



City of Coquitlam

Contract Documents

79042A

Clarke Road and Como Lake Avenue Intersection Improvements



Table of Contents

Contract No. 79042A

Clarke Road and Como Lake Avenue Intersection Improvements

Project Construction Documents

Table of Contents

The complete **Project Construction Documents** consist of the following parts:

1. Standard Documents – supplied	Page
Table of Contents	TC 1 to TC 2
Invitation to Tender	IN 1 to IN 3
Instruction to Tenderers	
▪ Table of Contents.....	IT 1
▪ Instructions to Tenderers	IT 2 to IT 13
Form of Tender, including	
▪ Form of Tender Summary	FT 1
▪ Form of Tender	FT 2 to FT 5
▪ Appendix 1 – Schedule of Quantities and Unit Prices.....	FT 6 to FT 7
▪ Appendix 2 – Preliminary Construction Schedule	FT 8
▪ Appendix 3 – Experience of Superintendent.....	FT 9
▪ Appendix 4 – Comparable Work Experience.....	FT 10
▪ Appendix 5 – Subcontractors	FT 11
▪ Appendix 6 – Bid Bond.....	FT 12
▪ Appendix 7 – Certificate of Compliance for Contract Insurance	FT 13
Agreement between Owner and Contractor.....	AGT 1 to AGT 4
▪ Schedule 1 – Schedule of Contract Documents.....	AGT 5
▪ Schedule 2 – List of Drawings	AGT 6
Supplementary General Conditions – Table of Contents.....	SGC 1 to SGC 2
▪ Supplementary General Conditions, including.....	SGC 3 to SGC 25
▪ Appendices:	
▪ Appendix I Performance Bond	SGC 19 to SGC 20
▪ Appendix II labour and Material Payment Bond	SGC 21 to SGC 23
▪ Appendix III Certificate of Insurance.....	SGC 24
▪ Appendix IV Prime Contractor Designation	SGC 25

Table of Contents

Supplementary Contract Specifications	SS 1 to SS 59
Appendix A – Traffic Management Detail Specifications	TMP 1 to TMP 10
Appendix B – Permits and Approvals.....	PAA 1 to PAA 22
Appendix C – Standard Detail Drawings	SDD 1 to SDD 2
Appendix D – As-built Records.....	ABR 1
Appendix E – Archaeological Chance Find Procedures	ACF 1 to ACF 19
Contract Drawings	Under Separate Cover

2. Standard Documents – not supplied

- i) (available in the “MMCD – General Conditions, Specifications and Standard Detail Drawings”)
 - Instructions to Tenderers
 - General Conditions
 - Schedule 17.5.3 – Letter Agreement with Referee
 - Flow Chart – Changes and Extra Work
 - Flow Chart – Dispute Resolution
 - Specifications
 - Standard Detail Drawings
- ii) City of Coquitlam Supplementary Specifications for Contract Documents

Invitation to Tender



INVITATION TO TENDER

DATE OF ISSUE: **February 19, 2026**

We acknowledge with gratitude and respect that the name Coquitlam was derived from the hənq̓əmíñəm̓ word kʷikʷəłəm (kwee-kwuh-tlum) meaning “Red Fish Up the River”. The City is honoured to be located on the kʷikʷəłəm (Kwikwetlem) traditional and ancestral lands, including those parts that were historically shared with the s̓qáčiýaʔ təməxʷ (Katzie), and other Coast Salish Peoples.

Tender No. 79042A

Clarke Road and Como Lake Avenue Intersection Improvements

The City of Coquitlam invites tenders for **Contract 79042A - Clarke Road and Como Lake Avenue Intersection Improvements**, generally consisting of the following, but not limited to:

- Traffic Signal and Pavement Marking Improvements
- East Bound Right Turn Upgrades
- Other miscellaneous and incidental works as further described in Contract documents

Tender Documents and Drawings are available for downloading from the City of Coquitlam website: www.coquitlam.ca/BidOpportunities

Printing of Tender documents and drawings is the sole responsibility of the Tenderers.

Tenders submitted must be accompanied by a copy of the original specified 10% Bid Bond and will be received:

On or Before 2:00 pm local time

March 12, 2026

(“Closing Date and Time”)

Addenda

Tenderers are required to check the City's website for any updated information, issued before the Closing Date at: www.coquitlam.ca/BidOpportunities. Where in its sole discretion it considers it to be necessary or desirable, the City may issue Addenda to amend any portion of the Contract Documents.

Any changes to the Tender documentation will be issued by means of written Addenda and posted on the City's website and will form part of the Tender. No amendment of any kind to the Tender is effective unless it is posted in a formal written Addendum on the City website. Upon submitting a Tender, Tenderers will be deemed to have received notice of all Addenda that are posted on the City's website and deemed to have considered the information for inclusion in the Tender submitted.

The City does not retain a bidder's list or bidder's registry. Tenderers are encouraged to register as plan takers and may view the Tender Documents and Drawings by contacting the Vancouver Regional Construction Association (VRCA), website: www.my.vrca.ca, ph: 604-294-3766, or email at vrca@vrca.ca, quoting the Coquitlam Tender Reference Number.

Should there be any discrepancy in the documentation provided, the City's original file copy shall prevail.

Tenders shall remain open for acceptance for 60 days following the submission Closing Date.

The City reserves the right to accept or reject any or all Tenders and the lowest or any Tender may not necessarily be accepted. The City also reserves the right to cancel any request for Tender at any time without recourse by the Tenderer.

The City, prior to award of any Tender, may negotiate with the Tenderer presenting the lowest price compliant Tender, for changes in the Work, materials, specifications or 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.

The City will not be responsible for any costs incurred by the Tenderer in preparing the Tender.

Procurement of goods and services is conducted in accordance with Chapter 5 of the Canadian Free Trade Agreement (CFTA) and the New West Partnership Trade Agreement (NWPTA).

M. Pain
Manager Procurement

Instructions to Tenderers

Tender 79042A

Clarke Road and Como Lake Avenue Intersection Improvements

INSTRUCTIONS TO TENDERERS

TABLE OF CONTENTS	INSTRUCTIONS TO TENDERERS	Page
1 Introduction		IT 2
2 Tender Documents		IT 2 to 3
3 Submission of Tenders		IT 3 to 4
4 Additional Instructions to Tenderers		IT 4 to 5
5 Tender Requirements		IT 6 to 7
6 Qualifications, Modifications, Alternative Tender		IT 7
7 Approved Equals		IT 7
8 Inspection of the Place of the Work		IT 8
9 Interpretation of Contract Documents		IT 8
10 Prices		IT 8 to 9
11 Taxes		IT 9
12 Amendment of Tenders		IT 9 to 10
13 Duration of Tenders		IT 10
14 Qualifications of Tenders		IT 10
15 Award		IT 10 to 13
16 Subcontractors		IT 13
17 Optional Work		IT 13

INSTRUCTIONS TO TENDERERS

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

The City of Coquitlam

Contract: **Clarke Road and Como Lake Avenue Intersection Improvements**

Reference No. **79042A**

<p>1.0</p>	<p>Introduction</p>	<p>1.1 These Instructions apply to and govern the preparation of tenders for this <i>Contract</i>. The <i>Contract</i> is generally for the following work:</p> <ul style="list-style-type: none">• Traffic Signal and Pavement Marking Improvements• East Bound Right Turn Upgrades• Other miscellaneous and incidental works as further described in Contract documents <p>1.2 All inquiries regarding this Tender are to be submitted in writing referencing the Tender Name and Number sent to:</p> <p style="margin-left: 20px;">E-mail bid@coquitlam.ca</p> <p style="margin-left: 20px;">The deadline for inquiries is 2:00 PM local time, Monday, March 9, 2026.</p> <p style="text-align: center;">INQUIRIES RECEIVED AFTER THIS DATE AND TIME MAY NOT RECEIVE A RESPONSE.</p>
<p>2.0</p>	<p>Tender Documents</p>	<p>2.1 The Tender Documents which a Tenderer should review to prepare a Tender consist of all of the <i>Contract Documents</i> listed in Schedule 1 entitled "Schedule of Contract Documents". Schedule 1 is attached to the Agreement which is included as part of the Tender Package. The <i>Contract Documents</i> include the drawings listed in Schedule 2 to the Agreement, entitled "List of Contract Drawings".</p> <p>2.2 <u>A portion of the Contract Documents are included by reference. Copies of these documents have not been included with the tender package.</u> These documents are the General Conditions, Specifications and Standard Detail Drawings. They are those contained in the publication entitled "Master Municipal Construction Documents - General Conditions, Specifications and Standard Detail Drawings". Refer to Schedule 1 to the Agreement or, if not specified in Schedule 1, then the applicable edition shall be the most recent edition as of the date of the <i>Tender Closing Date</i>.</p>

All sections of this publication are by reference included in the Contract Documents.

	2.3	Any additional information made available to Tenderers prior to the Tender Closing Time by the Owner or representative of the Owner, such as geotechnical reports or as-built plans, which is not expressly included in Schedule 1 or Schedule 2 to the Agreement, is not included in the Contract Documents. Such additional information is made available only for the assistance of Tenderers who must make their own judgments about its reliability, accuracy, completeness and relevance to the <i>Contract</i> , and neither the Owner nor any representative of the Owner gives any guarantee or representation that the additional information is reliable, accurate, complete or relevant.
3.0	Submission of Tenders	<p>3.1 Tenders must be submitted on the Tender Form provided, accompanied by a copy of the original 10% Bid Bond quoting the Tender Name and Number, and be uploaded to the City's file transfer website.</p> <p>Tenders must be received on or before:</p> <p>Tender Closing Time: 2:00 p.m. local time Tender Closing Date: March 12, 2026</p> <p>For the purpose of the Tender submission, digital copies of original documents and signatures sent electronically are accepted. Original documents are required upon request by the City.</p>
	Instructions for Tender Submission	<p>3.2 Tender submissions are to be consolidated into one (1) PDF file and uploaded electronically through QFile, the City's file transfer service accessed at website: http://qfile.coquitlam.ca/bid</p> <p>1. In the "Subject Field" enter: Tender Number and Name</p> <p>2. Add consolidated Tender file in PDF format and Appendix 1 in XLS format, and Send (ensure your web browser remains open until you receive 2 emails from Qfile to confirm upload is complete and was sent to email: bid@coquitlam.ca)</p> <p>Tenderers are responsible to allow for ample time to complete the submission process. For assistance, phone 604-927-3037.</p>
		<p>3.3 Tenders submitted shall be deemed to be received when displayed as a new email in the in-box of the above email address. The City will not be responsible for any delay or for any Tenders not received for any reason, including technological delays or issues by either party's network or email program, and the City will not be liable for any damages associated with Tenders not received.</p>

3.4 The City reserves the right to accept late Tenders to allow for technological delays. The City also reserves the right to accept Tenders by email: bid@coquitlam.ca.

BIDS RECEIVED IN-PERSON, BY COURIER, OR BY FAX WILL NOT BE ACCEPTED.

3.5 Tenders will not be opened in public. The unevaluated results will be forwarded to participants by email.

3.6 Tender submissions are subject to the Freedom of Information and Protection of Privacy Act and contents may be disclosed if required to do so, pursuant to the Act.

4.0	Additional Instructions to Tenderers	<u>Additional Instructions to Tenderers</u> Refer to Appendix A – Traffic Management Detail Specifications for specific time restrictions.
	Obtaining Documents	4.1 The following documents which are referred to and form part of the Contract Document package may be obtained as follows: <ul style="list-style-type: none">• Copies of the Master Municipal Construction Documents Volume II (2009), General Conditions, Specifications and Standard Detail Drawings are available separately from: Support Services Unlimited Suite 102 211 Columbia Street Vancouver, B.C. V6A 2R5 Tel: 604-681-0295 Fax: 604-305-0424• Copies of the City of Coquitlam Supplementary Specifications and Detailed Drawings to the MMCD 2009 Edition are available for viewing and downloading off the City of Coquitlam website: <u>Supplementary Specifications and Detailed Drawings to MMCD</u>
	Test Excavations	4.2 Prior to the excavation of test holes on road allowances or privately owned property the Tenderer shall obtain permission from the Municipality or Owner of the property and comply with their requirements for restoration of disturbed surfaces and utilities. Failure to comply with Municipal by-laws restricting this practice may result in prosecution of the offending party.
	Business License	4.3 The successful Tenderer shall provide evidence of a City of Coquitlam Business License or Tri-Cities Inter-Municipal Business License prior to commencement of work or supply of materials. For more information, contact Business License Division Ph: 604-927-3085 or apply online at website: <u>City of Coquitlam Business License</u>

No Claim	4.4	Except as expressly and specifically permitted in these Instructions to Tenderers, no Tenderer shall have any claim for any compensation of any kind whatsoever, as a result of participating in this Tender, including accepting a non-compliant bid and by submitting a Tender, each Tenderer shall be deemed to have agreed that it has no claim.
No Cost	4.5	The City will not under any circumstances be responsible for any costs incurred by the Tenderer in preparing the Tender.
Right to Accept or Reject any Tender	4.6	<p>The City reserves the right to accept or reject any or all Tenders and the lowest or any Tender may not necessarily be accepted. In its sole discretion, the City may reject or retain for its consideration, tenders which are nonconforming because they do not contain the content or form required by the instructions to tenderers or for failure to comply with the process for submission set out in these instructions to tenderers.</p> <p>The City specifically reserves the right to reject all Tenders if none is considered to be satisfactory and, in that event, at its option, to call for additional Tenders.</p>
Negotiation	4.7	The City, prior to award of any Tender, may negotiate with the Tenderer presenting the lowest price compliant Tender, for changes in the Work, materials, specifications or 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.
Cancellation of Tender	4.8	The City reserves the right to cancel any request for Tender at any time without recourse by the Tenderer. The City has the right to not award this work for any reason including choosing to complete the work with the City's own forces.
Conflict of Interest	4.9	Tenderers shall disclose any actual or potential conflicts of interest and existing business relationships it may have with the City, their elected or appointed officials or employees.
Collusion	4.10	Tenderers will not discuss or communicate with one another in regards to the preparation of their Tenders. Each Tenderer will ensure that its participation in the Tender process and that of its team members is conducted without collusion or fraud. Failure to comply with this requirement may lead to disqualification without further notice or warning.
Instruction to Tenderers - Part II		Delete Instructions to Tenderers – Part II Contained in the Edition of the Publication "Master Municipal Construction Documents 2009" and replace with the following:

<p>5.0</p>	<p>Tender Requirements</p>	<p>5.1 A tender should be on the Form of Tender as provided and be signed by the authorized signatory(s) as follows:</p> <p class="list-item-l1">5.1.1 if the tenderer is a partnership or joint venture then the name of the partnership or joint venturer should be included, and each partner or joint venturer should sign personally; if a partner of joint venture is a corporation then such corporation should sign as indicated in paragraph 5.1.3 below; and</p> <p class="list-item-l1">5.1.2 if the tenderer is a corporation then the full name of the corporation should be included, together with the names and signatures of authorized signatories.</p> <p class="list-item-l1">5.1.3 For the purpose of the Tender submission, digital copies of original documents and electronic signatures are accepted. Original documents are required upon request by the City.</p> <p>5.2 A tender must be accompanied by tender security ("Bid Security") in the form of:</p> <p class="list-item-l1">5.2.1 a copy (digital or Electronic copy is acceptable) of the original bid bond in an amount equal to 10% of the Tender Price, issued by a surety licensed to carry on the business of suretyship in British Columbia in a form reasonably satisfactory to the <i>Owner</i>;</p> <p>5.3 Tenderer should be competent and capable of performing the various items of work. Tenderer shall complete the following statement sheets appended to the Form of Tender:</p> <p class="list-item-l1">5.3.1 Appendix 1 – the Schedule of Quantities and Prices;</p> <p class="list-item-l1">5.3.2 Appendix 2 – a "<i>Preliminary Construction Schedule</i>", generally in the form attached as Appendix 2 to the Form of Tender, and showing <i>Substantial Performance</i> by the date or within the duration, shown in paragraph 2.2 of the Form of Tender.</p> <p class="list-item-l1">5.3.3 Appendix 3 – name and brief description of the previous experience of the <i>Superintendent</i> the tenderer will use for the <i>Work</i>;</p> <p class="list-item-l1">5.3.4 Appendix 4 – a list of previous comparable work, including a brief description of that work, approximate contract value, and references (with phone numbers);</p>
-------------------	-----------------------------------	---

		5.3.5 Appendix 5 – a complete list of all subcontractors, if any, that the tenderer will use for the <i>Work</i> including full names.; and
		5.3.6 Appendix 7 – is provided for information only, to indicate the Contract Insurance is to be submitted by the successful Tenderer upon Notice of Award.
5.4		The successful tenderer will, within 15 Days of receipt of the written <i>Notice of Award</i> , be required to deliver to the <i>Owner</i> the items listed in FT 5.1.1, including a Performance Bond and a Labour and Material Payment Bond as described in FT 5.1.1(a), failing which the provisions of FT 6.1 will apply.
6.0	Qualifications, Modifications, Alternative Tenders	<p>6.1 Tenders which contain qualifications, or omissions, so as to make comparison which other tenders difficult, may be rejected by the <i>Owner</i>.</p> <p>6.2 A tenderer may, at the tenderer's election, submit an alternative tender ("Alternative Tender") which varies the materials, products, designs or equipment by the <i>Owner as Approved Equals</i> as the case may be, <u>but an Alternative Tender must be in addition to, and not in substitution for a tender which conforms to the requirements of the Contract Documents.</u></p> <p>6.3 The only <i>Alternative Tender</i> that the <i>Owner</i> may accept is an <i>Alternative Tender</i> submitted by that tenderer whose conforming tender, submitted as required by paragraph 6.2 of these Instructions to Tenderers, would have been accepted by the <i>Owners</i> in the preference to other conforming tenders, if no <i>Alternative Tenders</i> had been invited.</p>
7.0	Approved Equals	<p>7.1 Prior to the <i>Tender Closing Time and Date</i>, a tenderer may request the <i>Owner</i> to approve materials, products, or equipment ("Approved Equal") to be included in a tender in substitution for items indicated in the Contract Documents.</p> <p>7.2 Applications for an <i>Approved Equal</i> must be in writing, and supported by appropriate supporting information, data, specifications, and documentation.</p> <p>7.3 If the <i>Owner</i> decides in its discretion to accept an <i>Approved Equal</i>, then the <i>Owner</i> will issue an addendum to all tenderers.</p> <p>7.4 The <i>Owner</i> is not obligated to review or accept an application for an <i>Approved Equal</i>.</p>

8.0 Inspection of the *Place of the Work*

8.1 All tenderers, either personally or through a representative, are responsible to examine the *Place of the Work* before submitting a tender. A tenderer has full responsibility to be familiar with and make allowance in the tender for all conditions at the *Place of the Work* that might affect the tender, including any information regarding subsurface soil conditions made available by the *Owner*, the location of the *Work*, local conditions, topographical soil conditions, weather and access. Unless otherwise specified in the *Contract Documents*, a tenderer is not required to do subsurface investigations. By submitting a tender, a tenderer represents that the tenderer has examined the *Place of the Work*, or specifically elected not to. No additional payments or time extensions shall be claimable or due because of difficulties relating to conditions at the *Place of the Work* which were reasonably foreseeable by a contractor qualified to undertake the *Work*.

8.2 Tenderers are referred to GC 11.2.1 regarding **Concealed or Unknown Conditions**.

9.0 Interpretation of *Contract Documents*

9.1 If a tenderer is in doubt as to the correct meaning of any provision of the *Contract Documents*, the tenderer may request clarification as instructed in paragraph 1.2 of the Instructions to Tenderers.

9.2 If a tenderer discovers any contradictions or inconsistencies in the *Contract Documents* or its provisions, or any discrepancies between a provision of the *Contract Documents* and conditions at the *Place of the Work as* observed in an examination under paragraph 8 of the Instructions to Tenderers - Part II, the tenderer shall immediately notify the person named in paragraph 1.2 of the Instructions to Tenderers.

9.3 If the *Owner* considers it necessary, the *Owner* may issue written addenda to provide clarification (s) of the *Contract Documents*.

9.4 No oral interpretation or representations from the *Owner* or any representative of the *Owner* will affect, alter, or amend any provision of the *Contract Documents*.

10.0 Prices

10.1 The Tendered Price will represent the entire cost excluding *GST* to the *Owner* of the complete *Work* based on the estimated quantities in the *Schedule of Quantities and Prices* of the Form of Tender. Notwithstanding the generalities of the above, tenderers shall include in the tendered prices (including unit prices, lump sum prices, or other forms of pricing) sufficient amounts to cover:

10.1.1 the costs of all labour, equipment and material included in or required for the *Work*, including all items which, whole not specifically listed in the *Schedule of Quantities and Prices*, are included in the *Work* specifically or by necessary inference from the *Contract Documents*;

10.1.2 all assessments payable with respect to labour as required by any statutory scheme such as unemployment insurance, holiday pay, insurance, CPP and all employee benefits and the Workers Compensation Act;

10.1.3 all overhead costs, including head office and on-site overhead costs, and all amounts for the *Contractor's* profit.

10.2 The tendered prices and all subcontracts must allow for compliance with all applicable laws regarding trade or other qualifications of employees performing the *Work*, and payment of appropriate wages for labour included in or required for the *Work*.

11.0 Taxes

11.1 The tendered prices shall cover all taxes and assessments of any kind payable with respect to the *Work*, but shall not include *GST*. *GST* shall be listed as a separate line item as required by GC 19.3.

12.0 Amendment of Tenders

12.1 A tenderer may amend or revoke a tender by giving written notice, delivered by Email, to the office referred to in paragraph 3.4 of the Instructions to Tenderers at any time up until the *Tender Closing Date and Time*. An amendment or revocation that is received after the *Tender Closing Date and Time* shall not be considered and shall not affect a tender as submitted.

12.2 An amendment or revocation must be signed by an authorized signatory of the tenderer in the same manner as provided by paragraph 5.1 of these Instructions to Tenderers.

12.3 Any amendment that expressly or by inference discloses the tenderer's *Tender Price* or other material element of the tender such that, in the opinion of the *Owner*, the confidentiality of the tender is breached, will invalidate the entire tender.

