consist of:
 - (a) the product of the actual quantities of the items of Work listed in the Schedule of Quantities and Prices which are incorporated into or made necessary by the Work and their unit prices listed in the Schedule of Quantities and Prices; plus
 - b) all lump sums, if any, as listed in the Schedule of Quantities and Prices, for items relating to or incorporated into the Work; plus
 - c) all applicable taxes.
- 3.2 Subject to any adjustment for changes to the Work, which are approved by the Engineer in accordance with the Contract Documents, the Total Tender Price shall be the maximum compensation owing to the Contractor for the Work and the Contractor's compensation shall cover and include all profit and all costs of supervision, labour, material, equipment, overhead, financing and all other costs and expenses whatsoever incurred in performing the Work.
- 3.3 The City, in respect of any Tender, in order to meet budget limitations, or for any other reason, may choose to proceed with only some, but not all of the Work, as originally described in the Tender Documents, and as bid on in any Tender, and accept a Tender on that basis, in which case the scope of the Work will be reduced to those items

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART B - INSTRUCTIONS TO TENDERERS

identified in a Notice of Award as being the Work with which the City wishes to proceed and the Tender Price will be adjusted accordingly.

4.0 City Council

4.1 Any award of a Contract based on Tenders the City receives will be subject to approval by its City Council.

5.0 Contract

5.1 On City Council Approval, the successful Tenderer will become a Contractor to the City in respect of the Work, pursuant to the Contract, and will be required to sign the Form of Agreement set out in Part D to the ITT.

5.2 Ownership of the improvements constructed in the Work, when completed in accordance with the Contract, will be wholly vested in and owned by the City.

6.0 Bonds

6.1 Each Tender will be accompanied by a Consent of Surety (Schedule "F" to the Form of Tender or equivalent) duly completed by a surety company authorized and licensed to carry on business in British Columbia and having an office in British Columbia and a bond (the "Bid Bond") payable to the "City of Vancouver" in the amount of ten percent (10%) of the Tender Price (not a dollar amount) as a security for the due execution of the Form of Agreement in Part D to the ITT and the delivery of the Bonds specified below.

6.2 The Bid Bonds of unsuccessful Tenderers will be returned to them as soon as possible after the Contract is awarded, and the Bid Bond of the Tenderer whose Tender the City accepts will be returned to it on execution of the Form of Agreement in Part D to the ITT, delivery of a Performance Bond for fifty percent (50%) of the Tender Price and a Labour and Materials Payment Bond for 50% of the Tender Price and commencement of the Work. The cost of all Bond premiums will be included in the Tender Price.

6.3 The forms of the Bonds will be those issued by the Canadian Construction Documents Committee as follows:

Bid Bond:	CCDC 220 (latest)
Performance Bond:	CCDC 221 (latest)
Labour and Material Payment Bond:	CCDC 222 (latest)

6.4 All bonds must be issued by a surety company authorized and licensed to carry on business in British Columbia and must have an office in British Columbia.

7.0 Insurance

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART B - INSTRUCTIONS TO TENDERERS

- 7.1 The Tenderer whose Tender the City accepts will be required maintain insurance in connection with the Work as described in the Part E - General Conditions portion of the ITT.
- 7.2 All Tenderers must submit with their Tenders a Certificate of Existing Insurance in the form annexed as Schedule "H" to the Form of Tender showing that they currently carry insurance as required in all respects under the Part E - General Conditions portion of the ITT or written confirmation from an insurer demonstrating conclusively that the Tenderer will be able to meet those insurance requirements in all respects.

8.0 Worksafe BC

- 8.1 Tenderers should familiarize themselves and be prepared to comply with the WorkSafe BC ("WCB") requirements as set out in the Part E - General Conditions portion of the ITT.

9.0 Acceptance of Tenders

Notwithstanding anything to the contrary contained in the ITT or any other document, material or communication:

- 9.1 The City need not necessarily accept the Tender with the lowest bid, or any Tender, and the City reserves the right to reject any and all Tenders at any time without further explanation and to accept any Tender the City considers to be in any way advantageous to it. The City's acceptance of any Tender is contingent on its City Council approving funding for the Work and a Contract with a Tenderer. Tenders containing qualifications will be considered to be non-conforming Tenders in that they will fail to conform to the requirements of the Tender Documents and on that basis they may be disqualified or rejected. Nevertheless, the City may waive any non-compliance with the requirements of the Tender Documents, specifications or any conditions, including, without limitation, the timing of delivery of anything required by these Tender Documents, and the City, at its discretion, may consider non-conforming Tenders and accept a non-conforming Tender.
- 9.2 All Tenders will remain open for the City to accept at any time for a period of sixty (60) calendar days after the Closing Time.
- 9.3 The award of a Contract will be based on the City's evaluation of the Tenders on any basis that the City considers will best serve its interests, including but not limited to the following criteria, as the City in its discretion may apply them:
- (a) the overall cost to the City represented by a Tender;
 - (b) the reputation and experience of the Tenderer and the Tenderer's senior staff to be assigned to the Work;
 - (c) the technical credibility, financial resources and environmental responsibility of the Tenderer;

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART B - INSTRUCTIONS TO TENDERERS

- (d) the Tenderer's proposed sources for materials to be used in the performance of the Work;
- (e) the Tenderer's scheduling of the Work in relation to the City's schedule and the Tenderer's demonstrable ability to complete the Work within the time frame required by the City;
- (f) the best value to the City based on quality, service, price; and
- (g) any of other considerations the City, in its discretion, may wish to take into account.

9.4 If the City considers that all Tenders are priced too high, it may reject them all.

9.5 The City, prior to awarding of any Contract, may negotiate with the Tenderer presenting the lowest priced Tender, or with any Tenderer, for changes in the Work, the materials, the specifications or any conditions, without having any duty or obligation to advise any other Tenderers or to allow them to modify their Tenders, and the City will have no liability to any Tenderer as a result of such negotiations or modifications.

9.6 The City will not be responsible for costs, expenses, losses, damages (including damages for loss of anticipated profit) or liabilities incurred by a Tenderer as a result of or arising from its submitting a Tender or the City's acceptance or non-acceptance of any Tender or any breach by the City of any Tender Contract or arising out of any Contract award that may not have been made in strict accordance with the Tender Documents.

9.7 The City may award a Contract on the basis of policies and preferences not stated or otherwise than as stated in the ITT.

9.8 No guidelines or policies of any government, organization, entity or other body that might be apply to the ITT, the tendering process contemplated thereby or a Contract, but are not requirements of law, will give rise to any legal rights on the part of any Tenderer, the Contractor, any subcontractors or others as against the City or create any liability on the part of the City.

10.0 Site Examination

10.1 The Work Sites are City owned property.

10.2 Prior to submission of Tenders, all Tenderers, at their risk and expense, will make careful examination and investigations of and regarding all Work Sites and ensure that they fully understand to their satisfaction the means of access to and from all Work Sites, the nature and scope of the Work and the requirements for the Work as shown in the drawings, specifications and other documents annexed hereto and incorporated by reference herein and of all other things necessary to the full and proper completion of the Work and the conditions under which it will be performed, and no allowances in

**INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART B - INSTRUCTIONS TO TENDERERS**

respect of the Tender Price or any portion thereof will be given subsequently to the successful Tenderer for any neglect, error, interpretation or misinterpretation in that respect.

- 10.3 The City gives no guarantees of any kind in relation to any Work Sites or geotechnical information provided in or with the Tender Documents. Tenderers must evaluate such information themselves relative to actual conditions.

11.0 Tender Documents

- 11.1 The Tender Documents are as follows:

- (a) Cover Page and Table of Contents to the ITT
- (b) Part A - Introduction to the ITT
- (c) Part B - Instructions to Tenderers portion of the ITT;
- (d) Part C - Form of Tender portion of the ITT, including, without limitation, all Schedules thereto;
- (e) Part D - Form of Agreement portion of the ITT;
- (f) Part E - General Conditions portion of the ITT;
- (g) Appendix "A" to Part E portion of ITT- Prime Contractor Agreement Form;
- (h) Appendix "B" to Part E portion of ITT - Certificate of Insurance Form
- (i) Part F - Supplementary General Conditions portion of the ITT;
- (j) Part G - Supplemental Specifications portion of the ITT;
- (k) Part H - Project Scope Drawings portion of the ITT, bound separately Consent of Surety required hereunder;
- (l) Bid Bond required hereunder;
- (m) Any addenda to any Tender Documents; and
- (n) Specifications and Standard Detail Drawings contained in the publication entitled "Master Municipal Construction Document, Volume II - Instructions to Tenderers - Part II, General Conditions, Specifications and Standard Detail Drawings" (printed 2000), as may be incorporated by reference into the ITT.

(collectively, the "Tender Documents")

12.0 Examination of Tender Documents

- 12.1 Each Tenderer must examine the Tender Documents carefully and thoroughly and must satisfy itself that it fully understands them and the nature and scope of the Work, and each Tenderer will make its own assessment therefrom regarding the Work Sites and any difficulties for the Work.
- 12.2 No allowance will be given subsequently to the Contractor for any error, omission or negligence on his part or for non-compliance with the requirements of this clause.

13.0 Interpretation

**INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART B - INSTRUCTIONS TO TENDERERS**

- 13.1 If any Tenderer is in doubt as to the true meaning and intent of any part of any Tender Documents, then, at least five (5) working days prior to the Closing Time, the Tenderer will request of the Engineer that he provide a clarification or an interpretation thereof.
- 13.2 The Engineer will answer and publish in writing, by way of addenda to the Tender Documents, prior to Closing Time, any requests made according to Paragraph 13.1 for clarification or interpretation of any Tender Documents. The City will not be responsible for verbal or any other explanations or interpretations thereof. To be in any way binding on the City, all such requests for clarification and interpretation must be made in writing, and the Engineer's response must be confirmed in writing by way of an addendum to the Tender Documents. All addenda and other written notices so issued will become part of the Tender Documents and will be binding upon all Tenderers.

14.0 Taxes and Fees

- 14.1 All Tenders must take into account that the Contractor will be fully responsible for the cost and payment of all permit and licence fees and all Municipal, Provincial and Federal taxes, customs duties and other assessments and charges required in connection with the Work, except as may otherwise be indicated in the Tender Documents. The City will not be liable in any way for any such costs not included in the Tender, and the successful Tenderer will indemnify the City for and save it harmless from any and all Claims made against it with respect thereto.

15.0 Product Approval

- 15.1 Wherever any Product (as defined in the Part E - General Conditions portion of the ITT) is specified or shown herein by description of proprietary items, model numbers, catalogue numbers, manufacturer, trade names or similar reference, the Tender and award of the Contract will be based upon the use of such Products. Use of such Product descriptions in the Tender Documents is intended to establish a reference by which to measure the quality of the Products required for the Work. In respect of specific situations for which two or more interchangeable Products are shown or specified in the Tender Documents, the Contractor may choose which to use.
- 15.2 For approval of Products for use in substitution for those specified in the Tender Documents, Tenderers will submit a request in writing to the Engineer at least ten (10) working days prior to the Closing Time. Requests will clearly define and describe the Product for which approval is requested and be accompanied by manufacturer's literature, specifications, drawings, cuts, performance data or other information necessary to completely describe the Product. Any Approval by the Engineer must be in the form of an addendum to the specifications in the Tender Documents issued to all persons who have received a set of the Tender Documents.
- 15.3 The City's approval for substitute Products not specified in the Tender Documents will be given only insofar as such Products, in the City's opinion, are fully interchangeable with and of equal quality to the Products specified in the Tender Documents.

16.0 Metric Measurements and Co-Ordination

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART B - INSTRUCTIONS TO TENDERERS

- 16.1 The Work has been designed using metric dimensions. All linear dimensions have been expressed in millimetres in whole numbers (without decimal parts) and in metres with fractions thereof. The unit "mm" for millimetres has been deleted from the dimensioning of the drawings.
- 16.2 Within the Specifications, the unit symbols for all metric units are included. Also, the decimal parts have been included in the Specifications where Products have been "soft converted" (i.e., when the dimensions of the Product remain the same as they are at present but are expressed in metric equivalent units). Dimensions for spacing of Products have been expressed in millimetres in whole numbers in both the Specifications and Drawings.
- 16.3 As a general rule, all dimensioning of Products and equipment has been "soft converted". Exceptions to this rule are certain Products which are presently available in metric sizes and have been "hard converted"; i.e., where the Product itself is manufactured to rational metric dimensions.
- 16.4 Where "hard conversion" Products have been specified and are available they will be supplied.
- 16.5 Care is required to ensure coordination of imperial and metric Products and in dimensioning and, in this regard, the Contractor will be entirely responsible for metric co-ordination of its Work.
- 16.6 The Contractor will ensure that all persons employed in the Work know how to use the metric system of measurement, and that they use metric references and measuring devices.
- 17.0 Scheduling and Completion
- 17.1 Time is of the essence for all purposes in relation to the ITT, the Contract and the Work. This requirement can be waived only by explicit written waiver and any such waiver will not be a general waiver but will be effective only as explicitly stated in the written waiver.
- 17.2 Each Tenderer will complete and submit the Schedule B to the Form of Tender showing the proposed critical path construction scheduling for the Work to clearly demonstrate how the Tenderer will start the work within fifteen (15) days of award of Contract and, subject to adjustments to scheduling pursuant to the Contract, achieve substantial performance of the Work by September 30, 2010.
- 17.3 The construction scheduling included in the Tender must detail scheduling for all major phases of the Work and indicate start and completion dates for each and should include scheduling for other activities as necessary.
- 17.4 Each Tenderer shall complete and submit Schedule I - Traffic Management Plan addressing vehicular and pedestrian movement, safety and access with specific detailing on methods, signage and materials used to maintain access to businesses,

**INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART B - INSTRUCTIONS TO TENDERERS**

cross streets and lanes. However, the Traffic Management Plan submitted by the Tenderer must be in compliance with and will, in any event, be in the event of any conflict, be subject to the requirements set out in Part E - General Conditions and Part F - Supplementary General Conditions.

- 17.5 Prior to the commencement of the Work, the City will endeavour to complete any of its water and sewer works activities in the area of the Work Sites. However, should time lines not permit for completion of the City's utility work, the Contractor will be required to coordinate its activities with City Crews or other contractors on behalf of utilities as required to facilitate the street upgrades.

18.0 Excavation, Soil Support and Work Areas

The following items are brought to the Tenderer's attention:

- 18.1 The Work Sites are in high density residential and commercial areas, in close proximity to existing residences, businesses and utilities.
- 18.2 The Work Sites will be approximately as indicated on the drawings.
- 18.3 The Work is taking place amidst various businesses and residential areas along 41st Avenue. In carrying out the Work, the Contractor will use all procedures necessary to minimize any Work related disturbance and inconvenience to all businesses and residents adjacent or near to the Work Sites, maintain safe public access at all times during construction and will strictly adhere to all construction procedures specified or referenced in the Contract Documents.
- 18.4 Before commencing any excavations in connection with the Work, the Contractor must inform the residents and businesses in each City block at which the excavations are to take place, regarding estimated start and finish times for the excavation activities.
- 18.5 Other contractors completing other construction work items will be on-site during the Work as noted in Paragraph 17.5 of these Part B - Instructions to Tenderers. The Contractor will be required to work together with the City and other contractors to resolve any coordination issues that arise as a result of these construction activities.

19.0 Labour Rates

- 19.1 Tenders must include a completed copy of the Schedule "E" to the Form of Tender ("Force Account Labour Rates"). Tenderers will insert the hourly rates for labour including allowances for taxes, assessments, benefits, small tools, overhead and profit as set out in the section headed "Force Account" contained in the Part F - Supplementary General Conditions portion of the Tender Documents.

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART B - INSTRUCTIONS TO TENDERERS

20.0 Experience

20.1 Tenderers are required to confirm in the Tender that they have suitable experience for the Work. Each Tenderer will complete and submit with the Tender the Schedule "D" to the Form of Tender regarding similar projects completed, including, without limitation, the following information:

- (a) a brief description of previous projects;
- (b) locations;
- (c) contract values;
- (d) start and completion dates;
- (e) completed on schedule or not;
- (f) name of project owner and representative to be contacted as reference; and
- (g) names and positions of key personnel involved in the project.

21.0 List of Subcontractors and Supplies

21.1 The Tenderer will insert in the Tender, in Schedule "C" thereto, a list of proposed subcontractors, providing their names, addresses of places of business and the part of the Work to be performed and/or the equipment or materials to be supplied by each of them. Pursuant to Schedule C, the City reserves the right to object to any of the Subcontractors and Suppliers listed in a Tender. If the City objects to a listed Subcontractor and/or Supplier then the City will permit a Tenderer to, within five (5) Working days, propose a substitute Subcontractor and/or Supplier acceptable to the City. A Tenderer will not be required to make such a substitution and, if the City objects to a listed Subcontractor and/or Supplier, the Tenderer may, rather than propose a substitute Subcontractor and/or Supplier, consider its Tender rejected by the City and by written notice withdraw its Tender. The City shall, in that event, return the Tenderer's bid security.

22.0 Non-Resident Withholding Tax

22.1 If a Tender is not a resident of Canada, the Income Tax Act of Canada requires that a certain percentage of the monies otherwise payable for the Work be withheld by the City and remitted to the Receiver-General for Canada. The percentage required to be withheld and remitted varies depending among other things, on the country of residence, the provisions of any applicable treaties and the nature of the payment. Non-resident Tenderers may contact the Vancouver office of Revenue Canada, Taxation for further details. The City will receive a credit under the Contract for monies withheld and remitted.

23.0 Release, Indemnity and Limitation

23.1 Release

Each Tenderer, in submitting a Tender, hereby releases the City and all of its officials, employees and agents from any and all liability for any Claims in respect of:

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART B - INSTRUCTIONS TO TENDERERS

- (a) any breach of any Tender Contract by the City (it being acknowledged and agreed that to the best of the parties' knowledge, the City has no obligation or duty under the Tender Contract which it could breach);
- (b) any unintentional tort of the City or its employees, officers, officials or agents occurring in connection with the ITT;
- (c) the Tenderer preparing and submitting a Tender;
- (d) the City accepting or rejecting any Tender;
- (e) the manner in which a Contract award is made; and
- (f) the City awarding no Contract in connection with the ITT.

23.2 Indemnity

Each Tenderer, in submitting a Tender, agrees to indemnify the City and its officials, employees and agents for and save them harmless from any injury, damage, loss or expense of any kind any of them may suffer, incur or experience in connection with the ITT or any Tender Contract and in respect of any claim or threatened claim by any Tenderer or any of their subcontractors, subconsultants or materials or equipment suppliers alleging or pleading:

- (a) any breach of the Tender Contract by the City (it being agreed that, to the best of the parties' knowledge, the City has no obligation or duty under the Tender Contract which it could breach);
- (b) any unintentional tort of the City or its employees, officers, officials or agents occurring in connection with the ITT; and
- (c) any liability on any other basis related to the tendering process, bidding process or the Tender Contract.

23.3 Limitation of Liability

In the event that, with respect to anything relating to the tendering process, bidding process or a Tender Contract, any person having jurisdiction to decide the matter determines that the City or any of its employees, officers, officials or agents is found to have breached any duty or obligation of any kind owed to a Tenderer or its subcontractors, subconsultants or suppliers, whether at law or in equity, including, without limitation, any fundamental or material breach of a Tender Contract, or to be liable to the Tenderer or its subcontractors, subconsultants or suppliers in any other way, the City's liability therefor is limited to a maximum of One Thousand Dollars (\$1000) in Canadian currency, despite any other term or agreement to the contrary.

24.0 Dispute Resolution

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART B - INSTRUCTIONS TO TENDERERS

- 24.1 Any dispute relating in any manner to the ITT, except disputes arising between the City and any Tenderer to whom the City has awarded the Contract, will be resolved by arbitration in accordance with the *Commercial Arbitration Act* (British Columbia), as amended, as follows:
- (a) The arbitrator will be selected by the City's Manager of Supply Management; and
 - (b) Paragraph 23 above - *Release, Indemnity and Limitation* will:
 - (i) bind the arbitrator, the Tenderer and the City; and
 - (ii) survive any and all awards made by the arbitrator.

25.0 Confidentiality and Privacy

- 25.1 All Tenders, once submitted to the City, become the property of the City, which is a public body required under Information and Privacy Legislation to protect or disclose certain types of records according to certain statutory rules. All Tenders, upon submission to the City, will be received and held in confidence by the City unless and to the extent that they must be disclosed pursuant to Information and Privacy Legislation or are disclosed pursuant to the award and evaluation process adopted by the City for the ITT.

26.0 Release of Information Restricted

- 26.1 No information will be given out between the Closing Time and the time the Contract award (or decision not to award the Contract) is made. Tenderers must attend the tender opening in order to obtain information prior to the making of the Contract award.

27.0 Master Municipal Specifications and Standard Detail Drawings

- 27.1 All Tenderers must thoroughly review the Tender Documents. Specifications for the Work are based on the Master Municipal Specifications and Standard Detail Drawings (printed 2000) as amended by the City of Vancouver (refer to Part H - Project Scope Drawings part of the Tender Documents). The Master Municipal Specifications and Standard Detail Drawings may be purchased separately from:

Support Services Unlimited
#302 - 1107 Homer Street
Vancouver, B.C. V6B 2Y1
Phone: 604.681.0295

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART C - FORM OF TENDER

Tenderer's Name: _____
"Tenderer"

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: _____
(or N/A if not applicable)

For the following work:

Arterial streets rehabilitation, specifically, 41st Avenue from Cambie to Kingsway. The work as described in the Tender Documents, includes but is not limited to:

- a) Removal and/or reconstruction of PC concrete curbs and gutters;
- b) Removal and/or reconstruction of sidewalks;
- c) Removal and/or reconstruction of grass boulevards;
- d) Removal and/or reconstruction of PC concrete bus pads complete with integral curb;
- e) Removal and/or reconstruction of AC pavement roadway;
- f) Permanent restoration of utility cuts in roadway;
- g) Grind and overlay of AC pavement; and
- h) Painted pavement markings.

Name of Tenderer

FT 1

Initials

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART C - FORM OF TENDER

The work to be done by the Contractor for this Contract shall include overhead, labour, equipment, tools, supplies and all other things necessary for and incidental to the satisfactory performance and completion of all work as specified in the Tender Documents.

(All of the above collectively hereinafter referred to as the "Work".)

1.0 Tender Price and Schedule

- 1.1 Having fully examined the Work Site, the access to the Work Site and all conditions affecting the Work and having carefully read and examined the Tender Documents, including without limitation the Invitation to Tender, the Instructions to Tenderers, the Form of Tender, the Form of Agreement, the General Conditions, the Supplementary General Conditions, the Appendices, the Specifications and Drawings, and the Addenda, Amendments and Questions and Answers issued as supplements to the aforementioned documents (if any), the undersigned hereby offers to complete the Work covered by the Tender Documents and to furnish all plant, tools, equipment, labour, Products, material and supervision necessary to execute the Work for the fixed Tender Price of:

ITT NO. _____
The Tender Price, which excludes GST, is
_____ dollars
and _____ cents (\$_____)

Accordingly, the undersigned offers to complete the Work according to the following schedule:

- (a) Work will begin by May 31, 2010, subject to approval by Vancouver City Council and the Owner issuing the Notice to Proceed.
- (b) Substantial Performance of the Work is targeted for September 30, 2010.
- (c) Total Performance of the Work will be achieved by October 30, 2010.

The undersigned confirms that the above stated Tender Price includes all fees and federal, provincial, and municipal taxes, except for federal GST, and all customs and excise import duties and WorkSafeBC assessments relating to the Work in force at this date.

If Schedule A - Schedule of Quantities and Prices forms part of this Tender, and if there is any conflict between the Tender Price entered above and the correct summation of the lump sum prices, provisional sums and/or correct extensions of the unit prices and approximate

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART C - FORM OF TENDER

quantities entered in the aforesaid Schedule, the said correct summation shall take precedence.

2.0 Notice of Award

2.1 The undersigned agrees that this Tender is irrevocable and open for acceptance by the City for a period of sixty (60) calendar days from the day following the date of the Closing Time, even if the tender of another Tenderer is accepted by the City at anytime during that sixty (60) day period. If within this sixty (60) day period the City delivers a Notice of Award accepting this Tender, the undersigned, within ten (10) working days of the receipt thereof, will deliver to the City, to its satisfaction:

- (a) a Performance Bond and a Labour and Material Payment Bond, each in the amount of fifty percent (50%) of the Contract Price, issued by a surety licensed to carry the business of suretyship in the province of British Columbia, and in a form acceptable to the City;
- (b) a detailed Construction schedule, as required by the Part E - General Conditions part of the Tender Documents;
- (c) a WorkSafe BC "clearance letter" indicating that the Tenderer is in WorkSafe BC compliance;
- (d) a Certificate of Insurance showing the Tenderer has all insurance coverages and requirements in place as required under Part E - General Conditions part of the Tender Documents; and
- (e) a traffic control plan as specified in the Part E - General Conditions part of the Tender Documents.

3.0 Notice to Proceed

3.1 Upon the City receiving from the successful Tenderer the materials described above in item 2 of this Form of Tender, the City will deliver to the Tenderer a Notice to Proceed (the "Notice to Proceed") and the Tenderer will proceed as follows:

- (a) duly execute and deliver to the City four copies of a final form of the Part D - Form of Agreement part of the Tender Documents within four (4) working days after receipt thereof from the City; and
- (b) commence the Work within five (5) working days of the receipt of the Notice to Proceed or such longer time as may be otherwise specified in the notice to proceed.

4.0 Conditions

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART C - FORM OF TENDER

4.1 If the City delivers a Notice of Award to undersigned Tenderer, and the undersigned:

- (a) fails or refuses to deliver the documents as specified and required by items 2 and 3 of this Form of Tender; or
- (b) fails or refuses to commence the Work in accordance with the Tender Documents and the Notice to Proceed,

then such failure or refusal will be deemed to be a refusal to perform the Contract and the Work, and the City, on written notice to the undersigned Tenderer, may award the Contract to another Tenderer or person. The Tenderer agrees that, as full compensation for damages suffered by the City because of such failure or refusal on the part of the undersigned Tenderer to perform the Contract and the Work, the Tenderer's Bid Bond will be forfeited to the City in the amount equal to the lesser of:

- (d) the face value of the Bid Bond; or
- (e) the amount by which the Tender Price presented herein is less than the amount for which the City contracts with another Tenderer or other person to perform the Work.

4.2 The Schedules attached to this Form of Tender form a part of it.

5.0 Addenda

5.1 The undersigned hereby acknowledges that it has reviewed and thoroughly understands the following addenda to the Tender Documents:

(ADDENDA, IF ANY)

6.0 Certification

6.1 The undersigned hereby certify that this Tender complies in all respects with the requirements of the Tender Documents.

7.0 Labour

7.1 The above stated Tender Price is based on the Work being performed by union/non-union labour. (Delete or cross out "union" or "non-union" as applicable).

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART C - FORM OF TENDER

SIGNED and SEALED this ____ day of _____, 2010 by the duly authorized officers of the Tenderer:

Tenderer's Legal Name or Registered Corporate Name and Address:
(Seal)

per: _____

per: _____

Witness' Name, Signature, and Address where Tenderer is a Proprietorship or Partnership:

(Address)

(Name and Signature)

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART C - FORM OF TENDER

SCHEDULE A - GENERAL
SCHEDULE OF QUANTITIES AND UNIT PRICES
Tender Price Breakdown

The Tenderer submits the following lump sums and/or unit prices for the items listed below. The lump sums and/or unit prices shall include the supply and installation of all labour, materials and services, together with the Tenderer's overhead and profit and all fees and taxes, but shall not include the GST. The GST shall be shown separately. The Tenderer is required to verify the extent of the Work in relation to this Contract as noted in Part B [Instructions to Tenderers] and paragraph 3 [Personal Examination] of Part E [General Conditions].