12.4 An acceptable form of a tender amendment which tenderers may, but are not required to, use is as follows:

"Contract: _____
(TITLE OF CONTRACT)

Reference No. _____
(OWNER'S CONTRACT REFERENCE NO.)

TO:

(NAME OF OWNER)

We the undersigned wish to amend our tender which we submitted for the above *Contract* by deleting the following tendered prices or items from our tender:

(TEDNERED PRICES AND/OR TENDER ITEMS IN THE TENDER THAT ARE TO BE AMENDED)

and substituting the following revised tendered prices or items:

(REVISED TENDERED PRICES OR TENDER ITEMS)

The extensions in our tender should be adjusted accordingly, and our **Tender Price** as set out in Appendix 1 of our submitted **Form of Tender**, and on the **Schedule of Quantities and Prices**, increased / decreased by \$_____, excluding GST. We have not included our revised **Tender Price** in order to preserve the confidentiality of our tender.

Signed and delivered the ___ day of _____, 20__."

13.0	Duration of Tenders	13.1	After the <i>Tender Closing Time</i> , a tender shall remain valid and irrevocable as set out in paragraph 5.1 of the Form of Tender.
14.0	Qualifications of Tenderers	14.1	By submitting a tender, a tenderer is representing that it has the competence, qualifications and relevant experience required to do the <i>Work</i> .
15.0	Award	15.1	In exercising its discretion, the <i>Owner</i> will have regard to the information provided in the Appendices to the Form of Tender as described under IT 5.3 including the proven experience of the tenderer, and any listed subcontractors, to do the <i>Work</i> . Tenders received will be evaluated to provide the City with greatest value based on quality, service, price and experience. Evaluation Criteria will include but is not limited to:

1. Ability to meet specifications and required completion date
2. Contractor's past experience, references, reputation and compliance to specifications
3. Demonstrated successful experience on similar projects and specific equipment installation
4. Price: purchase price, maintenance costs, availability of parts and service, warranty and compatibility with existing equipment and/or conditions
5. Any other criteria, the City deems, at its sole discretion, necessary to evaluate Tenders;
6. Lowest price will not necessarily be accepted.

The City may, in its absolute discretion, not award to a Tenderer if the Tenderer, or any officer or director of a corporate Tenderer, is or has been engaged, either directly or indirectly through another corporation or legal entity, in a legal action against the City and its elected and appointed officers and employees or any of them in relation to:

- a) any other contract or services; or
- b) any matter arising from the City's exercise of its powers, duties or functions under the *Local Government Act*, the *Community Charter* or any other enactments; within five years of this Tender Offer.

For purposes of this section, the words "legal action" includes, without limitation, mediation, arbitration, hearing before an administrative tribunal or lawsuit filed in any court.

Without limiting the City's sole discretion, in determining whether or not to award to a Tenderer pursuant to this clause, the City will consider such factors as whether the legal action is likely to affect the Tenderer's ability to work with the City and its employees, agents, consultants and representatives or any of them and whether the City's past experience with the Tenderer in the matter that resulted in the legal action indicates that the City is likely to incur increased staff and legal costs or either of them in the administration of this contract if it is awarded to the Tenderer.

In the event that the lowest total Tender Price by two or more Tenderers is the same amount, the City will select a Tenderer with an overall satisfactory performance record in having completed work on previous relevant projects that are provided as references, and on City projects. Information obtained from references will not be disclosed or discussed with any Tenderer. If all references are equal, selection will be determined by a coin toss in a manner to be directed by the City.

Where only one Tender is received the City may reject such and re-tender on a selected basis.

- 15.2 The *Owner* will notify the successful tenderer in writing.
- 15.3 If there are any discrepancies in the *Schedule of Quantities and Prices* between the unit prices and the extended totals then the unit prices shall be deemed correct, and corresponding corrections shall be made to the extended totals. If a unit price or extended total has been omitted, the following shall apply:
 - a) If a unit price is given but the corresponding extended total has been omitted, then the extended total shall be calculated from unit price and the estimated quantity, and inserted as the extended total;
 - b) If an extended total is given but the corresponding unit price has been omitted, then the unit price shall be calculated from the extended total and estimated quantity, and inserted as the unit price;
 - c) If both the unit price and the corresponding extended total for a tender item have been omitted, then the following test shall be applied to determine whether the tender shall be rejected as incomplete:
 - (i) the highest of the unit prices tendered by other tenderers for that tender item shall be used as the test unit price, and the corresponding test extended total shall be calculated from the test unit price and the estimated quantity;
 - (ii) if the test extended total for the tender item exceeds 1% of the revised total *Tender Price*, including the test extended total, or if the revised total *Tender Price*, including the test extended total, alters the ranking of the tenderers according to the lowest *Tender Price*, then the omitted unit price for that tender item is deemed to materially affect the *Tender Price* relative to other tenders and the tender shall be rejected;
 - (iii) if the tender is not rejected under subparagraph (ii) of this IT 15.3 (c), then the unit price and the extended total for that tender item shall both be deemed to be, and the costs for that tender item shall be zero deemed to be included in other tender items prices;

- d) In no event shall page totals in the *Schedule of Quantities and Prices* or the total *Tender Price* be used to calculate missing extended totals or unit prices.

16.0	Subcontractors	16.1	<p>The <i>Owner</i> reserves the right to object to any of the subcontractors listed in a tender. If the <i>Owner</i> objects to any of the subcontractor(s) then the <i>Owner</i> will permit a tenderer to, within 5 days, propose a substitute subcontractor(s) acceptable to the <i>Owner</i> provided that there is not resulting adjustment in the <i>Tender Price</i> or the completion date set out in paragraph 2.2 of the Form of Tender. A tenderer will not be required to make such substitution and, if the <i>Owner</i> objects to a listed <i>Subcontractor(s)</i>, the tenderer may, rather than propose a substitute subcontractor(s), consider its tender rejected by the <i>Owner</i> and by written notice withdraw its tender. The <i>Owner</i> shall, in the event, return the tenderer's bid security.</p>
17.0	Optional Work	17.1	<p>If the <i>Schedule of Quantities and Prices</i> includes any tender prices for <i>Optional or Provisional Work</i>, as defined in GC 7.4.1, the tenderers must complete all the unit prices for such <i>Optional or Provisional Work</i>. Such tender prices shall not include any general overhead costs, or other costs, or profit, not directly related to the <i>Optional or Provisional Work</i>.</p>
		17.2	<p>Notwithstanding that the <i>Owner</i> may elect not to proceed with the <i>Optional or Provisional Work</i>, the tender prices for any <i>Optional or Provisional Work</i>, including the extended totals for <i>Optional or Provisional Work</i> unit prices, shall be included in the <i>Tender Price</i> for the purpose of any price comparisons between tenders.</p>

Form of Tender



Form of Tender

Tender No. 79042A

Clarke Road and Como Lake Avenue Intersection Improvements

Summary

Name of **Contractor**: _____

Tender Price (exclude GST): \$ _____
(FROM APPENDIX 1 OF FORM OF TENDER)

**Tender submitted must be accompanied by a copy of the original 10% Bid Bond and
will be received**

**On or before 2:00 pm (local time)
Thursday, March 12, 2026**

Instructions for Tender Submission

Tender submissions are to be consolidated into one (1) .pdf file and **uploaded electronically** through QFile, the City's file transfer service accessed at website: qfile.coquitlam.ca/bid

1. **In the "Subject Field" enter:** Tender Number and Name
2. **Add consolidated Tender file in PDF format, and Appendix 1 in XLS format, and Send**
(ensure your web browser remains open until you receive 2 emails from Qfile to confirm upload is complete and was sent to the correct email address: bid@coquitlam.ca)

Tenderers are responsible to allow ample time to complete the Tender submission process. If assistance is required, phone 604-927-3037.

February 2026

THE CITY OF COQUITLAM
3000 Guildford Way
Coquitlam, B.C. V3B 7N2

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

Contract Name: Clarke Road and Como Lake Avenue Intersection Improvements
Reference No.: 79042A

TO OWNER:

1 WE, THE UNDERSIGNED:

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

;

(ADDENDA, IF ANY)

- 1.2 shall fully disclose any actual or potential conflicts of interest and existing business relationships we may have with the City, their elected or appointed officials or employees:

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

2 ACCORDINGLY WE HEREBY OFFER:

- 2.1 to perform and complete all of the *Work* and to provide all the labour, equipment and material all as set out in the *Contract Documents*, in strict compliance with the *Contract Documents*; and
- 2.2 to achieve *Substantial Performance* of the *Work* on or before **August 15, 2026**; and
- 2.3 to do the *Work* for the price, which is the sum of the products of the actual quantities incorporated into the *Work* and the appropriate unit prices set out in Appendix 1, the "*Schedule of Quantities and Prices*", plus any lump sums or specific prices and adjustment amounts as provided by the *Contract Documents*. For the purposes of tender comparison, our offer is to complete the *Work* for the "*Tender Price*" as set out on Appendix 1 of this Form of Tender. Our *Tender Price* is based on the estimated quantities listed in the *Schedule of Quantities and Prices*, and excludes *GST*.

3 WE CONFIRM:

- 3.1 that we understand and agree that the quantities as listed in the *Schedule of Quantities and Prices* are estimated, and that the actual quantities will vary.
- 3.2 that we understand and agree that the owner is in no way obliged to accept this Tender.

4 WE CONFIRM:

- 4.1 that the following Appendices are attached to and form a part of this tender:
 - 4.1.1 the Appendices as required by paragraph 5.3 of the Instructions to Tenderers - Part II; and
 - 4.1.2 the *Bid Security* as required by paragraph 5.2 of the Instructions to Tenderers - Part II.
 - 4.1.3 the Certificate of Compliance on the form provided in Appendix 7 of this Form of Tender.

5 WE AGREE:

- 5.1 that this tender will be irrevocable and open for acceptance by the *Owner* for a period of **60** calendar days from the day following the *Tender Closing Date and Time*, even if the tender of another Tenderer is accepted by the *Owner*. If within this period the *Owner* delivers a written notice ("*Notice of Award*") by which the *Owner* accepts our tender we will:
 - 5.1.1 within **15 Days** of receipt of the written *Notice of Award* deliver to the *Owner*:
 - a) a Performance Bond and a Labour and Material Payment Bond, each in the amount of 50% of the *Contract Price*, issued by a surety licensed to carry on the business of suretyship in the province of British Columbia, and in a form acceptable to the *Owner*;
 - b) a "clearance letter" indicating that the Tenderer is in WCB compliance; and
 - c) a copy of the insurance policies as specified in SGC Section 24 indicating that all such insurance coverage is in place and;
 - d) a letter confirming the *Contractor* as "Prime Contractor" for the Contract as specified in SGC Section 21.2.1.
 - 5.1.2 within **2 Days** of receipt of written "*Notice to Proceed*", or such longer time as may be otherwise specified in the *Notice to Proceed*, commence the *Work*; and
 - 5.1.3 sign the Contract Documents as required by GC 2.1.

6 WE AGREE:

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

6.1.1 fail or refuse to deliver the documents as specified by paragraph 5.1.1 of this Form of Tender; or

6.1.2 fail or refuse to commence the *Work* as required by the *Notice to Proceed*,

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

6.1.3 the face value of the *Bid Security*; and

6.1.4 the amount by which our *Tender Price* is less than the amount for which the *Owner* contracts with another party to perform the *Work*.

7 OUR ADDRESS is as follows:

Phone: _____ - _____ - _____

Email: _____

Attention: _____

This Tender is executed this _____ day of _____, 20 ____.

Contractor:

(FULL LEGAL NAME OF CORPORATION, PARTNERSHIP OR INDIVIDUAL)

(AUTHORIZED SIGNATORY)

(AUTHORIZED SIGNATORY)

8 WE CONFIRM:

8.1 our Goods and Services Tax (GST) registration status is as follows:

8.1.1 for information purposes, our GST Registration Number is:

(GST REGISTRATION NUMBER)

or;

8.1.2 by signature hereunder, we certify we are **not required** to provide a registration number:

(AUTHORIZED SIGNATORY)

(AUTHORIZED SIGNATORY)

**APPENDIX 1
FORM OF TENDER**

Contract 79042A

Clarke Road and Como Lake Avenue Intersection Improvements

SCHEDULE OF QUANTITIES AND PRICES

(see paragraph 5.3.1 of the Instruction to Tenderers)

(All Tender and Contract Prices shall NOT include GST. GST will apply upon payment)

(Should there be any discrepancy in the information provided, the City's original file copy shall prevail)

ITEM NO.	MMCD Ref. / (Supp. Specs)	DESCRIPTION	UNIT	QTY	UNIT PRICE	EXTENDED AMOUNT
1.00	01 55 00	TRAFFIC CONTROL, VEHICLE ACCESS AND PARKING				
1.01	1.5.1	Traffic Control and Management			Incidental to Contract	
2.00	01 57 01S	ENVIRONMENTAL PROTECTION				
2.01	(1.6.1)	ESC Supply & Installation, Maintenance and Removal			Incidental to Contract	
3.00	01 58 01S	PROJECT IDENTIFICATION				
3.01	(1.3.1)	1.2m x 1.2m Static Construction Zone Information Sign	each	4		
3.02	(1.3.2)	Changeable Message board Signs (x4)	month	1		
4.00	03 30 20S	CONCRETE WALKS, CURBS AND GUTTERS				
4.01	(1.4.3)	Concrete Barrier Curb & Gutter (MMCD C5)	lin.m	46		
4.02	(1.4.3)	Concrete Rollover Curb & Gutter (MMCD C4)	lin.m	27		
4.03	(1.4.3)	Custom Hand-Formed Curb Transitions	lin.m	11		
4.04	(1.4.3)	Concrete Median Curb and Interim Curb (CoQ-C6)	lin.m	7		
4.05	(1.4.5)	Concrete Raised Island - 100mm Thick Concrete Boulevard	sq.m	23		
4.06	(1.4.5)	Concrete Lougheed Burquitlam Streetscape and Ramps - 100mm Thick Concrete Sidewalk	sq.m	152		
4.07	(1.4.5)	Stamped and Coloured Concrete (200mm Thick, Stamped Brick, Davis Red Coloured)	sq.m	40		
4.08	(1.4.10)	Tactile Strip - Access Tile, Truncated Dome Pattern, Yellow color - Cast-in-place (removable)	sq.m	6		
4.09	(1.4.11)	Type R-7901 Bollard	each	6		
5.00	26 56 01	ROADWAY LIGHTING				
5.01	1.9.1	Supply & installation of Roadway and Pedestrian Lighting (ALL) Works (Including any removal, adjustments and disposal needed to complete the work and as shown on the Contract Drawing)	l.s.	1		
6.00	31 24 13S	ROADWAY EXCAVATION, EMBANKMENT AND COMPACTION				
6.01	(1.8.5)	Common Excavation - Off-Site Disposal	cu.m	90		
6.02	(1.8.5)	Remove Existing Asphalt - Up to 150mm thick (Sawcut, Removal, Offsite Disposal)	sq.m	140		
6.03	(1.8.5)	Removal and Disposal of Existing Concrete Curb and Gutter	l.m	82		
6.04	(1.8.5)	Remove Existing Existing Concrete Sidewalks up to 200mm Thick (Sawcut, Removal, Offsite Disposal)	sq.m	235		
6.05	(1.8.10)	Overexcavation, Offsite Disposal, Backfilling (Provisional)	cu.m	10		
7.00	32 11 16.1S	GRANULAR SUBBASE				
7.01	(1.4.3)	75mm Crushed Minus Granular Sub Base - variable thickness	tonne	60		
8.00	32 11 23S	GRANULAR BASE				
8.01	(1.4.3)	25mm Minus Granular Base, variable thickness, for roadway and as shown in Contract Drawings	tonne	95		
9.00	32 12 13.1S	ASPHALT TACK COAT				
9.01	(1.5.1)	Asphalt Tack Coat	sq.m	158		
10.00	32 12 16S	HOT-MIX ASPHALT CONCRETE PAVING				
10.01	(1.5.1)	Lower Course #1 Asphalt Concrete (75mm thick)	tonne	26		
10.02	(1.5.1)	Upper Course #1 Asphalt Concrete (50mm thick)	tonne	20		

ITEM NO.	MMCD Ref. / (Supp. Specs)	DESCRIPTION	UNIT	QTY	UNIT PRICE	EXTENDED AMOUNT
11.00	32 17 23S	PAINTED PAVEMENT MARKINGS				
11.01	(1.5.3)	Thermoplastic Pavement Markings (extruded) - Includes eradication of ex. Crosswalk	L.S	1		
11.02	(1.5.4)	Supply & install of sign on new base and post - City to supply new sign tab	each	3		
11.03	(1.5.4)	Relocate Existing Signs	each	3		
12.00	33 11 01S	WATERWORKS				
12.01	(1.8.15)	Fire Hydrant Relocation including removal of existing concrete thrust blocks	each	1		
12.02	(1.8.16)	Reverse Concrete Thrust Block (RATB) as shown on Contract Drawings (Optional Works)	each	1		
13.00	34 41 13	TRAFFIC SIGNALS				
13.01	1.9	Supply & Installation of Traffic Signal Upgrades (ALL) Works (Including any removal, adjustments and disposal needed to complete the work and as shown on the Contract Drawings)	L.S	1		

Total Tendered Price (exclude GST): _____

(Transfer the amount to Form of Tender Summary Page 1)

Name of Contractor: _____

APPENDIX 2

FORM OF TENDER

Contract 79042A Clarke Road and Como Lake Avenue Intersection Improvements

PRELIMINARY CONSTRUCTION SCHEDULE (See paragraph 5.3.2 of the Instructions to Tenderers)

INDICATE SCHEDULE WITH BAR CHART WITH CONSTRUCTION DURATIONS

CONSTRUCTION ACTIVITY	JUNE		JULY					AUGUST	
	3	4	1	2	3	4	5	1	2

Substantial Completion Date: August 15, 2026

Proposed Disposal Site: _____

APPENDIX 3

FORM OF TENDER

Contract 79042A Clarke Road and Como Lake Avenue Intersection Improvements

EXPERIENCE OF SUPERINTENDENT

(See paragraph 5.3.3 of the Instructions to Tenderers)

Proposed Project Superintendent _____

List of Project Experience

PROJECT:		Dates:	
Work Description:			
Responsibility:			
Owner/Reference:		Phone No.:	

PROJECT:		Dates:	
Work Description:			
Responsibility:			
Owner/Reference:		Phone No.:	

PROJECT:		Dates:	
Work Description:			
Responsibility:			
Owner/Reference:		Phone No.:	

APPENDIX 4

FORM OF TENDER

Contract 79042A Clarke Road and Como Lake Avenue Intersection Improvements

CONTRACTOR'S COMPARABLE WORK EXPERIENCE (See paragraph 5.3.4 of the Instructions to Tenderers)

PROJECT:		VALUE (\$):	
OWNER:		Phone No.:	
Work Description:			

PROJECT:		VALUE (\$):	
OWNER:		Phone No.:	
Work Description:			

PROJECT:		VALUE (\$):	
OWNER:		Phone No.:	
Work Description:			

PROJECT:		VALUE (\$):	
OWNER:		Phone No.:	
Work Description:			

APPENDIX 5

FORM OF TENDER

Contract 79042A Clarke Road and Como Lake Avenue Intersection Improvements

SUBCONTRACTORS

(See paragraph 5.3.5 of the Instructions to Tenderers)

Trade:		Tender Item:	
Work Description:			
Subcontractor:		Phone No.:	

Trade:		Tender Item:	
Work Description:			
Subcontractor:		Phone No.:	

Trade:		Tender Item:	
Work Description:			
Subcontractor:		Phone No.:	

Trade:		Tender Item:	
Work Description:			
Subcontractor:		Phone No.:	

Trade:		Tender Item:	
Work Description:			
Subcontractor:		Phone No.:	

APPENDIX 6

FORM OF TENDER

Contract 79042A

Clarke Road and Como Lake Avenue Intersection Improvements

Bid Bond

NO. _____

KNOW ALL MEN BY THESE PRESENTS THAT

As Principal, hereinafter called the Principal, and

As Surety, hereinafter called the Surety, are held and firmly bound unto

As Obligee, hereinafter called the Obligee, in the amount of

____ Dollars (\$_____) lawful money of Canada, for the payment of which sum, well and truly to be made, the Principal and the Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has submitted a written Tender to the Obligee, dated the _____ day of _____, 2026, for Contract _____.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if the aforesaid Principal shall have the Tender accepted within sixty (60) days from the Closing Date of Tender and the said Principal will, within the time required, enter into a formal contract and give good and sufficient bonds to secure the performance of the terms and conditions of the Contract, then this obligation shall be null and void; otherwise the Principal and Surety will pay unto the Obligee the difference in money between the amount of the bid of the said Principal and the amount for which the Obligee legally contracts with another party to perform the work if the latter amount be in excess of the former.

The Surety shall not be liable for a greater sum than the specified penalty of this Bond.

Any suit under this Bond must be instituted before the expiration of six (6) months from the date of this Bond.

IN TESTIMONY WHEREOF, the Principal has hereto set its hand and affixed its seal, and the Surety has caused these presents to be sealed with its corporate seal duly attested by the signature of its Attorney-In-Fact, this _____ day of _____, 2026.

SIGNED, SEALED AND DELIVERED

In the presence of:

)
)
)
)
)

PRINCIPAL

)
)
)
)

)
)

SLIBETY

APPENDIX 7

FORM OF TENDER

Contract 79042A Clarke Road and Como Lake Avenue Intersection Improvements

CERTIFICATE OF COMPLIANCE for CONTRACT INSURANCE

This is provided for information to certify that the Tenderer does hereby undertake and agree to supply to the City of Coquitlam, upon award, contract insurance listed below for the project requirements indicated:

Contract Number: **79042A**

Contract Name: **Clarke Road and Como Lake Avenue Intersection Improvements**

Description of Work:

- Traffic Signal and Pavement Marking Improvements
- East Bound Right Turn Upgrades
- Other miscellaneous and incidental works as further described in Contract documents

Other miscellaneous and incidental work as contained in the Contract Documents

Commercial General Liability: **\$5,000,000 limit**

Special Coverage Required: YES NO **Special Coverage Description**

((X) Shoring and Underpinning Hazard
((X) Pile Driving and Vibrations
((X) Excavation Hazard
((X) Demolition
((X) Blasting

We also certify that the insurance coverage will meet the requirements of the Supplementary General Conditions Section 24 – Insurance, included as part of the Contract Documents, and that the proof of insurance will be provided on the City of Coquitlam Certificate of Insurance form, without amendments, except for the exclusions noted above.

Name of Tenderer (printed)

Authorized Signature

Date

Agreement

AGREEMENT

Between Owner and Contractor

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

THIS AGREEMENT made in duplicate this _____ day of _____ 2026.

Contract: Clarke Road and Como Lake Avenue Intersection Improvements

Reference No. 79042A

BETWEEN:

The City of Coquitlam
3000 Guildford Way
Coquitlam, B.C. V3B 7N2

(the "Owner")

AND:

(the "Contractor")

The Owner and the Contractor agree as follows:

1 THE WORK - START/COMPLETION DATES

- 1.1 The Contractor will perform all Work and provide all labour, equipment and material and do all things strictly as required by the *Contract Documents*.
- 1.2 The Contractor will commence the Work in accordance with the *Notice to Proceed*. The Contractor will proceed with the Work diligently, will perform the Work generally in accordance with the construction schedules as required by the *Contract Documents* and will achieve *Substantial Performance* of the Work on or before **August 15, 2026**, subject to the provisions of the *Contract Documents* for adjustments to the *Contract Time*.
- 1.3 Time shall be the essence of the Contract.

2 CONTRACT DOCUMENTS

- 2.1 The "*Contract Documents*" consist of the documents listed or referred to in Schedule 1, entitled "Schedule of Contract Documents", which is attached and forms a part of this Agreement, and includes any and all additional and amending documents issued in accordance with the provisions of the *Contract Documents*. All of the *Contract Documents* shall constitute the entire *Contract* between the *Owner* and the *Contractor*.
- 2.2 The *Contract* supersedes all prior negotiations, representations or agreements, whether written or oral, and the *Contract* may be amended only in strict accordance with the provisions of the *Contract Documents*.

3 CONTRACT PRICE

- 3.1 The price for the *Work* ("*Contract Price*") shall be the sum in Canadian dollars of the following:
 - 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 the 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) any adjustments, including any payments owing on account of *Changes* and agreed to *Extra Work*, approved in accordance with the provisions of the *Contract Documents*.
- 3.2 The *Contract Price* shall be the entire compensation owing to the *Contractor* for the *Work* and this compensation shall cover and include all profit and all costs of supervision, labour, material, equipment, overhead, financing, and all other costs and expenses whatsoever incurred in performing the *Work*.

4 PAYMENT

- 4.1 Subject to applicable legislation and the provisions of the *Contract Documents*, the *Owner* shall make payments to the *Contractor*.
- 4.2 If the *Owner* fails to make payments to the *Contractor* as they become due in accordance with the terms of the *Contract Documents* then interest calculated at 2% per annum over the prime commercial lending rate of the Royal Bank of Canada on such unpaid amounts shall also become due and payable until payment. Such interest shall be calculated and added to any unpaid amounts monthly.

5 RIGHTS AND REMEDIES

- 5.1 The duties and obligations imposed by the *Contract Documents* and the rights and remedies available hereunder shall be in addition to and not a limitation of any duties, obligations, rights and remedies otherwise imposed or available by law.

5.2 Except as specifically set out in the *Contract Documents*, no action or failure to act by the *Owner*, *Contract Administrator* or *Contractor* shall constitute a waiver of any of the parties' rights or duties afforded under the *Contract*, nor shall any such action or failure to act constitute an approval of or acquiescence in any breach under the *Contract*.

6 NOTICES

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

The *Owner*:

The City of Coquitlam
3000 Guildford Way
Coquitlam, B.C. V3B 7N2

Tel: 604-927-3500

The *Contractor*:

Tel:
Email:
Attention:

The *Contract Administrator*:

The City of Coquitlam
3000 Guildford Way
Coquitlam, B.C. V3B 7N2

Tel:
Email:
Attention:

6.2 A communication or notice that is addressed as above shall be considered to have been received:

- a) immediately upon delivery, if delivered by hand; or
- b) immediately upon transmission if sent or received by email; or
- c) after 5 days from date of posting if sent by registered mail.

6.3 The *Owner* or the *Contractor* may, at any time, change its address for notice by giving written notice to the other at the address then applicable. Similarly if the *Contract Administrator* changes its address for notice then the *Owner* will give or cause to be given written notice to the *Contractor*.

7 GENERAL

7.1 This *Contract* shall be construed according to the laws of British Columbia.

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

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

Contractor:

(FULL LEGAL NAME OF CORPORATION, PARTNERSHIP OR INDIVIDUAL)

(AUTHORIZED SIGNATORY)

(AUTHORIZED SIGNATORY AND POSITION - PRINT)

Owner:

The City of Coquitlam

Edwin Dela Rosa, AScT
(MANAGER, CAPITAL PROJECTS AND INSPECTIONS)
Representative as Per G.C. 17

Chad Braley, AScT
(SENIOR MANAGER, DESIGN AND CONSTRUCTION)

Clarke Road and Como Lake Avenue Intersection Improvements

Reference No: 79042A

Schedule 1

Schedule of Contract Documents

(INCLUDE IN LIST ALL DOCUMENTS INCLUDING, IF ANY, SUPPLEMENTARY GENERAL CONDITIONS, SUPPLEMENTARY SPECIFICATIONS, SUPPLEMENTARY STANDARD DETAIL DRAWINGS)

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

NOTE: The documents noted with "*" are contained in the "Master Municipal Construction Documents – General Conditions, Specifications and Standard Detail Drawings", edition dated 2009. All sections of this publication are included in the *Contract Documents*.

1. Agreement, including all Schedules;
2. The following Addenda:
 - As issued
3. Supplementary General Conditions, if any;
4. General Conditions*;
5. Supplementary Specifications, if any;
6. Detail Specifications, if any;
7. Specifications*;
8. Supplementary Detail Drawings, if any;
9. Standard Detail Drawings*;
10. Executed Form of Tender, including all Appendices;
11. Drawings listed in Schedule 2 to the Agreement –"List of Drawings", if any;
12. Instructions to Tenderers;
13. COQUITLAM "Supplementary Specifications Master Municipal Construction Documents"

March 2022

Clarke Road and Como Lake Avenue Intersection Improvements

Reference No: 79042A

Schedule 2

LIST OF DRAWINGS

(Complete Listing of All Drawings, Plans and Sketches That Are Part of the Contract Documents)

Bound in this Document:

Appendix A: Traffic Management Detail Specifications

Appendix B: Permits and Approvals

Appendix C: Standard Detail Drawings

Appendix D: As-built Records

Appendix E: Archaeological Chance Find Procedures

Bound Separately: Contract Drawings

TITLE	SHEET NO.	REVISION NO.	DATE
Roadworks	1 of 5	6	10/28/2025
Typical Sections and Details	2 of 5	6	10/28/2025
Pavement Markings	3 of 5	4	07/18/2025
Curb Return	4 of 5	5	10/28/2025
Vehicle Movements	5 of 5	5	07/18/2025
Traffic Signal Modifications	1 of 3	4	06/11/2025
Traffic Signal Modification	2 of 3	4	06/11/2025
Traffic Signal Modification	3 of 3	4	06/11/2025

Supplementary General Conditions

SUPPLEMENTARY GENERAL CONDITIONS

TABLE OF CONTENTS

	Page
Supplementary General Conditions to MMCD Volume II, 2009 Issue	SGC 1 to SGC 18
Section 1: DEFINITIONS	SGC 3
1.1 Abnormal Weather	SGC 3
Section 2: DOCUMENTS	SGC 3
2.2 Interpretation.....	SGC 3
Section 4: CONTRACTOR	SGC 3 to 7
4.1 Control of Work.....	SGC 3
4.2 Safety	SGC 4
4.3 Protection of Work, Property and the Public.....	SGC 4
4.6 Construction Schedule.....	SGC 5
4.7 Superintendent	SGC 5
4.8 Workers	SGC 5
4.9 Materials	SGC 6
4.11 Subcontractors.....	SGC 6
4.12 Tests and Inspections	SGC 6
4.14 Final Clean-up.....	SGC 7
4.16 Notice of Disruption	SGC 7
Section 7: CHANGES.....	SGC 7 to 8
7.1 Changes	SGC 7
7.4 Optional Work	SGC 7
Section 9: VALUATION OF CHANGES AND EXTRA WORK	SGC 8
9.2 Valuation Method	SGC 8
9.4 Quantity Variations.....	SGC 8
Section 10: FORCE ACCOUNTS	SGC 8 to 9
10.1 Force Account Costs	SGC 8
Section 12: HAZARDOUS MATERIALS	SGC 9
12.2 Discovery of Hazardous Materials	SGC 9
Section 13: DELAYS	SGC 9 to 10
13.1 Delay by Owner or Contract Administrator	SGC 9
13.3 Unavoidable Delay.....	SGC 9
13.8 Direction to Stop or Delay	SGC 9
13.9 Liquidated Damages for Late Completion	SGC 9
Section 18: PAYMENT	SGC 10 to 11
18.1 Preparation of Payment Certificate	SGC 10

18.4	Holdbacks	SGC 10
18.6	Substantial Performance	SGC 10
Section 19: TAXES, DUTIES AND GST		SGC 11 to 12
19.4	Tariffs or Duties.....	SGC 11
Section 21: WORKERS COMPENSATION REGULATIONS		SGC 12
21.2	Contractor is "Prime Contractor".....	SGC 12
Section 24: INSURANCE.....		SGC 12 to 17
24.1	General	SGC 12
24.2	Required Insurance	SGC 13
24.3	Physical Loss or Damage with Respect to New Buildings under Construction and/or Major Additions to Existing Structures.....	SGC 14
24.4	Additional Insured	SGC 17
Section 25: MAINTENANCE PERIOD		SGC 17
25.1	Correction of Defects	SGC 17
Section 27: CONTRACTOR PERFORMANCE EVALUATION		SGC 18
APPENDICES		SGC 19 to SGC 25
Appendix I	Performance Bond.....	SGC 19 to 20
Appendix II	Labour and Material Payment Bond	SGC 21 to 23
Appendix III	Certificate of Insurance.....	SGC 24
Appendix IV	Prime Contractor Designation Letter.....	SGC 25

1.0 DEFINITIONS

1.1 Abnormal Weather 1.1.1 **(Replace clause 1.1.1 as follows):**
“Abnormal Weather” means temperature, precipitation, wind or other weather conditions in which the monthly average, differs from the statistical average for that condition in that period by more than one standard deviation, calculated based on data available from Environment Canada. Coquitlam’s Burke Mountain Rain Gauge will be used to compare the rainfall summary versus the available data from Environment Canada.
[City of Coquitlam Rainfall](#)

2.0 DOCUMENTS

2.2 Interpretation 2.2.4 (1) **(Replace clause 2.2.4 (1) as follows):**
The Contract Documents shall govern and take precedence in the following order as listed in Schedule 1 of the Agreement, taking precedence over all Contract Documents.

4.0 CONTRACTOR

4.1 Control of the Work 4.1.1 **(Add to clause 4.1.1 as follows):**
The *Contractor* is responsible for all survey layout for the construction of the Work to the design specifications and/or elevations as shown on the contract drawings or as amended on site by the Contract Administrator, unless otherwise described in the Contract Document.

4.1.2 **(Add to clause 4.1.2 as follows):**
The Contractor shall not deposit any material upon any street, sidewalk, boulevard or other property, without the Contract Administrator’s or the Owner’s permission, nor shall they allow the same to remain longer than necessary. All surplus spoil and rubbish and other waste material shall be removed from the site so that the area of work is cleaned up and restored to as clean a condition as it was before the Contract started, within four days of the Contract Administrator’s written request to do so, failing which the Owner may carry out the work or have the work carried out by others and recover the costs from the Contractor or may deduct the cost from any monies due or that may become due to the Contractor.

4.1.3 **(Add new clause 4.1.3 as follows):**
Work can be performed during the normal weekday working hours of 0700h to 1900h, unless specified otherwise in Supplementary Specifications - Appendix A: Traffic Management Detail Specifications. Written permission from the Contract Administrator will be required for any works to be performed outside of the normal working days of Monday to Friday.

No Sunday work will be permitted, except in case of emergency and then only with the written permission of the Contract Administrator and to such extent as he deems necessary.

In case the Contractor decides to work on a day which is a Statutory Holiday, they shall provide the Contract Administrator in writing at least (4) days in advance of such holiday, stating those places where said work is to be conducted. In case the Contractor fails to give such notice in advance of any Statutory Holiday, no work within the terms of the contract shall be done on such holiday.

The cost of inspections on a Sunday or on a Statutory Holiday by City staff/s will be at Contractor's expense.

4.2 Safety

4.2.2

(Add new clause 4.2.2 as follows):

In an emergency, gas pipeline rupture or leak, Contact FortisBC's 24 Hour Emergency Line (1-800-663-9911) and Coquitlam Fire (911) immediately and then City of Coquitlam's Utility Control Centre (604-927-6287).

4.3 Protection of Work, Property and the Public

4.3.1

(Replace clause 4.3.1 as follows):

In performing the Work, the Contractor shall protect the Work and the Owner's property and other person's property from damage. The Contractor shall at the Contractor's own expense make good any such damage which arises as the result of the Contractor's operations. If the Contractor causes damage to private property, the Contractor must obtain a written release from the owner of the damaged property.

4.3.5.1

(Add clause 4.3.5.1 as follows):

The Contractor shall notify the Contract Administrator immediately if damage occurs to any City or third party utility or structure.

4.3.7

(Add new clause 4.3.7 as follows):

Any lands other than those upon which the work is to be performed, which may be required for temporary facilities, storage purposes or access to the work site, other than

those provided by the *Owner*, shall be provided by the *Contractor* at their own cost, with no liability to the *Owner*.

4.6 Construction Schedule

4.6.1

(Replace clause 4.6.1 as follows):

The Contractor shall within the time set out in the Form of Tender prepare and submit to the Contract Administrator for their approval a construction schedule (the Baseline Construction Schedule) indicating the planned start and completion dates of major activities of the Work. The Baseline Construction Schedule shall be in more detail than the Preliminary Construction Schedule and shall indicate completion of the Work in compliance with any specified Milestone Dates, including Substantial Performance.

4.6.6

(Replace clause 4.6.6 as follows):

The time for the performance of the Work shall commence on the date specified in the Notice to Proceed, or if not so specified, on the date the Notice to Proceed is issued. The Notice to Proceed will not be issued until the documentation required under paragraph 5.1.1 of the Form of Tender has been submitted and the construction schedule has been approved.

4.6.8

(Add new clause 4.6.8 as follows):

Any requests to lengthen the work schedule shall be made in writing by the Contractor within five working days of knowledge of the reason for the extension. The Contract Administrator will adjust the schedule at their discretion upon receipt of a written request.

4.7 Superintendent

4.7.4

(Add new clause 4.7.4 as follows):

The key personnel named in the Contractor's Tender response, shall remain in these key positions throughout the project. In the event that key personnel leave the Contractor's firm, or for any unknown reason are unable to continue fulfilling their role, the Contractor must propose a suitable replacement, and obtain written consent from the Owner. Acceptance of the proposed replacement is at the sole discretion of the Contract Administrator and the Owner.

4.8 Workers

4.8.2

(Add new clause 4.8.2 as follows):

The Contractor shall, upon the request of the Contract Administrator, remove any person employed by them for the purposes of the Contract who, in the opinion of the Contract Administrator, is incompetent or has conducted themselves improperly, and the Contractor shall not permit a person who has been removed to return to the Place of Work.

4.9 Materials	4.9.3	<p>(Add new clause 4.9.3 as follows):</p> <p>The Contractor shall, at their cost,</p> <ul style="list-style-type: none">a) Be responsible for storing all of the materials supplied for the Work either by themselves or the Owner, until it has been incorporated into the completed Work;b) Store all materials in a manner which will prevent damage from the weather, dirt, foreign matter, vandalism and theft;c) Arrange for and/or verify the time of delivery of all materials to be supplied by themselves or the Owner to ensure that delivery will coincide with their work schedules.d) Examine with the Contract Administrator the quantities and details of all materials supplied by the Owner at the time and place of delivery or those materials already at the Place of Work, and prepare and sign a Statement of Materials Acceptance, specifically noting and rejecting any defective material;e) Replace all materials supplied by themselves or the Owner which are found to be stolen, missing or damaged while under their care;f) Replace all materials found to be defective in manufacture which have been supplied by themselves.
4.11 Subcontractors	4.11.3	<p>(Replace clause 4.11.3 as follows):</p> <p>The Contractor shall, upon notice of the Contract Administrator, remove any Subcontractor employed by them for the purposes of the Contract who, in the opinion of the Contract Administrator, is incompetent or has conducted themselves improperly, and the Contractor shall not permit the Subcontractor who has been removed to return to the Place of Work. The removal of a Subcontractor under this clause shall not be considered a Change and the Contract Price and the Contract Time shall not be adjusted.</p>
4.12 Test and Inspections	4.12.1	<p>(Replace clause 4.12.1 as follows):</p> <p>The Contractor shall perform or cause to be performed all tests, inspections and approvals of the Work as described in the Contract Documents or as required by the Contract Administrator as part of Quality Control. The Contractor shall complete all the necessary testing at the frequencies described in the Contract Document unless otherwise approved by the Contract Administrator.</p> <p>Acceptable test and inspection results will not relieve the Contractor of its obligations under the Contract to correct defects or deficiencies in the Work.</p>

4.12.11 **(Add clause 4.12.11 as follows):**
Failure to follow DFO/FLNRO BMPs and the approved permit for Instream Works or as instructed by Contract Administrator will result in shut-down of the work. The Contractor must take all steps to mitigate impacts to aquatic resources, environment and habitats before work can re-start on site. No claim will be accepted by the Owner for costs associated with this work shut-down.

4.14 Final Clean-up

4.14.1 **(Replace clause 4.14.1 as follows):**
Prior to applying for Substantial Performance, the Contractor shall remove all surplus products, tools, construction machinery and equipment relating to the Work that is not required for the performance of the remaining Work. The Contractor shall also remove waste, debris and waste products other than caused by the Owner or Other Contractors, and leave the Place of Work clean and suitable for occupancy by the Owner unless otherwise specified in the Contract Documents or directed by the Contract Administrator.

4.16 Notice of Disruption

4.16.2 **(Add new clause 4.16.2 as follows):**
Written notice must be provided to all properties which may be physically affected by the construction not less than one week and not more than two weeks prior to construction.

Notify occupants directly affected by the work 48 hours in advance of commencement of construction. Cost of notifying area occupants of ensuing construction and delivery of the notices is incidental to the Contract.

7.0 CHANGES

7.1 Changes

7.1.3 **(Replace clause 7.1.3 as follows):**
Additional work that the Owner may wished performed that does not satisfy the requirements of subparagraphs (a) and (b) of GC 7.1.1 is extra work (Extra Work) and is not a Change. Pursuant to GC 8, Extra Work may be declined by the Contractor or may, upon agreement between the parties, be undertaken as Extra Work.

7.4 Optional Work

7.4.2 **(Add new clause 7.4.2 as follows):**
If there are Optional items or Provisional items included in the *Schedule of Quantities and Prices*, those items shall be used only as directed and at the sole discretion of the Contract Administrator through the issue of a Change Order. These items will be paid at the contract unit price as

part of regular progress payments. Only quantities used will be eligible for payment. No claim will be accepted for unused Optional or Provisional quantities. Clause 9.4 Quantity Variations will not be applicable for these items.

9.0 VALUATION OF CHANGES AND EXTRA WORK

9.2 Valuation Method 9.2.4 **(Replace clause 9.2.4 as follows):**
Once a quotation is accepted by the Contract Administrator, or other agreement reached between the Contract Administrator and the Contractor regarding adjustments to the Contract Price or Contract Time on account of a Change or Extra Work, the Contractor shall not be entitled to claim or receive additional payment, or adjustment to the Contract Time on account of a Change or Extra Work.

9.4 Quantity Variation 9.4.1 **(Replace clause 9.4.1 as follows):**
If for any reason, including an addition or deletion under GC 7.1.1(1) or 7.1.1(2) respectively, the actual quantity of a unit price item varies by more than plus or minus the Variance Threshold Percentage from the estimated quantity for that unit price item listed in the Schedule of Quantities and Prices (the "Tender Quantity") or as otherwise agreed to pursuant to these Contract Documents, then either the Owner or the Contractor may by written notice request the other party to agree to a revised unit price, considering the change in quantities. A party shall make a request for a revised unit price as soon as reasonably possible after the party concerned becomes aware of the quantity variation.

9.4.2 **(Delete clause 9.4.2 (2))**

10.0 FORCE ACCOUNTS

**10.1 Force Account
 Costs 10.1.1(1)** **(Add to clause 10.1.1(1) as follows):**
Costs for the Contractor's Superintendent, Project Managers, Health and Safety Personnel, and Office/Administration Staff are not eligible for labour costs as those costs are considered incidental to the mark up owing for overhead and labour.

10.1.1(4) **(Replace clause 10.1.1(4) as follows):**
Force Account Work performed by a subcontractor shall be paid for in the lesser of: (i) the amount provided by subparagraphs (1), (2) and (3) of this GC, plus a mark-up of 5%, or (ii) the actual amount the Contractor pays the

subcontractor including a mark-up of 10% on such actual costs to cover all overhead and profit.

12.0 HAZARDOUS MATERIALS

12.2 Discovery of Hazardous Materials

12.2.2

(Replace clause 12.2.2 as follows):

If the Contract Administrator observes any materials at the Place of Work that the Contract Administrator knows or suspects may be Hazardous Materials, then the Contract Administrator shall immediately give written notice to the Contractor and the Contractor shall immediately stop the Work or portion of the Work as required by GC 12.2.1(1).

13.0 DELAYS

13.1 Delay by Owner or Contract Administrator

13.1.2

(Add new clause 13.1.2 as follows):

The Owner may at any time suspend the work or any portion thereof provided they give the Contractor five (5) days' written notice of delay. The Contractor shall resume work upon written notice from the Owner. The Contractor shall be entitled to:

- a) An extension of the Contract time equivalent to the length of suspension of work.
- b) Reimbursement by the Owner for directly related out-of-pocket additional costs, reasonably and necessarily incurred by the Contractor as a result of such suspension. No additional payment will be made to the Contractor for any loss of profits or overhead.