SECTION 1 QUANTITIES FOR ARTERIAL STREETS REHABILITATION FOR 41ST AVENUE; CAMBIE TO KINGSWAY

ITEM	DESCRIPTION	MMCD SECTION	UNITS	ESTIMATE QUANTITY	UNIT PRICE BID	AMOUNT BID
101	Common excavation & disposal of concrete curb and gutter, concrete sidewalk, concrete crossing, asphalt concrete & subgrade up to 300 mm including saw cutting.	02224	sq.m	7600		
102	Common excavation & disposal of concrete curb and gutter, concrete sidewalk, concrete crossing, asphalt concrete & subgrade up to 600 mm including saw cutting.	02224	sq.m	5300		
103	Over excavation & disposal of subgrade over 600 mm including saw cutting.	02224	cu.m	100		
104	Grade, prepare & compact subgrade for curb and gutters, sidewalks, sidewalk ramps, sidewalk crossings & asphalt roadbase.	02224	Sq.m	13200		
105	Supply, place & compact granular base (19mm minus) as required.	02224 02233	tonne	1500		

Name of Tenderer

FT 6

Initials

**INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART C - FORM OF TENDER**

ITEM	DESCRIPTION	MMCD SECTION	UNITS	ESTIMATE QUANTITY	UNIT PRICE BID	AMOUNT BID
106	Supply, place & compact granular sub base (80mm minus) as required.	02224 02233	tonne	400		
107	Supply & install P.C. concrete curb & gutter, type A or AX straight (including 150mm granular base).	02523	meter	700		
108	Supply & install P.C. concrete curb & gutter type A or AX at street returns (circular radius greater than 4.5 m and less than 10.0m, including 150mm granular base).	02523	meter	1100		
109	Supply & install P.C. concrete curb & gutter; type A or AX, straight and circular at lane returns (including 150mm granular base).	02523	meter	250		
110	Supply & install P.C. concrete sidewalks 100 mm thick (including 100mm granular base & installation of sleeves for sign posts. Sleeves supplied by CoV)	02523	Sq.m.	2800		
111	Supply & install P.C. concrete sidewalk ramps at variable thickness. (100mm - 200 mm, including 100mm granular base).	02523	Sq.m.	1800		
112	Supply & install P.C. concrete standard commercial sidewalk crossings 200 mm thick (including 150mm granular base). Ref. Dwg. MF 137-AF.	02523	Sq.m	200		
113	Supply & install P.C. concrete standard residential sidewalk crossings 150 mm thick (including 150mm granular base). Ref. Dwg. MF 137-AG.	02523	Sq.m.	200		

Name of Tenderer

FT 7

Initials

**INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART C - FORM OF TENDER**

ITEM	DESCRIPTION	MMCD SECTION	UNITS	ESTIMATE QUANTITY	UNIT PRICE BID	AMOUNT BID
114	Supply and place P.C. concrete bus slab complete with integral curb. Ref. Dwg. MF 137-AP	02523	Sq.m	2500		
115	Supply and place 175mm PC concrete base as required for permanent road restoration & slot repairs. Ref. Dwg. MF 137-AE-4	02523 02224 02233	Sq.m	4500		
116	Supply & hand place AC pavement, 125 mm of 12.5mm nominal surface mix c/w tack coat for curb slot repairs up to 300 mm wide.	02512	Sq.m	100		
117	Grind and dispose up to 50mm of AC pavement	02512 02547 02574	Sq.m	100000		
118	Grind and dispose up to 100 mm of AC pavement	02512 02547 02574	Sq.m	5000		
119	Supply and place AC pavement 75 to 125 mm of 25mm nominal base mix as required.	02512	tonnes	1200		
120	Supply and place AC pavement 50 to 100 mm of 12.5mm nominal surface c/w tack coat, as required.	02512 02547	tonnes	13200		
121	Adjust frames, covers, lids, valve boxes, catch basins and inspection chambers as required.		each	200		
122	Supply and install PC concrete median to match existing, including saw cutting.	02523	sq.m.	15		
123	Supply and place growing medium for boulevard restoration.	02921	cu.m.	400		
124	Hydro-seeding of new boulevard areas.		ls	1		

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART C - FORM OF TENDER

ITEM	DESCRIPTION	MMCD SECTION	UNITS	ESTIMATE QUANTITY	UNIT PRICE BID	AMOUNT BID
125	Reinstate painted pavement markings (including crossings and stop bars).	02580	ls	1		

Name of Tenderer

FT 9

Initials

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART C - FORM OF TENDER

SCHEDULE A1 - UTILITY CUTS RESTORATION
SCHEDULE OF QUANTITIES AND UNIT PRICES

Tender Price Breakdown

The City has separate funding sources for all items under Schedule A1 and will require separate invoicing from the successful Tenderer. The table below reflects total quantities for work associated with the permanent restoration of utility road cuts. Tenderers should provide pricing for all items in this Schedule A1 as below and not include this pricing in lump sum pricing for Schedule A.

ITEM	DESCRIPTION	MMCD SECTION	UNITS	ESTIMATE QUANTITY	UNIT PRICE BID	AMOUNT BID
101A	Common excavation & disposal of concrete curb and gutter, concrete sidewalk, concrete crossing, asphalt concrete & subgrade up to 300 mm including saw cutting.	02224	sq.m	3500		
102A	Common excavation & disposal of concrete curb and gutter, concrete sidewalk, concrete crossing, asphalt concrete & subgrade up to 600 mm including saw cutting.	02224	sq.m	100		
103A	Over excavation & disposal of subgrade over 600 mm including saw cutting.	02224	cu.m	50		
104A	Grade, prepare & compact subgrade for asphalt road base.	02224	Sq.m	3500		
105A	Supply, place & compact granular base (19mm minus) as required.	02224 02233	tonne	200		
106A	Supply and place 175mm PC concrete base as required for permanent road restoration. Ref. Dwg. MF 137-AE-4	02523 02224 02233	Sq.m	3500		
107A	Supply and place AC pavement 75 to 125 mm of 25mm nominal base mix as required.	02512	tonne	1100		

Name of Tenderer

FT 10

Initials

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART C - FORM OF TENDER

ITEM	DESCRIPTION	MMCD SECTION	UNITS	ESTIMATE QUANTITY	UNIT PRICE BID	AMOUNT BID
108A	Supply and install PC Concrete median to match existing include saw cutting.	02523	Sq.m	50		
109A	Supply & place concrete barriers, bollards & signs, c/w line painting as shown. Reference dwg 2009-38-C-G.		LS	1		

Name of Tenderer

FT 11

Initials

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART C - FORM OF TENDER

SCHEDULE B
PRELIMINARY CONSTRUCTION SCHEDULE

Please clearly define time requirements. The Tenderer agrees that the Work will be complete as per the Tender Schedule in paragraph 1.4 of the Form of Tender. If necessary, please add an attachment to this Schedule. Each such additional page should be clearly marked "ITT PS10042- SCHEDULE B", and should be signed by the Tenderer.

Detailed Construction Schedule to be completed by Tenderer:

WORK DESCRIPTION	May/10	June/10	July/10	Aug/10	Sept/10	Oct/10

Name of Tenderer

FT 12

Initials

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART C - FORM OF TENDER

SCHEDULE C
SUBCONTRACTORS & SUPPLIERS

1.0 Subcontractors

The Tenderer will list below all subcontractors it intends to use in its performance of the Work, and what parts of the Work each subcontractor will be undertaking (the "Subcontractors").

The Tenderer, if awarded the Contract, will engage the listed Subcontractors only, and no others in their stead, without prior written authorization of the City.

The Tenderer, if awarded the Contract, will ensure that every Subcontractor is bound by a legal agreement with the same terms and conditions of the Contract.

Tenderers are to provide the following information about the Subcontractors:

- (a) Describe how the Tenderer's operation is structured with respect to Subcontractors.
- (b) What methodology will be used for Subcontractors to participate in the performance of the Work.
- (c) Describe the type of work to be performed by Subcontractors and the percentage of Work to be performed by Subcontractors as compared to the percentage of the Work to be performed by the Contractor itself.
- (d) Describe the qualifications and level of experience of the Subcontractors.
- (e) Describe insurance held by Subcontractors.

Describe how the Tenderer assesses the Subcontractors' performance.

If no Subcontractors will be used, indicate "Not Applicable".

Subcontractor's Name, Address	Contact Name and Telephone Number	Type of Work/Area of Responsibility

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART C - FORM OF TENDER

2.0 Suppliers

The Tenderer will list here all major suppliers and manufacturers it intends to use on in performing the Work.

SUPPLIER	MANUFACTURER	ADDRESS	ITEM

Name of Tenderer

FT 14

Initials

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART C - FORM OF TENDER

SCHEDULE D
TENDERER'S EXPERIENCE WITH RELATED WORK

The Tenderer will describe its related experience by describing similar work it has undertaken previously, as follows:

Description of Project: _____

Location of Project: _____

Contract Value (Canadian Funds): \$ _____

Start and Completion Dates: _____

Completed on Schedule? Yes/No (Circle Correct Response)

Name of Contract Owner: _____

Name of Project Reference: _____

Current Telephone Number and E-mail of Project Reference:

Names of Key Personnel and Subcontractors:

Name of Tenderer

FT 15

Initials

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART C - FORM OF TENDER

SCHEDULE D - Continued
TENDERER'S EXPERIENCE WITH RELATED WORK

Description of Project: _____

Location of Project: _____

Contract Value (Canadian Funds): \$ _____

Start and Completion Dates: _____

Completed on Schedule? Yes/No (Circle Correct Response)

Name of Contract Owner: _____

Name of Project Reference: _____

Current Telephone Number and E-mail of Project Reference:

Names of Key Personnel and Subcontractors:

Name of Tenderer

FT 16

Initials

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART C - FORM OF TENDER

SCHEDULE D - Continued
TENDERER'S EXPERIENCE WITH RELATED WORK

Description of Project: _____

Location of Project: _____

Contract Value (Canadian Funds): \$ _____

Start and Completion Dates: _____

Completed on Schedule? Yes/No (Circle Correct Response)

Name of Contract Owner: _____

Name of Project Reference: _____

Current Telephone Number and E-mail of Project Reference:

Names of Key Personnel and Subcontractors:

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART C - FORM OF TENDER

SCHEDULE E
FORCE ACCOUNT LABOUR & EQUIPMENT RATES

(See Section 47 of General Conditions and Section 8 "Force Account" of the Supplementary General Conditions)

JOB CLASSIFICATION	REGULAR RATE	OVERTIME RATE

Name of Tenderer

FT 18

Initials

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART C - FORM OF TENDER

SCHEDULE F
CONSENT OF SURETY

PROJECT

Should it be required, we the undersigned Surety Company do hereby consent and agree to become bound as sureties in an approved Contract Performance Bond and Labour and Material Payment Bond each in the amount of fifty percent (50%) of the awarded Contract Price for the fulfillment of the Contract and for the performance of the Work as described herein, which may be awarded to _____ at the Tender Price set forth in the attached Tender, which Performance Bond and Labour and Material Payment Bond we understand are to be filed with the City of Vancouver within fifteen (15) days of receipt of Notice of Award of the Contract.

We hereby further declare that the undersigned Surety Company is legally entitled to do business in the Province of British Columbia and that it has a net worth over and above its present liabilities and the amounts herein set forth, together.

The Common Seal of _____
was hereto affixed in the
presence of:

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART C - FORM OF TENDER

SCHEDULE G
PROPOSED KEY PROJECT PERSONNEL

The following are the Key Project Personnel we propose to use for the Work:

		Name
Project Superintendent:		
Project Manager:		
Construction Safety Officer:		
Foreman:		

Name of Tenderer

FT 20

Initials

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART C - FORM OF TENDER



SCHEDULE H
CERTIFICATE OF EXISTING INSURANCE
TO BE COMPLETED AND SUBMITTED ALONG WITH
PROPOSAL/TENDER

Section 2 through 8 – to be completed 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 been issued to the Named Insured and is in full force and effect as of the effective date of the agreement described below.

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 DBA DOING BUSINESS AS

BUSINESS ADDRESS

DESCRIPTION OF OPERATION

• **PROPERTY INSURANCE (All Risks Coverage including Earthquake and Flood)**
INSURER _____ **Insured Values (Replacement Cost) -**
TYPE OF COVERAGE _____ Building and Tenants Improvement \$ _____
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 Tenant's 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 _____ *If vehicles are insured by ICBC, complete and provide Form APV-47.*

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** **Limits of Liability**
INSURER _____ Per Occurrence/Claim \$ _____
POLICY NUMBER _____ Aggregate \$ _____
POLICY PERIOD From _____ to _____ Deductible Per Occurrence/Claim \$ _____
If the policy is in a "Claims Made Form", please specify the applicable Retroactive Date: _____

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

SIGNED BY THE INSURER OR ITS AUTHORIZED REPRESENTATIVE

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

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART C - FORM OF TENDER

SCHEDULE I

PRELIMINARY TRAFFIC MANAGEMENT PLAN

Tenderers are to describe in this Schedule their proposed Traffic Management Plan, articulating how the requirements and constraints described in Part B -[Instruction to Tenderers], Part E [General Conditions], and Part F [Supplementary General Conditions. Tenderers are required to provide Changeable Message Signs (+/- 4 small 6'ft wide signs at no additional cost) at various locations to augment Traffic Plan as per City of Vancouver requirements.

SCHEDULE J

Name of Tenderer

FT 22

Initials

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART C - FORM OF TENDER

SUSTAINABILITY & ENVIRONMENTAL IMPACT

The City of Vancouver has a mandate to incorporate sustainability into all City operations as a "way of doing business". This means buying smart, upgrading to cleaner fleets, building social capacity, enacting bylaws that support sustainable best practices, implementing a sustainable economic strategy and protecting the environment.

Lowering the amount of energy used in buildings and on the road is currently a major part of protecting our environment. Thus, we have set emission reduction targets for our city operations as well as for our citizens. The City reduced greenhouse gas emissions from municipal operations to 33% below 1990 levels by changing how it runs its facilities, fleets and operations, and by implementing new bylaws.

Tenderers are to describe in this schedule their respective corporate policies and initiatives on sustainability and reducing environmental impact. Please include all relevant information and plans of action proposed for this project that will align with the City's directive. Some areas for consideration are listed below.

- ☐ Green House Gas Emissions
- ☐ Sustainable purchasing
- ☐ Employee commuting
- ☐ Reusing
- ☐ Recycling (% Reclaimed Asphalt Pavement)
- ☐ Disposing
- ☐ Storm water management

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART C - FORM OF TENDER

SCHEDULE K

TENDERER'S CHECKLIST

Before submitting your Tender, check the following points:

1. Has your Tender been signed, witnessed and sealed?
2. Have all pages of the Form of Tender been initialed?
3. Have you enclosed your Bid Bond?
4. Have you enclosed the Consent of Surety, signed and sealed by your proposed Surety?
5. Have you completed all Schedules (A-J) to the Form of Tender?
6. Have you completed the blanks in the Form of Tender to signify that all addenda issued have been taken into account in the preparation of the Tender?
7. Have you shown in the Form of Tender the time for completion of the Work?
8. Have you listed all your Subcontractors?
9. Have you listed your experience in similar work?
10. Have you listed your key staff?
11. Are the documents complete?
12. Have you completed Paragraph 7 of the Form of Tender regarding labour?
13. Have you reviewed with your insurer the insurance requirements in Clause 53 of the Part E - General Conditions portion of the Tender Documents?

NOTE: This Checklist is provided as an aid to the Tenderer. However, it is each Tenderer's sole responsibility to ensure the completeness of his/her Tender.

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART D - FORM OF AGREEMENT

FORM OF AGREEMENT

This AGREEMENT is made as of the ____ day of _____, 2010.

BETWEEN:

CITY OF VANCOUVER,

having an office at 320 - 507 West Broadway,
Vancouver, British Columbia, V5Z 0B4

(the "City")

OF THE FIRST PART

AND:

(Name of person, firm, or company)

(the "Contractor")

OF THE SECOND PART

WHEREAS:

- A. In [month/2010], the City issued an Invitation to tender (reference ITT No. PS10042) for the construction of various streets improvements in the City of Vancouver, called "Construction of PC Concrete Curbs, Gutters and Sidewalks and Asphalt Concrete Pavement on Sundry Streets";
- B. In response thereto, the Contractor submitted a Tender to the City (the "Tender")
- C. By resolution of its City Council made on [month/day/2010] the City approved the Tender.
- D. On that basis, the City and the Contractor have agreed that the Contractor will perform for the Work specified in the Contract Documents (as defined below), in accordance therewith.

THEREFORE, in consideration of the promises exchanged herein, the parties agree as follows:

ARTICLE I - CITY'S DESIGNATED REPRESENTATIVE

The City hereby designates and appoints Andreea Toma, P.Eng., (the "Engineer") as its sole and exclusive agent for the purpose of managing and administering the Contractor's performance of the Work. Unless the City otherwise notifies the Contractor in writing, the agency of the Engineer will continue for the entire duration of the Contract, including the periods of any guarantees and warranties given by or through the Contractor. If at anytime during that period the City revokes in writing the Engineer's agency hereunder, the Engineer will have no further authority in relation to the Work, except as may be specifically designated in writing by the City and agreed to in writing by the Engineer, and all references to the Engineer in the Agreement will thereafter be deemed to be a reference to the City or to such other person as the City may designate in writing to be substituted as the Engineer. The Engineer from time to time may delegate to a representative the performance of or the authority to perform the duties,

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART D - FORM OF AGREEMENT

responsibilities, rights and obligations of the City in respect of which the Engineer has been designated and appointed its sole and exclusive agent.

ARTICLE II - CONTRACT DOCUMENTS

The following is a list of the documents that contain the terms and conditions of the Contract (the "Contract Documents"). This list is subject to subsequent amendments in accordance with the provisions of the Contract Documents. Terms used anywhere in the Contract Documents that are defined in other parts of the Contract Documents will have the meanings given to them there.

- This Form of Agreement, as executed;
- Notice of Award delivered to Contractor;
- Notice to Proceed delivered to Contractor;
- Part B - Instructions to Tenderer's portion of the Tender Documents;
- Part C - Form of Tender portion of the Tender Documents, including, without limitation, all Schedules thereto, as completed by Tenderer;
- Part E - General Conditions portion of the Tender Documents;
- Appendix "A" to Part E General Conditions - Prime Contractor Agreement Form portion of the Tender Documents;
- Appendix "B" to Part E General Conditions - Certificate of Insurance
- Part F - Supplementary General Conditions portion of the Tender Documents;
- Part G - Supplemental Specifications and Drawings portion of the Tender Documents;
- Part H - Project Scope Drawings portion of the Tender Documents;
- Drawings and specifications for the Work bound separately;
- Performance Bond required under the Tender Documents;
- Labour and Materials Payment Bond required under the Tender Documents; and
- Any addenda to any Contract Documents.

The Contract Documents are complementary to each other, and what is called for by any one will be as binding as if called for by all. The intent and spirit of the Contract is that the Contractor is required to carry out the Work described in the Contract Documents in every detail within the times specified and for the purposes designated and the Contractor is required to furnish and do anything and everything necessary for such purposes notwithstanding any omission from the Contract Documents.

ARTICLE III - WORK

The Contractor will carry out the Work, and will furnish all materials, equipment, products, labour, services and supervision necessary to carry out the Work as specified in and in accordance with the Contract Documents.

The Contractor will carry out all Work to be performed and provided under the Contract in a proper and workmanlike manner and in accordance with the requirements of the Contract Documents.

ARTICLE IV - SCHEDULE OF WORK

- a) The Contractor will commence the Work in accordance with:
- the Notice of Award; and
 - the Notice to Proceed.

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART D - FORM OF AGREEMENT

The Contractor will proceed with the Work diligently, will perform the Work in accordance with the Construction Schedule as required by the Contract Documents and will:

- achieve substantial completion of Work on or before September 30, 2010; and
- achieve Total Performance of the Work by October 30, 2010.

(collectively, the "Contract Time"), subject to the provisions of the Contract Documents for adjustments to the Contract Time.

(b) Time shall be of the essence in this Contract.

ARTICLE V - PAYMENT

Subject to additions and deductions for variations in the Work as may be agreed upon in writing, and to the provisions of the Contract, the City will pay the Contractor as remuneration for the performance of the Work a maximum total of [____write out amount in full____] (\$0000.00), including, without limitation, all taxes and permit and license fees (the "Contract Price").

Applications for Payment:

- (a) During its performance of the Work, the Contractor may apply to the Engineer, in form approved by the Engineer, on or before the last day of every month, for payment for Work performed and materials supplied at or to the Work Site to the date of the application, provided that the Engineer may at any time require as a condition of payment the submission of documentation set out in the Part E General Conditions portion of the Contract Documents.
- (b) On Substantial Performance being certified in accordance with the procedures set out in the Part E -General Conditions portion of the Contract Documents and the value of the certified deficiencies being agreed upon, the Contractor may make application to the Engineer for the balance of all monies then owing to the Contractor under the Agreement, submitting also such documentation as is required under the Part E - General Conditions.
- (c) On correction and completion of all deficiencies listed on the Certificate of Substantial Completion, the Contractor will apply to the Engineer for final payment, accompanied by the documentation required by the Part E - General Conditions.

The City's payment to the Contractor for any Work under the Contract will not be construed as an acceptance of the Work as having been performed in accordance with the Contract Documents.

The City's issuance of a Certificate of Completion will constitute a waiver by the Contractor of all claims under the Contract, except those previously made in writing and still unsettled, if any, and specified by the Contractor in his application for final payment pursuant to subparagraph (c) above.

The City will make payments to the Contractor as follows for Work performed:

- (a) On or before the fifth day of the month following the Contractor's application for payment, the Engineer will adjust, if necessary, and certify the Contractor's progress estimate. Where the Engineer makes any changes to the amount submitted by the Contractor for

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART D - FORM OF AGREEMENT

payment, the Contractor will be notified in writing within five (5) Working Days and will be given the opportunity to defend his application without delay.

- (b) Within thirty (30) calendar days of the date the City receives any Engineer certified application for payment, the City will make payment to the Contractor up to the value of the completed Work as certified by the Engineer, less any holdback required under the *Builders Lien Act* and less the aggregate of any previous payments all in accordance with the Agreement.
- (c) The City, in addition to any other holdbacks as provided by the Contract Documents, will be entitled to deduct and retain from payments otherwise due to the Contractor for Work performed, a maintenance security holdback ("Maintenance Security") in the amount of five percent (5%) of the Contract Price to cover the cost of corrections to the Work that may be required under the Part E - General Conditions. The balance of the Maintenance Security not required under the Maintenance Security remaining at the end of the warranty period for the Work as provided for in the Contract, will be paid without interest to the Contractor at the end of that warranty period. The Contractor may substitute a letter of credit for the Maintenance Security, in the amount of the Maintenance Security held back and required under the Contract, in a form and from a financial institution acceptable to the City.
- (d) Where the Engineer has issued a Certificate of Completion in respect of any of the Work performed by subcontractors, and where fifty-five (55) calendar days have elapsed since the issuance of the certificate without any claims of builders lien being filed which arose under the subcontract, the City will release to the Contractor any *Builders Lien Act* holdback amount retained for such subcontract work.
- (e) After fifty-five (55) calendar days have elapsed from the date of issuance of a Certificate of Substantial Completion in accordance with Part E - General Conditions part of the Contract Documents, and upon the Engineer's satisfaction that no encumbrance, lawful claim or lien exists, the City, within a further ten (10) calendar days, will make payment to the Contractor of all monies due under the Contract at the date of Substantial Performance of the Work, including the release of any remaining *Builders Lien Act* holdback amounts, but retaining at least twice the estimated value of any certified deficiencies.
- (f) Subject to all other provisions of the Contract, upon the issuance of a Certificate of Completion, the City will make a final payment of all monies owing to the Contractor under the Contract.

Where payment is not made in accordance with the payment provisions above, the overdue amount will bear interest at the lending rate of the Bank of Montreal for its prime commercial customers and such interest will be calculated from and after the date upon which such payment is due and will accrue until the date of payment of the overdue amount, together with accrued interest. This interest obligation on the part of the City will be the sole remedy of the Contractor for any late payment under the Contract.

ARTICLE VI - DAMAGES FOR DELAYS

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART D - FORM OF AGREEMENT

Liquidated Damages for Late Completion. If the Contractor fails to meet the milestone date for Substantial Performance as set out above herein, as may be modified pursuant to the provisions of the Contract Documents, then the Owner may deduct from any monies owing to the Contractor for the work:

- (a) as a genuine pre-estimate of the Owner's increased costs for the Owner's Engineer and staff caused by such delay, an amount of CDN \$1,000.00 per day; plus
- (b) all direct out-of-pocket costs, such as, without limitation, costs for safety or security measures taken or equipment rented, reasonably incurred by the City as a result of such delay.

If monies owing to the Contractor are less than the total amount of liquidated damages owed by the Contractor to the City under subparagraph (a) above, then any such shortfall will be due and owing to the City from the Contractor immediately on written notice from the City therefore and upon Substantial Performance of the Work.

ARTICLE VII - NOTICES TO CITY

Unless otherwise specifically provided in the Contract Documents all notices, requests, claims or other communications by the Contractor will be in writing and will be given by personal delivery or by registered mail addressed to the:

Owner:

CITY OF VANCOUVER
Engineering Services
320 - 507 West Broadway
Vancouver, British Columbia
V5Z 0B4

Attention: [], Engineering Services

Any such notices, instructions, orders, requests or other communications sent by mail as aforesaid will be deemed to have been given on the second Working Day following the mailing thereof.

ARTICLE VIII - SUCCESSORS AND ASSIGNS

The Agreement will be binding upon and will ensure to the benefit of the successors and assigns of the respective parties hereto.

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART D - FORM OF AGREEMENT

IN WITNESS WHEREOF the parties hereto have set their hands and seals as of the day and year first above written.

CITY OF VANCOUVER

BY:

Print Name and Title

CONTRACTOR

BY: _____ C/S
Authorized Signatory

Print Name and Title

Refer to Council Minutes of _____, 2010.

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART E - GENERAL CONDITIONS

TABLE OF CONTENTS

GC NO.

GC.1.	DEFINITIONS
GC.2.	INTERPRETATION
GC.3.	PERSONAL EXAMINATION
GC.4.	CONTRACT AMOUNT
GC.5.	PERFORMANCE BOND
GC.6.	LABOUR AND MATERIALS PAYMENT BOND
GC.7.	WORKSAFE BC COVERAGE AND CONTRACTOR TO BE PRIME CONTRACTOR
GC.8.	LABOUR
GC.9.	COMMENCEMENT AND COMPLETION OF THE WORK
GC.10.	DELAY IN PROGRESS OF THE WORK
GC.11.	SPECIFICATIONS AND DRAWINGS
GC.12.	SHOP DRAWINGS
GC.13.	RECORD PLANS
GC.14.	ENGINEER SOLE JUDGE
GC.15.	ENGINEER'S ABSENCE
GC.16.	ACCESS AND ASSISTANCE
GC.17.	COMMUNICATIONS WITH CONTRACTOR
GC.18.	CONTRACTOR'S SUPERINTENDENT AND EMPLOYEES
GC.19.	INSPECTION OF WORK
GC.20.	DAILY REPORT
GC.21.	WEEKLY MEETINGS
GC.22.	CONSTRUCTION SCHEDULE
GC.23.	MAINTENANCE OF SCHEDULE
GC.24.	EMERGENCIES
GC.25.	SUBCONTRACTORS AND SUPPLIERS
GC.26.	CONTRACTOR'S PLANT AND UTILITIES
GC.27.	PLANT, LABOUR AND MATERIALS
GC.28.	MATERIAL AND EQUIPMENT SUPPLIED BY THE CONTRACTOR
GC.29.	MATERIAL IN IMPERIAL UNITS
GC.30.	SUPPLY OF MATERIALS BY THE CITY
GC.31.	TEMPORARY STRUCTURES
GC.32.	WORK AREAS AND CONTRACT LIMITS
GC.33.	OFFICE FACILITIES FOR THE ENGINEER [Intentionally Deleted]
GC.34.	STORAGE AREAS
GC.35.	HOURS OF WORK
GC.36.	TRAFFIC CONTROL
GC.37.	PUBLIC CONVENIENCE
GC.38.	ACCESS TO EXISTING STRUCTURES
GC.39.	PROTECTION OF WORK AND PROPERTY
GC.40.	FIRE, SECURITY AND SAFETY REGULATIONS
GC.41.	OVERLOADING
GC.42.	DRAINAGE
GC.43.	CLEANING UP
GC.44.	SAFEGUARDING EXISTING PROPERTY
GC.45.	EXISTING UTILITIES

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART E - GENERAL CONDITIONS

- GC.46. DUST CONTROL
- GC.47. ALTERATIONS, EXTRAS, DEDUCTIONS & CLAIMS
- GC.48. ERRORS BY CONTRACTOR
- GC.49. TESTING OF MATERIALS
- GC.50. DEFECTIVE WORK
- GC.51. WARRANTY
- GC.52. CONTRACTOR'S LIABILITY
- GC.53. INSURANCE BY THE CONTRACTOR
- GC.54. WORKSAFE BC ASSESSMENTS
- GC.55. CLAIMS FOR WAGES
- GC.56. LIENS
- GC.57. PATENT INFRINGEMENT
- GC.58. MONEY DUE TO OWNER
- GC.59. ASSIGNMENT
- GC.60. CERTIFICATES AND PAYMENTS
- GC.61. TERMINATION OF CONTRACT WITHOUT DEFAULT OF CONTRACTOR
- GC.62. TERMINATION OF CONTRACT FOR CONTRACTOR'S DEFAULT
- GC.63. SUBMITTALS
- GC.64. HARMONIZED SALES TAX ("HST") - PROVINCIAL SALES TAX ("PST")
AND FEDERAL GOOD AND SERVICES TAX ("GST") HARMONIZATION
- GC.65. NON-RESIDENT WITHHOLDING TAX

Appendix A - Prime Contractor Agreement Form (4)

Appendix B - Certificate of Project Specific Insurance (1)

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART E - GENERAL CONDITIONS

GC.1. DEFINITIONS

Where used in the Form of Agreement, Invitation to Tender, Instructions to Tenderers, Form of Tender (including the Schedules), Bonds, General Conditions, Supplementary General Conditions, Specifications and Drawings, or Addenda (if any), or any other documents forming part of the Contract Documents:

“Approved Equipment Rental Rate Guide” means the publication (as revised from time to time) which is listed on <http://www.roadbuilders.bc.ca/bluebook.php>.

“AC” means asphalt cement;

“Certificate of Insurance” means, subject always to Section 53 of the General Conditions, a certificate of insurance duly completed by the Contractor’s insurers or insurance brokers, substantially on the form attached as Schedule “H” of the Contract Documents;

“Certificate of Substantial Performance” means, subject always to Article V(c) of the Form of Agreement and to the warranty under GC.51, the certificate issued by the Engineer indicating that Substantial Performance of the Work has been achieved. Under no circumstances will issuance of the Certificate of Substantial Performance be deemed to mean that the Owner has accepted the Work as being in compliance with the Contract Documents;

“Certificate of Total Performance” means subject always to Article V(c) of the Form of Agreement and to the warranty under GC.51, a certificate issued by the Engineer accepting the Contractor’s certification that the entire Work of the Contract has been performed by the Contractor to the requirements of the Contract Documents;

“City” or “Owner” means the City of Vancouver, a municipal corporation continued pursuant to the *Vancouver Charter*, acting in its capacity as the owner of 41st Avenue, but expressly excludes the City of Vancouver, acting in its regulatory capacity;

“Construction Schedule” has the meaning set out in Section 22 of these General Conditions;

“Contract Documents” means the documents set out in Article II of the Agreement;

“Contract Price” means the price, as set out in the Form of Agreement as executed by the City and the Contractor, that the City agrees to pay the Contractor for full performance of the Work;

“Drawings” means all plans, profiles, drawings, sketches, or copies thereof exhibited, used or prepared for or in connection with the Work embraced under this Contract;

“Engineer” means the Engineer as defined in the Agreement or his delegate, who may be an employee of the City or an independent engineer engaged by the City on its behalf;

“Environmental Legislation” means any laws, statutes, regulations, orders, bylaws, permits or lawful requirements of any governmental authority with respect to environmental protection;

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART E - GENERAL CONDITIONS

"Force Account Work" means work directed by the Owner pursuant to General Condition 47.