13.3 Unavoidable Delay 13.3.1

(Add to clause 13.3.1 as follows):

Beyond the reasonable control of the Contractor also includes pandemic or community outbreak

13.8 Direction to Stop or Delay 13.8.3

(Add new clause 13.8.3 as follows):

The Contract Administrator may order the Contractor to stop work if at any time the Contract Administrator is of the opinion that there exists a danger to life or property.

13.9 Liquidated Damages for Late Completion 13.9.1

(Replace clause 13.9.1 as follows):

If the Contractor fails to meet the Milestone Date for Substantial Performance as set out in the Form of Tender, paragraph 2.2 as may be adjusted pursuant to the provisions of the Contract Documents, then the Owner may deduct from any monies owing to the Contractor for the Work:

- (1) An amount of \$1,000.00 for each calendar day the actual *Substantial Performance* is achieved after the Substantial Performance Milestone Date; plus

(2) All direct out of pocket costs, such as costs for safety, security or equipment rental, reasonably incurred by the Owner as a direct result of such delay.

If the monies owing to the Contractor are less than the total amount owing by the Contractor to the Owner under (1) and (2) then any shortfall shall immediately, upon written notice from the Owner, and upon Substantial Performance, be due and owing by the Contractor to the Owner.

18.0 PAYMENT

18.1 Preparation of Payment Certificate	18.1.1	(Replace clause 18.1.1 as follows): The Contract Administrator shall prepare and issue a certificate for the period ending the last calendar day of the month.
18.4 Holdbacks	18.4.2	(Add to clause 18.4.2 as follows): At the sole discretion of the Contract Administrator, an amount equivalent to 10% of the contract award value or 200% of a reasonable estimate, whichever is higher, may be held without interest until all deficiencies have been remedied and accepted by the Contract Administrator.
18.6 Substantial Performance	18.6.5	(Replace clause 18.6.5 as follows): The Owner may release any builders lien holdback on the <u>56th day</u> following the date of Substantial Performance, or other date as required by law, but the Owner may hold back the amounts for any deficiencies or filed builders liens as provided in GC 18.4.2, 18.4.3 and 18.4.4.
	18.6.6	(Replace clause 18.6.6 as follows): The <i>Contract Administrator</i> , as defined herein, shall be the <i>Payment Certifier</i> responsible under Section 7 of the <i>Builders Lien Act</i> for certifying <i>Substantial Performance</i> of the <i>Work</i> of the <i>Contractor</i> , but not the <i>Work</i> of <i>Subcontractors</i> . The <i>Contractor</i> shall cooperate with and assist the <i>Contract Administrator</i> by providing information and assistance in a timely manner as the <i>Contract Administrator</i> considers necessary to carry out the duties of the <i>Payment Certifier</i> for the <i>Contract</i> .

The *Contractor* shall be the *Payment Certifier* responsible under Section 7 of the *Builders Lien Act* for certifying *Substantial Performance* of the *Work* of each *Subcontractor*. Prior to certifying completion for a *Subcontractor*, the *Contractor* shall consult the *Contract Administrator* and obtain the *Contract Administrator's* comments on the status of completion by the *Subcontractor*, including any deficiencies or defects in the *Subcontractor's Work* noted by

These Supplementary General Conditions must be read in conjunction with the General Conditions contained in the Master Municipal Construction Documents, Volume II, Printed 2009

the *Contract Administrator*. The *Contractor* will indemnify and save the *Owner* harmless from any and all liability the *Owner* may have to anyone arising out of the certification by the *Contractor* of *Substantial Performance* for that *Subcontractor*.

Notwithstanding any other provision of the *Contract*, no payments will be due or owing to the *Contractor* so long as a Lien filed by anyone claiming under or through the *Contractor* remains registered against the Project of any lands, or interest therein, on which *Work* for the project was performed. Failure of the *Contractor* to remove all Liens promptly will entitle the *Owner* to damages.

19.0 TAXES, DUTIES AND GST

19.4 Tariffs or Duties	19.4.1	Tariffs or Duties refer to taxes, levies, or charges imposed by any level of government (including foreign governments) on imported or domestic goods, materials, or equipment used in the performance of the Work. The Contract Price is based on the tariffs and duties in effect as of the date of the Tender Closing. If, after the Tender Closing Date, any new Tariffs or Duties are imposed, or existing rates are materially increased, and such changes directly and demonstrably affect the cost of materials or equipment required for the performance of the Work, the Contractor shall notify the Contract Administrator in writing within ten (10) Working Days of becoming aware of such change, providing supporting documentation, including but not limited to: <ul style="list-style-type: none">(1) Affected materials(2) Quantity and cost impact(3) Evidence of original and new tariff rates(4) Reasonable efforts made to mitigate the cost impact (e.g., sourcing alternatives)
	19.4.2	If the Contract Administrator is satisfied that the Contractor has incurred additional direct costs solely due to the change in Tariffs or Duties, the Owner will issue a Change Order to adjust the Contract Price accordingly. No adjustment shall be made for Tariffs or Duties that were publicly announced or reasonably foreseeable before the Tender Closing Date.
	19.4.3	This clause does not apply to costs incurred due to delays caused by the Contractor's procurement or supply chain management. It also does not apply if the Contractor fails to take reasonable steps to mitigate the impact of the change.

These Supplementary General Conditions must be read in conjunction with the General Conditions contained in the Master Municipal Construction Documents, Volume II, Printed 2009

19.4.4 If the imposition of new Tariffs or Duties causes unavoidable delays in material delivery, the Contractor may request an extension of the Contract Time under GC 13.3, subject to approval by the Contract Administrator.

**21.0 WORKERS
COMPENSATION
REGULATIONS**

**21.2 Contractor is
"Prime Contractor"** 21.2.1 **(Add to clause 21.2.1 as follows):**
Prior to the issuance of the "Notice to Proceed" the Contractor must provide a signed "Prime Contractor Designation" form as provided in Appendix IV of these Supplementary General Conditions.

24.0 INSURANCE

(Replace section 24.0 as follows):

24.1 General 24.1.1 **Importance of Prompt Attention to Insurance Requirements:**
The Contractor shall provide the Owner with satisfactory evidence that the insurance required to be provided under this GC is in full force and effect.

24.1.2 **Acceptable Insurance Carriers:**
The insurer issuing any policy, or other document which is evidence of insurance to the Contractor, shall be an insurer licensed by the Superintendent of Insurance in the Province of British Columbia and registered with the Department of Insurance for Canada in Ottawa, except the Insurance Corporation of British Columbia, which is not subject to this condition.

24.1.3 **Owner's Right to Change Terms:**
Notwithstanding anything contained in the Contract Documents, the Owner will have the right to request a change to the specified terms and conditions respecting insurance at the sole option of the Owner. The Contractor will be notified in writing of any changes required by the Owner and will provide a quotation for such work.

24.1.4 **Delivery of Insurance Documents:**
All insurance policies or other acceptable specified documents shall be delivered to, and accepted by, the Owner before the Contract Documents are signed. No work shall be commenced by the Contractor or by anyone acting on the instructions of the Contractor, until the required Insurance Documents have been accepted by the Owner and the Contract Documents have been duly signed by the Owner and the Contractor.

24.1.5

Owner's Right to Insure:

Should the Contractor for any reason not comply with the specified requirements with respect to the insurance, the Owner will, at the Owner's option, have the right to purchase all or any part of such insurance which, in the opinion of the Owner, may be required to provide the specified insurance, and, in the event of so doing, the Owner will have the right to pay the premiums for such insurance and to withhold the amount of premiums so paid from any amount due and payable to the Contractor under the Contract.

24.2 Required Insurance

24.2.1

General

Damage to work (excluding Building Contracts where Section 24.3, Paragraph 24.3.1, Further Responsibilities of Contractor, applies).

The Contractor shall be responsible for any and all loss, or damage, whatsoever which may occur on or to the works, completed or otherwise, until such time as the entire works have been completed and the Notice of Acceptance has been issued by the Owner, except that loss or damage caused solely by an act of the Owner. In the event of any loss or damage occurring, the Contractor shall, on notice from the Contract Administrator, immediately put the works into the condition it was immediately prior to such loss or damage, all at the

Contractor's expense, except where such loss or damage was caused solely by an act of the Owner.

The Contractor shall be responsible for any and all loss or damage whatsoever which may occur on or to the works, completed or otherwise, arising out of the negligence of the Contractor, any subcontractors, and the employees or agents of any of them.

24.2.2

Public Liability Insurance:

(Other than Automobile Third Party Liability Insurance):

Evidence of Insurance:

The Contractor shall deposit with the Owner, before the work commences, a Certificate of Insurance, signed by an authorized representative of the insurer, such certificate to be as shown in Appendix III.

Effective Dates and Terms:

The effective date of the Certificate of Insurance shall be the date of the execution of the Contract Agreement and the term of this policy shall be from such effective date until a date not less than twelve (12) months after the date of Substantial Performance completion of all work under the Contract.

Limits of Liability:

For bodily injury and for property damage shall be inclusive limits not less than \$5,000,000.

24.2.3

Public Liability Insurance (Automobile):

The Contractor shall deposit with the Owner before the work commences a Certificate of Insurance with respect to owned automobiles on ICBC Form No. APV 47 entitled "Confirmation of Insurance Coverage" and with respect to Non-Owned Automobiles including hired automobiles and Contractual Liability on ICBC non-owned automobile policy Form APV 29 (if non-owned automobile coverage is not included under the comprehensive general liability coverage) each signed by an authorized representative of the Insurance Corporation of British Columbia.

24.3 Physical Loss or Damage With Respect to New Buildings under Construction and/or Major Additions to Existing Structures

24.3.1

Responsibility for Placing Insurance:

The types of insurance required under this section will be provided and maintained at the expense of the City of Coquitlam during the term of the Contract and will be as follows unless otherwise changed by specific endorsement to these Insurance Specifications.

24.3.2

Insurance Coverage Required:

Builders Risk Completed Value "All Risks" Course of Construction Insurance. This policy will be written in the names of the City of Coquitlam and the Contractor with loss payable as their respective interests may appear.

24.3.3

Responsibility of Contractor - Limitations of cover and deductibles:

The insurance provided by the City of Coquitlam as described herein will not provide the Contractor with full protection against any and all kinds of loss or damage which may arise out of the Contract. It is, therefore, the responsibility of the Contractor to fully understand the scope of the cover provided with particular attention to the exclusions, limitations of cover and deductible provisions contained in the Insuring Agreements of the policies and it

is further the responsibility of the Contractor to take out at the Contractor's expense, whatever other additional insurance the Contractor may consider necessary or desirable for his protection subject as hereinafter provided. The Contractor shall act in the same manner on insurance made available through the City of Coquitlam as he would if he had arranged such insurance himself.

24.3.4

Responsibility of Contractor - Direct Damage

Insurance:

If the Contractor fails to do all or anything that is required of them concerning insurance, the City of Coquitlam may do what is required and any monies expended by the City of Coquitlam for that purpose shall be repayable and recoverable from the Contractor. Should any action, failure or negligence of the Contractor result in higher insurance costs being incurred by the City of Coquitlam, such additional costs shall be payable or recoverable from the Contractor.

24.3.5

Responsibility of Contractor - Machinery and Equipment Belonging to Others:

Unless otherwise directed by the City of Coquitlam in writing, the Contractor shall carry insurance covering loss or damage to construction machinery, tools and equipment owned by and/or on bare rental from a third party or parties and used by the Contractor in performing the work, which insurance shall be in a form satisfactory to the City of Coquitlam and having coverage in accordance with the actual cash value of such construction machinery, tools and equipment. Such policies shall also provide for subrogation to be waived against the City of Coquitlam. A certified copy of the policy shall be delivered to the City of Coquitlam not later than thirty days after the commencement of work under the Contract.

24.3.6

Contractor's Waiver of Liability to Coquitlam:

The Contractor hereby releases the City of Coquitlam from any and all liability for damages to the extent that such damages are covered by the course of construction insurance referred to in Section 24.3 of these specifications.

24.3.7

Liability of Contractor:

Neither the providing of insurance by the Contractor or the City of Coquitlam in accordance with the requirements hereof, nor the insolvency, bankruptcy, nor failure of any insurance company to pay any claim accruing shall be held to waive any of the provisions of this Contract with respect to the liability of the Contractor or otherwise.

24.3.8 **Responsibility of Contractor for protection of work, persons and property:**

The Contractor and all persons employed by the Contractor or under their control, and all employees and subcontractors, shall use due care that no person or property is injured, and that no rights are infringed in the prosecution of the work. Contractors shall take particular care to protect the work against loss or damage caused by riot, vandalism or malicious mischief and shall be at the expense of the Contractor provide all necessary safeguards in the form of watchmen and/or watch dog protection to prevent loss or damage of this type. The payment of deductibles is the responsibility of the Contractor and if not paid by the Contractor such amounts shall be deducted by the City of Coquitlam from payment due to the Contractor. These deductibles will normally be \$250.00 each claim.

24.3.9 **Action to be taken in the event of loss or damage to the work covered by the Contract:**

When any loss or damage occurs to the work or to any materials and supplies on the site of the work, the Contractor shall remove any and all damaged or destroyed property and shall rebuild or replace the damaged or destroyed work, materials, or supplies and complete the work to the satisfaction of the Owner. For such removal, rebuilding, or replacing, the Contractor shall be entitled to receive from the Owner the amount of insurance monies received by the Owner pursuant to the said adjustment which amount shall be paid to the Contractor as the work of rebuilding or replacing proceeds, and in accordance with the Agreement. Damage or destruction of the whole or any part of the work shall not affect the rights and obligations of either party under the Agreement, except that in such event the Contractor shall be entitled to such reasonable extension of time to complete the work as the Architect and/or Contract Administrator may decide.

24.3.10 **Further responsibility of Contractor:**

Other than with respect to loss or damage arising out of insured risks and herein before specified, the Contractor shall be responsible for all loss or damage whatsoever which may occur on or to the works completed or otherwise, until such time as the entire works have been completed and the Notice of Acceptance has been issued by the Owner, except that loss or damage caused solely by an act of the Owner.

In the event of any loss or damage occurring, the Contractor shall on notice from the Owner immediately put the works into the condition it was immediately prior to such loss or damage, all at the Contractor's expense except as previously stated.

24.3.11 Owner Not Responsible for Loss or Damage or Loss of Use of Property of Contractors and their Employees:

The Owner will not be responsible for securing or paying for insurance of any kind other than as specified in Section 24.3 of these specifications nor will the Owner have any responsibility whatsoever for loss or damage from whatever cause occurring to property owned, leased, or otherwise in the possession of the Contractor, subcontractors or their employees including, without restricting the generality of the foregoing, machinery, equipment, tools, supplies, and clothing at the construction site or elsewhere including loss of use of same.

24.4 Additional Insured 24.4.1

The Contractor shall ensure the following are named as "additional insured" on the liability policy for this contract:

- The City of Coquitlam

The City may identify private properties that are directly affected by construction. If so, the Contractor shall include the legal owners of these properties named as "additional insured" on the liability policy for this contract.

**25.0 MAINTENANCE
PERIOD**

**25.1 Correction of
Defects**

25.1.4

(Add new clause 25.1.4 as follows):

The Owner is authorized to make repairs to defects or deficiencies if, ten days after giving written notice, the Contractor has failed to make or undertake with due diligence the required repairs. However, in the case of emergency where, in the opinion of the Owner, delay is not reasonable, repairs may be made without notice being sent to the Contractor. All expenses incurred by the Owner in connection with repairs made pursuant to GC 25 shall be paid by the Contractor or may be deducted from the Maintenance Security, or other holdbacks. The Contractor shall promptly pay any shortfall.

**27.0 CONTRACTOR
PERFORMANCE
EVALUATION**

27.1

(Add new clause 27.1 as follows):

After the completion of the Contract, the Contractor will be evaluated on their performance of the Work. The evaluation will provide percentage scores on the following categories:

1. *Contract Administration*
2. *Construction Management*
3. *Schedule Management*
4. *Communications*
5. *Resource Management and Contractor Performance*
6. *Quality Management*

An evaluation summary report may be issued to the Contractor with scores for each of these categories. Upon request, the Contractor may attend a meeting with the City to discuss the evaluation.

This internal evaluation may be reviewed for reference on subsequent tenders with the City. Evaluation scores can form part of the tender analysis and influence contract award decisions.

Evaluation Scores in categories that are below 50% may result in a suspension of tendering privileges with the City.

APPENDIX I

PERFORMANCE BOND

NO. _____ \$ _____

KNOW ALL MEN BY THESE PRESENTS THAT

As Principal, hereinafter called the Principal, and

As Surety, hereinafter called the Surety, are held and firmly bound unto

As Obligee, hereinafter called the Obligee, in the amount of

_____ Dollars
(\$)

lawful money of Canada, for the payment of which sum, well and truly to be made, the Principal and the Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has entered into a written contract with the Obligee, dated the _____

day of _____ 20____, for

in accordance with the drawings and specifications submitted, therefore, which contract, drawings and specifications and addenda thereto, to the extent provided for, are by reference made part hereof and are hereinafter referred to as the Contract.

NOW THEREFORE, THE CONDITION OF THIS OBLIGATION is such that, if the Principal shall promptly and faithfully perform said Contract (including any addenda thereto, provided such addenda do not collectively increase the amount to be paid to the Principal by more than twenty per cent (20%) of the amount of the Contract except with the written consent of the Surety) then this obligation shall be null and void; otherwise, it shall remain in full force and effect.

These Supplementary General Conditions must be read in conjunction with the General Conditions contained in the Master Municipal Construction Documents, Volume II, Printed 2009

Whenever the Principal shall be, and declared by Obligee to be, in default under the Contract, the Obligee having performed Obligee's obligations thereunder, the Surety may promptly remedy the default, or shall promptly:

1. Complete the Contract in accordance with its terms and conditions, or
2. Obtain a bid or bids for submission to Obligee for completing the Contract in accordance with its terms and conditions, and upon determination by Obligee and Surety of the lowest responsible bidder, arrange for a contract between such bidder and Obligee and make available as work progresses (even though there should be a default or a succession of defaults under the contract or contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the balance of the contract price; but not exceeding, including other costs and damages for which the Surety may be liable hereunder, the amount set forth in the first paragraph hereof. The term 'balance of the contract price', as used in this paragraph, shall mean the total amount payable by Obligee to Principal under the Contract less the amount properly paid by Obligee to Principal.

Any suit under this Bond must be instituted before the expiration of two (2) years from date on which the Notice of Acceptance under the Contract is issued.

The Surety shall not be liable for a greater sum than the specified penalty of this Bond.

No right of action shall accrue on this Bond to or for the use of any person or corporation other than the Obligee named herein or the heirs, executors, administrators, or successors of Obligee.

IN TESTIMONY WHEREOF, the Principal has hereto set its hand and affixed its seal, and the Surety has caused these presents to be sealed with its corporate seal duly attested by the signature of its Attorney-in-fact, this _____ day of _____ 20____.

SIGNED, SEALED and DELIVERED

In the presence of

)
)
)
)
)

PRINCIPAL

SURETY

APPENDIX II

LABOUR AND MATERIAL PAYMENT BOND (Private Contracts – Trustee Form)

NO. _____ \$ _____

Note: This Bond is issued simultaneously with another Bond in favour of the Obligee conditioned for the full and faithful performance of the Contract.

KNOW ALL MEN BY THESE PRESENTS THAT

As Principal, hereinafter called the Principal, and

As Surety, hereinafter called the Surety, are, subject to the conditions hereinafter contained, held and firmly bound unto

As Trustee, hereinafter called the Obligee, for the use and benefit of the Claimants, their and each of their heirs, executors, administrators, successors and assigns in the amount of

____ Dollars
(\$ _____) lawful money of Canada, for the payment of which sum well and truly to be made, the Principal and the Surety bind themselves, their heirs, executors, administrators, successors and assigns jointly and severally, firmly by these presents.

SIGNED AND SEALED this _____ day of _____, 20 ____.

WHEREAS, the Principal has entered into a written contract with the Obligee dated the _____ day of _____, 20 ___, for

which contract is by reference made a part hereof, and is hereinafter referred to as the Contract.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that, if the Principal shall make payment to all Claimants for all labour and material used or reasonably required for use in the performance of the Contract, then this obligation shall be null and void; otherwise it shall remain in full force and effect, subject, however, to the following conditions:

These Supplementary General Conditions must be read in conjunction with the General Conditions contained in the Master Municipal Construction Documents, Volume II, Printed 2009

1. A Claimant for the purpose of this Bond, is defined as one having a direct contract with the Principal for labour, material, or both, used or reasonably required for use in the performance of the Contract, labour and material being construed to include the part of water, gas, power, light, heat, oil, gasoline, telephone service or rental equipment directly applicable to the Contract provided that a person, firm or corporation who rents equipment to the Principal to be used in the performance of the Contract under a contract which provides that all or any part of the rent is to be applied towards the purchase price thereof shall only be a Claimant to the extent of the prevailing industrial rental value of such equipment for the period during which the equipment was used in the performance of the Contract. The prevailing industrial rental value of equipment shall be determined, insofar as it is practical to do so, in accordance with and in the manner provided for in the latest revised edition of the publication of the Canadian Construction Association entitled "Rental Rates on Contractors' Equipment" published prior to the period during which the equipment was used in the performance of the Contract.
2. The Principal and the Surety hereby jointly and severally agree with the Obligee as Trustee that every Claimant who has not been paid as provided for under the terms of his contract with the Principal before the expiration of a period of ninety (90) days after the date on which the last of such Claimant's work or labour was done or performed or materials were furnished by such Claimant, may as a beneficiary of the trust herein provided for, sue on this Bond, prosecute the suite to final judgment for such sum or sums as may be justly due to such Claimant under the terms of his said contract with the Principal and have execution thereon. Provided that the Obligee is not obliged to do or take any act, action or proceeding against the Surety on behalf of the Claimants or any of them to enforce the provisions of this Bond. If any act, action or proceeding is taken either in the name of the Obligee or by joining the Obligee as a party to such proceedings then such act, action or proceeding shall be taken on the understanding and basis that the Claimants or any of them who take such act, action or proceeding shall indemnify and save harmless the Obligee against all costs, charges and expense or liabilities incurred thereon and any loss or damage resulting to the Obligee by reasons thereof. Provided still further that subject to the foregoing terms and conditions, the Claimants or any of them may use the name of the Obligee to sue on and enforce the provisions of this Bond.
3. No suit or action shall be commenced hereunder by any Claimant:
 - a) unless such Claimant shall have given written notice within the time limits hereinafter set forth to each of the Principal, Surety and Obligee, stating with substantial accuracy the amount claimed. Such notice shall be served by mailing the same by registered mail to the Principal, Surety and Obligee at any place where an office is regularly maintained for the transaction of business by such persons or served in any manner in which legal process may be served in the Province or other part of Canada in which the subject matter of the contract is located. Such notice shall be given (i) in respect of any claim for the amount or any portion thereof required to be held back from the Claimant by the Principal under either the terms of the Claimant's contract with the Principal or under the Mechanic's Liens Legislation applicable to the Claimant's contract with the Principal whichever is the greater within one hundred and twenty (120) days after such Claimant should have been paid in full under the Claimant's contract with the Principal; (ii) in respect of any claim other than for the holdback or portion thereof referred to above within one hundred and twenty (120) days after the date upon which such claimant did

or performed the last of the work or labour or furnished the last of the materials for which such claim is made under the Claimant's contract with the Principal.