"Notice of Award" has the meaning set out in paragraph 2 of the Form of Tender;

"Notice to Proceed" has the meaning set out in paragraph 3 of the Form of Tender;

"Other contractors" means any person, firm or corporation employed by or having a contract with the Owner and/or associated parties otherwise than through the Contractor;

"PC" means Portland cement;

"Plant" means every temporary or accessory means necessary or required to carry on or complete the Work and extra work, in the time and manner herein provided including, without limiting the generality of the foregoing, all tools, fixed and moveable machinery, engines, motor vehicles, trucks, compressors, all temporary structures such as workshops, sheds, storehouses, shoring forms, trestles and hoardings and all other appliances, apparatus or equipment of every sort, kind and description whatsoever;

"Products" means material (including, but not limited to 115RE rail, concrete ties, Pandrol e-clips, insulators, pads, ballast, sub ballast, soils, site furnishings, machinery, equipment, goods and fixtures) incorporated or to be incorporated in the Work as required by the Contract Documents;

"Site" means the place or places where the Work under the Contract is to be carried out, erected, built or constructed;

"Specifications" means all specifications for the Work as shown, described and/or referred to in the Tender/Contract Documents

"Subcontractor" means the person or persons with whom the Contractor has made an agreement to perform a portion or portions of the Work or to supply Products therefor;

"Substantial Performance" and "Substantial Completion" means that the Contract is "substantially performed/completed" in accordance with the criteria set out in Section 1(2) of the *Builders Lien Act*;

"Surety" means the company which executes a bond required by the Contract to be furnished to the Owner;

"Total Performance" and "Total Completion" means when all the Work, including all deficiencies but excluding any correction of completed Work that appears during the Warranty period or other on-going warranty or guarantee as provided by the Contract Documents, has been performed as required by the Contract Documents, as certified by the Engineer;

"Traffic Management Plan" has the meaning set out in Section 36 of these General Conditions;

"Vancouver Park Board" means the City as represented by its Board of Parks and Recreation;

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART E - GENERAL CONDITIONS

"WCB" means the Workers Compensation Board established and functioning pursuant to the *Workers Compensation Act* (British Columbia) (the "WCA"), as amended, and/or related or successor legislation, and any successors in function thereto now referred to as "WorkSafe BC";

"WorkSafe BC/OHS Regulation" means the *WCA*, and all regulations thereto, including, without limitation, the Occupational Health & Safety Regulation (BC Regulation 296/97, as amended by BC Regulation 185/99), as amended or re-enacted from time to time;

"Work" or "Works" means (unless the context requires a different meaning) the whole of the Work as defined in the Form of Tender, including all materials, matters, Products and things required to be done or supplied therefor, and all work(s) mentioned or referred to in the Contract Documents, including all extra or additional work or materials, matters or things which may be ordered by the Owner or the Engineer as herein provided;

"Work Site" means the place or places on and about the City property where the Work is to be carried out;

"Working Day" means any day other than a Saturday, Sunday or "holiday" as defined in the *Interpretation Act* (British Columbia).

GC.2. INTERPRETATION

In this Contract, the masculine includes the feminine and bodies corporate, and each includes the others. Also, any reference to the singular includes the plural where appropriate.

Drawings and Specifications are intended to be complementary. Should any difference exist between the Drawings and Specifications, or should any errors or inconsistency occur in any or between any of the Drawings and Specifications, the Contractor, before proceeding, shall bring them to the attention of the Engineer.

The Engineer will furnish from time to time such detail drawings and information as the Engineer may consider necessary for the Contractor's guidance. These detail drawings shall take precedence over Contract Drawings and shall be considered as explanatory of them and not as indicating changes in the Work.

On all Drawings, figures take precedence over scaled dimensions. Scaling of dimensions, if done, is done at the Contractor's own risk. Despite the above, in the event of any inconsistency between the Drawings and Specifications or between any other Contract Documents or within any Contract Documents which could be construed as creating an ambiguity in the amount of Work involved, the cost or amount of Product being supplied, the Contract Amount being lower or higher, or any other similar discrepancy or inconsistency, the discrepancy or conflict will be resolved as follows:

- a) the portion of the Contract Documents most favourable to the Owner will be deemed to be correct;
- b) the more specific provision will take precedence over the less specific;

**INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART E - GENERAL CONDITIONS**

- c) the more stringent will take precedence over the less stringent; and
- d) the more expensive item will take precedence over the less expensive.

GC.3. PERSONAL EXAMINATION

The Contractor is required to examine carefully the site of the proposed Work, and the Drawings, Tables, Specifications and other Contract Documents. The Contractor shall satisfy himself as to the character, quality and quantity of work to be performed, materials to be furnished, and as to the requirements of the Drawings, Specifications and other Contract Documents. The Drawings and Tables show or describe conditions as they are believed by the Engineer to exist, but it is not to be inferred that all of the conditions as shown thereon are actually existent, nor shall the Owner or any of its respective officers be liable for any loss sustained by the Contractor as a result of any variance between the conditions as stated in the Drawings, Tables, or other Contract Documents and the actual conditions revealed during the progress of the Work, or otherwise.

The submission of a tender shall be prima facie evidence that the Contractor has made such an examination. The Contractor agrees that the Contractor has satisfied him/herself by the Contractor's own investigation and research regarding all conditions, that the Contractor's conclusion to enter into the proposed contract is based upon such investigation and that the Contractor will make no claim against the Owner or the Engineer because any of the estimates, tests or representations of any kind affecting the Work made by any officer or agent of the Owner or the Engineer may prove to be in any respect erroneous. The Contractor assumes the risk of unforeseen conditions and agrees to complete the Work under whatever circumstances that may develop. Any information shown or described in the Drawings, Tables, Specifications or any other Contract Documents as to the soil or material borings or tests of existing material is not guaranteed, and no claim for extra work or damages will be considered if it is found during construction that the actual soil or material conditions vary from those indicated.

GC.4. CONTRACT AMOUNT

Bids shall include all Federal, Provincial and Municipal fees and other taxes, rates and assessments, and the Contractor agrees that the Owner shall not be liable in any manner therefor and the Contractor agrees to indemnify and save harmless at all times the Owner against all claims which shall be made with respect thereto. All such taxes, rates, assessments and fees shall be paid by the Contractor, but if refundable, shall be refunded to the City and shall be the exclusive property of the City.

The Contractor shall include in the Contract Amount all cash allowances mentioned in the Specifications, if any, which allowances shall be expended in the whole or in part as the Engineer shall direct, the Contract Amount being adjusted in conformity therewith. The Contract Amount includes such sums for expenses and profit on account of such cash allowances as the Contractor requires.

GC.5. PERFORMANCE BOND

**INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART E - GENERAL CONDITIONS**

The Contractor, together with a surety company authorized to carry on business in the Province of British Columbia, shall be required to enter into a bond in a form satisfactory to the Engineer for a sum equal to fifty per cent (50%) of the Contract Amount as surety for the due and proper performance of the Contract including warranty. The expense of the bond shall be borne by the Contractor.

GC.6. LABOUR AND MATERIALS PAYMENT BOND

The Contractor, together with a surety company authorized to carry on business in the Province of British Columbia, shall be required to enter into a bond in a form satisfactory to the Engineer for a sum equal to fifty percent (50%) of the Contract Amount as surety for the due and proper payment for material and labour used in carrying out the Contract. The expense of the bond shall be borne by the Contractor.

GC.7. WORKSAFE BC COVERAGE AND CONTRACTOR TO BE PRIME CONTRACTOR

- a) **Payment of WorkSafe BC (WCB) Assessments** - The Contractor agrees that it shall at its own expense procure and carry or cause to be procured and carried and paid for, full WorkSafe BC coverage for itself and all workers, employees, servants and others engaged in or upon any work or service which is the subject of this Contract. The Contractor agrees that the City has the unfettered right to set off the amount of the unpaid premiums and assessments for such WorkSafe BC coverage against any monies owing by the City to the Contractor. The City shall have the right to withhold payment under this Contract until the WorkSafe BC premiums, assessments or penalties in respect of work done or service performed in fulfilling this Contract have been paid in full.
- b) **Designation of Contractor as Prime Contractor** - The City now designates the Contractor as the Prime Contractor, and the Contractor now acknowledges and agrees to its designation as the Prime Contractor, for the purposes of the WorkSafe BC OH&S Regulation.
- c) **Prime Contractor's Obligations** - Without in any way limiting the Contractor's obligations under the WorkSafe BC / OH&S Regulation, and by way of example only, the Contractor will:
 - i) appoint and provide a qualified coordinator for the purpose of ensuring the coordination of health and safety activities for the Site;
 - ii) provide and receive and respond to all information required to be given, received or relayed by the Contractor (both as an employer and as the Prime Contractor) pursuant to the WorkSafe BC / OH&S Regulation; and
 - iii) within five (5) Working Days of the City delivering the Contract Documents to the Contractor, sign and deliver to the City, the "Prime Contractor Agreement" in the form shown as Appendix "A" to these General Conditions.
- d) **General WorkSafe BC Obligations** - In addition to, and not in lieu of, the Contractor's obligations as the Prime Contractor, the Contractor will have a safety program acceptable to WorkSafe BC and will ensure that all City and WorkSafe BC safety policies,

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART E - GENERAL CONDITIONS

rules and regulations are observed during performance of this Contract, not only by the Contractor but by all Subcontractors, workers, material suppliers and others engaged in the performance of this Contract.

- e) Notice of Project - Prior to commencement of construction, the Contractor will:
 - i) complete and file a "Notice of Project" with WorkSafe BC in compliance with Section 20.2 of the WorkSafe BC / OH&S Regulation;
 - ii) post the Notice of Project at the Site; and
 - iii) will provide a copy of the Notice of Project to the City and confirm in writing that the Notice of Project has been posted at the Site.
- f) Initial Proof of WorkSafe BC Registration/Good Standing - Within five (5) Working Days of the City delivering the Notice of Award to the Contractor, the Contractor will provide the City with the Contractor's and all Subcontractor's WorkSafe BC registration numbers.
- g) Subsequent Proof of WorkSafe BC Registration/Good Standing - Within five (5) Working Days of the City delivering the Notice of Award to the Contractor, and concurrently with making any application for payment under this Contract, the Contractor will provide the City with written confirmation that the Contractor and all Subcontractors are registered in good standing with WorkSafe BC and that all assessments have been paid to date of the Notice of Award or date of application for payment, as applicable.
- h) Pre-Contract Hazard Assessment - The Contractor may or may not have received, as part of the Contract Documents, a "Pre-Contract Hazard Assessment" prepared by or for the City pursuant to the City's statutory obligations under the WorkSafe BC / OH&S Regulation (Section 119 of the WCA) as an "owner of a workplace". Despite the City's statutory obligations, the Prime Contractor now acknowledges and agrees that the Contractor may not rely on the "Pre-Contract Hazard Assessment" and now agrees to assume by the terms of this Contract full responsibility for carrying out the City's obligations under Section 119 of the WCA, including without limitation and by way of example only, conducting all due diligence inquiries of all applicable City staff and departments in order to ascertain what, if any, information is known or has been recorded by City staff about the Site that is necessary to identify and eliminate or control hazards to the health or safety of persons at the Site. The City now agrees to make all reasonable efforts to assist the Contractor in obtaining timely access to City staff and City records for this purpose. Within five (5) Working Days of the City delivering the Notice of Award to the Contractor, the Contractor will start conducting such due diligence inquiries and must complete and deliver written confirmation of the completion of such inquiries to the Engineer prior to the City being obligated to issue the Notice to Proceed.
- i) Special Indemnity Against WorkSafe BC Non-Compliance - The Contractor 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:

**INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART E - GENERAL CONDITIONS**

- i) unpaid WorkSafe BC assessments of the Contractor or any other employer for whom the Contractor is responsible under this Contract;
 - ii) the acts or omissions of any person engaged directly or indirectly by the Contractor in the performance of this Contract, or for whom the Contractor is liable pursuant to the Contractor's obligations as the Prime Contractor, and which acts or omissions are or are alleged by WorkSafe BC to constitute a breach of the WorkSafe BC / OH&S Regulation or other failure to observe safety rules, regulations and practices of WorkSafe BC, including any and all fines and penalties levied by WorkSafe BC; or
 - iii) any breach of the Contractor's obligations under this General Condition.
- j) Prime Contractor Agreement Form - The Contractor must complete and sign and deliver the Prime Contractor Agreement in the form set out in Appendix A prior to commencing work on the Site.

GC.8. LABOUR

The Contractor agrees to employ appropriate tradesmen on the Work. Where the tradesmen are covered by collective agreements, the Contractor shall abide by the wages and conditions of such collective agreements covering such tradesmen. Notwithstanding the foregoing, the Contractor shall pay or cause to be paid to every person employed on the Work not less than the wages or remuneration generally accepted as current at the time.

The Contractor shall endeavour to avoid labour problems and minimize work stoppages, jurisdictional or other labour disputes on the Site.

GC.9. COMMENCEMENT AND COMPLETION OF THE WORK

The Contractor shall not commence the Work or procure any material therefor until it has received the Notice to Proceed from the Owner. Forthwith after the receipt of the Notice to Proceed, the Contractor shall at once begin and continuously carry on to completion (subject as herein provided) and shall complete and give full possession thereof on or before the date specified by the Contractor in her tender, unless a longer period shall be allowed in writing by the Engineer in which case it shall be carried on to completion and possession given to the Owner within the additional time so allowed. No progress or interim estimate or certificate shall release the Contractor or its surety from any responsibility or shall be taken as evidence of any such release, or as an acceptance of any Work or material, or as a waiver of any condition herein. The whole Work and every portion and detail thereof shall, at the time of completion, be put and left by the Contractor in good and satisfactory condition, finished in all respects and at the time must be fully up to the requirements of the Drawings and Specifications in every particular aspect; all surplus and refuse material and rubbish removed from the vicinity of the Work; the premises left in a neat and tidy condition; all damages to adjacent property, including pavements, foot walks, boulevards, sodding, trees, shrubs and plants, or other things injured or interfered with by the Contractor, or in any way due to her work, made good; all wages paid, and every other requirement of the Contract complied with. In case of the Contractor's failure to finish the Work properly and fully, and as required, or in case of the Work or any part thereof being taken out of her hands, as provided in these

**INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART E - GENERAL CONDITIONS**

General Conditions, the Owner may proceed to finish the Work for the Contractor as her agent in this respect and at the Contractor's expense or proceed as provided in GC.62.

Before the completed Work is accepted and paid for, the Contractor shall notify the Engineer in writing that it is ready for final inspection. Upon receipt of the notifications, the Engineer will arrange to give the entire Work a minute and thorough inspection, either in person or through a competent representative.

Any defects or omissions noted during this inspection must be made good by the Contractor without extra charge before the Work will be accepted.

When the defects or omissions, if any, have been made good to the satisfaction of the Engineer, the Engineer will communicate the Engineer's acceptance of the Work, to the Owner, subject always to Article V - Form of Agreement and to the Contractor's warranty obligations.

GC.10. DELAY IN PROGRESS OF THE WORK

a) Delays

- i) If the Contractor is delayed in the performance of the Work by an act, omission or wilful default of the Owner, or the Engineer, or anyone employed or engaged by them, contrary to the provisions of the Contract Documents, then the time fixed herein for completion shall be extended for such reasonable time as the Engineer may decide.
- ii) If the Contractor is delayed in the performance of the Work by a Stop Work Order issued by a court or other public authority and provided that such Stop Work Order was not issued as the result of an act or fault of the Contractor or anyone employed or engaged by him directly or indirectly, then the time fixed for completion herein shall be extended for such reasonable time as the Engineer may decide.
- iii) If the Contractor is delayed in the performance of the Work by labour strikes, fire, or by 'unforeseeable causes beyond the Contractor's control, then the time fixed for completion herein shall be extended for such reasonable time as the Engineer may decide, but in no case shall the extension of time be less than the time lost as the result of the event causing the delay, unless such shorter extension be agreed to by the Contractor. The Contractor shall not be entitled to payment for any costs, loss, or damages incurred as the result of such delay.
- iv) The Engineer may, from time to time and for such period as the Engineer may deem expedient, suspend in whole or in part, the performance of the Work under the Contract, and the Engineer will order the time herein fixed for the completion of the Work to be extended for a period which is deemed by the Engineer equivalent to the time lost by reason of such suspension.
- v) No extension shall be made for delay unless written notice of claim is given to the Engineer not later than seven (7) calendar days after the commencement of delay,

**INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART E - GENERAL CONDITIONS**

providing however, that in the case of a continuing cause of delay only one notice of claim shall be necessary.

vi) In the event that the Work is delayed or suspended in accordance with:

- paragraphs (a)(i) or (iv) of this GC.10, the Contractor shall not be entitled to make any claim by reason of such delay or suspension for any losses, costs of damages except and unless, within seven (7) calendar days of the occurrence of such delay or suspension the Contractor shall give notice in writing to the Engineer of the basis of her claim. Such claim shall be limited to such unavoidable direct costs (excluding all charges for storage of Products, tools and equipment and indirect, overhead or other like costs) incurred as a result of such delay or suspension, and approved by the Engineer. In the case of a delay as described in paragraph (a)(i) or a suspension pursuant to paragraph (a)(iv), a sum equal to five percent (5%) of such approved, unavoidable direct costs (in lieu of all profit) shall also be allowed. Despite any other term of this Contract, in no event will the City's liability for any delay claim (whether under this GC.10 or otherwise, at law or in equity, in contract or in tort) exceed the lesser of \$500.00 for each Working Day of delay or 2% of the Contract Amount. All unavoidable direct costs claimed by the Contractor must be submitted and substantiated to the Engineer for verification on a weekly basis as incurred, failing which, they shall not be considered nor payable by the City. Authorization for any payment of the claim shall only be given by written Work Order, duly signed and issued by the Engineer; and
- paragraphs (a)(ii) or (a)(iii), the Contractor shall not be entitled to payment for any costs, loss, or damages incurred as the result of such delay and despite any other term of this Contract, the City will incur no liability for any such delay claim whether or not such claim is brought at law or in equity, contract or tort, or any other basis.

b) Non-Avoidance

No delay or suspension described in this GC.10 shall vitiate or avoid the Contract, or any part thereof, or any security or obligation for the performance thereof, unless the City elects to the contrary.

c) Resumption of Work

At the end of such delay or suspension, or upon the removal of the cause thereof, or upon the Contractor receiving notice from the Engineer requiring the resumption of work, the Contractor shall at once resume the performance of the Work and diligently carry on the same under the direction of the Engineer.

d) Continuance of Work After Time Fixed for Completion

The Contractor shall not construe any direct or inferred permission to continue work after expiry of time for completion of the Work, as stipulated in the Contract or as

**INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART E - GENERAL CONDITIONS**

amended by the order of the Engineer, as a waiver of damages for non-compliance with the requirement for the completion of the Work by or within such time. The Engineer may withhold such amounts from amounts otherwise due to the Contractor as the Engineer deems necessary to satisfy claims by the Engineer, the City, or by Other contractors caused by such non-compliance with the requirement for the completion of the Work by or within such time.

GC.11. SPECIFICATIONS AND DRAWINGS

The Contractor shall keep in its field office and available to the Engineer a complete set of the Specifications and Drawings, and of any further drawings which may from time to time be supplied or approved by the Engineer. The Contractor shall be supplied with five (5) sets of Specifications.

Wherever standard Specifications are referred to, they shall be the latest edition of those Specifications and they shall be considered to be a part of the Contract.

The Contractor will be supplied with five (5) prints of each of the Drawings and the Contractor must satisfy itself as to the accuracy of the said copies in every detail. Any additional copies desired will be furnished by the Engineer at cost to the Contractor.

The Drawings forming part of the Contract are intended to show the position and extent of the works, the general features of the design and construction, and the dimensions and proportions of all principal parts, but neither they nor the Specifications are guaranteed to show or describe every part or detail of the Work; anything omitted from the Drawings and Specifications, which may fairly be considered to be necessary for the proper execution and completion of the Work, shall be deemed to be included in the Contract.

Anything whatever which may be imperfectly specified or imperfectly shown on the Drawings, must be taken, considered and done as if it were perfectly shown and perfectly specified.

All dimensions on the Drawings, except as noted thereon, are shown in metric units.

The Engineer may from time to time issue further drawings or revised drawings as the Engineer deems necessary and such drawings shall be deemed to form part of the Contract. All sets of Drawings and Specifications shall be kept up to date at all times utilizing the Engineer's revised drawings and other documents issued to the Contractor.

All Drawings, Specifications, model and copies thereof furnished by the Engineer are and shall remain the Engineer's property. Such documents and models are to be used only with respect to the Work, are not to be copied or revised in any manner without the written authorization of the Engineer and are to be returned to the Engineer on request at the completion of the Work.

GC.12. SHOP DRAWINGS

- a) The Contractor shall submit, with such promptness so as to cause no delay in his work, or that of any Other contractor, one (1) sepia and one (1) copy of all shop or setting drawings and schedules required for the Work of the Contractor, and the Engineer shall

**INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART E - GENERAL CONDITIONS**

pass upon them with reasonable promptness. The Contractor shall make any corrections required by the Engineer, and file with him one (1) sepia and one (1) copy.

- b) The Engineer's review of shop drawings or schedules shall not relieve the Contractor from responsibility for deviations from Drawings and Specifications unless the Contractor has in writing called the Engineer's attention to such deviation at the time of submission, nor shall it relieve the Contractor from the responsibility for errors of any sort in shop drawings or schedules.

GC.13. RECORD PLANS

The Contractor shall supply the Engineer with three (3) complete sets of "as constructed record plans" of the Work, on or before the date the Contractor makes application to the Engineer for a Certificate of Substantial Performance.

GC.14. ENGINEER SOLE JUDGE

Should any discrepancies appear or difference of opinion or misunderstanding arise as to the meaning of the Contract Documents, or as to any omissions therefrom, or misstatements therein, in any respect, or as to quality or dimensions or sufficiency of materials, Products, Plant or Work, or any part thereof, or as to the due and proper execution of the Work, or as to the measurement of quantity or valuation of any Work executed or to be executed under the Contract or as to extras thereupon, or deductions therefrom, or as to any other questions or matters arising out of the Contract, the same shall be determined by the Engineer and the Engineer's decisions shall be final and binding upon all parties concerned, and from it there shall be no appeal; and the Contractor shall immediately, when ordered by the Engineer, proceed with and execute the Work, or any part thereof, forthwith, according to such decision, and with such additions to or deductions from the Contract Amount as are provided under the terms of the Contract, without making any claim for any extension of time in completing the Contract or the Work, unless arranged for in writing with the Engineer as provided herein.

In all cases of misunderstanding and disputes, oral arrangements will not be considered, and the Contractor must produce written authority in support of her contentions, and shall advance no claim in the absence of such written authority, or use, or attempt to use, any conversation with any person whomsoever against the Engineer or the Owner or in prosecuting any claim against any of them.

GC.15. ENGINEER'S ABSENCE

In the absence of the Engineer, any of the Engineer's assistants whom the Engineer may designate to supervise the Work, shall have (subject to the instructions of the Engineer) full power to decide as to the manner of conducting and executing the Work in every particular aspect, and the Contractor shall follow the instructions or orders of the person so designated.

**INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART E - GENERAL CONDITIONS**

GC.16. ACCESS AND ASSISTANCE

The Contractor shall furnish the Engineer and any of the Engineer's assistants at all times with convenient means of access to all parts of the Work, and also with all required assistance, to facilitate thorough examination of the same, and inspection, culling or removal of doubtful or defective material or Products and for any other purpose required in connection with the Work, or in the discharge of their respective duties, for which service no additional allowance will be made.

GC.17. COMMUNICATIONS WITH CONTRACTOR

At all times during the performance of the Work, the Contractor will maintain within the Greater Vancouver area an office equipped with a telephone and staffed at all times on all Working Days between 8:30 a.m. and 4:30 p.m. with a representative of the Contractor authorized to act on its behalf in connection with the Work and the Contract.

Before commencement of construction, the Contractor will provide the Engineer with a list of at least three persons with authority to act on the Contractor's behalf in times of emergency in connection with the Work, at least one of whom will be available at all times 24 hours per day after commencement of the Work until completion thereof.

Any notice or communication to the Contractor pursuant to the Contract will be deemed to be well and sufficiently given, delivered and received by the Contractor if handed to the Contractor or any of the Contractor's apparent representatives, if the Contractor is an individual, or to any of its apparent representatives, if it is not an individual, or if mailed or sent to the Contractor at the address set out in its Tender, or to its place of business, if that is different from the address given there, or left for the Contractor at any Work site or by fax or e-mail to the Contractor's fax number or email address as set out in the Tender.

In any written or printed notice the City gives communicating to the Contractor regarding requirements for the Work or otherwise in connection with the Work or the Contract, the City will not be obligated to specify minutely or in detail everything required, or to specify by measurement the exact extent thereof, or the precise spot or spots where the Work, material or Products that may be defective, or where any of the Specifications have not been observed, but a reference in such notice to the clause or clauses bearing upon the matter, and a description of the locality in general terms and sufficiently clear, in the Engineer's opinion, to indicate where the defects or trouble exists, will be deemed to be and will be ample notice.

GC.18. CONTRACTOR'S SUPERINTENDENT AND EMPLOYEES

The Contractor shall keep on the Site, during the progress of the Work, a competent superintendent and any necessary assistants, all satisfactory to the Engineer. The superintendent shall not be changed except with the consent of the Engineer, unless the superintendent proves to be unsatisfactory to the Contractor and ceases to be in her employ. The superintendent shall represent the Contractor in the Contractor's absence and directions

**INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART E - GENERAL CONDITIONS**

on minor matters given to the superintendent shall be held to be given to the Contractor. Important decisions shall be given in writing to the Contractor. The Contractor shall give efficient supervision to the Work, using her best skill and attention.

Should any person employed on the Site, or in connection therewith, give any just cause for complaint, the Engineer may require that such person be replaced forthwith, and such person shall not be again employed by the Contractor on the Site without the consent, in writing, of the Engineer.

GC.19. INSPECTION OF WORK

The Engineer may appoint inspectors or surveyors to inspect all materials used, Products made and all Work done. Such inspections may extend to any or all parts of the Work and to the preparation or manufacture of the Products to be used whether on Site or elsewhere. Inspectors and surveyors are not authorized to revoke, alter, enlarge or accept any portion of the Work or to issue instructions contrary to the Drawings and Specifications.

GC.20. DAILY REPORT

The Engineer may choose to maintain, in detail, a daily report to record progress of the Work, the number of personnel at the Site, the materials delivered to the Site, and all such other items which the Engineer deems necessary to record. The daily reports will be kept in the Engineer's Site Office and the Contractor or the Contractor's representative shall be required to read and sign each report. In case of differences of opinion between the Engineer and the Contractor regarding the particulars stated in the daily report, the Contractor shall, within 7 calendar days, give notice in writing to the Engineer expounding such difference.

GC.21. WEEKLY MEETINGS

The Contractor shall meet weekly with the Engineer on the Site to discuss work done in the previous week, and work proposed to be done in the week just starting, and as requested by the Engineer during the course of the Work.

GC.22. CONSTRUCTION SCHEDULE

Within 5 Working Days of receipt of the Notice of Award, the Contractor shall furnish the Engineer with a complete construction schedule ("Construction Schedule") consistent with the Total Performance date set out in the Form of Tender, as well as the preliminary construction schedule provided as Schedule B to the Form of Tender, and showing all material dates on which each material component of the Contractor's proposed program of operations will be performed so as to attain Total Performance on the required date. The Construction Schedule must include the various subdivisions of the Work and the dates of commencing and finishing of each. The Construction Schedule shall be completed using Microsoft Project or other scheduling software as approved by the Engineer.

The form of the Construction Schedule must be approved by the Engineer. On the last day of each calendar month, an updated copy of the Construction Schedule shall be submitted to the Engineer with particulars indicating the percentage completed of each division of the Work to that date.

**INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART E - GENERAL CONDITIONS**

The Contractor shall immediately advise the Engineer of any deviations or proposed changes in the submitted Construction Schedule. If, in the opinion of the Engineer, the Construction Schedule as submitted is inadequate to ensure the completion of the Work within the time limited therefor, or is otherwise not in accordance with the Tender, or if the Work is not being adequately or properly prosecuted in any respect, the Engineer, without derogating from the Owner's rights under the Contract, shall have the right to require the Contractor to submit a new Construction Schedule providing for proper and timely completion of the Work, and the Contractor shall be entitled to no claim for extension of time on account of such requirement.

GC.23. MAINTENANCE OF SCHEDULE

a) Work Delayed by the Contractor

The Contractor shall at all times provide a sufficient number of skilled personnel to maintain the progress of the Work and compliance with the master schedule, and if in the opinion of the Engineer the Contractor delays the progress of the works of Other contractors then the Contractor shall be responsible for all loss and damage, including, without limitation, that of Other contractors for stand-by and/or delay occasioned thereby.

If, in the opinion of the Engineer, the Contractor delays or is about to delay the Work or the progress of any portion of the Work as shown by the master schedule, then upon the written notification by the Engineer, the Contractor shall use such additional overtime work or shifts as may be necessary to catch up and/or maintain the general progress of the master schedule and the cost and expenses incurred by use of said overtime work or shift shall be borne entirely by the Contractor.

b) Work Accelerated by the Engineer

Should the Engineer be required to expedite the final completion of the Work or the works of Other contractors, then, provided the Contractor is not in default in any of the provisions of the Contract affecting the master schedule, the Engineer may order the Contractor to work additional shifts for which the Owner will pay:

- i) the substantiated extra premium wage incurred by such shift work;
- ii) the approved additional wages of supervision; and
- iii) an agreed percentage addition for profit for accelerated work.