- b) after the expiration of one (1) year following the date on which Principal ceased work on the Contract including work performed under guarantees provided in the Contract.
- c) Other than in a court of competent jurisdiction in the Province or District of Canada in which the subject matter of the Contract or any part thereof is situated and none elsewhere, and the parties hereto agree to submit to the jurisdiction of such court.

4. The amount of this Bond shall be reduced by and to the extent of any payments made in good further and in accordance with the provisions which may be filed of record against the subject matter of the Contract, whether or not claim for the amount of such lien be presented under and against this Bond.

5. The Surety shall not be liable for a greater sum than the specified penalty of this Bond.

IN TESTIMONY WHEREOF, the Principal has hereto set its hand and affixed its seal, and the Surety has caused these presents to be sealed with its corporate seal duly attested by the signature of its Attorney-in-fact the day and year first above written.

SIGNED, SEALED and DELIVERED

In the presence of

)
)
)
)
)
)

PRINCIPAL

SURETY

APPENDIX III

CERTIFICATE OF INSURANCE

This Certificate issued to the City of Coquitlam is to certify that policies of insurance, as described below, have been issued to the Insured named below and are in force at this time. It is understood and agreed that thirty (30) days' prior written notice by registered mail of any material alterations, transfer, assignment or cancellation of any of the policies listed below, either in part or in whole, will be given to the holder of this Certificate.

A. This Certificate is issued to: Named Insured and Mailing Address:

City of Coquitlam
3000 Guildford Way
Coquitlam, BC V3B 7N2

B. CONTRACT NUMBER AND/OR NAME Description of the Work:

C. INSURANCE POLICY

Name of Insurer:

Policy Number:

Effective Date:

Liability Limit:

Expiry Date:

D. INSURANCE COVERAGE

COMMERCIAL GENERAL LIABILITY coverage is required to insure against liability from the activities arising out of operations or work in connection with the above-described project, including liability arising out of the use of City property.

D.1 The minimum limit shall be \$5,000,000.00 inclusive per occurrence against bodily injury, personal injury and property damage.
D.2 The City of Coquitlam, its employees, officers, agents and volunteers are added as Additional Insureds, but only with respect to operations conducted by or on behalf of the Named Insured in connection with the above-described project, operations or work.
D.3 This insurance shall be primary as regards the City of Coquitlam, its employees, officers, agents and volunteers as Additional Insureds.
D.4 Any deductible or reimbursement clause contained in the policy shall not apply to the City of Coquitlam and shall be the sole responsibility of the Named Insured.
D.5 The insurance shall include the following coverages:
D.5.1 Cross Liability Clause
D.5.2 Non-Owned Automobile Liability
D.5.3 Unlicensed Automobile Liability
D.5.4 Blanket Contractual Liability
D.5.5 Broad Form Property Damage Liability
D.5.6 Owner's & Contractor's Protective Liability
D.5.7 Products & Completed Operations Liability

D.6 Indicate provision of special coverage for this project as required by the City:

YES NO Special Coverage Description

() (X) Shoring and Underpinning Hazard
() (X) Pile Driving and Vibrations
() (X) Excavation Hazard
() (X) Demolition
() (X) Blasting

Authorized Signature and Stamp

Date Name and Title

City' broker to return to City Representative Department

These Supplementary General Conditions must be read in conjunction with the General Conditions contained in the Master Municipal Construction Documents, Volume II, Printed 2009



APPENDIX IV

PRIME CONTRACTOR DESIGNATION

Owner: **City of Coquitlam**
Contractor: _____
Contract / Permit #: **79042A**
Project / Workplace: **Clarke Road and Como Lake Avenue Intersection Improvements**
(the "Project")

By signing this Prime Contractor Designation form, the Contractor hereby:

1. agrees to be, and accepts designation as, the "prime contractor" for the purposes of the Workers Compensation Act, R.S.B.C. 2019, c. 1 (the "Act") and the Occupational Health and Safety Regulation, B.C. Reg. 223/2022 (the "Regulation") in respect of the Project and Workplace noted above;
2. represents and warrants that the Contractor is qualified and capable to perform the duties of prime contractor and that the undersigned signatory has the authority to accept designation as prime contractor and to bind the Contractor;
3. accepts the duty and responsibility for ensuring the activities of employers, workers and other persons at the Workplace relating to occupational health and safety are coordinated and agrees to do everything that is reasonably practicable to establish and maintain a system or process that will ensure compliance with the Act and the Regulation in respect of the Workplace;
4. covenants and agrees to comply with the occupational health and safety provisions of the Act, the Regulation, any other applicable regulations under the Act, and any applicable orders;
5. acknowledges and agrees that the Owner has provided the Contractor the information known to the Owner that is necessary to identify and eliminate or control hazards to the health or safety of persons at the Workplace; and
6. agrees that the designation as prime contractor hereunder may not be assigned or revoked without the prior written consent of the Owner.

Prime Contractor Name: _____

Prime Contractor
Address: _____

Prime Contractor Signature _____ Date _____

Print Name _____

Please return a signed copy of this designation to the City of Coquitlam, 3000 Guildford Way, Coquitlam, BC, V3B 7N2. If you have any questions, please contact the City of Coquitlam Health & Safety Manager at 604-927-3070.

These Supplementary General Conditions must be read in conjunction with the General Conditions contained in the Master Municipal Construction Documents, Volume II, Printed 2009

Supplementary Contract Specifications

Supplementary Contract Specifications

to the
MASTER MUNICIPAL SPECIFICATIONS
Volume II – Platinum Book

Clarke Road and Como Lake Avenue Intersection Improvements

CONTRACT 79042A

TABLE OF CONTENTS

The following Supplementary Specifications are to be considered part of the Specifications. These Supplementary Specifications take precedence over the Master Municipal Specifications.

SUPPLEMENTARY CONTRACT

SPECIFICATIONS INDEX	SS 1
00 72 43S Contract Specific Notations	SS 2 to SS 5
01 33 01S Project Record Documents.....	SS 6
01 45 00S Quality Control	SS 7 to SS 9
01 55 00S Traffic Control, Vehicle Access and Parking.....	SS 10 to SS 11
01 57 01S Environmental Protection	SS 12 to SS 13
01 58 01S Project Identification.....	SS 14
03 30 20S Concrete Walks, Curbs and Gutters.....	SS 15 to SS 16
26 56 01S Roadway Lighting	SS 17 to SS 21
31 05 17S Aggregates and Granular Material	SS 22
31 22 01S Site Grading	SS 23
31 22 16S Reshaping Granular Roadbeds	SS 24
31 23 01S Excavating, Trenching and Backfilling.....	SS 25
31 24 13S Roadway Excavation, Embankment and Compaction	SS 26 to SS 27
32 01 16.7S Cold Milling.....	SS 28
32 11 16.1S Granular Subbase	SS 29
32 11 23S Granular Base	SS 30
32 12 13.1S Asphalt Tack Coat	SS 31
32 12 16S Hot-Mix Asphalt Concrete Paving.....	SS 32 to SS 34
32 17 23S Painted Pavement Markings.....	SS 35 to SS 37
33 11 01S Waterworks	SS 38 to SS 44
33 40 01S Storm Sewers.....	SS 45 to SS 46
33 44 01S Manholes and Catchbasins.....	SS 47 to SS 49
34 41 13S Traffic Signals.....	SS 50 to SS 59

**1.00 CONTRACT SPECIFIC
INSTRUCTIONS**

1.01 Schedule of Work	All work under this Contract is to be completed by the designated Substantial Performance Date as described in the Contract Documents. The Contractor must provide sufficient resources in a continuous effort and site presence to complete all the work within the allotted time. As set out in the MMCD the Contractor must provide updates to the construction schedule biweekly.
1.02 Coordination of Work	The Contractor shall be responsible to consult with all affected businesses, residents, transportation companies regarding delays, detours, and any other works affecting any transit service in the area, and will be responsible to coordinate the works with City crews and other contractors working in the area. If working area is to become a multiple-employer workplace as defined by WorkSafe BC, the Contractor shall remain the Prime Contractor.
1.03 Outside Agency Approval	In accordance with the Contract Documents, the Contractor is responsible to consult with and obtain any approval required to meet and comply with all the conditions required from outside agency such as, but not limited to, BC One Call, Metro Vancouver, BC Hydro, Telus, Kinder Morgan, Fortis BC and Translink in the area of the place of Work. City has approached Fortis, BC Hydro and Translink and have obtained necessary permits. Please refer to Appendix B for the permits obtained and detailed instructions from Fortis BC, BC Hydro and Translink for other approvals Contractor has to obtain.
1.04 Waste Collection Coordination	Contractor is responsible to accommodate all waste collection vehicles and cart pick up schedules throughout construction. . Questions: wastereduction@coquitlam.ca
1.05 Cooperation with Emergency and Maintenance Activities	The Contractor will be responsible to cooperate with regular maintenance or emergency vehicles and staff for access to the site when required including: <ul style="list-style-type: none">• Fire, Police, and Ambulance• Collections (garbage/recycling pick-up)• City Utilities Maintenance (or representatives)• Other Contractors
1.06 Site Safety	The Contractor is responsible to ensure the construction site is safe at all times for workers, pedestrians, and vehicle traffic. During non-working hours, the Contractor must ensure that the site has all potentially hazardous areas appropriately identified and protected, and also must provide appropriate signage, lighting, and markings for the direction of vehicle and pedestrian traffic, all to ensure the safety of the public. Supply and use of this equipment is considered incidental to the contract. Manhole lids, valve boxes and other appurtenances within the roadway that may present a traffic hazard during construction must be clearly marked for traffic. Manhole lids left raised in preparation for paving must have a rubberized protector ring painted with bright colour for traffic safety. Supply and use of this equipment is considered incidental to the contract.
1.07 Lane Closure Restrictions	The contractor shall refer to Contract Supplementary Specifications Section 01 55 00S and to Appendix A: Traffic Management Detail Specifications. The Contractor must take the above information into account in the preparation and submission of the Tender.

1.08 Survey Layout	Construction layout will be the responsibility of the Contractor.
1.09 Location of Existing Utilities	<p>The contractor is responsible to verify the depth and location of all utilities (watermains, storm mains, sanitary mains & etc.), including outside agency utilities (i.e. MV, Fortis BC Gas Mains & etc.) and service connections (water, storm & sanitary services at the mains & property lines) by hand digging or by Hydro-Vac in the presence of the Inspector.</p> <p>Pre-locates must be completed as soon as possible after award of the contract so changes can be completed by the Engineer prior to site construction. Contact Metro Vancouver for location of their utilities and BC One for location of other outside agency utilities. The contractor will not receive any compensation or allowance for delays if work is halted due to utilities & services connections not located prior to commencing construction.</p> <p>City of Coquitlam does not guarantee water, storm or sanitary services connections are perpendicular to the mains or property lines, the contractor will not receive any compensation for the time to locate these connections or for exposing hidden services at the property lines.</p> <p>Payment for this work will be treated as incidental to payment for work described in other Sections.</p>
1.10 Manholes & Valves	Access to manholes and valves must be maintained at all time for city utilities crews and external utility companies. In case of an emergency the cost for exposing any buried manhole or valve covers during construction will be paid by the contractor.
1.11 Verification of Dimensions and Quantities	Before proceeding with work, the Contractor shall visit the site, and check and verify dimensions and quantities. Report variations between drawings and site conditions to the Contract Administrator before proceeding with work. Payment for this work will be treated as incidental to payment for work described in other Sections.
1.12 Precautions	Protect areas under construction from damage caused by excessive erosion, flooding, heavy rains, etc. Repair or replace unprotected damaged areas as directed by the Contract Administrator at no cost to the Owner.
1.13 Work by Others	The Contractor is required to accommodate the City crews, Contractors, Developers and Utility companies in their scheduling and sequencing of work at no cost to the Owner.
1.14 FORTIS BC Emergency Protocol	In an emergency, gas pipeline rupture or leak, Contact Fortis BC 24 Hour Emergency Line (1-800-663-9911) & Fire Department (911) immediately and then City Coquitlam Utility Control Centre (604-927-6287).
1.15 Temporary Asphalt Pavement Restoration	The Contractor will be required to backfill all trenches (in paved areas) and place a temporary patch (50mm of hot mix asphalt), as per Coquitlam Standard Drawing COQ-G4, the same day excavation is made, unless otherwise approved by the Contract Administrator.
1.16 Order of Construction	The Contractor will be required to conduct the work as approved by the Contract Administrator in a manner causing minimum disturbance to general public, traffic and nearby residents and businesses.
1.17 Approved Materials	Refer to the City of Coquitlam website at https://coquitlam.ca/263/Subdivisions for the List of Approved Materials and Products which are to be incorporated
1.18 As Built Record Drawings	As built record drawings for City of Coquitlam are available in QtheMap, the City of Coquitlam's online interactive map (http://coquitlam.ca/QtheMap).

2.00 CONSTRUCTION ACTIVITY

2.01 Construction Materials in Sewer Manholes and Pipe

The Contractor is responsible to ensure that construction activities do not deposit construction materials (e.g. gravels) into the storm sewer or sanitary sewer manholes or pipe. The City has a video record of the pipe before construction. Prior to Substantial Performance, the City may again video inspect the lines to ensure no problems exist due to construction activities under this contract. If problems are encountered, the Contractor will be responsible for the cost of the video and all costs associated with the cleaning of the pipe.

2.02 Site Clean-up During Construction and End of Construction

The Contractor will be responsible for the complete clean-up of the work site during construction & at the end of construction and prior to the Substantial Performance review. This work is considered incidental to the Contract.

The work will include cleaning of all catch basins periodically or as directed by the Contract Administrator within the Work area, or nearby location as affected by the Work, to the same or better condition of the catch basins prior to starting the Work. All cleaning is to be performed by vacuum truck to the satisfaction of the Contract Administrator and will include off-site disposal of waste material. Payment for this work will be treated as incidental to payment for work described in other Sections.

2.03 Asphalt Milling Operations

Asphalt milling activities shall be done in such manner so as to cause the least disruption and inconvenience to traffic and area residents.

The Contractor will be required to provide a plan and schedule for milling sections and the subsequent paving activities and have that approved by the Contract Administrator. This schedule is to be updated as required and take into consideration weather conditions and weather forecasts to ensure work subsequent to milling can be completed in appropriate weather.

MILLING OF EXTENSIVE AREAS THAT CANNOT BE PAVED WITHIN 48 HOURS PERIOD (2 DAYS) WILL NOT BE PERMITTED.

3.00 MANDATORY MEETINGS AND CONTRACTOR REPRESENTATIVES AND SUBCONTRACTORS

3.01 Pre-Construction Meeting Requirements

After the Award of the Contract, the Contractor (Project Manager & Superintendent) will be required to attend a Pre-Construction Meeting with the Contract Administrator and provide all necessary information required by the Contract Administrator prior to provision of a Notice to Proceed. Items required to be provided at the meeting include:

1. A Detailed Construction Schedule showing the start date & completion date and the durations of major work components showing how all work will be completed within the Contract Duration.
2. Proof of insurance
3. Performance Bond and Labour and Materials Payment Bond
4. WCB Clearance Letter and copy of Notice of Project
5. City of Coquitlam Business License
6. A copy of portions of your Health and Safety Plan including the Title Page, Table of Contents, and portion showing latest revision date.

3.02	Contract Schedule, Contract Duration, and Charges	<p>A detailed, realistic construction schedule for this project must be presented at the pre-construction meeting. The schedule must show major components and durations.</p> <p>All work under this project is to be completed within the designated Contract Duration as contained in the signed Contract Agreement, or as formally amended.</p>
3.03	Contract Superintendent and Subcontractors	<p>In compliance with the MMCD General Conditions, Section 4.7, Superintendent, the Contractor shall have a competent senior representative, (the "Superintendent") in FULL TIME attendance at the Place of Work while work is being performed for the duration of the contract.</p> <p>This (FULL TIME) attendance is also required when Subcontractors are performing work.</p> <p>Work done by Subcontractors is to be directed by the Superintendent and monitored on site ensuring conformance to the Contract Documents and other particular direction to the Superintendent by the Contract Administrator.</p> <p>The Owner and Contract Administrator are not responsible for the direction of Subcontractors.</p>
3.04	Pre-Paving Site Meeting	<p>The Contractor will be required to have a pre-paving meeting with their paving staff, on-site, just prior to paving to provide instruction regarding the existing grading and requirements for the paving process and the end product.</p> <p>The Contractor must provide information to the Contract Administrator, for review, regarding proposed paving elevation control method, mat thickness control method, and rolling patterns.</p> <p>The Contractor Administrator must be in attendance at this meeting. It will be the responsibility of the Contractor's Contract Superintendent to ensure continuity between the base preparation and the paving process.</p>
3.05	Changes of Contractor Representatives & Subcontractors	<p>The Superintendent and Subcontractors indicated in the Form of Tender shall not be changed unless:</p> <ol style="list-style-type: none">1. The Owner requests a replacement.2. The Contractor submits an application for a change, in writing, to the Contract Administrator with the change being approved in writing.
3.06	Mobilization and Demobilization	<p>Payment for mobilization and demobilization of all equipment, labour and materials (both from the Contractor and from all sub-contractors) shall be incidental.</p>

END OF SECTION

1.0 GENERAL

1.3 Submission

Delete 1.3.2 and
replace with the
following

Submit one copy of an accurate project record document in final form prior to applying for Substantial Performance including any video report, test reports and Operation & Maintenance manual. Record documents to include changes in the issued for Construction Drawings, new elevation, offsets & location of all utilities, manhole rim, catchbasin rim, vaults, valve boxes, inverts walkways/sidewalks, and any unknown/new utilities found on site. Legal holdbacks will not be released until complete record documents, including reports and manuals, have been submitted and accepted by the Contract Administrator.

Contractor to get sign off letter duly signed by the property owners when private side is affected by the work. Properties to get the sign off letters will be at the sole discretion of the Contract Administrator.

Payment for all work performed under this section will be incidental to work in other Sections, unless otherwise described in Schedule of Quantities and Prices.

END OF SECTION

1.0 QUALITY

The Contractor shall provide a final product conforming to the Contract Documents and the intent of the work.

The work is to be accurate to the dimensional and tolerance requirements of the contract.

Payment will be subject to adjustments based on quality assurance tests performed by the Contract Administrator.

1.1 Quality Control (QC) by Contractor

The MMCD (2009) definition of “Quality Control” is the process by which the *Contractor* checks specific materials, products, and workmanship to ensure strict conformance with the Contract Documents.

The Contractor is fully responsible for quality control of the materials, production, and construction processes.

Quality control tests shall be performed by the Contractor, at their own expense, to ensure that products meet the contract specifications.

Failure by the Contractor to conduct adequate quality control testing during production and construction will negate the Contractor's ability to appeal the quality assurance tests used for acceptance/rejection of the work.

Under no circumstances will QC test results produced after completion of the Quality Assurance (QA) results be considered for appeal purposes.

Any changes in the Work with respect to the location, grade, or line shall be approved in advance by the Contract Administrator. Failure to notify the Contract Administrator of changes in writing may result in rejection of Work.

1.2 Inspection of Work, Quality Assurance, and Material Testing, by the Owner

The MMCD (2009) definition of “Quality Assurance” means the process by which the *Owner* evaluates if the work is being constructed in accordance with the Contract Documents. This definition will be used for this contract

The *Contract Administrator* may provide construction review through spot inspections and spot materials testing for Quality Assurance.

Any materials testing results indicating a non-conformance to the Contract Documents will require construction corrective action by the *Contractor*.

All subsequent testing to corrective action to verify conformance to the Contract Documents will be the full responsibility of the Contractor.

Inspection review by the Owner will not relieve the Contractor from providing a product that meets or exceeds the requirements of the Contract Documents.

1.3 Inspection

Materials testing shall be as described in MMCD General Conditions, Section 4.12 with the following change:

Delete Section 4.12.2(a) and insert the following:

Where the MMCD specification clauses for Inspection and Testing indicate the Contract Administrator will arrange for all testing for work described in this section will be amended to read The Contractor will arrange for and pay for all testing for work described in this section. The testing shall take place at the following prescribed rates and as directed by

the Contract Administrator. The Contract Administrator has the authority to call for testing, up to the rates and frequencies specified, at the Contractors cost.

All testing covered under this item shall be performed by a CCIL certified laboratory and technicians with copies of all test results to be sent directly to the Contract Administrator. Re-testing resulting from failed first tests shall be at the Contractors expense.

1.4 Survey Layout

The Contractor shall be responsible for all survey layouts unless otherwise described in the document. All Survey Layout to be completed in accordance with the Contract Drawings and Coordinate System set out within them. The Contractor will be provided digital AutoCAD files but shall be responsible to confirm elevations and tie in locations and report any discrepancies prior to construction.

The Contractor shall be responsible for the preservation of all layout stakes and marks. If at any time during the progress of the work any error shall appear or arise in the position, levels, dimensions or alignment of any part of the work, the Contractor shall stop work on his portion of the project and shall notify the Contract Administrator. The Contractor shall make all the necessary corrections required.

1.5 Testing

Contractor shall carry out inspection and testing (QC) to ensure compliance with Contract Documents. Contractor shall submit test results within one week of testing to the Contract Administrator. The Contractor shall provide test results prior to the preparation of the payment certificate.

**1.6 Contractors
Responsibilities**

Furnish labour and facilities to:

1. Provide access to work to be inspected
2. Facilitate inspections and tests
3. Make good work disturbed by inspection and tests

1.7 Access to Work

Allow inspection testing agencies access to Work.

1.8 Tests

Test rates and frequencies (excluding failed tests), when not defined in the MMCD or Detail Specifications Sections shall be at the following frequencies:

1. Trench Backfilling and Compaction

1.1 Compaction: 1 test / 10 lm / 300mm lift
1.2 Sieve: 1 test / placed material / 50 m³

2. Granular Base

2.1 Compaction: 1 test/500m² / 100mm depth of granular base, min. 1 test if < 500m²
2.2 Sieve: 1 test / placed material / 250 TONNES

3. Granular Subbase

3.1 Compaction: 1 test/500m²/150mm depth of granular subbase, min. 1 test if <500m²
3.2 Sieve: 1 test / placed material / 250 TONNES

4. Embankment (Subgrade)

4.1 Compaction: 1 test/ 50m² / 0.15m depth of fill, min. 1 test if < 50m²
4.2 Sieve: 1 test / placed material / 100 TONNES

5. Asphalt

5.1 Marshall test: 1 test per 250 TONNES placed, per mix specified, min. 1 / day
ASTM D1559, D3203, C117, C136
5.2 Superpave: 1 test per 250 TONNES placed, per mix specified, min. 1 / day

CAI-SP2, ASTM D3203, C117, C136

5.3 Cores: 1 per 500 m²/lift

5.4 Continuous asphalt density testing during paving.

6. Subgrade Preparation

6.1 Compaction & Moisture: 1 test / 500 m², min. 1 test if < 500m²

7. Concrete Tests

7.1 Air, Slump & 1 Set Cylinders: 1 test / 10 m³, min. 1 set / day

**1.9 Measurement for
Payment**

Payment for all work performed under this section will be incidental to payment for work described in other Sections.

END OF SECTION

1.0	GENERAL	Add 1.0.6	<p>The <i>Contractor</i> is responsible for all temporary traffic control on the streets required for completion of the work. The <i>Contractor</i> will be responsible to provide a Traffic Management Plan (TMP) for approval (10) ten working days prior to any lane closures taking place. TMP is to be prepared by a qualified professional to the satisfaction of the Contract Administrator.</p> <p>The TMP shall outline the approach to traffic management, show recognition and minimization of risks indicates signing locations, identify Traffic Control Persons (TCP) stations, show lane shifting and proposed closures.</p> <p>The Contractor is responsible to ensure and maintain all business/residential vehicles, cyclists and pedestrian accesses open at all times. The contractor may provide temporary accesses if the affected owner agrees. All costs associated with temporary accesses will be at the contractor's expense.</p>
		Add 1.0.7	<p>A Road and Sidewalk Closure Permit is required from Coquitlam for all work affecting pedestrian and traffic flow related to construction. A permit is required for each specific construction interference with pedestrian and traffic flow. The road and sidewalk closure permit form can be obtained for use from the City's website at http://www.coquitlam.ca. The Contractor must follow the approved TMP. Any changes to this TMP must be submitted to Traffic and Street Use Management for approval.</p>
		Add 1.0.8	<p>Refer to Appendix A – Traffic Management Detail Specifications.</p>
		Add 1.0.9	<p>The Contractor is responsible to maintain all business/residential vehicles and pedestrian accesses open at all times, the contractor may provide temporary accesses if the affected owner agrees. All costs associated with temporary accesses will be at the contractor's expense.</p>
1.4	Traffic Control	Delete 1.4.1 and replace with the following	<p>The Contractor shall conduct his operations to cause the minimum obstruction and inconvenience to traffic and to places of business and residences adjacent to the Place of Work. No greater quantity of work shall be undertaken at any one time than can be properly conducted with due regard to the rights and interests of the public as may be determined by the Contract Administrator.</p> <p>The Contractor is to provide at all times safe and convenient means of approach and entrance to adjoining lanes, driveways, buildings and property both for vehicles and pedestrians to the satisfaction of the Contract Administrator. For this purpose, he shall construct and maintain suitable and safe platforms, approaches, structures, bridges, diversions or other works.</p> <p>Where traffic must cross open trenches, the Contractor shall provide suitable bridges. Where trenches have been backfilled or where road improvements are incomplete, the Contractor shall take any steps necessary to prevent potholes or other traffic hazards. Where the Contract Administrator so instructs or where Contract Specifications so require, the Contractor shall provide temporary asphalt patching of such hazards.</p>

Add 1.4.9.3.1

The *Contractor*, as required by the *Contract Administrator* and the City, is to supply Construction Zone information signs (stationary), refer to MMCD 01 58 01 for the required identification signage.

The *Contractor* is responsible for the removal of the signs at the completion of the work.

Delete 1.4.10.1.3 and
replace with the
following

When workmen or equipment are employed over travelled way over brow of hills, around sharp curves or at other locations where oncoming traffic would not otherwise have adequate warning.

END OF SECTION

1.0 GENERAL

1.0.3	Erosion and Sediment Control Supervisor	Add 1.03	The Erosion and Sediment Control (ESC) Supervisor is the Qualified Professional, who is experienced in implementing ESC Plans and who is responsible for the inspection and monitoring of ESC Facilities to ensure these are installed and maintained and if necessary, are modified during construction to ensure compliance with the Stream and Drainage System Protection Bylaw No. 4403, 2013.
1.2	Temporary Erosion and Sediment Controls	Delete 1.2.1 and replace with the following	<p>Properly drain all portions of the site. Protect the site and the watercourses to which it drains, directly or indirectly, against erosion and siltation in accordance with a Sediment Control Plan under the City of Coquitlam Stream and Drainage System Protection Bylaw No. 4403, 2013 during construction and until the maintenance period is completed. Ensure no silt, gravel, debris or other deleterious substance resulting from construction activity discharges into existing drainage systems or watercourses or onto highways or adjacent property. The <i>Contractor</i> is responsible for all damage that may be caused by water backing up or flowing over, through, from or along any part of the work or otherwise resulting from his operations.</p> <p>Keep existing culverts, drains, ditches and watercourses affected by the work clear of excavated material at all times. When it is necessary to remove or alter any existing drainage structure, provide suitable alternative measures for handling the drainage. Adequately support culverts and drainpipes across trenches to prevent displacement and interference with the proper flow of water due to trench settlement.</p> <p>Sweep streets, and clean catch basins, manhole sumps, detention tanks, and maintain siltation controls as often as the <i>Contract Administrator</i> and the City deems necessary.</p>
		Delete 1.2.2.2 and replace with the following	Do not operate construction equipment in watercourses.
		Add 1.2.2.9	All work must be carried out during favorable and low water conditions.
		Add 1.2.2.10	Any fill used on this project shall be certified inert and from a source which is confirmed to be free of contaminants.
		Add 1.2.2.11	All work within a watercourse must be undertaken and completed in isolation of all flowing water to maintain downstream water quality and unrestricted flows.
1.4	Environmental Protection	Add 1.4.3.5	Immediately contain and clean up any leaks and spills of prohibited materials at the <i>Place of Work</i> .
		Add 1.4.3.6	Ensure that a well-stocked spill kit is on-site at all times and that the <i>Contractor</i> 's employees are familiar with appropriate spill response techniques.
		Add 1.4.3.7	Immediately notify the <i>Contract Administrator</i> and the City of any leaks or spills of prohibited materials that occur at the <i>Place of Work</i> .

	Add 1.4.3.8	Ensure that any fuel stored on-site is located at least 15 meters from the nearest stream, and is placed within a bermed and lined area, in order to prevent leaks or spills into the environment.
	Add 1.4.3.9	All equipment and machinery must be in good working condition (power washed), free of leaks or excess oil and grease. No equipment refueling or servicing shall be undertaken within a minimum of 15 meters of any watercourse or surface water drainage.
	Add 1.4.3.10	During all phases of the operation, the Contractor shall take precautions to abate nuisance caused by mud or dust by clean up, sweeping, sprinkling with water or dust control, or other means as necessary to accomplish results satisfactory to the Contract Administrator.
1.6	Measurement and Payment	Delete 1.6.1 and replace with the following Add 1.6.2
		Payment for all work, unless included in the Schedule of Quantities and Prices, performed under this section will be incidental to payment for work described in other Sections. Payment for the poly cover or temporary tarps over stockpile materials or exposed road subgrades shall be treated as incidental work.
1.9	Archaeological / Historical Resources	Add 1.9 .1
		If any archaeological or historical resources are encountered during construction, immediately cease work and inform the <i>Contract Administrator</i> and the City. Leave these resources in place and do not disturb them in any way. The Contractor must follow Appendix E- Archaeological Chance Find Procedures.

END OF SECTION

1.3 Measurement and Payment	Delete 1.3.1 and replace with the following	Payment for the installation of 1.2m x 1.2m static construction Information signs as shown in Appendix A – Traffic Management Detail Specifications - Clause 6.5 includes supply, placement & removal and will be incidental to payment for work described in other Sections, unless shown otherwise in the Schedule of Quantities and Prices.
	Add 1.3.2	Payment for changeable message signs (CMS) includes supply, placement, weekly communication updates, and removal.

END OF SECTION

1.4	Measurement and Payment	<p>Delete 1.4.3 and replace with the following</p> <p>Payment for machine placed or hand formed C5/C4 wide base and median narrow concrete curb and gutter, excluding granular subbase & base, includes supply and placing of the concrete curb and gutter, tie-ins, transitions, subgrade preparation, compaction, saw cutting, and will cover all straight and curve sections and will be made separately for each specified type.</p> <p>Payment for excavation and disposal of excavated material will be made under payment item, Common Excavation – offsite disposal, in the Schedule of Quantities and Price.</p> <p>Payment for granular subbase and granular base under curb and gutter will be made under payment items in Section 32 11 16.1S and 32 11 23S, Granular Subbase and Granular Base, respectively.</p>
	<p>Delete 1.4.5 and replace with the following</p>	<p>Payment for concrete sidewalks, letdowns, driveways, walkways, raised concrete islands, stamp concrete, infills, concrete exposed aggregate and all concrete ramps excluding granular subbase & base, supply and installation, saw cutting, regrading of driveways for proper tie-in, field fit and adjustments, subgrade preparation under the concrete sidewalks, in-fills, driveways and walkways, and will be made separately for each specified thickness and type of finish.</p> <p>Payment for excavation and disposal of native excavated material will be made under payment item, Common Excavation – offsite disposal, in the Schedule of Quantities and Price.</p> <p>Payment for granular subbase and granular base will be made under payment items in Section 32 11 16.1S and 32 11 23S, Granular Subbase and Granular Base, respectively.</p>
	<p>Add 1.4.10</p>	<p>Payment for Detectable/Tactile Warning Surface Tile includes supply and placing of Access Tile Model # ACC-R-_x_ (or approved equal) Truncated Dome Detectable Warning Tactile Surface replaceable cast in place - Yellow Color, installation as per the Manufacturer's Specifications and as specified in the Schedule of Quantities and Prices.</p>
	<p>Add 1.4.11</p>	<p>Payment under this item will include supply and complete installation of TYPE R-7901 bollards as per Burquitlam Lougheed Streetscape guideline. Mounting Option would be "Removable Receiver with Lid".</p> <p>(https://www.coquitlam.ca/DocumentCenter/View/364/Burquitlam-Lougheed-Streetscape-Guidelines-PDF)</p>
2.1	Materials	<p>Delete 2.1.5.1 and replace with the following</p> <p>Hand-formed and hand-placed concrete:</p> <p>Slump: 80 mm</p> <p>Air entrainment: 5 to 8%.</p> <p>Maximum aggregate size: 20 mm.</p> <p>Minimum cement content: 335 kg/m3.</p> <p>Minimum 28-day compressive strength: 32 MPa.</p> <p>Tactile warning surface tile shall be replaceable cast-in-place style. Truncated domes shall be in square grid pattern with a 5 mm nominal raised height, base diameter of 23 mm and top diameter of 11.5 mm. Dome spacing range shall be between 40 mm – 60 mm.</p> <p>Color of the panel shall be Federal Yellow (Y) per US Federal Standard 595B Table IV, Color No. 335.</p>
	<p>Add 2.1.7</p>	

Minimum size of the panel shall be 600 mm by 1200 mm.

3.0 EXECUTION

3.5 Concrete Placement	Delete 3.5.9 and replace with the following	<p>The <i>Contractor</i> is responsible for adjusting all utility manhole frames and valve boxes, belonging to Coquitlam and/or other agencies that are affected by the road works. All adjustments to utilities must be completed to the satisfaction of the utility owner. Riser rings will not be accepted.</p> <p>The <i>Contractor</i> should note that certain utility owners may decide to complete their own adjustments. The <i>Contractor</i> will be required to cooperate with any utility company providing their own adjustments.</p> <p>The <i>Contractor</i> shall be responsible to contact the appropriate utility company within a minimum of seventy-two (72) hours of the work. No adjustment shall be made without the written approval of the utility company. <u>All manholes must be vertically adjusted a minimum of twenty-four (24) hours prior to concrete placement.</u></p>
3.9 Expansion Joints	Delete 3.9.1 and replace with the following	<p>Form transverse expansion joints at both ends of curb returns and at maximum spacing of 9.0 m for sidewalks, 30.0 m of curb and gutter, at each end of driveway crossing, at tangent point of circular work, and on either side of catch basins.</p>

END OF SECTION

1.0 GENERAL

1.3	Shop Drawings	Delete 1.3.4 and replace with the following	Shop drawings for pole structures, where required, to be sealed by a Professional Engineer registered in British Columbia.
1.4	Electrical Energy Supply	Add 1.4.4	The Electrical <i>Contractor</i> shall process a letter of application to the City of Coquitlam for the Utility Company and attain all required permits.
1.5	Contractor Qualifications	Add 1.5.3	All on-site traffic signal installations shall be under the responsibility of a primary journeyman electrician with IMSA Level 1 Roadway Lighting Certification and have a minimum of three (3) years' experience maintaining and installing street lighting systems. This primary journeyman electrician is expected to be on the work site and report work progress to City of Coquitlam's Traffic Operations staff, in addition to reporting to the <i>Contract Administrator</i> .
1.6	Permits and Tests	Add 1.6.4	<i>Contractor</i> shall provide the BC Safety Electrical Permit, and arrange all inspections with the City. The inspection entails, but not limited to, Coquitlam's Street Lighting Inspection Report, which can be obtained from Coquitlam's Traffic Operations staff.
		Add 1.6.5	<i>Contractor</i> to obtain approval of all buried portions of the installation from the City Inspector before any backfill is commenced.
1.8	Record Drawings	Add 1.8.2	Final payment(s) will be withheld until record drawings are received.
1.9	Measurement and Payment	Add 1.9.4	Supply and installation of conduits / ducts to include all labor, equipment and materials required to complete the installation as specified in the contract and/or shown on Contract Drawings. Payment includes coordinating with Third Party Utilities. Payment will be for each complete set of joint trench crossing as specified in the contract documents.
2.0	PRODUCTS		
2.1	General	Delete 2.1.2 and replace with the following	All products supplied to be new, in accordance with <i>Contract Documents</i> . All products are to meet Canadian Electrical Code requirements and be certified by either CSA, UL®, or Intertek Testing Systems (Wattrock Hersey) and be supplied with the certifier's label.
		Delete 2.1.3 and replace with the following	All products shall be in accordance with the City of Coquitlam's List of Approved Materials and Products List. Any products not listed with in the Approved List shall default to the current BCMOTI specification.
		Delete 2.1.5 and replace with the following	Equipment models listed within the City of Coquitlam's List of Approved Materials and Products shall be confirmed with the City immediately prior to their order to ensure that they are current. Cut-sheets, equipment make, model and serial number list to be provided to the City by the <i>Contractor</i> .
2.2	Conduit	Add 2.2.1.3	All exposed metallic surfaces to be hot dip galvanized.
2.3	Trench marker Tape	Add 2.3.2	Detectable (Magnetic) marker tape shall be used in all trenches containing interconnection (communications) conduit.

2.6	Concrete Bases	Add 2.6.2	Maximum of four (4) conduits shall enter the base of a luminaire pole, however more than four (4) may enter a service base.
2.8	Conductors and Cables	Add 2.8.5	<p>.1 Minimum conductor size to be as follows, unless specified otherwise on <i>Contract Drawing</i>:</p> <p>.1.1 No 6 AWG for feeder conductors in conduit.</p> <p>.1.2 No 8 AWG for bond conductors in conduit.</p> <p>.1.3 No 12 AWG for luminaire conductors in poles.</p>
2.9	Conductor Tags	Delete 2.9 and replace with the following	Refer to the City of Coquitlam's List of Approved Materials and Products.
2.11	Fuses and Fuse Holders	Delete 2.11 and replace with the following	Refer to the City of Coquitlam's List of Approved Materials and Products.
2.13	Receptacles	Add 2.13.3	Receptacles shall have a spring loaded cast aluminum covers.
		Add 2.13.4	Refer to the City of Coquitlam's List of Approved Materials and Products.
2.14	Luminaires	Add 2.14.6	Refer to the City of Coquitlam's List of Approved Materials and Products.
2.19	Service Panels	Add 2.19.1	Type 40A 120/240V, 60A 120/240V roadway lighting and 100A 120/240V combination roadway lighting / traffic signal, per <i>Contract Drawing</i> to include items listed within the 2009 MMCD Section 34 41 13 - Traffic Signals - 2.11.2
		Add 2.19.2	Refer to the City of Coquitlam's List of Approved Materials and Products.
2.20	Wire Anti-Theft Devices	Add 2.20.1	Handhole access shall utilize security covers with reinforced backing bars.
3.0	EXECUTION		
3.1	General	Add 3.1.5	During the installation of the lighting system, maintain the existing system as noted on the <i>Contract Drawing</i> . If temporary or permanent relocations of related lighting equipment are required, such equipment shall be reinstated as required under the <i>Contract Documents</i> or as directed by the <i>Contract Administrator</i> .
3.3	Concrete Bases	Add 3.3.7	Concrete service bases detailed on Standard Detail Drawings CE1.3 and CE1.4, Type C1 and C3 service bases shall have five (5) conduits. See Coquitlam Standard Detail Drawing SS-E7.3.
		Add 3.3.8	All concrete bases shall be pre-cast concrete only, unless noted on <i>Contract Drawing</i> or directed by the <i>Contract Administrator</i> .
3.4	Junction Boxes and Vaults	Delete 3.4.1 and replace with the following	Install junction boxes as shown on Standard Detail Drawings E2.2 to E2.4. Install vaults as shown on Coquitlam Standard Detail Drawing SS-E2.5.
		Add 3.4.5	Bell end fittings shall be installed in all conduits entering junction boxes or vaults.

		Add 3.4.6	All junction boxes shall be provided with RPVC bars to support electrical connections and fuse holders. The RPVC bars shall be attached into the junction box sidewalls with the electrical connections/fuse holders tie-wrapped in place and installed in the up-right position.
		Add 3.4.7	Junction boxes requiring 3 or more sections must be approved by the City of Coquitlam's Traffic Operations staff.
3.5	Underground Conduit	Delete 3.5.2 and replace with the following	Minimum cover over conduits to be 600 mm in boulevard areas and 900 mm in roadway areas.
		Delete 3.5.3 and replace with the following	Place trench marker tape 300 mm above installed conduit in trench. Trench marker tape not required for conduits installed via trenchless technology.
		Delete 3.5.5 and replace with the following	Empty conduits shall have a No. 8 HB Yellow/Green Mk pull string and capped at both ends.
		Add 3.5.6	Conduit run shall contain no more than the equivalent of 4 – 90-degree bends.
		Add 3.5.7	Conduits shall be blown out with compressed air, from both ends if necessary, and then swabbed out to remove stones, dirt, water and other material, which may have entered during installation.
		Add 3.5.8	All conduits entering poles and cabinets shall be sealed with "Duct Seal".
		Add 3.5.9	Conduit depth of bury to be recorded when a trenchless technology method is used.
		Add 3.5.10	Conduit shall not be bent in the field. Only factory bends will be accepted.
3.7	Electrical	Delete 3.7.2 and replace with the following	Mount electrical service panels in service base or on poles as shown on Standard Detail Drawings E7.2, E7.6 to E7.9, as well as Coquitlam Standard Detail Drawings SS-E7.3 to SS-E7.5.
3.8	Wiring	Delete 3.8.3 and replace with the following	Make conductor splices in handholes. See Standard Detail Drawing E7.11 for splice details.
		Delete 3.8.6 and replace with the following	Wire each luminaire and receptacle separately from the base of pole.
		Delete 3.8.7 and replace with the following	Neatly arrange and bundle wiring in junction boxes, pole handholes and service panels. Conductor connections in all access points to be installed in the up-right position, allowing for easy access
		Delete 3.8.11 and replace with the following	Bond all luminaires and receptacles with No. 12 RW90 green conductor, and steel junction box lids with No. 8 RW90 green conductor.