Such instructions to the Contractor will only be valid when given in writing by the Engineer. The Contractor shall be responsible for having time sheets covering all such shift work checked and approved daily by the Engineer and claims for reimbursement of the extra wages will only be accepted when properly supported by such signed time sheets.

c) Work Out-of-Sequence

**INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART E - GENERAL CONDITIONS**

The Contractor shall at no additional cost perform his Work as to operation or location out-of-sequence as and when directed by the Engineer.

d) Execution of Other Works or Contracts

The Contractor shall afford all facilities for the execution of any other works which may be undertaken by the Owner or by such parties as may be employed by them, so that such works may be properly and conveniently completed, and the Engineer shall have full authority to make and enforce such regulations as the Engineer may deem necessary for the conduct of the works; and the Contractor shall proceed in such manner and with and complete in such order such portions of the Work as the Engineer may require, and the Engineer shall be the sole judge as to what facilities are due and proper, and can be afforded without any undue interference with the execution of the Contract.

The Contractor shall at all times give free access and every reasonable facility to the employees of the Owner and to Other contractors, to such portion of the works and adjoining land as may be necessary to enable them to execute and maintain works of any description; such accommodation and access being regulated and directed by the Engineer and no inconvenience or alleged inconvenience arising therefrom shall form any ground for claims, losses or damages, compensation or otherwise, by the Contractor against the Owner.

GC.24. EMERGENCIES

The Engineer has the authority in an emergency to stop the progress of the Work whenever in his/her opinion such stoppage may be necessary to ensure the safety of life, or the Work or neighbouring property. This includes authority to make changes in the Work, and to order, assess and award the cost of work extra to the Agreement or otherwise, as may in his/her opinion be necessary. The Engineer shall within two (2) Working Days confirm in writing any such instructions.

GC.25. SUBCONTRACTORS AND SUPPLIERS

The Contractor shall supply complete information to Subcontractors and equipment and material suppliers. The Contractor agrees to bind every Subcontractor by the terms of the General Conditions, Supplementary General Conditions, Drawings, Specifications, and other Contract Documents as far as applicable to their component of the Work. Where both Specifications and Drawings are required to provide complete information on any aspect of the Work, the Contractor shall supply both to the Subcontractor or supplier concerned.

In every subcontract the Contractor shall specify that the Contractor or agent of the Contractor shall be the person responsible for payment certification under that subcontract for the purposes of the Builders Lien Act (and not the Owner or Engineer).

GC.26. CONTRACTOR'S PLANT AND UTILITIES

The Contractor shall at its own expense supply, maintain and remove its field office and whatever electric or telephone facilities the Contractor requires for her Plant for either domestic or construction purposes.

**INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART E - GENERAL CONDITIONS**

The Contractor must provide and properly maintain, in clean and sanitary condition, suitable and convenient privy or toilet accommodation for the Contractor's employees so that they shall not be a source of inconvenience, complaint or nuisance to the public or to others in the vicinity of the Site.

Contractors shall make all necessary arrangements with the Engineering Department of the City for obtaining water from the City.

GC.27. PLANT, LABOUR AND MATERIALS

The Contractor at its own expense shall provide all necessary temporary buildings and storage grounds and shall furnish all necessary labour, materials and plant together with all proper and required facilities for moving and transporting the same, so that the Contract and all Work required to be done under it can and will be carried on in a workmanlike manner, properly, satisfactorily, continuously and expeditiously, to completion, to the Engineer's satisfaction in all respects. Unless otherwise specified, all materials shall be new and both workmanship and materials shall be of good quality.

Should any Plant, equipment, appliance, materials or workmanship which the Engineer may deem to be inferior or unfit for use in or on the works be brought on the ground or used, the same shall be wholly removed therefrom within twenty-four (24) hours after notification to that effect from the Engineer, and in the case of failure or neglect on the part of the Contractor to remove the same the Engineer may cause the same to be taken away at the Contractor's expense, and deposited, wasted or otherwise disposed of in any locality, place or way the Engineer considers convenient or proper, and the Contractor shall forthwith pay to the Owner on demand, all expenses incurred including storage, if any, or the same may be deducted or collected by the Owner as provided in GC.58.

GC.28. MATERIAL AND EQUIPMENT SUPPLIED BY THE CONTRACTOR

Material and equipment supplied by the Contractor shall be as specified. If the Contractor wishes to supply and install items other than specified, the Contractor shall apply for and must receive written permission from the Engineer before incorporating such items into the Work. Descriptive literature and price schedules covering such alternative items shall be supplied to the Engineer if requested.

The Contractor shall furnish for the approval of the Engineer as the Engineer may reasonably require samples of any material of any kind to be used in the Work and no material shall be used which is in any way inferior to the approved samples; but it is understood that the approval of any material shall not subject the Owner or the Engineer to pay for the same nor prevent the rejection afterwards of any portion thereof which is found in the Engineer's judgement to be unsound or unfit to be used, nor shall such approval be considered as any waiver of objection to the Work at any subsequent period on account of the unsoundness or imperfection of the materials used.

GC.29. MATERIAL IN IMPERIAL UNITS

**INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART E - GENERAL CONDITIONS**

Where manufactured materials that are specified in metric units are not available, materials manufactured to Imperial units may be substituted, provided the Contractor can satisfy the Engineer that the substitute materials are at least equivalent to those specified.

GC.30. SUPPLY OF MATERIALS BY THE CITY

The Contractor's responsibility for materials supplied by the City shall begin upon the Contractor's acceptance at the points of supply to the Site. All such materials shall be examined and the Contractor shall advise the Engineer in writing of any defective or damaged material. Any material supplied by the City which is damaged after acceptance by the Contractor shall be replaced by the Contractor at his own expense.

Any material supplied by the City that is not required for the Work shall remain the property of the City. Such material shall be neatly stored at the point of original supply.

GC.31. TEMPORARY STRUCTURES

Temporary structures erected by the Contractor shall remain the Contractor's property and be removed from the Work Site on completion of the Work.

The Contractor shall be responsible for the design, adequacy, safety and efficiency of all falsework, temporary structures and construction processes required in connection with the completion of the Contract. All such designs and plans shall be prepared and sealed by a Professional Engineer licensed to practice in British Columbia and submitted to the Engineer for review and comment, but such review shall not relieve the Contractor of any responsibility. The Contractor shall make good at the Contractor's expense immediately all defects arising from the Contractor's faulty design, equipment or application thereof.

GC.32. WORK AREAS AND CONTRACT LIMITS

The Contractor shall, as far as is practicable, confine operations to the Engineer's specified area within the Work Site. Any land or property outside Work Site boundaries which the Contractor requires during construction shall be acquired by the Contractor at the Contractor's own expense, and the Contractor shall make its own arrangements for the use of such land or property and for the compensation of its owners.

Work to be performed by the Contractor outside the Contract Work limits includes:

- a) installation of barricades and barriers and other traffic control measures; and
- b) repairing and making good property and improvements which are damaged or destroyed by the Contractor's operations.

GC.33. OFFICE FACILITIES FOR THE ENGINEER [Intentionally Deleted]

GC.34. STORAGE AREAS

Working and storage areas will be allocated by the Engineer for use by the Contractor. The Contractor shall be responsible for the maintenance and clean-up of the allotted areas.

**INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART E - GENERAL CONDITIONS**

GC.35. HOURS OF WORK

The Contractor must comply at all times with all applicable requirements of the City's Noise By-law.

The Contractor shall keep the Engineer advised on the proposed hours of work so that inspection can be co-ordinated. Work without inspection shall not be permitted.

The Owner's forces work between the hours of 7:30 a.m. and 3:30 p.m. on all Working Days, except those where City Hall is closed. The Contractor shall not expect any work to be performed by the Owner's crews outside these hours except by special arrangement agreed to by the Engineer or in case of emergency.

GC.36. TRAFFIC CONTROL

For all works on City streets, lanes or sidewalks, all traffic control shall be provided by the Contractor, at the Contractor's expense, except where otherwise specifically provided for in this Contract. The Contractor shall adhere to the standard procedures and practices prescribed in the Ministry of Transportation and Highways "Traffic Control Manual for Work on Roadways" (Second Field Edition).

The Contractor shall also provide, at the Contractor's expense, erect and maintain all requisite barriers, fences or other proper protection and must provide and maintain such flagpersons, watchpersons and lights as may be necessary or as may be ordered by the Engineer, in order to ensure safety to the public as well as to those engaged about the premises or Works, and must (where it is practicable in the Engineer's opinion) keep any roadway open for the use of the public, or for some restricted use specified by the Engineer, for such width as the Engineer may direct.

Within 5 Working Days of receipt of the Notice of Award, or at any other time within 2 Working Days of such request by the Engineer, the Contractor shall submit a detailed Traffic Management Plan for the Engineer's approval incorporating all aspects of the preliminary traffic management plan provided as Schedule I [Traffic Management Plan] to the Form of Tender as well as all further details then available to the Contractor or reasonably requested by the Engineer in preparation for commencement of the Work following receipt of a Notice to Proceed.

The Contractor shall, from the date of commencement to the date of completion of the Work, assume responsibility for the barricading and signing of hazards resulting from such works as utility trenches, out-of-grade utility-access covers, or any other obstruction or impediment to pedestrian or vehicular traffic, be these works in progress prior to or subsequent to the above mentioned date of commencement.

Unless ordered otherwise by the Engineer, the Contractor shall inspect the barricades and warning signs of unattended construction Sites at least once per day.

When any work is carried out at night, the Contractor must supply, at the Contractor's expense, a sufficient number of electric or other approved lights to enable the work to be done in an efficient and satisfactory manner, and the Engineer shall have the right to order

**INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART E - GENERAL CONDITIONS**

additional lights at the Contractor's expense if, in the Engineer's opinion, they are or may be required.

Licence numbers of vehicles legally parked at the time of placement of signs shall be recorded by the Contractor and made available for the Engineer. If these vehicles are still parked when work commences, the Engineer shall be contacted by the Contractor for further instructions.

For the information of the Contractor, the Parking Enforcement Branch or the Vancouver City Police are the only designated authorities approved to call tow trucks. Providing the signing is adequate and the Contractor has contacted the Engineer, the City of Vancouver will pay the costs of towing. Owners of vehicles unlawfully parked will be charged with costs of towing and other costs.

GC.37. PUBLIC CONVENIENCE

In carrying out the Work, or any portion thereof, the convenience of the public must always be specially considered and provided for by the Contractor, who must not obstruct any street, thoroughfare or sidewalk longer or to any greater extent than is absolutely necessary in the Engineer's opinion. The Contractor shall not deposit any material upon any street, sidewalk, boulevard, grass plot, or other City or public property, without the Engineer's permission nor shall the Contractor allow the same to remain thereon longer than necessary but must remove all rubbish and other material, clean and thoroughly restore all such places to as good and as tidy a condition as the Contractor found them, as speedily as possible, from time to time as the Work progresses, or as directed. Unless material and rubbish are removed within four (4) days after the completion of the Work and without previous notice to the Contractor the Engineer will proceed to do whatever is necessary to restore such places to as good and as tidy a condition as before the commencement of the Work and charge the cost thereof against the Contractor. Where the Contractor obstructs more of the street, roadway or place than is ordered or sanctioned by the Engineer in writing, then the Engineer may cause such obstructions to be removed at the expense of the Contractor.

GC.38. ACCESS TO EXISTING STRUCTURES

The Contractor shall at all times maintain satisfactory pedestrian access to buildings and private property.

The Contractor shall provide suitable notice to affected property owners prior to changes in access. Interruption of access to any entrance shall be kept to a minimum.

The Contractor shall maintain fire exits from existing buildings as required by the Fire Department.

GC.39. PROTECTION OF WORK AND PROPERTY

The Contractor shall maintain continuously adequate protection of all the Contractor's Work from damage and shall protect the Owner's property from all injury arising in connection with the Contract. The Contractor shall make good any such damage or injury. The Contractor shall protect adequately adjacent property as required by law and the Contract.

**INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART E - GENERAL CONDITIONS**

GC.40. FIRE, SECURITY AND SAFETY REGULATIONS

a) Fire and Security

The Contractor shall comply and the Contractor shall enforce compliance by all her agents, employees, Subcontractors and suppliers with any and all fire regulations which have been or may be established from time to time by the Engineer and anybody having jurisdiction over such matters.

All security regulations which have or may be promulgated by the Engineer or other authorized representatives of the Owner shall be complied with. Watchmen for the buildings and grounds may be provided by the Owner at the Owner's discretion. However, neither the Owner nor the Engineer will be responsible for any loss or damage to the property of the Contractor whether or not watchmen are provided by the Engineer. The Contractor will furnish such security as the Contractor feels necessary for the protection of the Contractor's equipment and Products stored or used on Site.

b) Loss Control

The Contractor will provide a Loss Control Program, satisfactory to the Owner to meet WorkSafe BC and other requirements.

c) Safety

When required by WorkSafe BC Regulations, first aid facilities, including an attendant, shall be provided on the Site at all times during working hours by the Contractor. Such facilities will be completely equipped in accordance with the requirements of the WorkSafe BC.

The Contractor shall be fully responsible for taking all necessary precautions for the safety of the Contractor's workers on the Site or of complying with all applicable safety laws and regulations, particularly those regulations pursuant to the Workers' Compensation Act to prevent accidents or injury to persons on, about or adjacent to the Site.

The Contractor shall provide all safeguards required directly for or as a result of the Work as referred to in GC.39 - Protection of Work and Property and in the scope of work described in the Contract Documents.

GC.41. OVERLOADING

No part of the Site shall be loaded with a load greater than it is calculated to bear safely. Should any damage or accident occur through the violation of this requirement, the Owner will hold the Contractor solely answerable and liable.

GC.42. DRAINAGE

The Contractor shall keep all portions of the Work well, properly and efficiently drained until completion, and the Contractor will be held responsible for all damage which may be caused

**INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART E - GENERAL CONDITIONS**

or result from water backing up or flowing over, through, from or along any part of the Work, or which any of the Contractor's operations may cause to flow elsewhere.

GC.43. CLEANING UP

The Contractor shall at all times keep the premises free from accumulations of waste material or rubbish caused by its employees or work, and at the completion of the Work, it shall remove all its rubbish from and about the site and all its tools, scaffolding and surplus materials, and shall leave the Site "broom clean" or the equivalent, unless more exactly specified. In case of dispute, the Engineer may remove the rubbish and charge the cost to the Contractor as the Engineer shall determine to be just.

GC.44. SAFEGUARDING EXISTING PROPERTY

Existing property, buildings, fences, power/telephone poles or other improvements of any kind shall be protected by the Contractor during the life of the Contract. The Contractor shall make good to the satisfaction of the Engineer any damage done to the existing property, buildings, fences or other improvements. This applies to areas of private property incorporated in the Work area.

Where removal of existing improvements such as pavement, fences, structures, sewers and ducts is necessary during the course of the Work, the same shall be re-established by the Contractor to the satisfaction of the Engineer. The cost of protection and rehabilitation shall be borne by the Contractor.

GC.45. EXISTING UTILITIES

The Contractor will be responsible for the care of all public utilities and in the event of any of these requiring to be upgraded, removed, raised or lowered permanently, this will be done either by the City or by the utility company interested and at no expense to the Contractor. If temporary alteration of location is required for purposes of the construction, such work shall be done by the City or by the utility company interested at the expense of the Contractor. The Contractor, however, will be held responsible for, and will have to bear the cost due to any damage done to any of the utilities through its operations.

Reasonable notice must be given to the Engineer of any change required in utility services.

Existing utilities are shown on the Drawings. These, however, are shown for convenience only and the Owner assumes no responsibility for improper locations, or failure to show utility locations on the construction plans. Before commencing any Work on site, the Contractor shall be responsible to locate all underground utilities and structures as being part of the Work Site. The contractor shall also be responsible to consult with all utility corporations that provide electricity, communications, gas or other utility services in the area, to locate all underground utilities for which they have records. The Contractor shall contact BC One Call at least 48hrs prior to excavation to advise of the Work. All this at no extra cost to the Owner.

The Contractor shall provide adequate barricades and lighting around and adjacent to any open excavation or potentially dangerous location or other locations designated by the Engineer.

**INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART E - GENERAL CONDITIONS**

The Contractor shall at all times ensure that the fire hydrants are not obstructed.

GC.46. DUST CONTROL

The Contractor shall at all times control the generation of dust by its operations by water sprinkling or by other methods approved by the Engineer.

GC.47. ALTERATIONS, EXTRAS, DEDUCTIONS & CLAIMS

The Owner without invalidating the Contract shall have the right to make or order any alterations and changes, such as it may deem advisable, at any time before or during the prosecution of the Work, in any line, grade, Drawings, Specifications or detail thereof, or to increase or decrease the dimensions, quantity of material or work, or to alter the situation or level, or to vary the form or dimensions of any part of the Work, or to vary in any other way the Work; or to order any additional or extra work to be done or additional or extra materials to be furnished; and the Contractor shall, in pursuance of the Engineer's written orders to that effect, proceed with, carry out and execute the Work as directed, and shall supply such additional materials and do such additional or extra work in pursuance of such orders without being entitled to any extension of time for completion, or any additional payment on account thereof, except only as herein provided.

In each and every case where additional or extra work or material of any kind is ordered to be done or supplied, or where the Contractor does or supplies, or contemplates doing or supplying, any work or material the Contractor shall notify the Engineer in writing and shall state in its notification clearly and fully what the circumstances are, and the additional sum or compensation it intends to demand therefor, otherwise it shall have no claim in respect thereof. If any work, labour or material is not required to be performed or supplied, then the Owner may deduct from the Contract Amount the value of such work, labour or material not required to be performed or supplied which shall be determined by:

- a) using the unit or lump sum prices contained in the Schedule of Quantities and Prices applicable to such work, labour or material, or
- b) if, and to the extent that, in the opinion of the Engineer some or none of the unit or lump sum prices aforesaid apply, then using the hourly rates for work and labour or cost of material as set out in the Contract Documents, or
- c) such fixed sum as agreed upon between the Contractor and the Owner.

All claims of every nature which the Contractor may have in respect of the Contract or Work done thereunder, are to be summarized and submitted by it (in duplicate) to the Engineer within one month of the completion of same, and the Contractor shall make no claim of any nature afterwards; and no claim not then made or not then allowed by the Owner shall be sustainable, and the Owner shall be in no way disentitled to determine any and all questions concerning said claims, and no action or suit shall be commenced by either party to the Contract until after the Final Certificate of Total Performance shall have been signed by the Engineer and then only for the amount appearing thereby to be due to the Contractor.

GC.48. ERRORS BY CONTRACTOR

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART E - GENERAL CONDITIONS

Changes, errors or mistakes made by the Contractor or the Contractor's Subcontractors, workmen or employees, and all settlements, washouts and defects, shall be rectified by the Contractor at its expense.

GC.49. TESTING OF MATERIALS

Except where otherwise specified, testing of materials will be carried out by the City and paid for by the City.

GC.50. DEFECTIVE WORK

All defective work must be forthwith made good by the Contractor at its own expense to the Engineer's or Owner's satisfaction, as the case may be.

GC.51. WARRANTY

The Contractor shall perform the Work in a proper and workmanlike manner and in accordance with the requirements of the Contract Documents and maintain the Work against any defects arising from faulty installation, material or workmanship during the period of 12 months from the date of issuance of the Certificate of Substantial Performance and make good in a permanent manner satisfactory to the Owner any defects arising from any of these causes. Where the Contract Documents provide for a warranty of greater scope or duration than set out in this General Condition, the broader and longer warranty provisions will apply.

Whether the Contractor should replace defective Products or Work, or repair the same, shall be determined by the Engineer. Should the Contractor fail to make good defects within 3 Working Days after being notified by the Owner to do so, the Owner at its option may do so and all costs, charges and expenses so incurred may be deducted or collected by the Owner as provided in GC.58 - *Money Due to Owner*. If the Owner warrants the defects to be dangerous and an emergency situation exists, the Owner, at the Owner's discretion will effect repairs immediately and all costs, charges and expenses so incurred may be deducted or collected by the Owner as provided in GC.58 - *Money Due to Owner*. The decision of the Owner shall be final as to the necessity of repairs or of any work done or required to be done under the provisions of the Contract and for the amounts expended thereunder. If in the opinion of the Engineer, it is in the Owner's best interests (taking into account effects on the Owner's overall schedule, the difference in value between the Work as performed and that called for by the Contract Documents, and other relevant factors) not to correct defective Work or Work not provided in the Contract Documents, the Engineer will assess the amount which should be deducted from the amount otherwise due to the Contractor and will assess the length of time by which the obligations should be extended in order to put the Owner in as close a position financially and in terms of the useful life of the Work as would have been the case had the Contractor performed the Work as called for by the Contract Documents. For further certainty, the Engineer may extend the warranty period in appropriate circumstances to a minimum of twice the warranty period originally provided for under the Contract Documents, subject always to the above parameters.

GC.52. CONTRACTOR'S LIABILITY

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART E - GENERAL CONDITIONS

The Contractor shall be liable for any and all damages, or claims for damages, for injuries or accident to person or property done or caused by the Contractor, the Contractor's Subcontractors or employees, or resulting from the prosecution of the Work or any of its operations, or caused by reason of the existence or location or condition of the Work, or of any materials, Products or Plant used therein or thereon, or which may happen by reason thereof, or arising from any failure, neglect or omission on the Contractor's part, or on the part of the Contractor's Subcontractors or employees, to do or perform any or all of the several acts or things required to be done by the Contractor or them under and by the Contract, and the Contractor covenants and agrees to indemnify and save harmless at all times the Owner against all such damages and claims for damages whatsoever arising out of or in connection therewith, and in the event of any such action being brought by any person against the Owner, either directly or indirectly, or by reason of the execution of the Contract, the Owner may enforce payment by the Contractor of all such loss, costs, damages and expenses as a debt due to them.

In the case of the Contractor's failure, neglect or omission to observe and perform faithfully and strictly all the provisions of the Contract, the Owner may either with or without notice (except where in this Contract notice is specially provided for, and then upon giving the notice therein provided for), take such steps, procure such material, equipment, trucks, and men, and do such work or things as it may deem advisable towards carrying out and enforcing the same, and any and all expenses so incurred may be deducted or collected by the Owner under the provisions of GC.58.

Any such action taken by the Owner under this General Condition as it is herein empowered to take shall not in any way relieve the Contractor or its sureties from any liability under the Contract.

GC.53. **INSURANCE BY THE CONTRACTOR**

1. ALL RISK COURSE OF CONSTRUCTION INSURANCE

a) Coverage

"All Risks" of physical loss or damage.

b) Property Insured

i) At Site

All materials, equipment and machinery, labour and supplies of any nature whatsoever, Work in progress, including property of the Insured or of others for which the Insured may have assumed responsibility, to be used in or incidental to the Site preparations, demolition or existing structures, erection and/or fabrication and/or reconstruction and/or repair of the project insured, commencing when the property becomes at the Insured's risk, at the Site, and while there awaiting, during and subsequent to erection and/or fabrication and/or repair and/or testing.

ii) Transit

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART E - GENERAL CONDITIONS

Property to enter into and form a part of the project insured, from the commencement of loading at the original point of shipment anywhere in Canada or the Continental United States of America, but excluding such property in the course of manufacturing or processing within buildings at the manufacturer's or supplier's site.

iii) Off Site

Off Site coverage shall apply to property that is to be incorporated into and form a part of the project insured, anywhere in Canada or the Continental United States of America, but excluding such property while in transit or in the course of manufacturing or processing within buildings at the manufacturer's or supplier's site.

c) Insureds

The Owner, the Contractor, and their respective officials, officers, employees and agents.

d) Term

During the period of the construction operations and also during any period in which the property insured is being prepared for occupancy and while partially

occupied provided all coverage shall cease when the Work has been formally accepted as complete by the Owner, whichever shall first occur.

e) Limit and Deductibles at Site

i) Limit of Liability: Full Value of the Work

ii) Deductible not to exceed \$5,000.

2. "WRAP UP LIABILITY INSURANCE"

a) Insureds

The Owner, the Engineer, the Contractor, and all Subcontractors, and their respective officials, officers, employees and agents.

b) Limits

Bodily Injury Liability and Property Damage Liability including aggregate products and completed operations: \$5,000,000 each occurrence.

c) Extensions of Coverage

i) broad form products and completed operations liability, including coverage for activities of the Contractor and Subcontractors during the completed

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART E - GENERAL CONDITIONS

operations period,

- ii) owner's and contractor's protective liability
- iii) blanket contractual liability
- iv) contingent employer's liability
- v) personal injury liability
- vi) non-owned automobile liability
- vii) cross liability or severability of interest clause
- viii) employees as additional insureds;
- ix) Blasting, collapse, underpinning, shoring, pile driving, dredging or grading activities
- x) Loading and unloading of automobiles
- xi) Hoist liability
- xii) Unlicensed and specially licensed vehicles
- xiii) Operation of attached machinery
- xiv) Limited pollution liability arising out of hostile fire and sudden and accidental release of contaminants

d) Deductibles

Deductible not to exceed \$5,000.

e) Cross Liability

The insurance shall apply to any action brought against any one of the Insureds by any other Insured in the same manner as though separate policies were issued to each.

f) Term

Period of construction or completion of the project, whichever shall first occur, plus 24 months for completed operations liability thereafter.

g) Waiver of Subrogation

It is understood and agreed that in the event of a loss and upon payment of claim hereunder, the Insurer will waive his/her right of subrogation against the Owner, the

**INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART E - GENERAL CONDITIONS**

Engineer and all architects, engineers or consultants engaged in or connected with the construction and Site preparation and related operations of the Work and any of their servants, agents, employees, and parent, subsidiary, affiliated or associated firms.

3. AUTOMOBILE INSURANCE

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 applicable British Columbia law, the minimum limits as follows:

Bodily injury and property damage (third party limit) inclusive limit \$5,000,000.

4. CONTRACTOR'S EQUIPMENT INSURANCE

"All Risk" insurance with Insurers acceptable to the Owner, covering all construction equipment, owned or rented, or for which the Contractor or any of its Subcontractors may be responsible. In the event of loss or damage to the said construction equipment, or any part thereof, the Contractor or the Subcontractor, as the case may be, shall, if so requested by the Owner in writing, forthwith replace such damaged or destroyed construction equipment.

5. GENERAL

- a) All insurance coverage described in this General Condition shall be issued by an insurance carrier or agent acceptable to the Owner and licensed to conduct business in the Province of British Columbia.
- b) Contractors and Subcontractors shall be required to file with the Owner within 5 Working Days of issuance of the Notice of Award, a Certificate of Insurance, and where required by the Owner's Director of Supply Management, certified copies of all policies and endorsements evidencing the placement and endorsement of insurance in accordance with this General Condition.
- c) Contractors and their Subcontractors shall be required to furnish evidence of the renewal of policies described in this General Condition by renewal certificate, endorsement or certified copy to be received by the owner at least 15 calendar days prior to the expiry date of the policy.
- d) If the Contractor fails to obtain and maintain insurance as required hereunder, or if the Owner does not approve any insurance policy or policies submitted to the Owner and the Contractor thereafter does not meet the requirements of the Owner as to terms and conditions of the insurance policy, the Owner shall have the right to place and maintain such insurance in the name of the Contractor. The cost thereof shall be payable by the Contractor to the Owner on demand, and the Owner may deduct the cost thereof from any monies which are due or may become due to the Contractor. If coverage should lapse, all work by the Contractor shall be stopped until satisfactory evidence of renewal is produced.

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART E - GENERAL CONDITIONS

- e) Each policy described in this General Condition shall be required to be endorsed to provide the following Notice for Policy Changes and Cancellations to the City of Vancouver:

"It is understood and agreed that this policy will not be cancelled, reduced, materially altered or changed without the Insurer giving at least 30 calendar days prior written notice by registered mail to the City of Vancouver."

- f) Subject to the provisions of Section 1, each Contractor and each of its Subcontractors shall provide at its own cost any additional insurance which it is required by law to provide or which he/she considers necessary.

- g) Deductibles

All deductibles shall be for the account of and be paid by the Contractor upon demand by the City.

The Owner shall have the right to deduct amounts for which the Contractor is responsible under this Section from any monies which are due or may become due to the Contractor.

6. The Contractor will obtain or cause its Subcontractors to obtain Hull and Machinery Insurance with a minimum limit of not less than the full value of such vessel, barge or equipment and a deductible of not more than \$5,000 protecting the Contractor and its Subcontractors from all claims for loss or damage to any vessel, barge or equipment arising out of ownership or operation of the Contractor or its Subcontractors. This policy shall contain a Waiver of Subrogation that in the event of a loss or damage and upon payment of claim hereunder, the Insurer will waive his/her subrogation against the Owner (City), its officers, officials and employees.
7. The Contractor will obtain or cause its Subcontractors to obtain Protection and Indemnity Insurance to cover all claims for bodily injury including death, property damage or loss arising out of the activities conducted by the Contractor, the Subcontractors, or their employees, agents or subcontractors, with a minimum limit of not less than \$5,000,000 per occurrence and a deductible of not more than \$5,000. This policy shall name the City, its officials, officers, employees and agents as an additional insured or co-insured.

GC.54. WORKSAFE BC ASSESSMENTS

Prior to execution of the Agreement and prior to commencing the Work under the Contract, the Contractor shall provide a letter from the WorkSafe BC confirming the Contractor's registration and that all assessments have been paid to the date thereof. The Contractor shall require that the Contractor's Subcontractors maintain such coverage and pay such assessments as will protect them, the Owner and the Engineer from claims under the *Workers' Compensation Act (British Columbia)*, as amended from time to time and regulations pursuant thereto.

GC.55. CLAIMS FOR WAGES

**INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART E - GENERAL CONDITIONS**

The Owner may settle any claim for damages, and pay all wages overdue or the price of any materials or the amount due and payable by the Contractor to any Subcontractor, for which payment is in arrears, and the amount thereof shall be debt due by the Contractor to the Owner, as and for money paid by them for the contractor and shall be deducted or collected by them as provided in GC.58 - Money Due to Owner, but they do not assume any liability in this respect; nor shall the persons to whom such wages or payments are paid become, by such payments, the employees or servants of the Owner.

GC.56. LIENS

The Contractor hereby agrees to make payment and take all other steps which may be necessary to insure that all Contract monies, and the Work, and every part thereof, shall be and remain at all times free from and not liable to any lien or charge at law or in equity, or to any claim of liability under the Builders Lien Act, or to any attachment for debt, garnishee process or otherwise, and the Contractor and her sureties, as well as its respective executors, administrators, successors and assigns, shall fully indemnify and save harmless the Owner and all its officers, servants and employees from any and all such liability, and shall, on demand, immediately cause any such lien, charge, claim or attachment to be removed or released from the records of any Land Title Office or Court in which the same may appear.

Notwithstanding anything to the contrary contained in the Contract Document, the Owners shall not be obliged to pay any monies to the Contractor if and for so long as any liens exist against the Works or the Site.

GC.57. PATENT INFRINGEMENT

The Contractor shall fully indemnify the Owner against and from all suits or actions arising from the claim of any person or persons who are or claim to be patentees of any process used in connection with the Work or of any material, Products, Plant, machinery, tool or appliance used therein or thereon, or in any way therewith.

GC.58. MONEY DUE TO OWNER

All money payable to the Owner by the Contractor may be retained out of any money then due, or which may become due from them to the Contractor under this or any other contract with the Owner, or otherwise howsoever, or may be recovered from the Contractor and its sureties, or any of either of them, in any Court of competent jurisdiction, as a debt due to them; and the Engineer shall have full power to withhold any estimate or certificate, if circumstances arise which may indicate to him the advisability of so doing, until the Engineer is satisfied that the Work and material so far done or furnished are in accordance with the Contract and that the Contractor is otherwise entitled thereto, though the sum to be retained may be unascertained.

GC.59. ASSIGNMENT

The Contractor shall not, without the consent in writing of the Owner first had and obtained, assign or transfer any sum or sums, or any part thereof, due or to become due to the

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART E - GENERAL CONDITIONS

Contractor under the Contract, or assign, transfer or sublet any portion of the Contract or of the Work but must carry out the Work with its own men or subcontract under the Contractor's supervision. This section however does not apply to the furnishing of material for the different parts of the Work, for which material, however, the Contractor will be held strictly responsible, and no excuse for the quality of the material or for the non-delivery in good time by any Subcontractor, as affecting the progress of the Work, will be entertained, nor will the Owner's consent to the assigning, transferring or subletting of any portion of the Work relieve the Contractor from any of its obligations or liabilities under the Contract. No assignment, transfer or subletting hereinbefore mentioned, except if the same is made in accordance herewith, shall be in any manner valid or binding on the Owner.

GC.60. CERTIFICATES AND PAYMENTS

a) Payment Certifier:

The Engineer shall be the "payment certifier" and the person responsible for payment certification under the Contract for the purposes of the *Builders Lien Act*. The Engineer will not be the "payment certifier" under any subcontract.

b) Certificate for Substantial Performance:

- i) The Contractor shall give written notice to the Engineer that the Work is substantially performed, and, upon subsequent inspection by the Engineer, a list of deficient work shall be issued to the Contractor by the Engineer. When these deficiencies have been rectified to the satisfaction of the Engineer, the Engineer shall recommend that the Work is substantially performed and ready for official inspection.

At the time of the application for a Certificate of Substantial Performance, the Contractor shall deliver up to, and to the complete satisfaction of the Engineer:

- the "as constructed record plans" of the Work required by GC.13 - *Record Plans*;
 - documentation showing compliance with WCB requirements; and
 - a sworn declaration in a form acceptable to the Engineer that all amounts relating to the Work, due and owing as of the end of the month covered by Article V (c) of the Form of Agreement to third parties including all Subcontractors and suppliers, have been paid.
- ii) The Owner, the Engineer and the Contractor shall inspect the Work and any remaining deficiencies shall be detailed and included on the Certificate of Substantial Performance. The date of Substantial Performance shall be as stated in this Certificate. Upon issuance of the Certificate of Substantial Performance to the Contractor, the Engineer shall set a reasonable date for the Total Performance of the Work.

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART E - GENERAL CONDITIONS

- iii) For the purposes of the *Builders Lien Act*, the Certificate of Substantial Performance as described herein shall serve as the Contract's certificate for completion, and the date of Substantial Performance stated in the Certificate shall be deemed to be the date of the Certificate's issuance.

c) Certificate of Total Performance:

Upon the provision of satisfactory evidence that the deficiencies have been rectified, the Owner and the Engineer will then be permitted to verify such rectification. Upon rectification of all claims and statutory declarations as specified in GC 60(d) ii and to the reasonable satisfaction of the Engineer, the Engineer will issue the Certificate of Total Performance.

d) Statutory Declarations:

The Contractor shall submit with the Contractor's application for payment such statutory declarations as may be required herein, which shall be sworn in duplicate by the Contractor, or by such person on behalf of the Contractor as the Engineer may approve.

- i) Prior to payment and as condition to any payment, the Engineer may at any time require the Contractor to file with him a Statutory Declaration showing that all wages for the various classes of labour, the hire of trucks, equipment, etc., employed in or about the Site, all Products or other things supplied for use in or upon the Work and amounts due to Subcontractors and suppliers have been paid and satisfied and that there is no encumbrance, lawful claim or lien accruing for labour or services in connection with the Work.

Should any amounts be due and unpaid for wages, equipment, hire, Products and Subcontractors or suppliers as above listed or any encumbrance, lawful claim or lien accrue, the amounts shall be listed on a duly attested statement, in duplicate, and attached to the Statutory Declaration referred to above.

The Engineer may at any time, if the Engineer deems it advisable, require from the Contractor a statement showing the rates of wages paid by him for the various classes of labour, the rates of hire of trucks and equipment employed and the prices and quantities of any Products supplied for use in or upon the Work and may also require the statement to show in detail the names of unpaid employees, the rates of wages and amounts due to each, and the names of creditors, quantities, prices and amounts due to each. Such statement shall be duly attested in duplicate as above and be a condition precedent to the right of the Contractor to receive payment.

- ii) Prior to final payment and as a condition to issuance by the Engineer of a Certificate of Total Performance, the Contractor shall file with the Engineer a Statutory Declaration showing that all Work in respect of the Contract has been completed; all accounts, detailed in the first sentence of paragraph (d)(i) of this General Condition have been paid and satisfied and there is no encumbrance, lawful claim or lien accruing for labour, products or services in connection with the Work; and payments already received and now due under the final payment

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART E - GENERAL CONDITIONS

application are accepted by the Contractor as full compensation for everything furnished and done by the Contractor under the Contract.

e) Other Documentation

The Engineer may as a further condition to any payment, at any time, require the Contractor to furnish such or other detailed information as may be necessary to establish to their satisfaction the compliance by the Contractor with the conditions of the Contract.

f) Books Open for Inspection

The Contractor's payrolls, time-books, books of account, invoices, receipt and statements relating to her Work under the Contract shall be at all times open for inspection and extract by the Engineer and the Owner and any authorized representative of them.

GC.61. TERMINATION OF CONTRACT WITHOUT DEFAULT OF CONTRACTOR

The Engineer may, as agent for and on behalf of the Owner, at the Engineer's discretion terminate the Contract at any time upon written notice to the Contractor notwithstanding the fact that the Contractor may not then be in default, in which event the Owner shall be liable to the Contractor only for a reasonable amount for Work done and materials delivered at or to the Site up to the date of the termination.

Upon payment of the aggregate of the aforesaid sums, the Owner, the Engineer and the Contractor shall be released from their liabilities or obligations under the Contract save and except that the liabilities and obligations of the Contractor shall continue with respect to deficiencies and warranties in the portion of the Work completed prior to termination.

GC.62. TERMINATION OF CONTRACT FOR CONTRACTOR'S DEFAULT

- a) The Engineer as agent for and on behalf of the Owner, without prejudice to any other right, may elect to terminate the Contract forthwith upon notice to the Contractor if:
 - i) the Contractor fails to comply with the Notice of Award requirements of paragraph 2 of the Form of Tender;
 - ii) the Contractor fails to comply with the Notice to Proceed requirements of paragraph 3 of the Form of Tender;
 - iii) the Contractor commits an act of bankruptcy or becomes a bankrupt or makes a general assignment for the benefit of the Contractor's creditors;
 - iv) a receiver is appointed for the Contractor's business;

**INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART E - GENERAL CONDITIONS**

- v) the Contractor fails, on reasonable notice from the Engineer, to supply enough proper workmen or Products;
 - vi) the Contractor does not pay promptly the Contractor's employees, Subcontractors or suppliers;
 - vii) the Contractor does not comply with the requirements of the WorkSafe BC / Occupational Health and Safety Regulations, and any failure to meet the safety requirements of the Contract; or
 - viii) the Contractor persistently or substantially breaches any provision of this Contract.
- b) On such termination the Engineer may arrange for the performance of the Work by whatever method the Engineer deems expedient but without undue delay or expense.
- c) The Engineer may take possession of all Products, equipment, tools, structures and appliances belonging to or provided by the Contractor located on the Site which the Engineer deems necessary to prosecute the Work which possession the Contractor hereby pledges to the Engineer as agent for and on behalf of the Owner, as security for the performance of the Contract and the Work, provided that upon completion of the Work the Engineer shall return to the Contractor or her legal representative any such chattels so taken in possession in their original condition (ordinary wear and tear excepted) if not incorporated in the Work, without any compensation for use thereof.
- d) In case the Work or any part thereof is taken out of the hands of the Contractor, as herein provided, it shall in no way affect the relative obligations of the Owner and the Contractor or its sureties in respect of the Contractor's or their obligation, or in respect of the remainder of the Work (if any), as the Engineer may consider reasonable. The Contractor and its sureties in every case shall be liable for such damages, expenditures and extra expenditures, and for all additional cost of the Work which may be incurred by reason of termination of the Contract pursuant to this GC.62, together with the compensation for liquidated damages, if any, from the date fixed for the Total Performance of the Work, and the same may be deducted or collected by the Owner as provided by GC.58.
- e) All the powers of the Engineer with respect to the determination of any doubts, disputes and differences, and the determination of the sum or sums, or balance of money to be paid to or received from the Contractor, and otherwise in respect of the Contract shall nevertheless continue in force.
- f) The fulfilment by the Contractor of any stipulation in the Contract may be enforced by legal proceedings and judgement, or order of Court, without prejudice to any other remedy herein contained. Neither the Owner nor any of its officials, officers, employees or other agents shall be liable or accountable to the Contractor in any way for the manner in which, or the price at which the Work, or any portion thereof, may have been or may be done or completed by the Owner.

**INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART E - GENERAL CONDITIONS**

- g) No proceeding taken pursuant to this GC.62 or pursuant to any other provision of the Contract, shall at any time be deemed to be an assignment of the Contract or of any portion thereof, unless otherwise agreed to in writing.

GC.63. SUBMITTALS

The Contractor shall submit Product data and samples to the Engineer for review on request. The Contractor's responsibility for deviation in submissions is not relieved by the Engineer's review unless the Engineer gives written acceptance of specific deviations from the requirements of the Contract Documents. The Contractor shall make any changes in submissions which the Engineer may request consistent with the Contract Documents and shall resubmit as directed by the Engineer. The Contractor shall not proceed with work until relevant submittals have been reviewed by the Engineer. The Contractor shall co-ordinate submittals with the requirements of the Contract Documents and shall allow 14 calendar days for the Engineer's review.

GC.64 HARMONIZED SALES TAX ("HST") - PROVINCIAL SALES TAX ("PST") AND FEDERAL GOOD AND SERVICES TAX ("GST") HARMONIZATION

The parties agree that the Contract Price presently includes all duties, sales and social service taxes, excise taxes, personal property taxes on products, materials, construction machinery and equipment and other property owned or leased by the Contractor, and any other taxes, assessments, charges applicable to or arising directly or indirectly out of the performance of the work under the Contract other than the GST. The Contractor shall be registered in accordance with applicable laws and shall comply with all requirements hereunder to collect and remit GST and HST (as presently announced by the federal and provincial government to be effective July 1, 2010 for British Columbia and Ontario) and to pay or remit any other such taxes, assessments or charges. For greater certainty, on the harmonization of the PST with the GST, or the replacement of the PST with a value-added tax similar to the GST, the Contractor will decrease the Contract Price to the same extent that the Contractor is no longer required to pay the PST included in the Contract Price and is instead paying a recoverable value-added tax (or HST). If requested by the Owner, the Contractor shall make available to the representatives or auditors of the Owner, all relevant accounting books, tax records, invoices and other documents for inspection and audit during normal business hours. Any refund, rebate or credit in respect of PST or other taxes, assessments or charges payable arising directly or indirectly out of the performance of work under the Contract shall be for the benefit of the Owner and the Contractor shall participate and cooperate, as required, in any filing or application process necessary to initiate or complete the intent of this provision. The Contractor shall provide the Owner, at the Owner's request, such documents and particulars relating to the performance of work under the Contract in respect of which GST or HST is required to be paid by the Owner that are necessary to substantiate any claim for any input tax credits as may be permitted pursuant to the Excise Tax Act (Canada) or other applicable laws. The Contractor represents and warrants that the Contractor is not a non-resident of Canada for the purposes of the Income Tax Act (Canada) and that the Contractor has complied fully with the provisions of all applicable tax legislation, including, the Social Service Tax Act (British Columbia). The Contractor shall be liable to the Owner for: (i) any non-compliance with any of the Contractor's obligations under this paragraph; and (ii) any costs, penalties, assessments or other charges incurred by or levied against the Owner by reason of the

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART E - GENERAL CONDITIONS

Contractor being or becoming a non-resident of Canada for the purposes of the Income Tax Act (Canada).

GC.65. NON-RESIDENT WITHHOLDING TAX

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

- a) 25% of all money payable under the Contract; and
- b) sums required to be withheld and remitted by the *Income Tax Act* (Canada) as amended.

The City will receive a further credit under the Contract for money 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 Contractor.

1.0 DEFINITIONS

- (a) "OH&S Regulation" means Occupational Health & Safety Regulation (British Columbia Regulation 296/97), as amended by British Columbia Regulation 185/9) 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 on 41st Avenue, Cambie to Kingsway;
- (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 the 41st Avenue Rehabilitation Construction, 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;
- (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 copy of its WCB/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 OH&S Regulation 20.2 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 WorkSafeBC OH&S Regulation 20.3(4).

- 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 OH&S Regulation Clause 20.3(3) 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 a 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



CERTIFICATE OF INSURANCE
Project Specific Insurance

Section 7 a) – City staff to select the required # of days Written Notice before sending out for completion
Section 2 through 7 – 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 PROJECT/CONTRACT: _____

3. **PROPERTY INSURANCE – ALL RISK COURSE OF CONSTRUCTION (Builder's Risk Form) /INSTALLATION FLOATER**
 - Providing All Risk Coverage including Earthquake and Flood up to full replacement cost of the Project/Contract described above
 - Naming the City of Vancouver as an Insured and containing a Loss Payee Clause in favour of the City of Vancouver stating that proceeds of any claims against the Insurer be made payable to City of Vancouver as its interest may appear

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

INSURED VALUES: (Full Replacement Cost value of Project)
Limit: \$ _____
Deductible Per Loss: \$ _____

4. **WRAP UP LIABILITY INSURANCE (Occurrence Form)** in the Joint Named Insured of the Owner, City of Vancouver, Architects, Engineers, Consultants, Sub-consultants, Contractors, and Subcontractors, including their officials, officers, employees, agents, and all participants engaged in or connected with the above Project/Contract, including the following extensions:

- ✓ Personal Injury
- ✓ Cross Liability or Severability of Interest
- ✓ Employees as Additional Insureds
- ✓ Blanket Contractual Liability
- ✓ Broad Form Products and Completed Operations
- ✓ Broad Form Property Damage including Loss of Use
- ✓ Non-Owned Auto Liability

Check Additional Extensions where applicable and included:

- ☐ Work below ground level over 3 metres
- ☐ Excavation, shoring, underpinning, pile driving or caisson
- ☐ Demolition, removal or weakening of support of property
- ☐ Blasting
- ☐ Operation of hoist or attached machinery
- ☐ 24 months Completed Operations
- ☐ 36 months Completed Operations

INSURER: _____ POLICYNUMBER: _____

POLICY PERIOD: From _____ To _____

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

Per Occurrence:\$ _____ Aggregate:\$ _____ 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. **OTHER INSURANCE (e.g. Contractors' Equipment) – Please specify Name of Insurer(s), Policy Number, Policy Period, and Limit**

7. **POLICY PROVISIONS:**

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

- a) *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;*
- b) *All property insurance policies must contain a provision in which the Insurer(s), upon payment of a claim will waive all rights of subrogation against the City of Vancouver, its officials, officers, employees or agents;*
- c) *The insurance policy (policies) listed herein shall be primary with respect to the above described project/contract. 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: _____

InsCertCoVProjectSpecific.dot_Jan.08

**INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART F - SUPPLEMENTARY GENERAL CONDITIONS**

SUPPLEMENTARY GENERAL CONDITIONS

1.0 HOURS OF WORK

The City Noise By-Law allows construction between the hours of 7:00 A.M. to 8:00 P.M., Monday to Saturday, and 10:00 A.M. to 8:00 P.M. on Sundays and holidays. No work shall be done outside these hours except as approved by the Engineer. A request for a Noise By-Law exemption to work outside the specified hours must be made in writing to the Mayor's Office a minimum of two (2) weeks prior to the work being done.

Notwithstanding GC.35, the City's forces work between the hours of 7:30 A.M. and 3:30 P.M. Mondays to Fridays, except statutory holidays. Work will not be performed by City forces or City inspectors outside these hours except by special arrangement agreed to by the Engineer or in case of an emergency. Work performed in the absence of a required inspection is not permitted.

2.0 WORK WITH ENGINEER

The Work shall be done in accordance with the Contract Documents and to the satisfaction of the Engineer. The Contractor shall coordinate the Work with the Engineer. The Contractor shall have no cause for claim against the City whatsoever with respect to delays or other interruption of the Work by City forces or due to the above requirement to coordinate the Work with the Engineer.

3.0 COORDINATION WITH OTHER WORK ON SITE

Time shall be of the essence for all purposes of this Contract and the performance of the Work.

The Contractor will be responsible for completing the Work in a way that does not hinder other work on the Site (as described in paragraph 17 of the Instructions to Tenderers). The Contractor shall have no cause for claim against the City whatsoever with respect to delays or other interruption of the Work due to the above requirement to complete the Work in a way that does not hinder other work on the Site.

4.0 PROGRESS PAYMENTS

Notwithstanding anything else in the Contract, the Contractor will not make application for payment and the City is not obliged to make payment for Work done until each sub-project, if any, as described in the Contract Documents, has been completed in accordance with the Contract Documents.

5.0 COMPLY WITH APPLICABLE LAW

The Contractor will be required to conduct the Work in accordance with the requirements of all applicable Federal, Provincial and Municipal laws and regulations.

6.0 TRUCK SAFETY

All truck operators must operate the vehicle in a safe and courteous manner and in full compliance with the Motor Vehicle Regulations.

**INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART F - SUPPLEMENTARY GENERAL CONDITIONS**

All truck operators must comply with the City of Vancouver By-laws regulating truck use, including truck route, engine brake noise, and weight and load securement provisions. There will be zero tolerance on overloading trucks and untarped loads.

[Note: The City of Vancouver Street and Traffic By-Law 2849 - Spilling of Vehicle Loads on Streets - Securing of Loads

99. (2) (a) No person shall drive, ride, or propel any vehicle containing any sawdust, solid waste, liquid waste, dirt, gravel, rocks, or other loose material on any street in the City unless such vehicles are kept tightly and securely covered in such a manner as to prevent any of the load from being blown, dropped or spilled from such vehicle.]

All vehicles must be inspected prior to leaving a site to ensure that loads are properly secured and tarped and that there is no debris on the vehicle and no debris or rocks between the tires.

7.0 EXTRA WORK

Adjustments to the Contract Price on account of changes or additions to the Work will be valued on the basis of the unit prices specified in the Schedule of Quantities and Prices. Where no unit price is identified, adjustments will be valued as follows:

- (a) by any amount or method agreed to by the Engineer and the Contractor including new unit prices or a lump sum; or
- (b) by Force Account, as discussed below.

8.0 FORCE ACCOUNT

Payment for Force Account Work will be calculated as follows:

- (a) Labour - at the lower of the hourly rates set out in the Tender or the actual cost to the Contractor, including all amounts paid for labour and all related taxes, assessments payable as required by any applicable laws, such as, without limitation, WorkSafe BC/OHS Regulations and those relating to employment insurance, holiday pay, insurance and all employee benefits. A markup of 3% on the foregoing will be allowed for all small tools. A markup of 10% on the total of the foregoing will be allowed for overhead. A further markup of 10% on the total of the foregoing, including the markup for overhead, will be allowed for profit.
- (b) Equipment:
 - (i) Contractor Owned or Bare Rented-at the non-operated hourly rates as set out in the Approved Equipment Rental Rate Guide based on actual hours, in minimum increments of 0.5 hours, plus a 10% markup to cover all overhead costs and profit. If equipment is not listed in the Approved equipment Rental Guide then at a rate determined by the Engineer based on local equipment rates; or

**INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART F - SUPPLEMENTARY GENERAL CONDITIONS**

- (ii) Non-Contractor Owned and Operated-at the lower of the all found rate in the Approved Equipment Rental Rate Guide for operated equipment, or the actual rental costs incurred by the Contractor, as evidenced by invoice, plus, in either case, a 10% markup to cover all overhead costs and profit.

Separate rental for small tools will NOT be allowed.

- (c) Materials incorporated into the Work or used up by the Contractor in performing the Work will be at the Contractor's actual cost, as evidenced by invoice, including all transportation, freight and haulage costs plus a markup of 10% on such actual cost to cover all overhead, handling and profit.
- (d) Force Account Work performed by a Subcontractor will be paid for in the lesser of: (i) the amount as provided by subparagraphs (a), (b) and (c) above, plus a mark-up of 5% to cover all overhead and profit; or (ii) the actual amount the Contractor pays the Subcontractor including a mark-up of 10% on such actual cost to cover all overhead and profit.

9.0 RELEASE AND INDEMNIFICATION

The Contractor hereby releases the City and its officers, officials, employees and agents from any and all liability for any 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 Contractor, its Subcontractors, and their respective officers, employees and agents in connection with the performance of the Work.

Notwithstanding any insurance coverage the City may have in place, the Contractor will indemnify the City and all of its officials, officers, employees and agents for and hold them harmless from any and all complaints, claims, demands, actions, suits, judgments and orders for any injury, damage, expense, infringement or penalty of any kind suffered, incurred or experienced by or imposed upon any person or entity as a result of any act or omission on the part of the Contractor or any of its subcontractors in connection with the Work.

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.

The release and indemnity set out above will survive the expiry or sooner termination of the Contract.

10.0 NO PROMOTION OF RELATIONSHIP WITH THE CITY OR THE OLYMPICS

The Contractor will not in any way disclose or promote its relationship with the City, including, without limitation, by means of any verbal declarations, announcements, 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 Contractor to perform the Contractor's obligations under the terms of the Agreement.

**INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART F - SUPPLEMENTARY GENERAL CONDITIONS**

Furthermore, the Contractor will not in any way under any circumstances disclose or promote its relationship with the City in connection with the Work and the Contract in any communications in a manner that might suggest or create an association, express or implied, between the Contractor and the International Olympic Committee, the 2010 Olympic and Paralympics Winter Games, the Olympic Movement or the Vancouver Organizing Committee for the 2010 Olympic and Paralympics Winter Games (also known as “VANOC”) or the Olympic Games generally or at all. Without limiting the generality of the foregoing, the Contractor will not in any way in any communications whatsoever refer to “VANOC”, “Vancouver 2010”, the “2010 Games”, the “Games”, “Host City” or “Olympics”, and will not use any official emblem, logo or mascot of the 2010 Games unless it is specifically and expressly authorized in writing by an authorized Olympics authority to do so.

11.0 MASTER MUNICIPAL SPECIFICATIONS AND STANDARD DETAIL DRAWINGS

All references to “Specifications”, “Master Specifications”, “Master Municipal Specifications”, “Technical Specifications” will be taken to mean the “Master Municipal Construction Document” (“MMCD”) and Standard Detail Drawings (printing 2000) as amended by the City of Vancouver in the Supplemental Specifications and Detail Drawings. [*Note: Superpave Asphalt Specifications and Design Mix added (revised 2004).*]

12.0 PROTECTION OF CITY FROM ENVIRONMENTAL LIABILITY FOR CONTAMINATED SOILS

- a) The City will undertake testing, sampling and records-keeping in respect of all applicable Environmental Legislation for the soils and/or materials excavated by the Contractor, in accordance with the Contract Documents. Excavated soils and/or materials will require characterization prior to disposal by the Contractor.
- b) If the excavated soils and/or materials are tested and determined to be contaminated, the Contractor shall remove the contaminated soils and/or materials at its own expense (excluding tipping fees at the Vancouver Landfill, if applicable) and treat them in conformity with all Environmental Legislation. The Contractor will be deemed to have taken ownership of such excavated soils and/or materials once they are removed from the Work Site. The Contractor shall be liable for handling, transporting, or disposing of these contaminated soils and/or materials as specified in the Contract Documents.

All contaminated soils are to be disposed of at the Vancouver Landfill, located at 5400 72nd Street, Delta, British Columbia. For certainty, the Contractor will not be required to pay the Vancouver Landfill tipping fee; such fee will be paid by the City.

If the Vancouver Landfill refuses to accept any of the contaminated soils from the Site, the Contractor shall dispose of such soils in accordance with Environmental Legislation, and provide to the Engineer, prior to any disposal of contaminated soils and/or materials:

- copies of applicable site disposal permit, along with a letter of consent signed by the Contractor authorizing the City to make all relevant enquiries of the applicable issuer of such permits as to their validity, authenticity, and current status, and the Contractor’s compliance with same;
- a copy of all relevant bonds, insurance certificates, and procedures which the

**INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART F - SUPPLEMENTARY GENERAL CONDITIONS**

Contractor utilizes for ensuring that its customers are fully protected from liability for claims that contaminated soils deposited on a disposal site originated from the customer's site; and

- copies of relevant documents from applicable federal, provincial and municipal authorities with respect to authorization or permits for disposal of contaminated soils and/or materials at a particular disposal site.

Unless a separate unit rate is provided in Schedule A, the City shall pay the Contractor its commercially reasonable additional costs (without any markup for overhead, profit or otherwise) for disposing of the contaminated soils at another disposal site (instead of the Vancouver Landfill site).

The Contractor shall keep a complete record of all contaminated soils removed from the Site and the location of disposal, including dates when such work was completed.

The City of Vancouver will accept recycled crushed portland cement concrete (which conforms to Section 02226 of the Supplemental Specifications) for use as granular base.

At the City's option, it may require the Contractor to recover excavated material for recycling purposes. In the event the City requires this excavated material, the Contractor will be required to deliver this material to the City's Kent Yard at 900 Kent Avenue, Vancouver.

13.0 STAKES, LINES AND LEVELS

The Contractor will give the Engineer at least 48 working hours' notice before requiring the first survey layout of any levels, lines or stakes on any portion of the Work Site, and the Contractor will clearly state in such notice the exact locations where such are needed for immediate use. However, such notice does not require the Engineer to permit work to commence at that location.

The Contractor must be satisfied, before commencing work at any points, as to the meaning and correctness of all stakes and marks, and no claim will be entertained by the City for or on account of any alleged inaccuracies, or for alterations subsequently rendered on account of such alleged inaccuracies, unless the Contractor notified the Engineer thereof in writing prior to commencing the work. The Contractor shall be responsible for the preservation of all stakes and marks in their proper positions, and in case any of them are disturbed, lost or destroyed after having once been given, the Contractor will incur all necessary replacement expenses.

As the stakes and marks set will not in all cases represent all the grades, levels, lines and angles, or changes of surface, lines or levels, in the finished work, the Contractor must be careful to see that they are taken and read correctly in connection with the plans, details, specifications and Engineer's direction. Should the Contractor discover or suspect any errors in the same, work will be discontinued until such errors are investigated and rectified; but no claim will be made or allowed on account thereof, or on account of any delay occasioned thereby.

14.0 NO PARKING SIGNS

**INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART F - SUPPLEMENTARY GENERAL CONDITIONS**

The Contractor must provide at least 48 working hours notice to the Engineer for erection or relocation of temporary “no parking” or “no stopping” signs. The Contractor is prohibited from interfering in any way with the Owner’s parking regulation signage or placing its own signage without the Owner’s prior written consent.

15.0 WORK ADJACENT TO TREES

The Contractor will not prune any tree branches or roots without Engineer’s prior approval. If any such pruning is so approved, the cutting must be done with a sharp axe or saw with an inspector from City’s Park Board present, and not with a backhoe or gradall bucket. Where required by the Engineer, construction adjacent to trees will be done by hand and not by machine.

Note: The new Protection of Trees By-law requires that root pruning be done by an Arborist.

Root Pruning Guidelines

The following general root pruning guidelines are provided for your knowledge:

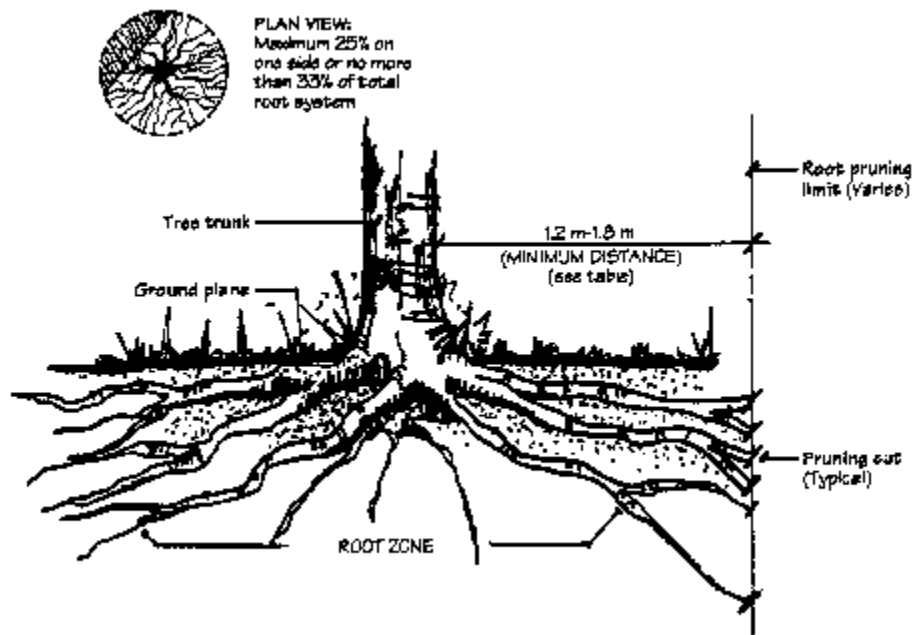
1. A tree should be root pruned only if the problem can be solved by removing less than 33 percent of the tree’s roots, with no more than 25 percent from one side.
2. For trees 30 cm in diameter and less, roots should not be removed within 1.2 m of the outer edge of the tree base. Trees with diameters over 30 cm should be allowed an additional 30 cm for every extra 7.5 cm of trunk diameter measured at a point 1 m above ground. For example, a tree with a 37.5 cm diameter trunk measured 1 m above the ground would require a minimum 1.55 m allowance around it. The following table provides a guideline for root pruning different tree sizes.