3.9	Pole Mounted Receptacle	Delete 3.9.1 and replace with the following	Pole mounted receptacles to be installed as detailed on the <i>Contract Drawing</i> and Coquitlam Standard Detail Drawings SS-E7.19 to SS-E7.23.
3.10	Luminaires and Photocells	Add 3.10.4	NEMA wattage label shall be visible at the bottom of the luminaire on all fixtures.
3.11	Grounding & Bonding	Add 3.11.5	Ground plates and grounding conductors are to have a minimum of 5 meters clearance between them and other utility grounding.
		Add 3.11.6	Remove all paint around bonding studs on inside of pole to expose the galvanized or metal surface prior to bonding equipment.
3.13	Pole Finish Application	Delete 3.13 and replace with the following	<ol style="list-style-type: none">.1 Prior to producing a powder finish product the supplier must provide a Certificate of Compliance indicating that they have met or exceeded the following specifications. The supplier will name their independent testing agency and this information will be submitted to the City for their files..2 The application process will be as follows:<ol style="list-style-type: none">.1 The pole or product will be hot dip galvanized..2 Powder will only be applied after the product is completely fabricated. No welding or bending will take place after the powder is applied..3 The pole or product will be thoroughly cleaned by brush blasting in accordance with SSPC-SP7. The brush blast will maintain a minimum profile of 0.5 mils. If brush blasting is done off site then the product will be covered and shielded from any dirt or moisture during its return to the powder applicators facility. Where poles or products are not kept clean and dry or have any signs of flash rust they will be returned for further brush blasting..4 Once at the applicators facility the pole or product will be thoroughly cleaned and dried with an air gun. All hand marks or grease spots will be cleaned with a mild solvent..5 After brush blasting the entire pole or product will be pre-baked in an oven at 220 degrees C for at least 30 minutes to 1 hour, depending on steel thickness. The pre-baking must be done to prevent out-gassing during the curing cycle..6 The base powder coat will then be applied electrostatically while the pole or product is cooling from the 220 degrees C pre-bake period to allow the powder to melt and fuse to the surface. The base coat will be a minimum of 3 mils in thickness..7 After base coat is applied and set the topcoat will be applied to a thickness of 3 to 5 mils. The pole or product will be returned to the oven and heated to 190 to 220 degrees C (temperature will not exceed pre-bake) for a minimum of 25 minutes, depending on steel thickness. Thicker product material may require longer bake cycles to fully cure. Upon removal of the pole or product from the oven, it will be left to rest until the pole or product is cool enough to the touch..8 Once the topcoat has cured and the poles or product cooled, they will then be individually wrapped (min 4" overlapping method) with 1/8" foam wrap over the entire pole or product. The poles or product will be bundled

together and separated with suitable wood dunnage to avoid contact between the poles, product or other bundles. All bundles themselves will be fully wrapped with foam and with stretch-wrap as noted above. The poles or products will be handled and shipped with great care to prevent damage; damaged product will be cause for rejection of the item(s).

- .3 Testing process will be as follows:
 - .1 Each run of product in an oven will have at least one sample tested for:
 - .2 Adhesion – The finished powder surface will have minimum pull-off strength exceeding 1000 PSI as tested in accordance with ASTM D4541.
 - .3 Quality – The finished powder surface will be free from any holidays (skips or misses) as tested in accordance with ASTM D4541. The product will also be free from wrinkles, orange peel, cracking, pinholes, fish eyes, blisters, etc. by visual inspection.
 - .4 Color – The color will be verified to be within 3 DE of specialized color.
 - .5 An independent firm such as CanSpec Testing who are qualified to test powder finish will do the testing at the supplier's expense. The result of tests must accompany the Certificate of Compliance and will be made available to the City or their representative upon request. A supplier who fails to test product as noted above will have their product rejected until the testing is completed and the product deemed acceptable by the testing agency.
 - .6 Where the tested product fails on a given production run then a minimum of 30 % of the entire production run will be tested. If no other failures are found then the individual failed product will be stripped, reapplied and re-tested until it passes. If any of the 30% of product tested fails then the entire order will be stripped, reapplied and retested until it passes.
- .4 Field repairs will be undertaken as required to fix any scratches or imperfections in the final finish. Field repairs will be done as follows:
 - .1 Feather the damaged area with sandpaper.
 - .2 Clean area with solvent.
 - .3 Let dry.
 - .4 Neatly brush on an application of Aliphatic Urethane Acrylic Semi-Gloss High Build applied at 2-4 mils DFT over the entire sanded and damaged area. The ambient conditions will be dry and over 10 degrees C when the paint is applied.
 - .5 The pole supplier will warranty the integrity of the surface for a minimum of 1 year from the date of installation. The warranty will include all labour and materials required to provide replacement product if required. The powder finish will be the responsibility of the pole supplier. The warranty will apply to fading, blistering, cracking or chipping of the surface.

END OF SECTION

2.0 PRODUCTS

2.3	Pit Run Gravel	Add to 2.3.2	The use of recycled concrete shall be approved by the <i>Contract Administrator</i> and the City prior to use.																				
		Add 2.3.3	Asphalt millings free from contaminated and other extraneous material, conforming to the specified gradations may be used as pit run gravel. The use of asphalt millings shall be approved by the <i>Contract Administrator</i> and the City prior to use.																				
2.7	Granular Pipe Bedding and Surround Material	Add to 2.7.1	All recycled or other extraneous materials shall be approved by <i>Contract Administrator</i> and the City prior to use.																				
2.10	Granular Base	Delete 2.10.2																					
		Add 2.10.3	All 25 mm minus granular base is to conform to the following gradation specifications for Collector / Arterial Roads:																				
			<table border="1"><thead><tr><th>Sieve Designation (mm)</th><th>Percent Passing (%)</th></tr></thead><tbody><tr><td>25</td><td>100</td></tr><tr><td>19</td><td>80-100</td></tr><tr><td>12.5</td><td>75-90</td></tr><tr><td>9.5</td><td>50-85</td></tr><tr><td>4.75</td><td>35-70</td></tr><tr><td>2.36</td><td>25-50</td></tr><tr><td>1.18</td><td>15-35</td></tr><tr><td>0.30</td><td>5-20</td></tr><tr><td>0.075</td><td>0-5</td></tr></tbody></table>	Sieve Designation (mm)	Percent Passing (%)	25	100	19	80-100	12.5	75-90	9.5	50-85	4.75	35-70	2.36	25-50	1.18	15-35	0.30	5-20	0.075	0-5
Sieve Designation (mm)	Percent Passing (%)																						
25	100																						
19	80-100																						
12.5	75-90																						
9.5	50-85																						
4.75	35-70																						
2.36	25-50																						
1.18	15-35																						
0.30	5-20																						
0.075	0-5																						
		Add 2.10.4	<p>The intention of the Gradation Chart is to identify the desired mix of size of aggregate in the granular base. The Target Percentage Passing is the middle of the shown Range.</p> <p>Tests that show sieve values of Percent Passing that are consistently low or consistently high in two (2) or more consecutive tests will be considered to be non-conforming.</p>																				
2.11	Recycled Aggregate Material	Delete 2.11.1 and replace with the following	Aggregates containing recycled material may be utilized if approved by the <i>Contract Administrator</i> and the City. In addition to meeting all other conditions of the specifications, recycled material should not reduce the quality of the construction achievable with quarried materials. Recycled material shall consist only of aggregates, crushed portland cement concrete, or asphalt that is free of impurities.																				

END OF SECTION

1.4	Measurement and Payment	Delete 1.4 in its entirety and replace with the following	Payment for all work performed under this Section will be incidental to payment for work described in other Sections unless shown otherwise in the Schedule of Quantities and Prices.
------------	------------------------------------	--	---

END OF SECTION

1.4 Measurement and Payment Delete 1.4.1 to 1.4.4 and replace with 1.4.1 with the following

Payment for all work performed under this Section will be incidental to payment for work described in other Sections unless shown otherwise in the Schedule of Quantities and Prices.

END OF SECTION

1.0 GENERAL

1.8 Limitations of Open Trench	1.8.1 Replace last sentence with the following	If circumstances do not permit complete backfilling of all trenches, and where permitted by the <i>Contract Administrator</i> and the City, adequately protect all open trenches or excavations with approved fencing or barricades and, where required, with flashing lights.
	Add 1.8.2	The use of road plates to cover excavations and restore travel lanes is not permitted in late Fall, Winter or if forecast indicates temperature equal or below 2 degrees Celsius, unless otherwise permitted by the <i>Contract Administrator</i> .
		Where construction necessitates the use of road plates, the Contractor is responsible for properly securing them (either pinned or recessed into the pavement) and feathered a minimum of 300mm with existing road asphalt on all four sides. The Contractor is responsible for repairing any pavement damage related to the plate installation.

2.0 PRODUCTS

2.2 Use of Specified Materials	Delete 2.2.1.2	Delete Pit Run Sand
	Delete 2.2.3.3	Delete Pit Run Sand

3.0 EXECUTION

3.3 Excavation	Delete 3.3.1.2 and replace with the following	Connections to existing waterworks systems are to be made by the <i>Contractor</i> under the inspection / supervision of the <i>Contract Administrator</i> and the City.
3.6 Surface Restoration	Delete 3.6.2.4 and replace with the following	Restore lawns with approved topsoil and sod to match existing lawn.
	Delete 3.6.3.1 and replace with the following	Restore surface with a minimum 100 mm of 19 mm granular road base material.
	Delete 3.6.7.5 and replace with the following	Restore Pavement as detailed on Coquitlam Standard Detail Drawing COQ-G4. Temporary patch shall be a minimum thickness of 50 mm thickness. Permanent restoration to existing asphalt thickness (minimum of 75 mm) with a 35 mm key where existing thickness permits. A 50 mm key is required on Arterial and Collector Roadways. Dry if necessary and paint clean, dry edge with asphalt emulsion (tack coat).

END OF SECTION

1.8	Measurement and Payment	Delete 1.8.4 and replace with the following	Payment under this item will only apply to removal of the components included in this item under a separate operation as shown on the Contract Drawings or as directed by the Contractor Administrator. No payment will be made under this item for removal of these components as part of the operation for common excavation, and such removal will be treated as common excavation.
		Delete 1.8.5 and replace with the following	Payment will be made at the respective unit prices bid in the Schedule of Quantities and Prices and will include all labour, and equipment required to complete the work, including offsite disposal. It is the responsibility of the contractor to locate and verify all utilities.

Payment for Common Excavation includes:

1. Unless noted in the Schedule of Quantities and Prices as removal in square meters, common excavation will be measured in cubic meters calculated from measurements taken by the Contract Administrator in the areas of excavation for road widening areas.
2. Cross-sections will be taken after clearing and grubbing and after stripping of existing topsoil immediately prior to excavation of material to be incorporated into work.
3. Where determined by the Contract Administrator that truck box volume will be used to determine excavation quantities the volume per load shall be determined using 75% of the truck load quantity. The following is to be used for payment:

Truck Type	Material Type	Volume (cu.m)
Tandem	ordinary material	7
Tandem	asphalt/concrete/pipe	4
Triaxle	ordinary material	8
Triaxle	asphalt/concrete/pipe	5
Tandem and Pony	ordinary material	11
Tandem and Pony	asphalt/concrete/pipe	7.5
Triaxle and Pony	ordinary material	13
Triaxle and Pony	asphalt/concrete/pipe	9
Tandem and Transfer	ordinary material	19
Tandem and Transfer	asphalt/concrete/pipe	13

4. Contractor to provide truck slips detailing location type of common excavation, time loaded and location of dump site. The slips are to be given to Contract Administrator by the end of shift or Contract Administrator can deny quantities subsequently submitted.
5. Payment for on site re-use includes excavation, transport, temporary stockpiling, placement, compaction, boning, adjustment of moisture content, spreading and grading of material anywhere on site or within the work zone, as needed, to establish the roadway & pathway cross-section.

Payment will be made at the respective unit prices bid in the Schedule of Quantities and Prices and will include all labour, and equipment required to complete the work, including offsite disposal.

It is the responsibility of the contractor to locate and verify all utilities.

Delete 1.8.10 and
replace with the
following

Payment for replacement of areas of unsuitable granular base, granular subbase or sub-grade revealed during proof rolling will include excavation with off-site disposal, installation & compaction of granular base material (25 mm minus), and all remedial work required to achieve a suitable base. Payment will be based on the cubic metre volume removed.

2.0 PRODUCTS

2.2 Specified Materials	Delete 2.2.1.3	Pit Run Sand
	Delete 2.2.1.4	River Sand
	Delete 2.2.2	

END OF SECTION

1.5 Measurement and Payment Delete 1.5.1 to 1.5.3 and replace with 1.5.1 with the following Payment for cold milling is incidental to work described in Section 31 24 13S, Clause 1.8.4, and includes cost of mobilization, demobilization and demonstration milling test section, unless shown otherwise in Schedule of Quantities and Prices.

END OF SECTION

1.4	Measurement and Payment	Delete 1.4.1 and replace with the following	Measurement for granular subbase of variable thickness will be for actual quantity placed based on weigh tickets provided to Contract Administrator as loads are delivered.
		Delete 1.4.2 and replace with the following	Measurement for granular subbase for each specified thickness will be for the actual area placed.
		Delete 1.4.3 and replace with the following	Payment for Subsection 1.4.1 & 1.4.2 above includes supply, placement and compaction of granular subbase material, adjustment of moisture content, and boning to establish the road cross-section, shall be included in the unit price bid in the Schedule of Quantities and Prices.
		Delete 1.4.4 and replace with the following	Payment for removal of unsuitable subgrade including disposal off-site prior to direct placement of granular subbase will be made under Section 31 24 13 – 1.8.5 Common Excavation.
2.0	PRODUCTS		
2.1	Specified Materials	Delete	2.1.1.1: Select Granular Subbase 2.1.1.2: 75 mm Pit Run Gravel 2.1.1.4: Pit Run Sand 2.1.1.5: Approved Native Material 2.1.1.7: River Sand

END OF SECTION

1.4	Measurement and Payment	Delete 1.4.1 and replace with the following	Measurement for granular base of variable thickness will be for actual quantity placed based on weigh tickets provided to Contract Administrator as loads are delivered.
		Delete 1.4.2 and replace with the following	Measurement for granular base for each specified thickness will be for the actual area placed.
		Delete 1.4.3 and replace with the following	Payment for Subsection 1.4.1 & 1.4.2 above includes supply, placement and compaction of granular base material, adjustment of moisture content, and boning to establish the road cross-section, shall be included in the unit price bid in the Schedule of Quantities and Prices.
		Delete 1.4.4 and replace with the following	Payment for removal of unsuitable subgrade including disposal off-site prior to direct placement of granular subbase will be made under Section 31 24 13 – 1.8.5 Common Excavation.
2.0	PRODUCTS		
2.1	Granular Base	Add 2.1.1.3	25 mm minus crushed gravel conforming to the gradation specifications for Collector/Arterial Roads under Section 31 05 17S – 2.10.3.
3.0	EXECUTION		
3.5	Proof Rolling	Delete 3.5.1 and replace with the following	For proof rolling, use fully loaded single axle, to 80 KN (18, 000 lb) minimum, dump truck.
		Add 3.5.7	Prior to paving with asphalt concrete, the base surface shall be checked by the <i>Contract Administrator</i> and the City, for deflections utilizing a Benkelman Beam, in order to insure that the final rebound requirements can be obtained with the asphalt pavement. In the event that such deflection is in excess of those required to produce the final standards, then the base shall be adequately strengthened by additional gravel or asphalt concrete to insure that final deflections as follows are not exceeded. The Benkelman spring rebound value of the completed pavement surface shall not at any point exceed 0.75 mm for arterial industrial roads and lanes, 1.15 mm for collector roads, and 1.5 mm for local roads and lanes as determined in the procedures outlined in the Transportation Association of Canada publication "Pavement Management Guide."

END OF SECTION

1.5	Measurement and Payment	Delete 1.5.1 and replace with the following	Payment for all work performed under this Section will be incidental to payment for work described in other Sections unless shown otherwise in the Schedule of Quantities and Prices.
		Delete 1.5.2 and replace with the following	Pavement surface cleaning, as per section 32 01 11, and all other work incidental to the application of tack coat is deemed to be incidental to payment for work described in other Sections unless shown otherwise in the Schedule of Quantities and Prices.
3.0	EXECUTION		
3.2	Application	Add to 3.2.3	Asphalt tack coat to be applied using a truck mounted spray bar unless otherwise approved by the <i>Contract Administrator</i> and the City. Contractor shall demonstrate, to the <i>Contract Administrator</i> and the City, prior to application that all spray nozzles are operational and providing a consistent application.

END OF SECTION

1.0 GENERAL

1.4 Submission of Mix Design	Delete 1.4.1 and replace with the following	Submit asphalt concrete mix design, including RAP content and trial mix test results to Contract Administrator for review at least two weeks prior to commencing work.
1.5 Measurement and Payment	Delete 1.5.1 and replace with the following	<p>Payment for asphaltic concrete paving includes all construction joint preparation, surface cleaning and preparation, reshaping, asphaltic surface milling to tie into existing asphalt, saw cutting, supply and placing of the asphaltic concrete, compaction and cleaning frames, covers and lids of castings affected and taped temporary pavement markings.</p> <p>Measurement for asphaltic concrete paving for the specified design mixes will be made at the respective unit prices bid in the Schedule of Quantities and Prices and incorporated into Work will be asphalt concrete actually based on weigh tickets provided to the Contract Administrator as loads are delivered.</p>
		<p>The contractor will not receive any additional compensation above the respective unit prices bid in the Schedule of Quantities and Prices for Hand Work, Special Equipment & Machinery to complete the Hot Mix Asphaltic Paving Work as shown on the Contract Drawings or as directed by the Contract Administrator.</p>
		<p>For measurement and payment purposes, Contract Administrator may calculate payment on actual area paved to the thickness specified in the Schedule of Quantities and Prices and as shown on the Contract Drawings.</p>
	Delete 1.5.3 and replace with the following	<p>Payment for asphaltic concrete sidewalks, pathways, driveways, and infill strips paving includes all construction joint preparation, surface cleaning and preparation, saw cutting, supply and placing of the asphaltic concrete, tack coat, compaction and cleaning frames, covers and lids of castings affected.</p> <p>Measurement for asphaltic concrete paving for the specified design mixes for will be made at the respective unit prices bid in the Schedule of Quantities and Prices and incorporated into Work will be asphalt concrete actually based on weigh tickets provided to the Contract Administrator as loads are delivered.</p>
	Add 1.5.9	<p>Payment for this item includes all applicable materials and work described in 1.5.1. Work includes all necessary adjustments on site during construction to achieve proper tie-in to existing driveways as directed by Contract Administrator. Adjustments performed under this section shall be incidental to payment for work described in other Sections.</p> <p>The <i>Contractor</i> or the <i>Owner</i> may request adjustment of the unit prices submitted for Asphalt Pavement if the Composite Rack Posting (CRP) varies by more than 5.0% from Tender Closing Date to the time the asphalt paving is actually performed as per the schedule indicated in the Form of Tender. Neither party can make a request for unit price adjustment due to its own delay.</p>
		<p>The CRP is a composite of the available Rack Postings for PG 64-22 FOB Langley BC.</p>

Requests for asphalt pavement unit price adjustment must be made prior to commencing asphalt paving. Payment for asphalt paving performed prior to a request for price adjustment will be made at the unit price submitted.

Unit prices will be increased or decreased as applicable using the following formula:

$$\text{Adjustment} = (\text{CRP}_{\text{work}} - \text{CRP}_{\text{tender}}) \times \text{AC}_{\text{volume}}$$

Adjustment is the amount in dollars per tonne the unit price is modified. *CRP_{work}* is the CRP at the time paving is performed. *CRP_{tender}* is the CRP at the Tender Closing Date. *AC_{volume}* is the mixture design percent asphalt content, by volume.

1.6	Inspection and Testing	Add 1.6.3	Test cores will be taken by the <i>Contract Administrator</i> in the areas of new paving and will include cores along construction joints to ensure compliance with the required design and compaction.
2.0 PRODUCTS			
2.1	Materials	Add 2.1.2.1	Usage of recycled asphalt shingles will not be permitted.
		Add 2.1.2.2	Usage of softening agents, rejuvenators, or recycling agents will not be permitted.
2.2	Mix Design	Delete 2.2.2 and replace with the following	Mix may contain up to a maximum of 15 % by mass of RAP for Upper Course Asphalt and 20 % by mass of RAP for Lower Course Asphalt without a special mix design. The <i>Contract Administrator</i> and the City may approve higher proportion of RAP if <i>Contractor</i> demonstrates ability to produce mix meeting requirements of the specification.
		Delete 2.2.3.2 Marshall Stability and replace with the following	Marshall Stability at 60°C for both lower and upper courses to be 10 KN min.
3.0 EXECUTION			
3.3	Preparation	Delete 3.3.3 and replace with the following	The <i>Contractor</i> is responsible for adjusting all utility manhole frames and valve boxes, belonging to Coquitlam and/or other agencies that are affected by the road works. All adjustments to utilities must be completed to the satisfaction of the utility owner. Utility adjustment within the paved surface will be considered incidental to the <i>Work</i> unless otherwise noted in the <i>Contract Documents</i> .
			The <i>Contractor</i> should note that certain utility owners may decide to complete their own adjustments. The <i>Contractor</i> will be required to cooperate with any utility company providing their own adjustments.
			The <i>Contractor</i> shall be responsible to contact the appropriate utility company with in minimum of seventy-two (72) hours of the work. No adjustment shall be made without the written approval of the utility company.
			<u>All manholes must be vertically adjusted a minimum of twenty-four (24) hours prior to paving.</u> The use of riser rings for adjusting manhole frames and valve boxes will not be permitted.

3.7 Joints Delete 3.7.5 and replace with the following

Construct butt joints at locations as shown on the *Contract Drawing* and as directed in the field by the *Contract Administrator* and the City.