TREE DIAMETER	DISTANCE FROM TRUNK	
(measured 1 m above ground)	Minimum	Preferred
15 cm	1.2 m	1.5 m
22.5 cm	1.2 m	1.5 m
30 cm	1.2 m	1.8 m
37.5 cm	1.5 m	2.1 m
45 cm	1.8 m	2.4 m
52.5 cm	2.1 m	2.7 m

3. Cut roots cleanly after excavation with clean, sharp tools, to promote callus formation and wound closure. Wounds may be dressed with a tree rooting hormone compound that is available at garden centres.

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART F - SUPPLEMENTARY GENERAL CONDITIONS

4.



5. Backfill the excavation as soon as possible and water the soil around the roots to avoid leaving air pockets. If backfilling won't happen for several days, leave the roots exposed until just before backfilling.
6. Mix soil improvements (e.g., peat moss) with fill soil to promote new root growth, especially if the existing soil is of poor quality. The soil quality can be easily determined by using a basic soil testing kit which is readily available at most nursery supply stores. Do not add fertilizers until improved tree growth is noticed, generally after 6 to 8 weeks during a growing season. Soil testing will better determine soil deficiencies and additional amendment requirements if necessary.
7. Surface roots which interfere with other elements in the landscape should only be removed by an Arborist. Each tree has a different root system and requires individual analysis and treatment.

16.0 SPECIAL PREPARATION FOR TREE BEDS & ROOT BARRIERS

Where directed by the Engineer, the Contractor will prepare a base and trench area complete with growing medium for future tree (refer to drawing MF137-AC in the Contract). The materials description is noted in drawing MF137-AC (refer to Section 02921 - Topsoil & Finish Grading of the Supplemental Specifications).

17.0 TREE ROOT LINEAR BARRIERS

If required, the Contractor will install plastic tree root linear barriers at all locations where the City's Parks Board will be installing new trees. The dimensions of the root barriers are 0.6m (2 feet) in length x 0.45m (1.5 feet) in depth. The barriers are to run adjacent to the existing City sidewalk for 3 metres (approx. 10 feet) centered on the location of the new tree (i.e. 1.5m or 5 feet on either side of the tree).

**INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART F - SUPPLEMENTARY GENERAL CONDITIONS**

Note: Approved suppliers of the tree root linear barriers are Deep Root (604.687.0899) and Century Root Barriers (604.532.6000). The barriers are to be non-biodegradable and to not contain any pesticides. An approved equal to the above suppliers must be approved by the Engineer.

Refer to Drawing MF137-AC for typical location of the barriers and further specifications.

18.0 CURB RAMPS

The location of curb ramps required in the Work will be in conformance with Supplemental Detail Drawings MF137-L-3, MF137-L-5, and MF137-L-6.

GENERAL CONSIDERATIONS

- Curb ramps are designed for the access of wheelchairs (they also accommodate scooters, strollers and people with poor mobility).
- Ramps should land wheelchair users safely in the crosswalk and in the desired direction of travel.
- The preferred design is to install 2 ramps per corner with directional score lines wherever possible.
- The scoring pattern is designed to assist people with visual impairments.
- Directional score lines shall guide someone safely into the crosswalk, lining up with the ramp across the street and be parallel with the crossing or marked crosswalk.

DOUBLE CURB RAMP DESIGN (Preferred) - Standard Drawing MF137-L-5

- The ramp and the directional score lines shall lead into the crosswalk, lining up with the ramp across the street and be parallel with the crossing or marked crosswalk.
- Where a greener treatment is desired grass can be installed between the two ramps where there is a reasonable expectation that the adjacent property owner will mow the additional grass.
- Minimum 1 meter full curb between the two ramps.

LARGE SINGLE CURB RAMP DESIGN (Alternative) - Standard Drawing MF137-L-3

- Used when double curb ramps cannot be accommodated due to obstructions such as poles, utility boxes, property lines, etc. that would result in less than 1 meter full curb between the two ramps.
- The ramp must adequately land a pedestrian in either crosswalk.
- Directional score lines shall lead the user over the curb and into the crosswalk, lining up with the ramp across the street and be parallel with the crossing or marked crosswalk.

LANE CURB RAMP DESIGN - Standard Drawing MF137-L-6

- Used at lane intersections. However, consideration can be given to running the sidewalk through the lane (this would generally be a crossing as opposed to a raised sidewalk).

**INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART F - SUPPLEMENTARY GENERAL CONDITIONS**

- The ramp and the directional score lines shall line up with the ramp across the lane and be parallel with the crossing.

In residential areas, the flares may be installed in grass to match the boulevard treatment.

19.0 PERMITS FOR WORK

Nothing in this Contract constitutes the issuance of a permit otherwise required to be obtained by the Contractor from the City of Vancouver (acting in its regulatory capacity, as opposed to its capacity as the Owner). The Contractor must obtain any and all required permits for the Work, including and all permits required by the City of Vancouver. Extra compensation will not be allowed for costs incurred by the Contractor as a result of the failure of the Contractor to secure permits such that the Contractor can comply with the Construction Schedule.

20.0 PROVISION OF PEDESTRIAN AND VEHICULAR ACCESS

20.1 The Contractor's Work will be carried out in accordance with the following requirements:

- a) maintaining safe and continuous pedestrian access at all times to all businesses within the Work Site, for example, but without limitation, supplying temporary ramps and bridges to cross over any newly poured concrete;
- b) closing only one sidewalk on 41st Avenue at a time (no closure of both the north and south side simultaneously) while maintaining safe and continuous pedestrian access across the closed sidewalk as set out in (a) above by providing a safe pedestrian corridor alongside the roadway adjacent to the closed sidewalk;
- c) closing only one crosswalk within an intersection at any time, and maintaining safe and continuous access to at least three pedestrian crossings within an intersection at all times;
- d) except to the limited extent permitted by clause (e) below, maintaining one lane eastbound and one lane westbound vehicular traffic during peak rush hours - and for the purposes of this clause (d), "peak rush hours" means Workings Days between 7:00 a.m. and 9:30 a.m. and 3:00 p.m. and 6:00 p.m.
- e) despite clause (d) above, temporary closures of
 - roadway between intersections to vehicular traffic (but only where required by the Contractor for roadway paving) will be limited to a maximum of three contiguous blocks at any given time,
 - roadway within intersections will be limited to Saturdays and Sundays only,

provided always that such temporary closures are arranged in advance with the City's Traffic Management Branch and/or the Engineer as part of the

**INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART F - SUPPLEMENTARY GENERAL CONDITIONS**

Construction Schedule review and approval process referred to in Section 22 of the General Conditions.

- f) City approved Traffic Management Plan to Ministry of Transportation & Highways standards augmented by Changeable Message Signs (+/- 4 small 6'ft wide signs at no additional cost) at various locations.

20.2 At the Contractor's reasonable request, and where reasonably required for the Work and expressly provided for in the Construction Schedule approved pursuant to GC.22, the City will permit the Contractor to suspend or stop, as appropriate, curb side street parking.

20.3 At no time will the Contractor be permitted to utilize the Work Site for the parking of employee or other vehicles, except for those actively and reasonably required for the performance of the Work. Vehicle traffic within the Work Site must be limited to Work purposes, such as paving, staging and delivery and in full compliance with WorkSafe BC guidelines.

21.0 COORDINATION WITH OTHER CONTRACTORS

Prior to the commencement of the Work, the City's water and sewer and BC Hydro crews and other utility groups may have commenced their activities in the area of the Work Site. The Contractor will coordinate its Work with the Engineer for such areas where previous work has commenced and not completed prior to start date of this Contract. Coordination may also be required with Coast Mountain Bus for bus service adjustments and City Traffic/Electrical forces. The Tenderer is required to work together with the City and Other contractors to resolve any coordination issues that may arise as a result of these anticipated construction activities.

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART G - SUPPLEMENTAL SPECIFICATIONS

Supplemental Specifications

All references to “Specifications”, “Master Specifications”, “Master Municipal Specifications”, “Technical Specifications”, etc. will be taken to mean the “Master Municipal Construction Document” (“MMCD”) and Standard Detail Drawings (printing 2000) as amended by the City of Vancouver in the Supplemental Specifications and Detail Drawings. *Note: Superpave Asphalt Specifications and Design Mix added (revised 2004).*

Index

DIVISION 1 - GENERAL

<u>No.</u>	<u>Title (Comments)</u>
------------	-------------------------

	Section 01310 - Construction Schedule
	Section 01340 - Shop Drawings, Product Data and Samples
	Section 01400 - Quality Control
	Section 01535 - Temporary Facilities (MMCD Section, as amended)
	Section 01561 - Environmental Protection (MMCD Section, as amended)
	Section 01570 - Traffic Regulation (MMCD Section, as amended)
	Section 01721 - Project Record Documents

DIVISION 2 - SITE WORK

<u>No.</u>	<u>Title (Comments)</u>
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	Section 02000 - References (MMCD Section, as amended)
	Section 02104 - Shrub and Tree Preservation
	Section 02111 - Clearing & Grubbing
	Section 02210 - Site Grading (MMCD Section, as amended)
	Section 02221 - Rock Removal (MMCD Section, as amended)
	Section 02223 - Excavating, Trenching & Backfilling
	Section 02224 - Roadway Excavation, Embankment and Compaction (MMCD Section, as amended)
	Section 02226 - Aggregates & Granular Materials (MMCD Section, as amended)
	Section 02233 - Granular Base (MMCD Section, as amended)
	Section 02234 - Granular Subbase (MMCD Section, as amended)
	Section 02242 - Dust Control (MMCD Section, as amended)
	Section 02271 - Riprap
	Section 02272 - Gabions
	Section 02512 - Hot-Mixed Asphalt Concrete Paving (MMCD Section, as amended)
	Section 02515 - Unit Paving
	Section 02521 - Portland Cement Concrete Pavement (MMCD Section, as amended)
	Section 02523 - Concrete Walks, Curbs and Gutters (MMCD Section, as amended)
	Section 02546 - Asphalt Prime
	Section 02575 - Full Depth Reclamation (MMCD Section, as amended)
	Section 02576 - Sealing Pavement Cracks for Maintenance Purposes
	Section 02577 - Pavement Crack Cleaning & Filling (MMCD Section, as amended)
	Section 02580 - Painted Pavement Markings
	Section 02594 - Restoration of Cuts in Portland Cement Concrete Sidewalks & Driveway Crossings
	Section 02666 - Waterworks

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART G - SUPPLEMENTAL SPECIFICATIONS

Section 02721 - Storm Sewers
Section 02723 - Pipe Culverts
Section 02725 - Manholes & Catch Basins
Section 02731 - Sanitary Sewers
Section 02732 - Sewage Force Mains
Section 02831 - Chainlink Fences
Section 02921 - Topsoil & Finish Grading (MMCD Section, as amended)
Section 02933 - Seeding (MMCD Section, as amended)
Section 02934 - Hydraulic Seeding
Section 02938 - Sodding (MMCD Section, as amended)
Section 02950 - Planting of Trees, Shrubs & Ground Covers

DIVISION 3 - CONCRETE

<u>No.</u>	<u>Title (Comments)</u>
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Section 03200	- Concrete Reinforcement
Section 03298	- Geosynthetics
Section 03300	- Cast-in-Place Concrete (MMCD Section, as amended)

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART G - SUPPLEMENTAL SPECIFICATIONS

DIVISION 1

01310

CONSTRUCTION SCHEDULE

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| 1.0 | GENERAL | .1 | Section 01310 describes the Contractor's responsibilities in the preparation and submission of construction schedules. This section must be referenced to and interpreted simultaneously with all other sections pertinent to the works described herein. |
| 1.1 | Section Includes | .1 | Schedule, form, content. |
| | | .2 | Staged construction. |
| | | .3 | Scheduled revisions. |
| 1.2 | Schedules Required | .1 | Submit following schedules as required by the Engineer: |
| | | .1 | Construction Progress Schedule |
| | | .2 | Submittal Schedule for Shop Drawings and Product Data |
| | | .3 | Submittal Schedule for Samples |
| | | .4 | Submittal Schedule for Owner supplied Products |
| | | .5 | Product Delivery Schedule |
| 1.3 | Format | .1 | Prepare schedules in form of horizontal bar chart. |
| | | .2 | Provide separate bar for each activity. |
| | | .3 | Provide horizontal time scale identifying first work day of each week. |
| | | .4 | List activities in chronological order based on start of each item of work. |
| 1.4 | Submissions With Tender | .1 | Refer to Tender Documents for details regarding schedules to be submitted with tender. |
| 1.5 | Submissions Following Award of Contract | .1 | Submit required schedules within 15 days after Award of Contract. |
| | | .2 | Engineer will review schedules and return reviewed copy within 10 days after receipt. |
| | | .3 | Resubmit finalized schedules within 7 days after return of reviewed copy. |
| | | .4 | Submit revised progress schedule with each application for payment or as directed otherwise by Engineer. |
| | | .5 | Distribute copies of revised progress schedule to: |
| | | .1 | Job site office. |

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART G - SUPPLEMENTAL SPECIFICATIONS

- .2 Subcontractors.
- .3 Other concerned parties as directed by Engineer.
- .6 Instruct recipients to report any problems anticipated with the schedule to Contractor within 10 days.
- 1.6 Construction Progress Schedule
 - .1 Include complete sequence of construction activities.
 - .2 Include dates for commencement and completion of each major element of construction including the following:
 - .1 Clearing.
 - .2 Utilities.
 - .3 Roadworks.
 - .4 Testing.
 - .5 Deficiencies.
 - .6 Completion.
 - .3 Show projected percentage of completion of each item as of first day of month.
 - .4 Indicate progress of each activity to date of submission schedule.
 - .5 Show changes occurring since previous submission of schedule:
 - .1 Major changes in scope.
 - .2 Activities modified since previous submission.
 - .3 Revised projections of progress and completion.
 - .4 Other identifiable changes.
 - .6 Provide a narrative report to define:
 - .1 Problem areas, anticipated delays, and impact on schedule.
 - .2 Corrective action recommended and its effect.
- 1.7 Submittals Schedule
 - .1 Include schedule for submitting shop drawings, product data and samples if required.
 - .2 Indicate dates for submitting, review time, resubmission time, float time, and last date for meeting fabrication schedule.
 - .3 Include dates when Owner supplied products will be required.
 - .4 Include dates when reviewed submittals will be required from Engineer.

01340 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

- 1.0 GENERAL
 - .1 Submit to Engineer, for review, shop drawings, product data and samples specified.

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART G - SUPPLEMENTAL SPECIFICATIONS

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| | .2 | Until submission is reviewed, work involving relevant product may not proceed. |
| 1.1 | Shop Drawings | |
| | .1 | Drawings to be originals prepared by Contractor, Sub-Contractor, Supplier or Distributor, which illustrate appropriate portion of work. Drawings to show fabrication, layout, setting or erection details, as specified in appropriate Sections. |
| | .2 | Identify details by reference to sheet and detail numbers shown on Contract Drawings. |
| | .3 | Maximum sheet size 1,000 X 707 mm. |
| 1.2 | Product Data | |
| | .1 | Manufacturer's standard schematic drawings, catalogue sheets, diagrams schedules, performance charts, illustrations and other standard descriptive data may be accepted in lieu of shop drawings, as determined by Engineer. |
| | .2 | The above must conform to the following: |
| | .1 | Delete information which is not applicable to the project. |
| | .2 | Supplement the standard information to provide additional information applicable to the project. |
| 1.3 | Coordination of Submissions | |
| | .1 | Review shop drawings, product data and samples prior to submission. |
| | .2 | Verify: |
| | .1 | Field measurements; |
| | .2 | Field construction criteria; and |
| | .3 | Catalogue numbers and similar data. |
| | .3 | Coordinate each submission with requirements of work and Contract documents. Individual shop drawing will not be reviewed until all related drawings are available. |
| | .4 | Contractor's responsibility for errors and omissions in submission is not relieved by Engineer's review of submittals. Refer to GC.12. |
| | .5 | Contractor's responsibility for deviations in submission from requirements of Contract documents is not relieved by Engineer's review of submission, unless Engineer gives written acceptance of specified deviations. Refer to GC.12. |
| | .6 | Notify Engineer in writing at time of submission, of deviations from requirements of Contract documents. |
| | .7 | After Engineer's review, distribute copies. |

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART G - SUPPLEMENTAL SPECIFICATIONS

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|-----|-------------------------|---|
| 1.4 | Submission Requirements | <ul style="list-style-type: none">.1 Schedule submissions at least 10 days before date that reviewed submission will be needed..2 Submit number of copies of shop drawings and product data which Contractor requires for distribution plus two (2) copies which will be retained by Engineer..3 Accompany submissions with transmittal letter, in duplicate, containing:<ul style="list-style-type: none">.1 Data;.2 Project title and number;.3 Contractor's name and address;.4 Number of each shop drawing, product data and sample submitted; and.5 Other pertinent data.4. Submission will include:<ul style="list-style-type: none">.1 Data and revision dates;.2 Project title and number;.3 Name of:<ul style="list-style-type: none">.1 Contractor;.2 Sub-Contractor;.3 Supplier;.4 Manufacturer; and.5 Separate detailer, when pertinent..4 Identification of product or material;.5 Relation to adjacent structure or material;.6 Field dimensions, clearly identified as such;.7 Specification Section number;.8 Applicable standards, such as CSA or CGSB numbers; and.9 Contractor's stamp, initialled or signed, certifying review of submission, verification of field measurements and compliance with contract documents. |
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01400 QUALITY CONTROL

1.0 GENERAL

- | | | |
|-----|--|---|
| 1.1 | Related Requirements Specified Elsewhere | <ul style="list-style-type: none">.1 Particular requirements for inspection and testing to be carried out by testing laboratory designated by engineer are specified under various sections. |
| 1.2 | Appointment and Payment | <ul style="list-style-type: none">.1 Engineer will appoint and pay for services of testing laboratory except for the following:<ul style="list-style-type: none">.1 Inspection and testing required by laws, ordinances, rules regulations or orders of public authorities..2 Inspection and testing performed exclusively for Contractor's convenience. |

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART G - SUPPLEMENTAL SPECIFICATIONS

- .3 Mill tests and certificates of compliance.
 - .4 Tests specified to be carried out by Contractor under the supervision of Engineer.
 - .5 Additional tests specified in paragraph 1.2.2.
 - .2 Where tests or inspections by designated testing laboratory reveal work not in accordance with contract requirements, Contractor will pay costs for additional tests or inspections as Engineer may require to verify acceptability of corrected work.
- 1.3 Contractor's Responsibilities
 - .1 Furnish labour and facilities to:
 - .1 Provide access to work to be inspected and tested.
 - .2 Facilitate inspections and tests.
 - .3 Make good work disturbed by inspection and test.
 - .2 Notify Engineer sufficiently in advance of operations to allow for assignment of laboratory personnel and scheduling of test.
 - .3 Where materials are specified to be tested, deliver representative samples in required quantity to testing laboratory.
 - .4 Pay costs for uncovering and making good work that is covered before required inspection or testing is completed and approved by Engineer.
- 1.4 Measurement for Payment .1 No separate payment will be made for any costs associated with this section.

01535 **TEMPORARY FACILITIES**

- 1.5 Water Supply
 - Add 1.5.2 Provide an adequate supply of potable water.
 - Add: 1.5.3 A hydrant use permit is required if any hydrant is to be used for the supply of water. Fees (including applicable deposits) for permits are the responsibility of the Contractor.
- 1.9 Construction Parking
 - 1.9.1 Delete 1.9.1 and replace with: Parking will be permitted on or near the Work Site provided it does not disrupt the performance of work and does not contravene any Traffic By-laws.
- 1.10 Hoarding and Barricades
 - 1.10.1 Delete 1.10.1 and replace with: Provide hoarding and/or barricades and flashers as required to protect the public from injury and private and City property from damage and as requested by the Engineer.
- 1.11 Security

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART G - SUPPLEMENTAL SPECIFICATIONS

- 1.11.1 Delete 1.11.1 and replace with: Provide and pay for responsible security personnel to guard site and contents of site after working hours and during holidays to the satisfaction of the Engineer.

01561 **ENVIRONMENTAL PROTECTION**

1.0 **GENERAL**

ADD: 1.0.3 and 1.0.4 under 1.0 **GENERAL**

- 1.0.3 The Contractor shall have due regard for the protection of the environment in the performance of the Work and shall not place any materials, or dispose of any materials, or perform any Work in a manner contrary to applicable Federal or Provincial or municipal environmental laws and regulations, either at the place of the Work, or at any other place or property.

- 1.0.4 Clean up shall progress as rapidly as the work itself and upon completion of the job, the contractor shall remove all debris and waste material caused by construction operations and leave the job site in a clean and neat condition.

All wastes and wastewater resulting from construction and its related activities on City property must be strictly treated in accordance with all related City regulations and By-laws such as Sewer and Watercourse By-law and Federal Fisheries Act. Failure to do so could result in immediate stoppage of work and penalty. Further information and guideline pamphlet can be obtained from City Environment Protection Office, Streets Operations, Sanitation Operations, Water Operations and Sewer Operations Branches. See contact numbers on page 2 of this manual.

Where vehicular, bicycle or pedestrian volumes are heavy and where weather conditions result in unsightliness, discomfort, or hazards, the contractor shall always take special precautions, to ensure that the site is kept both clean and safe.

Fire Hydrants shall be left clear for hose connections at all times.

REPLACE: 1.2.2 under 1.2 **Disposal of Wastes** with the following:

- 1.2.2 Do not dispose of waste, liquids or volatile materials, such as mineral spirits, oil or paint thinner into watercourses, storm or sanitary sewers.

DELETE: 1.3.3 under 1.3 **Drainage** and replace with the following:

- 1.3.3 Do not discharge water with a pH less than 6.0 or greater than 9.0
- 1.3.4 Control disposal of runoff water containing suspended materials or other harmful substances in accordance with Federal, Provincial and Municipal requirements.

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART G - SUPPLEMENTAL SPECIFICATIONS

- 1.3.5 A truck wheel wash system may be required to keep mud, dirt and debris from being tracked onto roads and into the storm sewers system.
- 1.3.6 Storm drain inlet protection may be required adjacent to the work being done.
- 1.3.7 An Erosion Sediment Control Plan subjected to the approval of the City of Vancouver Manager of Environmental Protection may be required prior to the work being done.

DELETE: 1.5.1 and 1.5.5 under 1.5 Work Adjacent to Watercourses and replace with the following:

- 1.5.1 Work around watercourses shall be done in accordance with the most recent version of the "Land Development Guidelines for the Protection of Aquatic Habitat" published by the Federal Department of Fisheries and Oceans and Provincial Ministry of Environment Lands and Parks.
- 1.5.5 No temporary stream crossings will be allowed without the approval of the federal, provincial or municipal authorities.
- 1.5.9 Prevent sand blasting and other extraneous materials from entering watercourses.

01570 **TRAFFIC REGULATION**

1.0 GENERAL

ADD: 1.0.5 under 1.0 GENERAL

- 1.0.5 The Contractor shall, at his own expense and without further or other order, provide, erect and maintain all requisite barriers, fences, or other proper protection in accordance with the latest version of "B.C. M.O.T. Traffic and Control Manual for Work on Roadways".

The Contractor shall also abide by any instructions issued by the City Engineer regarding traffic control.

ADD: the following under 1.2 Protection of Public Traffic

- 1.2.7 Pedestrians:
- Pedestrian behaviour (a person on foot or in a wheelchair) is to be monitored and addressed appropriately whenever their movements are impacted
 - A pedestrian provision must be in place whenever a sidewalk is closed for work purposes, or a reasonable alternate solution to the satisfaction of the City Engineer

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART G - SUPPLEMENTAL SPECIFICATIONS

- When observations reveal a condition that requires additional measures be taken to ensure the public's safety, the contractor must make all efforts to correct the situation in a timely manner
- No two parallel sidewalks are to be under construction concurrently
- Where work directly impacts sidewalk accessibility, ramps with a tactile surface are to be provided at either end of the work area allowing pedestrians to safely negotiate the grade change between the roadway surface and drop ramps, curbs and boulevards

Cyclists:

- Specific care and attention shall be provided for construction on Bike Routes or within Bike Lanes. Refer to the pamphlet 'Construction on Vancouver's Bicycle Routes', available through the Traffic Management Branch, for further information
- A traffic plan with clear directions of how cyclists are to be managed should be provided to Engineering staff
- Field review must be conducted regularly to ensure there are no conflicts between other road users or workers
- Different measures are to be used for the varying type of work impact - Emergency, Long Term and Short Term
- Accommodations are to be made whenever possible to allow cyclists through the work zone safely

Trucking:

- All truck operators must operate the vehicle in a safe and courteous manner and in full compliance with Provincial and Federal Motor Vehicle and Trucking Regulations
- All truck operators must comply with City of Vancouver By-laws regulating truck use, including truck route, engine brake noise, weight and load securement (tarping) provisions. There will be a zero tolerance on overloading trucks and untarped loads
- All vehicles must be inspected prior to leaving a site to ensure no debris is on the vehicle and that no debris or rocks are between tires

<u>01721</u>	<u>PROJECT RECORD DOCUMENTS</u>	DELETE
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DIVISION 2

<u>02000</u>	<u>REFERENCES</u>
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1.2	Referenced Specifications
	ADD: under 1.2.7 <u>ASTM (C)</u>

1.2.7.25	ASTM C 33, <i>Standard Specification for Concrete Aggregates</i>
1.2.7.26	ASTM C140, <i>Standard Test Methods for Sampling and Testing Concrete Masonry Units and Related Units</i>

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART G - SUPPLEMENTAL SPECIFICATIONS

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|----------|---|
| 1.2.7.27 | ASTM C144, <i>Standard Specification for Aggregate for Masonry Mortar</i> |
| 1.2.7.28 | ASTM C936, <i>Standard Specification for Solid Concrete Interlocking Paving Units</i> |
| 1.2.7.29 | ASTM C979, <i>Pigments for Integrally Coloured Concrete</i> |

ADD: under 1.2.8 ASTM (D)

- | | |
|----------|--|
| 1.2.8.37 | ASTM D2216, <i>Test Method for Laboratory Determination of Water (Moisture) Content of Soil and Rock</i> |
| 1.2.8.38 | ASTM D4491, <i>Permittivity</i> |
| 1.2.8.39 | ASTM D4751, <i>Apparent Opening Size</i> |
| 1.2.8.40 | ASTM D4632, <i>Grab tensile Strength</i> |
| 1.2.8.41 | ASTM D4833, <i>Puncture Resistance</i> |
| 1.2.8.42 | ASTM D4533, <i>Trapezoidal Tear</i> |
| 1.2.8.43 | ASTM D3786, <i>Mullen Burst</i> |
| 1.2.8.44 | ASTM D4353, <i>Sampling of Geotextiles for Testing</i> |
| 1.2.8.45 | ASTM D4355, <i>Ultraviolet Stability</i> |
| 1.2.8.46 | ASTM D4873, <i>Guide for Identification, Storage, and handling of Geosynthetics</i> |

ADD: under 1.2.13 CAN/CSA = CAN3

- | | |
|-----------|--|
| 1.2.13.16 | CAN/CSA-A179, <i>Mortar and Grout for Unit masonry</i> |
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ADD: 1.2.17 AASHTO under 1.2 Referenced Specifications

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|----------|--|
| 1.2.17.1 | AASHTO M288, <i>Geotextile Specifications for Highway Applications</i> |
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Add: 1.2.17 Municipal & Provincial By-Laws

- | | |
|----------|--|
| 1.2.17.1 | BC Ministry of Transportation & Highways Traffic Manual for Work on Roadways |
| 1.2.17.2 | Building By-Law No. (8057) |
| 1.2.17.3 | Encroachment By-Law No. (4243) |

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART G - SUPPLEMENTAL SPECIFICATIONS

- 1.2.17.4 Street and Traffic By-Law No. (2849), including Granville Mall Bylaw (4792), Motor Vehicle Noise Abatement Bylaw (4338) and Impounding Bylaw (3519)
- 1.2.17.5 Crossings By-Law No. (4644)
- 1.2.17.6 Noise Control Bylaw (6555)
- 1.2.17.7 Private Property Tree Bylaw (7347)
- 1.2.17.8 Street Tree Bylaw (5985)
- 1.2.17.9 Sewer and Watercourse Bylaw (8093)
- 1.2.17.10 Zoning and Development Bylaw (3575)

02104 **SHRUB AND TREE PRESERVATION**

ADD: 3.6 Work Adjacent Trees under 3.0 EXECUTION

3.6 **Work Adjacent Trees**

- 3.6.1 No tree branches or roots may be cut without prior approval by the City Engineer.
- 3.6.2 Branches and roots are to be cut with a sharp axe or saw with a Park Board inspector present. Cutting roots with an excavating equipment such as backhoe or gradall bucket is not acceptable.
- 3.6.3 Where required by the City Engineer, construction adjacent to trees will be done by hand, not by machine.

02210 **SITE GRADING**

1.0 **GENERAL**

- 1.0.1 Add after the first sentence: "...and the removal of any existing fill material which is unacceptable for required sub-grade bearing capacities or Standard Proctor density."

1.3 **Site Conditions**

Add: 1.3.3 Protection of existing buildings and surface features

- 1.3.3.1 Conduct with the Engineer, condition survey of existing building walls, fencing, service poles, wires, paving, survey bench marks and monuments which may be affected by work.
- 1.3.3.2 Photograph and record any existing damage, adjacent to the Work Site prior to the start of work. Provide documentation of all existing damages to the Engineer prior to the start of work.
- 1.3.3.3 Protect existing fencing, walls, curbs, sidewalks, pavement, bench marks, surface or underground utility lines which are to remain. If damaged, restore to original condition unless specified otherwise. Notify Engineer immediately if any damage occurs.

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART G - SUPPLEMENTAL SPECIFICATIONS

1.5 Inspection and Testing

Add: 1.5.2 The Engineer or the Engineer's representative is to inspect and approve all stages of the work. Provide twenty-four (24) hours notice to the Engineer when inspection is required.

3.1 Stripping of Topsoil

3.1.2 Add after last sentence: Surfaces must always be left graded smooth and rolled with a smooth drum roller to minimize infiltration of water and subsequent deterioration of material due to excessive moisture content. The surface must never be left with undrained depressions or with a rough texture.

3.2 Grading

3.2.2 Replace in the first sentence: "80%" with "85%"

3.2.3 Add after the last sentence: Notify Engineer when soil at bottom of excavation appears unsuitable and proceed as directed by Engineer.

3.2.5 Add after the first sentence: Do not use backfill material which is frozen or contains ice, snow or debris.
Replace in the last sentence: "200mm" with "150 mm" and "80%" with "85%"

3.2.6 Replace in the first sentence: "80%" with "85%"

Add: 3.2.9 For trench excavation, unless otherwise authorized by the Engineer in writing, do not excavate more than 30m of trench in advance of installation operations and do not leave open more than 15m at the end of day's operation.

Add: 3.2.10 Where required due to unauthorized over-excavation, correct by filling areas with stockpiled excavated material compacted to minimum of 85% standard proctor density.

02221 ROCK REMOVAL

1.6 Measurement and Payment

Delete 1.6.1 to 1.6.5 and replace with: Rock removal, including disposal as directed by the Engineer, will be paid as Extra Work under Clause 7 of the Supplementary General Conditions.

3.3 Rock Disposal

Add: 3.3.2 Rock remains property of the City of Vancouver. Disposal as directed by the Engineer.

02223 EXCAVATING, TRENCHING, & BACKFILLING

DELETE

02224 ROADWAY EXCAVATION, EMBANKMENT AND COMPACTION

1.3 Definitions

1.3.1 Delete 1.3.1 and replace with: Excavation Classes:

1.3.1.1 Rock excavation as defined under Section 02221 - Rock Removal, Clause 1.3 and as determined by the Engineer.

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART G - SUPPLEMENTAL SPECIFICATIONS

- 1.3.1.2 Common excavation includes removal and disposal of roots, stumps, logs, culverts, stones, boulders (under 1 cubic metre), miscellaneous debris, Macadam rock surfacing, curb and gutter, sidewalks, crossings, asphalt cement concrete pavement, and all sod and unstable surface material from the total excavation area to the designed subgrade level.

Common excavation is divided into several items:

1.3.1.2.1 Excavate and dispose existing portland cement concrete curb and gutter.

1.3.1.2.2 Excavate and dispose portland cement concrete crossings and sidewalks less than or equal to 100mm thick.

1.3.1.2.5 Excavate and dispose existing portland cement concrete sidewalks greater than 100mm thick.

1.3.1.2.6 Excavate and dispose existing portland cement concrete pavement.

1.3.1.2.7 Excavate, grade & prepare subgrade for sidewalk, sidewalk ramps, and asphalt crossings.

Add 1.3.1.2.7 If design grade is on average greater than any excavation beyond 375 mm is paid as extra work only under clause 7 of the Supplemental General Conditions otherwise unit rates will apply. This clause is specific to curb and road excavation.

1.8 Measurement and Payment

1.8.4 Delete 1.8.4 and replace with: Rock removal, including disposal as directed by the Engineer, will be paid as Extra Work under Clause 7 of the Supplementary General Conditions.

1.8.5 Delete 1.8.5 and replace with: Common excavation:

1.8.5.1 Excavate, grade and prepare subgrade for pavement is measured in square metres. When excavation, grading and preparation of subgrade for curb & gutter and for pavement can be accomplished in one operation, as determined by the Engineer, payment will be at unit price for excavation, grading and preparation of subgrade for pavement.

1.8.5.2 Excavate, grade and prepare subgrade for curb & gutter (0.9m wide) is measured in linear metres.

1.8.5.3 Excavate and dispose existing p.c. concrete curb and gutter is measured in linear metres.

1.8.5.4 Excavate and dispose p.c. concrete crossings and sidewalks less than or equal to 100mm thick is measured in square metres.

1.8.5.5 Excavate and dispose p.c. concrete sidewalks greater than 100mm thick is measured in square metres.

1.8.5.6 Excavate and dispose existing p.c. concrete pavement is measured in square metres.

1.8.5.7 Excavate, grade and prepare subgrade for sidewalk, sidewalk ramps, and asphalt crossings is measured in square metres.

1.9 Inspection and Testing

Add: 1.9.2 Engineer may require testing of materials and densities by a testing laboratory. Initial tests will be paid for by Corporation. If work fails initial tests, subsequent tests will be paid for by Contractor.

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART G - SUPPLEMENTAL SPECIFICATIONS

DELETE: 2.2 Specified Materials under 2.0 PRODUCTS and replace with the following:

2.2 Specified Materials

2.2.1 Materials for embankment fill (subgrade fill) to be:

- 2.2.1.1 Approved native or imported granular material (refer to SRM Section 02226)
- 2.2.1.2 Pit Run (City of Vancouver aggregate item #12; refer to SRM Section 02226 Clause 2.3)
- 2.2.1.3 Sand Fill (City of Vancouver aggregate item # 17; refer to SRM Section 02226 Clause 2.5)
- 2.2.1.4 75 mm Crushed Tailings (City of Vancouver aggregate item #13; refer to SRM Section 02226 Clause 2.9)

The final acceptance to use the above materials or other proposed materials shall be at the sole discretion of the City Engineer.

DELETE: 3.4.4 under 3.4 PLACING and replace with the following:

- 3.4.4 Place backfill material in uniform lifts not exceeding 300 mm in loose thickness and compact to specified densities.

02226 AGGREGATES & GRANULAR MATERIALS

DELETE: 2.2 Native Material under 2.0 PRODUCTS and replace with the following:

2.2 Granular Native Material

Granular Native Material may be used only with the express written permission of the City Engineer, and provided it can be compacted to the requirement stated in Clauses 3.5.4 and 3.5.5 of Section 02223, "Backfill Classifications", and provided that such materials also meet the following requirements:

- % passing the 600 um (#30) sieve: Not to exceed 55%
- % passing the 75 um (#200) sieve: Not to exceed 20%
- Liquid Limit (LL): Not to exceed 25
- Plasticity Index (PI): Not to exceed 10
- To be used only up to 1.2 m below finished grade
- Relatively free of organic and foreign matter (max. 0.5% by mass)
- Reasonably well-graded with coefficient of uniformity (C_u) not lower than 10 and to the satisfaction of the City Engineer
- To be placed in uniform lifts of maximum 200 mm in loose thickness
- Not to be used in inclement weather
- In-situ moisture content to be within the range (preferably +/- 2% of the optimum or less) determined by 'Modified Proctor' test that will provide for minimum specified compaction.

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART G - SUPPLEMENTAL SPECIFICATIONS

Prior to any granular native material being approved for use, the grain size and in-situ moisture content of the proposed material must be verified by washed sieve and moisture content test as per ASTM C117, C136 and D2216.

A “Modified Proctor Test”, as per ASTM D1557, shall subsequently be conducted to determine the moisture density relationship of the proposed soil. The in-situ moisture content shall then be compared against the “Optimum Moisture Content” determined from the Proctor Test to give an indication as to the viability of using the material. If the in-situ moisture content is found to be within the range of moisture levels that will yield the desired minimum compaction levels it may be considered for approval. The moisture content and grain sizes shall be closely monitored thereafter to ensure that material properties are consistent and minimum compaction levels can be achieved. Every effort shall be made to maintain the favourable moisture of a suitable granular native material.

Only native granular materials with properties within above limits, as verified by Sieve Analysis, Proctor Tests and in-situ Moisture Tests can be used as backfill materials. Any deviation in materials as trench work progresses, or any changes in soils strata throughout the depth of the trench must meet the same criteria as outlined above; testing confirming continuous compliance and the frequency of that testing shall be to the satisfaction of the City Engineer.

Compaction shall subsequently be done in equal lifts not exceeding 200 mm in loose thickness, as necessary throughout the entire depth of the backfill in order to ensure even and adequate compaction to the specified levels of compaction.

Thicker lifts may be considered if it can be demonstrated that specified densities is achievable for a given combination of material, equipment, and conditions. Before the City Engineer gives his approval, the permittee may be called upon to demonstrate that their compaction method and machinery are feasible and adequate to meet the specified requirements.

In addition to the specified compaction requirement, the compacted backfill using approved granular native material must also be able to provide good stability and acceptable load bearing capacity with minimum settlement to the satisfaction of the City Engineer. The City Engineer may require the contractor to provide an independent third party certification and or additional testing to verify the specified properties of the granular native backfill.

Native silty and/or clayey materials are, at best, difficult to compact to specification and impossible to compact under wet conditions. The re-use of soils containing silts and clays, outside of the parameters set above, is typically not allowed because of the difficulty in achieving consistent compaction levels. With their very narrow “optimal moisture range” and the near impossibility of correcting the moisture content in the field, these materials are seldom suitable as backfill for cuts. Where, in the opinion of the City Engineer, native material is unsuitable it shall be removed from the job and approved granular material shall be substituted and no claim for extra payment shall be made.

DELETE: 2.3 Pit Run Gravel under 2.0 PRODUCTS and replace with the following:

2.3 Pit Run (City of Vancouver Item #12)

This granular material may be considered to be used for deep fills only if the regular used items #17 and #9 are not available from the suppliers. It should be well graded and free-draining with clay lumps, organic matter and other extraneous material totalling not more than 0.5% by mass, and screened to remove all stones in excess of 75 mm. The material should compact readily to the density

**INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART G - SUPPLEMENTAL SPECIFICATIONS**

specified for its use. The City may specify additional requirements as part of the conditions of accepting the material for backfill purpose. The final acceptance of the material will be solely at the discretion of the City Engineer. The grading limits shall be:

SIEVE SIZE		% PASSING (by wt.)
75.0 mm	(3 in)	100
12.5 mm	(½ in)	56 - 100
4.75 mm	(No. 4)	32 - 83
2.36 mm	(No. 8)	17 - 70
75 µm	(No. 200)	2 - 10

DELETE: 2.5 River Sand under 2.0 PRODUCTS and replace with the following:

2.5 Sand Fill (City of Vancouver Item #17)

This granular material is also used for deep fills, to a maximum upper limit of 0.6 m (2') below the base of pavement. This material shall be sand with uniform quality. Clean sand containing less than 0.5% organic materials is generally acceptable. This material is used for deep fills where a granular fill material is required. The grading limits shall be:

SIEVE SIZE		% PASSING (by wt.)
12.5 mm	(½ in)	100
9.5 mm	(3/8 in)	91 - 100
4.75 mm	(No. 4)	83 - 100
2.36 mm	(No. 8)	73 - 94
1.18 mm	(No. 16)	57 - 80
600 µm	(No. 30)	33 - 60
300 µm	(No. 50)	10 - 37
150 µm	(No. 100)	4 - 17
75 µm	(No. 200)	0 - 5

DELETE: 2.6 Drain Rocks under 2.0 PRODUCTS and replace with the following:

2.6 19 mm Clear Drain Rock (City of Vancouver Item #7)

- 2.6.1 Drain rock shall be of uniform quality, thoroughly washed free of sand, silt and clay, and should not contain more than 15% in crushed particles. It shall consist of durable particles capable of withstanding the effects of handling and spreading without degradation or production of deleterious fines. The grading limits shall be as follows:

SIEVE SIZE		% PASSING (by wt.)
37.5 mm	(1-1/2 in)	100
25 mm	(1 in)	0 - 100
19 mm	(3/4 in)	0 - 100

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART G - SUPPLEMENTAL SPECIFICATIONS

SIEVE SIZE	% PASSING (by wt.)
12.5 mm (1/2 in)	0 - 30
4.75 mm (No. 4)	0 - 3

2.6.2 An alternate partially crushed rock with proven physical properties against degradation meeting the above gradation limits may be allowed to be used as drain rock with City Engineer's approval. Final acceptance of the material will be at the discretion of the City Engineer.

2.6.3 Drain rock to be used only where specified in Standard Detail Drawings or Contract Drawings. Use of drain rock other than as specified requires approval of City Engineer after examination of soils against which drain rock will be placed.

DELETE: 2.7 Granular Pipe Bedding and Surround Materials under 2.0 PRODUCTS and replace with the following:

2.7 20 mm to 2.5 mm Clear Crushed Coarse Aggregate (Pipe Bedding) (City of Vancouver Item #15)

This material shall be of uniform quality, crushed to size as necessary and shall consist of sound, tough, durable, highly angular, 100% mechanically crushed fragments, with two or more fractured faces having a rough surface texture. It shall be free from an excess of flat or elongated particles, wood, shells, coatings of clay or any other deleterious material. Aggregates with objectionable polishing characteristics are not acceptable. The grading limits shall be:

SIEVE SIZE	% PASSING (by wt.)
19 mm (3/4 in)	100
12.5 mm (1/2 in)	28 - 46
9.5 mm (3/8 in)	8 - 21
4.75 mm (No. 4)	3 - 11
2.36 mm (No. 8)	0 - 6
1.18 mm (No. 16)	0 - 2

DELETE: 2.9 Crushed Granular Sub-Base under 2.0 PRODUCTS and replace with the following:

2.9 75 mm Crushed Tailings (City of Vancouver Item #13)

This material shall be a well-graded 75 mm minus 100% crushed quarried material of uniform quality suitable for use in fills and road base lifts. It shall consist of durable particles capable of withstanding the effects of handling, spreading and compacting without degrading, resulting in the production of deleterious fines. The recommended grading limits are:

SIEVE SIZE	% PASSING (by wt.)
75 mm (3 in)	100
19 mm (3/4 in)	40 - 50
4.75 mm (No. 4)	20 - 35

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART G - SUPPLEMENTAL SPECIFICATIONS

0.075 mm (No. 200)	2 - 8
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DELETE: 2.10 Granular Base under 2.0 PRODUCTS and replace with the following:

2.10 19 mm Minus Combined Crushed Aggregate (Mulch) Fill (City of Vancouver Item #9)

This material shall be of uniform quality, crushed to size as necessary and consisting of sound, tough, durable, mechanically crushed fragments. A minimum 60% of particles by mass of the portion retained on a 9.5 mm sieve shall have at least one freshly fractured face. The grading limits shall be:

SIEVE SIZE	% PASSING (by wt.)
19 mm (3/4 in)	100
12.5 mm (1/2 in)	61 - 95
9.5 mm (3/8 in)	45 - 85
4.75 mm (No. 4)	35 - 60
2.36 mm (No. 8)	26 - 47
1.18 mm (No. 16)	20 - 39
600 um (No. 30)	13 - 29
300 um (No. 50)	8 - 21
150 um (No. 100)	5 - 15
75 um (No. 200)	2 - 8

This is a high quality granular fill and may be used up to the bottom of the asphalt or concrete surface.

DELETE: 2.11.1 under 2.11 RECYCLED AGGREGATE MATERIAL and replace with the following:

- 2.11.1 Aggregates containing recycled material may be utilized if approved by the City Engineer. In addition to meeting all other conditions of this manual, recycled material should exhibit the same quality as in quarried products. Recycled material should consist only of crushed concrete aggregates, crushed asphalt slabs and virgin mineral aggregates of control quantity; other construction and demolition materials such as bricks and plaster are not acceptable. The use of any recycled products must be approved by the City Engineer.

ADD: 2.12 9.5 mm Minus Rounded Granular Aggregate (Pea-Gravel)

2.12 9.5 mm Minus Rounded Granular Aggregate (Pea-Gravel)

The material may be used only in backfill operations adjacent to foundation walls, as per standard detail drawing figure H1 on page 93 of this manual.

The material shall be of uniform quality, thoroughly washed free of sand, silt and clay and shall contain no more than 5% non-rounded (having one or more fractured faces) particles by mass on material retained on the 4.75 mm sieve size or larger. The particles shall be durable, capable of

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART G - SUPPLEMENTAL SPECIFICATIONS

withstanding the effects of handling, placement and compaction without the production of deleterious fines. The grading limits shall be:

SIEVE SIZE		% PASSING (by wt.)
9.5 mm	(3/8 in)	100
6.3 mm	(1/4 in)	60 to 85
4.75 mm	(No. 4)	40 to 75
2.36 mm	(No. 8)	0 to 13
1.18 mm	(No. 16)	0 to 1

Any proposed alternative materials for the specified pea gravel must be approved by the City Engineer prior to its use. The City Engineer may also require additional qualification requirements for the replacement product.

02233 **GRANULAR BASE**

3.5 Proof Rolling

Add: 3.5.7 Engineer may require testing of materials and densities by a testing laboratory. Initial tests will be paid for by Corporation. If Work fails initial tests, subsequent test will be paid for by Contractor.

02234 **GRANULAR SUBBASE**

3.5 Proof Rolling

3.5.7 Add: Engineer may require testing of materials and densities by a testing laboratory. Initial tests will be paid for by Corporation. If Work fails initial tests, subsequent test will be paid for by Contractor.

02242 **DUST CONTROL**

1.0 GENERAL

Add: 1.0.3 Haul routes along and across any public traveled way shall be kept free and clean of all rubbish and debris, including spillage, resulting from construction operations. Water or dust palliative, or both, shall be supplied as necessary to prevent dust nuisance, to the satisfaction of the City Engineer.

Any vehicle exiting a site that is handling loose material or travelling over loose material shall be inspected to ensure no debris is on the vehicle or between the tires.

If sites are not adequately controlled for dust, or kept clean to the satisfaction of the City Engineer, the City may do the work at the Contractor's expense. Flushing of debris into City catch-basins is not permitted without the express written consent of the City Engineer.

3.1 Application

3.1.1 Delete 3.1.1 and replace with: The intention of this specification is to apply water when necessary to control dust. It is the Contractor's option to use the other methods described in this section.

02271 **RIPRAP**

DELETE

02272	GABIONS	DELETE
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DELETE: 2.0 PRODUCTS and replace with the following:

DELETE: 2.1 MATERIALS and replace with the following:

2.1.1 Asphalt Cement: Asphalt cement shall be a minimum PG 64-22 for industrial/arterial pavements and PG 58-22 for higher zoned residential pavements and light duty residential pavements unless otherwise specified by the City Engineer. All PG binders used shall meet the requirements as specified in AASHTO M 320-05 *“Standard Specification for Performance-Graded Asphalt Binder”*. Routine quality control test results and Temperature-Viscosity curve for the Project Binder shall be provided to the City Engineer.

2.1.3 Consensus Aggregate Requirements:

2.1.3.3 Flat and Elongated Particles: ASTM D4791, “*Flat or Elongated Particles in Coarse Aggregate*”. Test is performed on coarse aggregate larger than 4.75 mm. The maximum value allowed shall be 10% based on a 5:1 maximum length-to-minimum thickness ratio.

2.1.4 Source Aggregate Requirements:

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART G - SUPPLEMENTAL SPECIFICATIONS

2.1.4.1 Toughness: ASTM C131 or C535, “Resistance to Degradation of Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine”. The loss shall not be more than 35%.

2.1.4.2 Soundness: ASTM C88, “Soundness of Aggregates by use of Magnesium Sulfate.” The loss shall not be more than 15% for coarse aggregate and 18% for fine aggregate.

2.1.4.3 Deleterious Materials: ASTM C142, “Clay Lumps and Friable Particles in Aggregates”. The loss shall not be more than 1%.

2.1.5 Design Aggregate Gradation Requirements:

The design aggregate structure shall meet the Superpave gradation requirements. A design structure must pass between gradation control points while avoiding gradation restricted zones as indicated below in Clauses 2.1.5.1, 2.1.5.2 and 2.1.5.3. It is recommended that the design gradation pass below the restricted zone. Exception can be made on individual cases with documented success history and test results. The supplier must provide proof documentation on such mix design to the City Engineer upon request.

2.1.5.1 12.5 mm Nominal Maximum Aggregate Size Mix

City of Vancouver, Heavy Duty Surface Mix

Sieve mm	Control Points		Restricted Zone Boundary	
	Minimum	Maximum	Minimum	Maximum
19	100			
12.5	90	100		
9.5		90		
4.75				
2.36	28	58	39.1	39.1
1.18			25.6	31.6
0.600			19.1	23.1
0.300			15.5	15.5
0.075	2	10		

2.1.5.2 19 mm Nominal Maximum Aggregate Size Mix

City of Vancouver, Heavy Duty Surface/Base Mix. The City Engineer will consider the use of this mix for base or surface course only on an individual project basis. The City Engineer’s decision will be final.

Sieve mm	Control Points		Restricted Zone Boundary	
	Minimum	Maximum	Minimum	Maximum
25	100			
19	90	100		
12.5		90		
9.5				
4.75				

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART G - SUPPLEMENTAL SPECIFICATIONS

Sieve	Control Points		Restricted Zone Boundary	
mm	Minimum	Maximum	Minimum	Maximum
2.36	23	49	34.6	34.6
1.18			22.3	28.3
0.600			16.7	20.7
0.300			13.7	13.7
0.075	2	8		

2.1.5.3 25 mm Nominal Maximum Aggregate Size Mix

City of Vancouver, Heavy Duty Base Mix

Sieve	Control Points		Restricted Zone Boundary	
mm	Minimum	Maximum	Minimum	Maximum
37.5	100			
25	90	100		
19		90		
12.5				
9.5				
4.75			39.5	39.5
2.36	19	45	26.8	30.8
1.18			18.1	24.1
0.600			13.6	17.6
0.300			11.4	11.4
0.075	1	7		

*Note: Superpave uses these aggregate size definitions:

Maximum Size: One sieve size larger than the nominal maximum size.

Nominal Maximum Size: One sieve size larger than the first sieve to retain more than 10 percent of combined aggregate.

Control Points: Function as master range between which gradation must pass.

Restricted Zone: Resides along the maximum density gradation. It forms a band through which the combined gradation is recommended not to pass.

DELETE 2.2 MIX DESIGN and replace with the following:

2.2 Superpave Asphalt Mix Design

- 2.2.1 Submit job mix formula to the City Engineer for review and approval. Mix designs older than two years will not be acceptable to the City.

**INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART G - SUPPLEMENTAL SPECIFICATIONS**

2.2.2 Mix Designs should be based on the following AASHTO Standards, Asphalt Institute Manual and C-SHRP Technical Brief:

- M 323-04: "Standard Specifications for Superpave Volumetric Mix Design"
 - R 30-02: "Standard Practice for Mixture Conditioning of Hot-Mix Asphalt (HMA)"
 - R 35-04: "Standard Practice for Superpave Volumetric Design for Hot-Mix Asphalt (HMA)"
 - T 312-04: "Standard Method of Test for Preparing and Determining the Density of Hot-Mix Asphalt (HMA) Specimens by Means of the Superpave Gyratory Compactor"
- Asphalt Institute Manual: "Superpave Mix Design Superpave series No. 2 (SP-2)"
- "Superpave 2000 - Improved Standards for a New Millenium" C-SHRP Technical Brief #17 issued by Canadian Strategic Highways Research Program (C-SHRP)

2.2.3 Laboratory compaction shall be by means of a Superpave Gyratory Compactor (SGC) and the asphalt content selected based on volumetric design requirements according to the above-mentioned standards.

Mixture Properties	Criteria
Air Voids, %	4.0
VMA, % for 25 mm Nominal Max Size	12.0 Min.
VMA, % for 19 mm Nominal Max Size	13.0 Min.
VMA, % for 12.5 mm Nominal Max Size	14.0 Min.
VFA, %	65 - 75
Dust Proportion	0.6 - 1.2*
%Gmm @ N-initial	Max. 89
%Gmm @ N-design	96
%Gmm @ N-maximum	Max. 98
% TSR (Moisture Sensitivity)	Min. 80
Gmm = maximum theoretical specific gravity	

* Ratio may increase to 0.8 - 1.6 if the aggregate gradation passes beneath the restricted zone boundaries.

2.2.4 Compactive effort of the design mixture
Asphalt mix shall be designed at the following specified design number of gyrations unless otherwise specified by the City Engineer:

N-initial	8
N-design	100
N-maximum	160

2.2.5 The air voids of the design mix shall be 4.0 %.

**INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART G - SUPPLEMENTAL SPECIFICATIONS**

2.2.6 Use of Reclaimed Asphalt Pavement (RAP) in Superpave mix

Superpave asphalt mix may contain up to a maximum 15% RAP by weight of total mix without a special mix design. The City Engineer may approve a higher proportion of RAP if the contractor can demonstrate with proof documentation their ability to produce a mix meeting the requirements of the specification.

Tier	% RAP by wt of Total Mix	Determine RAP AC Content	Measure RAP Gradation	Measure RAP AC Stiffness	Measure Agg Blend Properties	PG Grade Change
1	≤ 15%	(a)	yes	no	yes	none
2	16% to 25%	yes	yes	no (b)	yes	one grade lower (c)
3	> 25%	yes	yes	yes	yes	use blending chart
(a) At the discretion of the agency (b) Unless blending chart is used (c) Or use blending chart						

2.2.7 The job mix formulas, with the mixing variance limits in Clause 3.1.4.1 applied, shall not result in a gradation that is outside the recommended Superpave design limits as stated in Clauses 2.1.5.1, 2.1.5.2, 2.1.5.3 and the applicable design standards as stated in Clause 2.2. The final gradation of the supplied mix as represented by the test samples must also retain the initial designed nominal maximum aggregate size of the mix.

DELETE 3.1.4.1 and 3.1.4.2 under 3.1.4 Mixing Tolerances and replace with the following:

3.1.4.1 Mixing tolerances:
Permissible variation in aggregate gradation from the job mix (percent of total mass) shall be as follows:

Gradation	Tolerance
Passing 4.75 mm and larger sieves	+/- 5%
Passing 2.36 mm to 0.6 mm	+/- 4%
Passing 0.6 mm to 0.3 mm	+/- 3%
Passing 0.3 mm to 0.15 mm	+/- 2%
Passing 0.15 mm to 0.075 mm	+/- 1.5%

3.1.4.2 Permissible variation of asphalt cement from job mix, 0.25%

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART G - SUPPLEMENTAL SPECIFICATIONS

ADD: 3.2.3.3 under 3.2.3 VIBRATORY ROLLERS:

3.2.3.3 Vibratory rollers may only be used with precaution to ensure there will be no damages done to nearby structures and utilities, or cause unreasonable discomfort to nearby residents.

While compaction standards as set forth in Sections 02223 and 02512 must always be met, extreme care must be taken around cast iron watermain as additional costs may be incurred by the contractor if the repair of leaking/damaged watermain becomes necessary.

ADD: 3.5.8 Established Practices under 3.5 PLACING:

3.5.8 Established Practices:
In addition to the requirements of this specification, the Contractor shall adhere to the practices described in the Paving Manual Series No. 8 published by the Asphalt Institute.

DELETE: 3.6.1 under 3.6 COMPACTION and replace with the following:

- 3.6.1 Roll asphalt continuously to meet the following requirements:
- 38 mm nominal maximum aggregate size mix: 95 to 96% of MTD
 - 25 mm nominal maximum aggregate size mix: 95 to 96% of MTD
 - 19 mm nominal maximum aggregate size mix: 93 to 96% MTD
 - 12.5 mm nominal maximum aggregate size mix: 92 to 96% MTD
 - 9.5 mm nominal maximum aggregate size mix: 92 to 96% MTD

Maximum Theoretical Density (MTD) of each mix shall be determined in accordance with AASHTO T 209-05 or ASTM D2041-03. Final compaction level of the finished pavement shall be determined by core samples. The contractor will be required to provide core density verification data upon request by the City Engineer.

A minimum three cores shall be obtained from random locations as selected by the City Engineer. No more than one individual test result shall be more than 1.0% below or 2.0% above the specified range as indicated above and the average test results of the cores must be within the specified range. The contractor may be allowed to extract one additional core near the original failed area with the consent of the City Engineer. New average will be calculated with the new core result replacing the original failed data. Failing to comply constitutes immediate rejection.

ADD: 3.6.6 Confined Areas under 3.6 COMPACTION

3.6.6 Confined Areas: The Contractor shall use smaller approved power compactors or tampers in areas around manholes, poles, or other structures which are inaccessible to a roller, to the satisfaction of the City Engineer.

02521 PORTLAND CEMENT CONCRETE PAVEMENT

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART G - SUPPLEMENTAL SPECIFICATIONS

ADD: 3.9.2.4 under 3.9 CONSOLIDATION

3.9.2.4 To achieve consolidation to depths of 300mm or more, use a hand vibrator in advance of the vibratory screed.

ADD: 3.10.1 under 3.10 FINISHING

3.10.1 Finishing should be in two stages, a burlap drag to provide micro-texture for wet weather stopping, followed by transverse tining (grooving) to provide macro-texture for removal of water from the tire/pavement interface.

ADD: 3.14.1.4 under 3.14 JOINTS

3.14.1.4 Delete: maximum distance of 4.5m and replace with: ...maximum distance of 4.0m between joints.

02523 CONCRETE WALKS, CURBS AND GUTTERS

1.4 Measurement and Payment

1.4.5 Add: Measurement for payment to exclude any utility appurtenances within the sidewalk.

1.4.9 Delete 1.4.9 and replace with: Drainage facilities will be measured in linear metres installed complete with fabric, wrapping, and supply and placement of drain gravel.

Add: 1.4.10 The additional cost of high early portland cement concrete, calcium chloride, or retarding agents where ordered by the Engineer will be paid under Extra Work under Clause 7 of the Supplementary General Conditions. Other additives such as pozzolanic materials, cement dispersing agents and water reducing agents will be included in the unit price for concrete work.

ADD: 3.3.9 under 3.3 FORMWORK

3.3.9 At lanes, crossings, etc., formworks shall be left in place until the concrete has attained sufficient strength to bear traffic loads without edge damage.

ADD: 3.7.2, 3.7.3 and 3.7.4 under 3.7 DRIVEWAY CROSSINGS AND WHEEL CHAIR RAMPS

3.7.2 Wheel Chair Ramps (See Curb Ramp Design Standards in page 103 of this manual):

3.7.2.1 Ramps should land wheelchair and other users safely in the crosswalk and in the desired direction of travel.

3.7.2.2 Wherever possible, 2 ramps shall be installed per corner. Large single curb ramps may be installed on:

- Steep streets where one of the two doubles ramps would have an unacceptable cross fall or

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART G - SUPPLEMENTAL SPECIFICATIONS

- Where double curb ramps cannot be accommodated due to a site condition and obstructions such as poles, catch basins, and property line that would result in less than 1 meter full curb between the two ramps

3.7.2.3 Double Curb Ramp Design (refer to Standard Detail Drawing MF 137-L-5 on page 104 of this manual):

- The ramp and the directional score lines shall lead into the crosswalk, lining up with the ramp across the street and be parallel with the crossing or marked crosswalk. The directional score lines are intended to aid the visually impaired pedestrian across the street
- Where a greener treatment is desired grass can be installed between the two ramps where there is a reasonable expectation that the adjacent property owner will mow the additional grass area

3.7.2.4 Large Single Curb Ramp Design (refer to Standard Detail Drawing MF 137-L-3 on page 105 of this manual):

- The ramp and the directional scores lines shall lead over the curb and into the crosswalk, lining up with the ramp across the street and be parallel with the crossing or marked crosswalk. The directional score lines are intended to aid the visually impaired pedestrian across the street

3.7.3 The minimum thickness of all concrete driveway crossings shall be 150 mm (minimum thickness for commercial crossings is 200 mm). See Standard Detail Drawings MF 137-AF and MF 137-AG on page 107 & 108.

3.7.4 The minimum thickness of all curb ramps shall taper from 100 mm at the back of ramp (matching the sidewalk thickness) to 200 mm at the back of curb. See Curb Ramp Design Standards on page 103 to 106 for more detail.

REPLACE: 3.5.6 under 3.5 Concrete Placement with the following:

3.5.6 Place concrete within 120 minutes of batching time.

ADD: 3.12.9, 3.12.10, 3.12.11, 3.12.12 and 3.12.13 under 3.12 FINISHING

3.12.9 Finished curb and gutter shall have a smooth and uniform surface, true to line, grade, and section and shall be free from voids, sags, bumps, or other irregularities to the satisfaction of the City Engineer.

3.12.10 Walks 1.5 m, 1.8 m and 2.0 m in width shall be marked off in panels 1.5 m, 1.8 m or 2.0 m long respectively unless otherwise directed by the City Engineer. Control joints, to control and minimize cracking, shall be installed to the satisfaction of the City Engineer. The scoring pattern of the sidewalk is governed by the distance between the constants such as tree pits and water boxes. Keep the scoring pattern as square as possible for the sidewalk stones (panels). See Standard Drawings MF 137-F-2, MF 137-F-3, and MF 137-F-4 on pages 100 to 102.

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART G - SUPPLEMENTAL SPECIFICATIONS

- 3.12.11 Cutting and marking tools shall have a cutting edge not less than 25 mm in depth and the edge of the panel shall be rounded to a 6 mm radius. Trowel edge to be as closest to flush as possible with broom finish.
- 3.12.12 Carefully fit, cut, and mark the sidewalk around all waterworks boxes, lamp standards, poles, and hydrants to prevent cracking of the slabs, to the satisfaction of the City Engineer.
- 3.12.13 Scoring pattern for exposed aggregate front filler walk: Whenever there is sidewalk constant presented, the scoring pattern must follow through from the main sidewalk scoring pattern. If there are an odd number of stones greater than three between the constants, two cuts are required at equal distance from the constants. A cut is generally spaced between two adjacent sidewalk stones as long as it provides balanced scoring pattern between constants. No cuts are required for three stones or less.

ADD: 3.13.3 under 3.13 SPECIAL EFFECTS

- 3.13.3 At street intersections the cast year shall be stamped in the surface of the sidewalk as directed by the City Engineer. The necessary template figures will be available from the City.

Old historical sidewalk stamp markings 1950 or older have special value to the City and are required to be saved and keep in place. The City must be contacted and consulted prior to the demolition and removal of the markings.

ADD: to end of first sentence of 3.14.1 the following:

- 3.14.1 "...for a minimum 24 hours after final set.

DELETE: 3.16.1 under 3.16 PERFORATED DRAIN and replace with the following:

- 3.16.1 Install perforated drain pipe adjacent to sidewalk or curb and gutter wherever the adjacent finished grade rises more than 1 m within 10 m of the sidewalk or curb and gutter. Perforated drain shall also be installed where shown on Contract Drawings or as directed by the City Engineer.
- 3.16.2 Drain pipe or fittings to be continuously extruded polyvinyl chloride (PVC) or acrylonitrile butadiene-styrene (ABS) plastics, meeting the requirements of the latest revision of CSA B182.1. It shall be available in 3 metre lengths with nominal diameter of 100 mm and perforations as detailed in Section 4.1.4 of CSA B182.1 for leach field pipe. The pipe will include bell and spigot design suitable for solvent welding, where required.
- 3.16.3 Connect to catch basins and stamp letter "D" in walk where drain crosses under.
- 3.16.4 Perforated Corrugated Metal Pipe (PCMP) shall conform to the latest revision of the requirements for Corrugated Metal Culvert Pipe AASHTO Designation M36. PCMP shall consist of 18 gauge (minimum 1.214 mm) metal with 6.35 mm minimum

APPENDIX 2. SUMMARY OF THE CONCEPTS OF THE CONCEPTUAL FRAMEWORK

1. *Journal of the American Medical Association*, 1997; 277: 1001-1005.

- ... , ...

11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100. 101. 102. 103. 104. 105. 106. 107. 108. 109. 110. 111. 112. 113. 114. 115. 116. 117. 118. 119. 120. 121. 122. 123. 124. 125. 126. 127. 128. 129. 130. 131. 132. 133. 134. 135. 136. 137. 138. 139. 140. 141. 142. 143. 144. 145. 146. 147. 148. 149. 150. 151. 152. 153. 154. 155. 156. 157. 158. 159. 160. 161. 162. 163. 164. 165. 166. 167. 168. 169. 170. 171. 172. 173. 174. 175. 176. 177. 178. 179. 180. 181. 182. 183. 184. 185. 186. 187. 188. 189. 190. 191. 192. 193. 194. 195. 196. 197. 198. 199. 200. 201. 202. 203. 204. 205. 206. 207. 208. 209. 210. 211. 212. 213. 214. 215. 216. 217. 218. 219. 220. 221. 222. 223. 224. 225. 226. 227. 228. 229. 230. 231. 232. 233. 234. 235. 236. 237. 238. 239. 240. 241. 242. 243. 244. 245. 246. 247. 248. 249. 250. 251. 252. 253. 254. 255. 256. 257. 258. 259. 260. 261. 262. 263. 264. 265. 266. 267. 268. 269. 270. 271. 272. 273. 274. 275. 276. 277. 278. 279. 280. 281. 282. 283. 284. 285. 286. 287. 288. 289. 290. 291. 292. 293. 294. 295. 296. 297. 298. 299. 300. 301. 302. 303. 304. 305. 306. 307. 308. 309. 310. 311. 312. 313. 314. 315. 316. 317. 318. 319. 320. 321. 322. 323. 324. 325. 326. 327. 328. 329. 330. 331. 332. 333. 334. 335. 336. 337. 338. 339. 340. 341. 342. 343. 344. 345. 346. 347. 348. 349. 350. 351. 352. 353. 354. 355. 356. 357. 358. 359. 360. 361. 362. 363. 364. 365. 366. 367. 368. 369. 370. 371. 372. 373. 374. 375. 376. 377. 378. 379. 380. 381. 382. 383. 384. 385. 386. 387. 388. 389. 390. 391. 392. 393. 394. 395. 396. 397. 398. 399. 400. 401. 402. 403. 404. 405. 406. 407. 408. 409. 410. 411. 412. 413. 414. 415. 416. 417. 418. 419. 420. 421. 422. 423. 424. 425. 426. 427. 428. 429. 430. 431. 432. 433. 434. 435. 436. 437. 438. 439. 440. 441. 442. 443. 444. 445. 446. 447. 448. 449. 450. 451. 452. 453. 454. 455. 456. 457. 458. 459. 460. 461. 462. 463. 464. 465. 466. 467. 468. 469. 470. 471. 472. 473. 474. 475. 476. 477. 478. 479. 480. 481. 482. 483. 484. 485. 486. 487. 488. 489. 490. 491. 492. 493. 494. 495. 496. 497. 498. 499. 500. 501. 502. 503. 504. 505. 506. 507. 508. 509. 510. 511. 512. 513. 514. 515. 516. 517. 518. 519. 520. 521. 522. 523. 524. 525. 526. 527. 528. 529. 530. 531. 532. 533. 534. 535. 536. 537. 538. 539. 540. 541. 542. 543. 544. 545. 546. 547. 548. 549. 550. 551. 552. 553. 554. 555. 556. 557. 558. 559. 560. 561. 562. 563. 564. 565. 566. 567. 568. 569. 570. 571. 572. 573. 574. 575. 576. 577. 578. 579. 580. 581. 582. 583. 584. 585. 586. 587. 588. 589. 590. 591. 592. 593. 594. 595. 596. 597. 598. 599. 600. 601. 602. 603. 604. 605. 606. 607. 608. 609. 610. 611. 612. 613. 614. 615. 616. 617. 618. 619. 620. 621. 622. 623. 624. 625. 626. 627. 628. 629. 630. 631. 632. 633. 634. 635. 636. 637. 638. 639. 640. 641. 642. 643. 644. 645. 646. 647. 648. 649. 650. 651. 652. 653. 654. 655. 656. 657. 658. 659. 660. 661. 662. 663. 664. 665. 666. 667. 668. 669. 670. 671. 672. 673. 674. 675. 676. 677. 678. 679. 680. 681. 682. 683. 684. 685. 686. 687. 688. 689. 690. 691. 692. 693. 694. 695. 696. 697. 698. 699. 700. 701. 702. 703. 704. 705. 706. 707. 708. 709. 710. 711. 712. 713. 714. 715. 716. 717. 718. 719. 720. 721. 722. 723. 724. 725. 726. 727. 728. 729. 730. 731. 732. 733. 734. 735. 736. 737. 738. 739. 740. 741. 742. 743. 744. 745. 746. 747. 748. 749. 750. 751. 752. 753. 754. 755. 756. 757. 758. 759. 760. 761. 762. 763. 764. 765. 766. 767. 768. 769. 770. 771. 772. 773. 774. 775. 776. 777. 778. 779. 780. 781. 782. 783. 784. 785. 786. 787. 788. 789. 790. 791. 792. 793. 794. 795. 796. 797. 798. 799. 800. 801. 802. 803. 804. 805. 806. 807. 808. 809. 810. 811. 812. 813. 814. 815. 816. 817. 818. 819. 820. 821. 822. 823. 824. 825. 826. 827. 828. 829. 830. 831. 832. 833. 834. 835. 836. 837. 838. 839. 840. 841. 842. 843. 844. 845. 846. 847

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART G - SUPPLEMENTAL SPECIFICATIONS

1.0 GENERAL

- 1.1 This specification covers the restoration of Portland cement concrete sidewalks, ramps and crossings that have been cut, broken, damaged, or undermined during operations on City of Vancouver streets.

2.0 REQUIREMENTS

- 2.1 Restoration shall be done as soon as practicable, in the opinion of the City Engineer, but within four weeks after completion of the project.

3.0 GRADE PREPARATION

- 3.1 The granular aggregate grade shall consist of a minimum of 100 mm of 19 mm Crushed Aggregate (as per Clause 2.10 of Section 02226) for sidewalks and ramps and 150 mm for crossings immediately below the concrete. Fill materials below these levels shall be approved aggregates in accordance with Section 02226, "Aggregates and Granular Materials". Refer to standard drawings 101, 102, 103, 108 and 109 for further details. All aggregates shall be compacted as per Section 02223, "Excavating, Trenching & Backfilling".

4.0 SIDEWALK AND CROSSING CONSTRUCTION

4.1 Restoration

- 4.1.1 All concrete supplied shall meet the requirements of CSA Standard CSA-A23.1-04 and City specified mix requirements. Concrete shall be normal weight and the contractor and its supplier shall assume responsibility for the quality and performance of the concrete as per CSA A23.1-04 Alternative 1. Alternate mixes may be used only with the written approval of the City Engineer. Submit mix design to the City Engineer for review and record.

Concrete for the restoration of sidewalks and crossings shall be finished to match the surrounding walk unless otherwise directed by the City Engineer, and shall conform to the following requirements:

**INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART G - SUPPLEMENTAL SPECIFICATIONS**

| | | |
|---------------------------|---|--------------------------------|
| City Mix No. | : | 2828B (Sidewalks) |
| Cement Type | : | CSA Type GU (HE if required) |
| Max. Aggregate Size, mm | : | 20 or 14 |
| Slump, mm | : | 80 +/- 30 |
| Total Air Content % | : | 5 - 8 |
| Strength Accelerator | : | As needed |
| Hot Water | : | When required |
| Exposure Class | : | C2 (CSA A23.1-04 Table 2) |
| Compressive Strength, MPa | : | Min. 15 @ 7 days & 32 @ 28 day |

| | | |
|---------------------------|---|---------------------------------|
| City Mix No. | : | 1503 (Crossings) |
| Cement Type | : | CSA Type GU (HE if required) |
| Max. Aggregate Size, mm | : | 20 or 14 |
| Slump, mm | : | 80 +/- 30 |
| Air Content, % | : | 5 - 8 |
| Strength Accelerator | : | As needed |
| Hot Water | : | When required |
| Exposure Class | : | C2 (CSA A23.1-04 Table 2) |
| Compressive Strength, MPa | : | Min. 15 @ 3 days & 32 @ 28 days |

- 4.1.2 Details for typical sidewalk, ramps and crossing (standard markings) are indicated on drawings MF 137-F-2, MF 137-F-3, MF 137-F-4, Curb ramp design Standards, MF 137-L-5, MF 137-L-3, MF 137-L-6, MF 137-AF and MF 137-AG, pages 100 to 108, in the Standard Details Drawings index of this manual.
- 4.1.3 Construction Joints: Construction shall be as outlined in Clause 3.14, Section 02521 of MMCD and shall be uniform. Where tree pits are encountered, construction joints shall extend from the corners of tree pits in order to minimize and control cracking.
- 4.1.4 Tree Pit Installation: When installing tree pits in front filler walk, the tree pits must be installed at the front edge of main walk. The seat for the tree pit surround panels at main sidewalk edge must be part of the sidewalk construction.
- 4.1.5 The building strip must be poured separately of main walk. Expansion joint to be used between main walk and building strip.
- 4.2 Removal of Sidewalk and Crossing
- 4.2.1 Whenever a part of a panel, square or section of sidewalk or crossing is broken, damaged or undermined, the entire panel, square or section shall be removed and replaced neatly to the nearest score, groove or joint. No partial repairs are allowed.
- 4.2.2 Whenever removing sidewalk from against a building, the sidewalk must be totally removed as outlined in Clause 4.2.1 above or concrete sawed cut if workable to provide a clean, straight edge.

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART G - SUPPLEMENTAL SPECIFICATIONS

5.0 INSPECTION

- 5.1 Unless otherwise covered by prior agreement, a permit and a deposit or fee shall generally be required for this work and the City Engineer's designated representative shall be present during the restoration of the pavement. The cost of this inspection shall be charged against the deposit or contractor.
- 5.2 The City's Engineering Services shall be notified 24 hours in advance of the start of the work.
- 5.3 Any departure from these specifications shall be considered just cause for rejection of the work by the inspector. Should a repair be rejected in this manner, the City will rebuild the said repair at the expense of the Contractor or authority that constructed the repair.
- 5.4 Inspectors shall be given free access to all construction works and the plants that are producing materials for use in said construction.

6.0 MAINTENANCE

- 6.1 The Contractor shall maintain the sidewalk which they have permanently restored for a two years period from date of completion unless otherwise noted in applicable City by-laws. The contractor is also responsible, within this two years period, for the extra costs the City incurs for the repair of damage to the pavement caused by backfill deficiency.

02921 TOPSOIL & FINISH GRADING

DELETE: 1.0.1 under 1.0 GENERAL and replace with the following:

- 1.0.1 Section 02921 refers to those portions of the work that are unique to the supply and placement of growing medium (topsoil) and subsequent finished grading. In this Section, the term "growing medium" is used in place of the generic and commonly used term "topsoil". The term "topsoil" in this section is used where appropriate to identify imported natural material conforming to 2.4 - Imported Topsoil. This Section must be referenced to and interpreted simultaneously with all other sections pertinent to the works described herein.

ADD: 1.3.3, 1.3.4 and 1.3.5 under 1.3 SOURCE QUALITY CONTROL

- 1.3.3 The bidding Contractor will test, or have the supplier test, the proposed growing medium and include the required modifications in the price of the work.
- 1.3.4 Failure to test and provide appropriate documentation of test results may be considered grounds for rejection of a proposed growing medium and may result in removal of the rejected material at the Contractor's expense.
- 1.3.5 The Contractor guarantees that the growing medium submitted for laboratory analysis is a representative sample taken from the growing medium to be delivered to the site.

1.4 Measurement and Payment

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART G - SUPPLEMENTAL SPECIFICATIONS

1.4.1 Replace last sentence with: Payment for growing medium will be measured in cubic metres as determined by the Engineer.

1.5 Inspection and Testing

Add: 1.5.2 The Engineer or the Engineer's representative is to inspect and approve all stages of the work. Provide twenty-four (24) hours notice to the Engineer when inspection is required.

Add: 1.6 Site Conditions

1.6.1 Protect existing fencing, walls, curbs, sidewalks, pavement, bench marks, surface or underground utility lines which are to remain. If damaged, restore to original condition unless specified otherwise. Notify Engineer immediately if any damage occurs.

DELETE: 2.1.1 under 2.1 GENERAL and replace with the following:

2.1.1 In this Section, a range of measurable physical and chemical properties are set out as being acceptable in a growing medium. Compliance with this section is to be determined by testing for these properties. All topsoil or growing medium is to be tested and modified as necessary by admixture of other components to bring its properties within the ranges set in 2.10 for growing medium.

DELETE: 2.2 APPLICATIONS

DELETE: 2.3 NATIVE TOPSOIL

DELETE: 2.4.1, 2.4.2 and 2.4.3 under 2.4 IMPORTED TOPSOIL and replace with the following:

2.4.1 Imported topsoil to be a sandy loam or loamy sand texture (no less than 50% sand by mass) containing between 5% to 10% organic matter (dry mass basis). No particles in the topsoil shall be larger than 2 mm and 50% to 80% of the total dry mass shall be sandy particles between 0.053 mm to 2 mm in sizes. The combined silty and clayey size particles (smaller than 0.053 mm) shall be 5% to 15% with no more than 5% in clayey particles (smaller than 0.02 mm). Import topsoil shall be free of subsoil, roots, noxious grass, weeds, toxic materials, stones over 12.5 mm, foreign objects, and with an acidity range (pH) of 6.0 to 7.0. The in-place minimum saturated hydraulic conductivity of the topsoil shall not be less than 2 cm/hr. No crabgrass, couchgrass, equisetum, convulvulus or other noxious weeds or seeds shall be presented.

2.4.2 Population of any single species of plant pathogenic nematode to not exceed 1000 per litre of growing medium.

DELETE: 2.5.1 under 2.5 PEAT MOSS and replace with the following:

2.5.1 Peat moss to be Horticultural grade, partially decomposed fibrous or cellular stems and leaves of Sphagnum Mosses with texture varying from porous to spongy fibrous, fairly elastic and substantially homogenous with pH value of not less than 3.5 and

**INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART G - SUPPLEMENTAL SPECIFICATIONS**

not greater than 6.5, free of decomposed colloidal residue, wood, sulphur and iron, brown in colour and medium to coarse shredded, suitable for horticultural purposes.

DELETE: 2.7.1 and 2.7.2 under 2.7 MANURE and replace with the following:

- 2.7.1 Manure to be well-rotted farm animal manure or mushroom manure, rotted to the extent that liquids have been eliminated, and material is crumbly, free from weed seeds, rocks, sticks, rubble and containing not more than 40% sawdust, straw or shavings. Total carbon to nitrogen ratio shall not exceed 40:1.
- 2.7.2 Manure to be free of harmful chemicals such as any used to artificially hasten decomposition, and to have salt content that gives an electrical conductivity reading of less than 3.0 mmho/cm.

DELETE: 2.10.8, 2.10.9 and 2.10.10 under 2.10 GROWING MEDIUM and replace with the following:

- 2.10.8 Total Nitrogen: to be 0.2% to 0.6% by mass.
- 2.10.9 Available Phosphorous: to be 20 to 100 ppm.
- 2.10.10 Available Potassium: to be 50 to 250 ppm.

ADD: 2.11.1 COMPOST

- 2.11.1 Commercially prepared compost to be a uniform blend of natural-source organic materials free from subsoil, chemical and toxic contaminants, coliform, pathogens, noxious weeds, and seeds or parts thereof. Physical contaminants such as rocks, plastic, metal or glass to not exceed 0.5%. Total carbon to nitrogen ratio shall not exceed 40:1.

DELETE: TABLE 2 PROPERTIES of GROWING MEDIUM for DIFFERENT APPLICATIONS under 2.10 GROWING MEDIUM and replace with the following:

TABLE 2: PROPERTIES OF GROWING MEDIUM

The textural classification for this growing medium by the Canadian System of Soil Classification is “Loamy Sand” to “Sandy Loam”.

| PROPERTIES | | LIMITS |
|----------------------------|--|-----------------------|
| TEXTURE
(Particle Size) | GRAVEL:
• larger than 2 mm | 0% by Dry Mass |
| | Percent of Dry Weight Specified Below Excluding Gravel | |
| | SAND:
• between 2 mm to 0.053 mm | 50% - 80% by Dry Mass |
| | SILT:
• between 0.053 mm to 0.002 mm | 5% - 15% by Dry Mass |

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART G - SUPPLEMENTAL SPECIFICATIONS

| | | |
|-----------------|---|-------------------------|
| | CLAY:
• smaller than 0.002 mm | 1% - 5% by Dry Mass |
| | CLAY & SILT Combined: | Maximum 15% by Dry Mass |
| ORGANIC CONTENT | Total Organic | 5% - 10% by Dry Mass |
| ACIDITY | pH Level | 6.0 - 7.0 |
| DRAINAGE | Minimum In Place Saturated Hydraulic Conductivity | 2.0 cm/hr |

DELETE: 3.3.2 under 3.3 PROCESSING GROWING MEDIUM and replace with the following:

Ensure moisture content of peat moss at time of mixing is between 60% and 75%. Peat moss to form a ball when squeezed and retain shape upon release of pressure. Insufficient moisture will result in peat moss not holding together, while excessive moisture is evident when ball formed is pliable with clear water sheen on surface.

DELETE: TABLE 3: MINIMUM GROWING MEDIUM DEPTHS under 3.4 PLACING GROWING MEDIUM and replace with the following:

TABLE 3
MINIMUM GROWING MEDIUM DEPTHS

| Application | Minimum Depths | | |
|-----------------------|---------------------------------|--|-----------------|
| | Over Prepared Subsoil | | Over Structures |
| | Medium (loamy) Textured Subsoil | Coarse (sandy) or Fine (clayey) Textured Subsoil | |
| Boulevard Lawn Areas: | | | |
| • irrigated | 100 mm | 150 mm | 150 mm |
| • not irrigated | 100 mm | 150 mm | 225 mm |

DELETE: 3.5.1 under 3.5 APPLYING FERTILIZERS and replace with the following:

- 3.5.1 Add fertilizers to bring growing medium fertility within ranges set out in this Section, and as recommended on the basis of testing of the growing medium.

DELETE: 3.5.4 under 3.5 APPLYING FERTILIZERS and replace with the following:

- 3.5.4 Ensure fertilizers are fully incorporated to a minimum depth of 50 mm.

02933 SEEDING

2.1 Grass Seed

- 2.1.1 Replace first sentence with: Grass seed to meet requirements of Canada Seed Act for Canada No. 1 seed with a minimum P.L.S. of 80%

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART G - SUPPLEMENTAL SPECIFICATIONS

- 2.1.2 Delete 2.1.2 and replace with: The approved seed mixture is Anderson Sod Farm Sports Mix (Ryegrass 50%, Bluegrass 50%). The use of an equivalent product is to be approved by the Engineer.
- Add: 2.1.4.7 Percentage germination
- 2.2 Water
- 2.2.1 Delete 2.2.1 and replace with: Potable and free of impurities that would inhibit germination and growth or may be harmful to environment.
- 2.3 Fertilizer
- 2.3.1 Delete 2.3.1 and replace with: Use turf starter; "Evergro Quick Start" (13-26-6) as supplied by Agrico or pre-approved equivalent.
- Add: 2.3.2 Fertilizer will be of standard commercial materials with chemical analysis clearly shown on each bag and must meet Canada "Fertilizers Act" and "Fertilizers Regulations".
- Add: 2.3.3 The fertilizer will have an analysis of 13-26-6, with 50% of the total nitrogen derived from sulphur coated urea and 0.64% iron (Fe). Fertilizer will be adjusted to suit soil conditions as per soil analysis.
- 3.1 Finish Grade Preparation
- 3.1.4 Add before the first sentence: Cultivate areas to be seeded to 100mm depth except for areas that are excessively compacted.
- 3.3 Application for Mechanical Dry Seeding
- 3.3.3 Delete 3.3.3 and replace with: Apply seed at a uniform rate of 2.5kg/100m² using approved seeder. Embed seed into soil to depth of 5mm simultaneously or within 1 hour of sowing.
- 3.3.4 Delete 3.3.4 and replace with: Sow half of required amount of seed in one direction and remainder at right angles.
- 3.3.7 Delete 3.3.7 and replace with: Roll area immediately afterward with water ballast type lawn or agricultural type roller approved by the Engineer prior to watering.
- Add: 3.3.9 Water with fine spray, avoiding washing out of seed. Apply enough water to ensure penetration of minimum 50mm.
- Add: 3.3.10 Seed area during early spring as approved by Engineer
- Add: 3.3.11 Sow during calm weather (winds less than 10km/h).
- Add: 3.3.12 Protect seeded areas against damage. Remove this protection after lawn areas have been accepted by the Engineer.
- Add: 3.3.13 In the case of dormant seeding, protect seeded areas from pedestrian and vehicular damage.

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART G - SUPPLEMENTAL SPECIFICATIONS

Add: 3.3.14 Reseed at 2 week intervals where germination has failed.

3.6 Grass Maintenance

Add: 3.6.2.7 Fertilize seeded areas after first cutting at rate of 1.9kg/100m². Spread half of required amount of fertilizer in one direction and remainder at right angles and water in well. Postpone fertilizing until following spring if application falls within four week period prior to expected end of local growing season.

3.7 Conditions for Completion

3.7.5 Replace in the first sentence: "48 h" with "24 h"

02938 SODDING

DELETE: 2.1.2 under 2.1 SOD and replace with the following:

2.1.2 The sod shall consist of Canada No. 1 seed mixture consisting of 20-30% Perennial Rye grass, 40% Kentucky Blue grass and 20-40% Chewing Fescue or an alternative approved by the City Engineer.

ADD: 2.1.8 under 2.1 SOD and replace with the following:

2.1.8 No netting to be added to the sodding.

ADD: 2.3.2 under 2.3 FERTILIZER with the following:

2.3.2 Prior to placing sod, 50 g/m² of 12-4-8 fertilizer shall be placed on the topsoil below the sod.

DELETE: 3.4.1 under 3.4 GRASS MAINTENANCE and replace with the following:

3.4.1 The sod shall be thoroughly watered within reasonable time of placement.

DELETE: 3.4.2 under 3.4 GRASS MAINTENANCE

DELETE: 3.5.5 under 3.5 CONDITIONS for TOTAL PERFORMANCES and replace with the following:

3.5.5 Sodded areas to be smooth, level and even after sod and topsoil have consolidated.

03300 CAST-IN-PLACE CONCRETE

ADD: 2.1.10 under 2.1 MATERIALS:

2.1.10 All concrete used under this specification shall be ready-mixed concrete, proportioned and mixed in an approved mixing plant.

DELETE: 2.2.1 under 2.2 Concrete Mixes and replace with the following:

2.2.1 All concrete supplied shall meet the requirements of CSA-A23.1-04 and City of Vancouver specified mix requirements unless other allowed by the City Engineer. Concrete shall be normal weight and the contractor and its supplier shall assume

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART G - SUPPLEMENTAL SPECIFICATIONS

responsibility for the quality and performance of the concrete as per CSA-A23.1-04 Table 5 Alternative 1. Submit mix design to the City Engineer for review and record upon request.

ADD: 3.5 FIELD QUALITY CONTROL & QUALITY ASSURANCE INSPECTION OR TESTING

3.5 Field Quality Control & Quality Assurance Inspection or Testing

- 3.5.1 The City may require proof documentation on QC inspection or testing by an independent testing laboratory. The cost of this QC testing shall be covered by the contractor. The City may also elect to carry out periodic QA checks at its own cost. If QA inspection results indicated non-compliance, subsequent confirmation inspection and corrective measures shall be paid for by the contractor unless confirmation inspection showing conformance.

INVITATION TO TENDER NO. PS10042
ARTERIAL STREETS REHABILITATION FOR
41ST AVENUE; CAMBIE TO KINGSWAY
PART H - PROJECT SCOPE DRAWINGS

Project Scope Drawings available in CD form.

To be picked up at Purchasing Services c/o Donna Lee or Mere Skiba

Address:

320 East Tower, City Square
555 West 12th Avenue
Vancouver, BC
V5Z 3X7
Telephone # 604-873-7263
Facsimile: # 604-873-7057
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