END OF SECTION

1.0 GENERAL

1.2 Scope	Delete 1.2.1 and replace with the following	Pavement Markings: Miscellaneous taped temporary and permanent pavement paint markings including pedestrian crosswalk, merge and diverge markings, stop lines, solid and broken line road lane markings including edge lines of merge and diverge markings, bike symbols, etc. to be provided as shown on the <i>Contract Drawing</i> .
1.5 Measurement and Payment	Delete 1.5.2 and replace with the following	All permanent markings shall be marked with thermoplastic road markings as specified under Section 32 17 23S, 2.1 Materials, unless shown otherwise in the Schedule of Quantities and Prices.
	Delete 1.5.3 and replace with the following	The lump sum payment for permanent thermoplastic pavement markings or MMA Solid Green covers removal of existing markings, supplying all materials and completing all the permanent thermoplastic pavement markings or MMA necessary to provide markings as shown on the Contract Drawings.
	Delete 1.5.4 and replace with the following	<p>NOTE: PAYMENT FOR PERMANENT THERMOPLASTIC PAVEMENT MARKINGS WILL NOT BE MADE UNTIL ALL TEMPORARY PAVEMENT MARKINGS AND REFLECTIVE DEVICES HAVE BEEN REMOVED.</p> <p>Payment for signage includes all sign poles, bases, sleeves, sign relocations, temporary removal, cleaning and re-installation of existing, disposal of unused materials, and sign installations (complete). The City will supply signs to supplement existing signs as required. Payment includes all labor, materials and incidentals to complete the work.</p> <p>1. Installation of each new sign pole, cap, sleeve and trapezoidal base includes all costs to supply all materials, labour and equipment and incidentals, as shown on Standard Detail Drawings SS-E11.1 & SS-E11.2, necessary to the install sign structure as shown on the Contract Drawings and as directed by the Contract Administrator.</p> <p>2. Installation of each new sign pole, cap, sleeve, galvanized steel bracket for no post barrier, as per MOT Drawing # SP635-3.8.3, includes all costs to supply all materials, labour and equipment and incidentals necessary to the sign structure as shown on the Contract Drawings and as directed by the Contract Administrator.</p> <p>3. The unit price payment is for each city supplied aluminum sign installed on a sign pole includes sign mount clamps & all costs to supply all materials, labour and equipment and incidentals necessary to install each sign as directed by the Contract Administrator.</p> <p>4. Installation of each aluminum sign on a lamp standard pole or sign pole includes sign mount clamps and all costs to supply all materials, labour and equipment and incidentals necessary to install each sign as directed by the Contract Administrator.</p>
	Add 1.5.5	Payment for the removal and disposal of all existing signages that are no longer required on site, as described in contract drawings or as directed by the Contract Administrator will include removal and

disposal of signs, poles, bases, and all labour and equipment to complete the work.

2.0 PRODUCTS

2.1 Materials

Delete 2.1.1 and replace with the following

All permanent paint markings shall be marked with thermoplastic manufactured by LAFRENTZ Road Markings, HITEX North America (HiBrite Extrude Thermoplastic), or ENNIS-FLINT (Extruded Thermoplastic).

Delete 2.1.6 and replace with the following

Pavement Markings:

Delete 2.1.7 and replace with the following

Thermoplastic material

- .1 Material composition shall be at the discretion of the manufacturer subject to the approval of the Contract Administrator and the City. Each formulation shall be identified by a code number.
- .2 No retained water when tested by ASTM D-570.
- .3 Specific gravity of the supplied product shall be within 3 % of that specified for the selected formulation.
- .4 Material shall not deteriorate upon contact with deicing chemicals, gasoline, diesel fuel or grease dropped by traffic.
- .5 Material shall not break down, deteriorate, scorch or discolour, if held within the application temperature range specified by the manufacturer for a period of four hours and it must be able to be reheated from room temperature to the application temperature four (4) times without showing any of these detrimental effects.
- .6 When applied at the temperature recommended by the manufacturer and at a film thickness of 2 to 4 mm, the material shall set solid and show no tracking under traffic after elapsed times as follows:
 - .1 Two (2) minutes at an air temperature of 10° C, relative humidity less than 75 %, and road surface temperature from 10° C to 20° C.
 - .2 Five (5) minutes at an air temperature of 32° C, relative humidity less than 75 %, and road surface temperature from 35° C to 50° C.
 - .3 The drying time under conditions intermediate between the two air temperatures shall be interpolated using a straight line model.
- .7 The quantity, type, and gradation of the component reflecting glass spheres premixed in the thermoplastic material shall be at the discretion of the manufacturer, but shall provide retroreflection levels specified below.

3.0 EXECUTION

3.3 Application

Add to 3.3.1.3

Temporary raised pavement markings (TRPMs) are to be provided on all multi-lane roadways as directed by the *Contract Administrator* and the City.

Delete 3.3.3.3 and
replace with the
following

Thermoplastic material shall be heated in the melter to a temperature of 382 °F.

END OF SECTION

1.8	Measurement and Payment	Delete 1.8.2 and replace with the following	<p>Payment for watermain will include location and exposure of existing utilities, saw cutting and disposal of pavement, trench excavation, disposal of surplus / displaced excavated material, support of utility poles and adjacent piping, supply and installation of all pipe, bends, bolts, gaskets, thrust blocks, couplings, restraints and tie rods, all nuts, bolts and fasteners to be 304 stainless steel or better, application of petrolatum mastic on all metal but non stainless water appurtenances, blind flanges, caps, fittings and related materials, tie-ins, bedding, approved native excavated backfill material compacted in place, import backfill, cleaning, pressure and leakage testing including all labor, material and equipment required to complete the test, flushing, disinfection where required, granular sub-base, granular base, all surface restoration as specified under Section 31 23 01 – Sub-section 3.6, COQ-G4 and all other work and materials necessary to complete installation as shown on Contract Drawings, as described in Schedule of Quantities and Prices, and as specified under this Section; and</p> <p>Payment includes pre-determining of existing watermain OD by Contractor prior to start of work for proper joint restraint sizing.</p> <p>Measurement for watermain will be made along the centerline of the main, through the valves and fittings, with no deduction for length of valve or fittings, over surface after work has been completed; and</p> <p>Native excavated material approved for re-use as trench backfill shall be at the sole discretion of the Contract Administrator. All cobbles greater than 150 mm diameter removed and disposed off-site and shall be granular in nature and free from organic materials. Native excavated material shall not be used as trench backfill where moisture content does not permit compaction to specified density. Where native excavated material is unacceptable for use as trench backfill, imported trench backfill shall be supplied, placed, and compacted to specified density.</p>
		Delete 1.8.3 and replace with the following	<p>Payment for inline gate valves or butterfly valves including Terminal City Nelson Type valve boxes, restraints; and for fittings (crosses, tees, bends, reducers, blind flanges, caps, anchors and etc.) will be made for items identified on Contract Drawings and installed as part of watermain as described under 1.8.2 in this Section.</p> <p>Payment for fittings, unless specified in the Schedule of Quantities and Prices, performed under this section will be incidental to payment for work described in other Sections.</p> <p>Measurement will be for each respective item installed without deduction of length of valves and fittings from length of pipe measured for payment under 1.8.1 and 1.8.2 in this Section.</p>
		Add 1.8.15	<p>Payment includes removal of existing bend, concrete thrust blocks, relocation of existing fire hydrant, supply and installation of necessary pipe extensions, concrete thrust block, coupler, tie rods, bedding material, testing and disinfection, as indicated in the requirements in 1.8.2 of this Section and all other incidental work as shown on MMCD Standard Detail Drawing W4.</p>

Measurement will be made at the unit price bid for each hydrant assembly/relocated.

Add 1.8.16

Provide and install concrete thrust block (RATB) as shown on Contract Drawing complete including all labour and material required.

2.0 PRODUCTS

2.2	Mainline Pipes, Joints and Fittings	Add to 2.2.1.1	Pipe: to AWWA C151, and shall meet the following Pressure Class or Thickness Class: .1 100 mm – 350 mm – Thickness Class 50 .2 400 mm & greater – PC 350
		Delete 2.2.2.2 and replace with the following	Joints: It is mandatory that the push-on integrally thickened bell and spigot type conform to ASTM D3139 Clause 6.2 with single elastomeric gasket to ASTM F477.
		Delete 2.2.4.13 and replace with the following	Joint Restrain Devices: General Requirements: .1 Ductile iron castings to ASTM A536. .2 Anti-corrosion coating of ductile iron castings to AWWA C219, AWWA C210, AWWA C213 or AWWA C550. .3 Bolts and nuts high strength low alloy steel to AWWA C111 or as specified in Contract Documents, stainless steel to ASTM F593 or ASTM F738 for bolts and ASTM F594 or ASTM F836 for heavy hex nuts. Rolled threads, fit and dimensions to AWWA C111. .4 Tie rods to 2.2.3.8 of this Section .5 Restrainers for ductile iron pipe shall be mechanical joint fittings or push-on joint fittings with tie rod. .6 Restrainers for PVC pipe shall be mechanical joint fittings or push-on joint fittings with tie rod lugs. .7 Restrained harnesses or integral restrain systems manufacturers as part of the pipe joint. .8 All joint restraint systems for PVC pipe be approved by the specific PVC pipe manufacturer, and that they do not derate the pipe manufacturer's recommended working pressures. .9 Restrainers for PVCO pipe shall be mechanical joint fittings or push-on joint fittings with tie rod lugs. .10 All joint restraint systems for PVCO pipe be approved by the specific PVCO pipe manufacturer, and that they do not derate the pipe manufacturer's recommended working pressures.
		Add 2.2.7	Oriented Polyvinyl (PVC) Pressure Pipe: .1 Pipe: .1 Pipe to be manufactured to specifications for pipe size ranges as follows: .1 Pipes 100 to 600 mm diameter – AWWA C909. .2 Pipes to be certified by Canadian Standards Association for pipe size ranges 100 mm to 600 mm dia. – CSA B137.3.1.

			<p>.2 Cast iron pipe equivalent outside diameter.</p> <p>.3 To be compatible with specified mechanical joint and push-on joint fittings and valves without use of a special adapters.</p> <p>.2 Joints: Push-on integrally thickened bell and spigot type to AWWA C909 Clause 4.3.3.2 (a.) with single elastomeric gasket to ASTM F477.</p>
2.3	Valves and Valve Boxes	Delete 2.3.1.3 and replace with the following	Valves 400 mm and larger shall be butterfly valves.
		Delete 2.3.1.4	
		Delete 2.3.4 and replace with the following	Blow-Down or Blow-Off Valves: 50 mm to 300 mm as specified for mainline gate valves.
		Delete 2.3.6.1.1	
		Delete 2.3.6.1.2 and replace with the following	Circular type valve box shall be Nelson style cast iron.
		Delete 2.3.7.1 and replace with the following	Curb stop valve boxes on 19 mm dia. to 38 mm dia. shall be as shown on Coquitlam Standard Detail Drawings COQ-W2b, COQ-W2j.
		Delete 2.3.7.2	
		Delete 2.3.7.3 and replace with the following	Curb stop valve boxes (300 mm from property line) alternative on 19 mm dia. to 38 mm dia. services without operating rods to be assembled as specified for Mainline Valve Boxes 2.3.6.1.2, and shown on Coquitlam Standard Detail Drawings COQ-W2b, COQ-W2j. Service boxes may be Nelson style PVC, except when located in driveways.
		Delete 2.3.7.5 and replace with the following	Corporation stop valve boxes (at mainline tees or tappings) on services 50 mm dia. and larger as specified for Mainline Valve Boxes per Coquitlam Standard Detail Drawings COQ-W2e, COQ-W2f.
2.5	Service Connections, Pipes, Joints and Fittings	Delete 2.5.1 and replace with the following	Pipe diameter 19 mm to 75 mm to be Type K annealed copper to ASTM B88M.
2.6	Hydrants	Delete 2.6.1.6 and replace with the following	Pump nozzle shall be "quick connect" STORZ type. STORZ type nozzle must be painted gloss black.
		Delete 2.6.2 and replace with the following	Colour: Tremclad Rust Paint Body – Fire Red Hose Caps and Bonnet – Bright Yellow

2.8	Granular Pipe Bedding and Surround Material	Add 2.8.3	Bedding and surround material shall be Type 1 under Section 31 05 17 – 2.7 or 19 mm minus clear crushed gravel.
3.0 EXECUTION			
3.6	Pipe Installation	Add 3.6.15	When the watermain crosses a storm or sanitary sewer, the watermain shall be installed a minimum 0.5 m clear above the sewer. Where this is not possible, the watermain shall have a minimum 0.3 m clearance under the sewer with all joints within a 3.0 m horizontal distance from the sewer wrapped with heat shrink plastic or packed and wrapped with petrolatum tape in accordance to the following standards: <ul style="list-style-type: none">.1 ANSI/AWWA C214 (factory applied).2 ANSI/AWWA C209 (field applied).3 ANSI/AWWA C217-90 (petrolatum tape).4 All materials used are to have zero health hazard Installation shall be in accordance with the requirements of the Regional Health Engineer under the Health Act.
3.10	Service Connection Installation	Delete 3.10.4	Delete 3.10.5 and replace with the following Tappings in cast iron or ductile iron mains to AWWA CISI pipe to be made using double strap saddles specified in 2.5.3 of this Section.
		Add 3.10.13	Water service connections (19 mm and 25 mm) must be installed as one continuous length of pipe.
3.18	Cleaning and Preliminary Flushing	Add 3.18.5	Water mains 400 mm and larger shall be swabbed as per the following procedure: <ol style="list-style-type: none">1. Purpose and Scope .1 To remove any possible contaminants introduced into the water main through pipe storage or installation activities.2. Swab Requirements .1 Swabs are to be of a polyurethane foam construction, minimum 2 lb/ft³ density .2 Swabs are to be new. Used swabs will not be accepted. .3 Swab outside diameter must be minimum 1 nominal size larger than the largest diameter main to be swabbed (eg. 150 mm main requires minimum 200 mm diameter swabs) .4 Swab length must be minimum 1.5 times the outside diameter.3. Swab Entry Point .1 2 swabs are to be inserted into the beginning of the first length of water main installed into the trench. Swabs are

to have a minimum of 1-meter separation between them.

.2 Minimum 300 grams of calcium hypochlorite granules are to be installed in between the 2 swabs.

4. Swab Discharge Point

.1 Swabs are to be discharged from the water main at the end of the installation (ie-permanent or temporary dead end)

.2 A temporary connection for a discharge assembly of minimum 150 mm (100 mm is acceptable for 100 mm water main only) is to be made to the end of the new water main pipe (connection to a blow off assembly is not acceptable).

.3 The discharge assembly must consist of a 90-degree elbow and appropriate fittings to adapt to 150 mm "camlock" style layflat hose. The assembly must have adequate thrust protection to avoid blowing off during the swabbing procedure.

.4 The 150 mm layflat hose must extend above the surface of the existing ground.

5. General Swabbing Requirements

.1 Swabbing to be performed after the satisfactory completion of all pipe work (as determined by the city inspector), and prior to flushing, pressure testing, and chlorination of the new water main.

.2 Swabbing of the water main is to be witnessed by the City of Coquitlam.

.3 Although a minimum of 2 swabs must be used for each run, additional swabs may be required depending on the time required for the water to run clear after swab discharge. This determination will be made by the City of Coquitlam.

.4 Swabs are to be used once only. Additional new swabs will be required for additional swab runs if deemed necessary by the city.

.5 Swabs must be stored and handled hygienically.

.6 The contractor must provide all labour and materials required to carry out the swabbing procedure.

.7 Swabbing should be completed from a low point to a high point where possible.

.8 A plan to complete the swabbing must be submitted to the City of Coquitlam prior to the work taking place for approval.

.9 The contractor must take all necessary action to prevent flooding of the discharge area.

6. Swabbing Procedure

.1 The length of main within the swabbing run must have all connections larger than 25 mm isolated by closing appropriate valves.

.2 The new main is to be filled and swabs propelled via a certified backflow prevention device (double check valve assembly) and water meter from the existing system. The connection to the existing system will form part of the plan submitted to the city for approval.

.3 Appropriate flow is to be used to propel the swabs at approximately .75 meter per second velocity. See following list for appropriate flow:

Main diameter (mm)	Approximate flow required to produce 0.75 m/s velocity (l/s)
100	6.3
150	12.6
200	25.2
250	37.9
300	56.8
600	227.2

.4 Upon discharge of the swabs, the main must be flushed until the water runs clear.
.5 The supply point can then be slowly closed.
.6 Additional swabs must be run through the water main if excessive debris is noted to be discharged from the main or there is excessive clean up time after the swabs are discharged.

3.23	Connection to Existing Mains	<p>Delete 3.23.1 and replace with the following</p> <p>Add 3.23.2</p> <p>Add 3.23.3</p> <p>Add 3.23.4</p> <p>Add 3.23.5</p> <p>Add 3.23.6</p> <p>Add 3.23.7</p>	<p>Connections to existing waterworks systems will be made by the Contractor under the supervision of the Contract Administrator. Make all necessary arrangements with the Contract Administrator and the City to schedule work to prevent construction delays.</p> <p>Provide written notification to all affected residents a minimum 48 hours prior to service interruption.</p> <p>Arrange shutdown of the existing valves by the City. <i>Contractor</i> shall not operate any valves without prior approval of the <i>Contract Administrator</i> and the City.</p> <p>Provide temporary water service while existing service is interrupted as detailed in <i>Contract Drawing</i> or Project Specific Specifications.</p> <p>Fittings used for tie ins should be cleaned of all foreign material and sprayed with a 1% hypochlorite solution prior to assembly. Disinfect all pipes and fittings installed at the connection.</p> <p><i>Contractor</i> shall be responsible for the costs for the City to flush and purge all air from existing mains and services in the area affected by the water service interruption.</p> <p>Procedures for BacteriologicalTests shall be as described in AWWA C651-99. No connection to existing watermains will be authorized until final results of coliform bacterial testing have been received and reviewed by the Water Superintendent.</p> <p>All samples shall be taken by the City Water Utility.</p> <p>All valve operation shall be handled by the City Water crews.</p> <p>The <i>Contractor</i> shall provide sampling points, one every 366m plus the end of each main segment. The <i>Contractor</i> shall provide all labour to temporarily connect and disconnect the new main in order to properly acquire test samples.</p>
-------------	-------------------------------------	---	---

Initial flushing, testing and chlorination will be undertaken by the *Contractor* from a water source approved by the Water *Superintendent*.

Coordination for the bacterial testing and tie in shall be coordinated by the project Engineering Inspector and the Water *Superintendent* prior to final flushing.

The *Contract Administrator* shall review with the Water *Superintendent* and the *Contractor* sampling locations and appurtenances.

The *Contract Administrator* shall check and record chlorine residual prior to final flushing.

After final flushing the City Water crew will collect two sets of samples 24 hours apart. Samples will be taken at least every 366m of the new main as well as the terminus and all branches.

Test results will be delivered to the Water Superintendent who will provide a copy to the Contract Administrator.

The Water *Superintendent* will judge the adequacy of the test results and issue an authorization to connect.

City Water crews will provide shutdown and flushing as required.

**3.25 Permanent Capping
of Existing Water
Service Connections** Add 3.25

Permanent capping of existing water service connections to be completed as per Coquitlam standard Detail Drawings COQ-W2g, COQ-W2h, COQ-W2i.

END OF SECTION

2.0	PRODUCTS		
2.2	PVC Pipe, Mainline Smooth Wall	Delete 2.2.1 pipe size ranges and replace with the following	200 mm dia. – 375 mm dia. to ASTM D3034 450 mm dia. – 1,200 mm dia. to ASTM F679
2.3	PVC Pipe, Mainline Profile	Delete 2.3	
2.6	Service Connections	Delete 2.6.1 and replace with the following Delete 2.6.8.1 Delete 2.6.8.2 and replace with the following Add 2.6.8.3	Storm service connections to be PVC DR 28 150 mm diameter minimum or as specified on <i>Contract Drawings</i> . Connections to PVC pipe to be made with a performed wye fitting where mainline pipe is 300 mm diameter or smaller. For connections to PVC mainline pipe larger than 300 mm diameter an insertable tee for PVC pipe is permitted. Insertable tee fitting shall have a rubber collar which inserts into the mainline pipe to form a tight seal and shall have stainless steel band to secure the tee insert. The tee insert shall be a standard bell end with depth control lugs. The joint shall provide a minimum seal of 90 kPa on concrete and polyethylene pipe, and 190 kPa on PVC pipe.
2.9	Granular Pipe Bedding and Surround Material	Delete 2.9.3	Pipe bedding shall be 19 mm clear crushed rock or as approved by the <i>Contract Administrator</i> and the City.
3.0	EXECUTION		
3.8	Connections to Existing Mainline Pipe	Delete 3.8.3 and replace with the following	For new connections to existing, smooth wall or profile, mainline sewers 300 mm and smaller, shall be made by removal of the section of the main and replacement with a preformed PVC wye fitting complete with stubs and double hub PVC couplings for PVC mains and approved shear band couplings for other mainline materials. For new connections to existing mainline greater than 300 mm, use of insertable tee will be permitted.
3.10	Service Connection Installation	Delete 3.10.3 replace with the following	Inspection chambers shall be provided on all storm service connections as per Standard Detail Drawing S7. If inspection chamber is located in driveway, lane, or paved surface, Series 37 Brooks concrete box with lid shall be installed as per Standard Detail Drawing S9.
3.12	Inspection and Testing		The contractor shall video inspect completed storm sewers under 900 mm in diameter and all service connections following completion of the installation. The video inspection report shall be in a form specified by the Contract Administrator and the City. Copies of the video DVD and written report shall be forwarded to the Contract Administrator and the City. Refer to Section 33 01 30.1 and 33 01 30.1S CCTV Inspection of Pipelines.
3.16	Permanent Capping of Service Connections	Add 3.16.1	Permanent capping of existing storm sewer connections to be completed as per Coquitlam Standard Detail Drawing COQ-S18.

Add 3.16.2

A trenchless method of permanently capping a service may be required on an arterial road or on a road which has been paved within 5 years, as directed by the Manager.

The trenchless technology used to cap the service must be approved by the Manager.

END OF SECTION

1.0 GENERAL

1.1	Related Work	Add 1.1.6	Hot Mix Asphalt Concrete Pavement	Section 32 12 16
		Add 1.1.7	Portland Cement Concrete Paving	Section 32 13 13
1.5	Measurement and Payment	Delete 1.5.1 and replace with the following	Lump sum payment includes all labor, material and equipment required to complete the installation as shown on Contract Drawings and specified under this Section. Payment includes subgrade preparation, compaction of base material, all in-situ concrete work, supply and installation of concrete base, lid suitable for H2O loading and as per City standard, metal frame, concrete lid, barrel and riser sections including ladder rungs, manhole benching, and all associated works as shown on the Contract Drawings and as described in Schedule of Quantities and Prices. Payment includes manhole preparation to accommodate tie-ins, excavation, disposal of surplus excavated material, base preparation, bedding and import backfill. No payment will be made under this item carried out as part of operation of items described in other Sections.	
		Delete 1.5.2 and replace with the following	Payment includes supply and installation of new catchbasin/lawnbasin as described in Schedule of Quantities and Prices including catch basin base, concrete barrel, concrete riser, pvc sanded stub, donut ring, off-set sump, H2O rated concrete frame/lid, metal frame, top inlet and grate, aluminum trapping hood and all labor, material and equipment required to complete the work from specified invert to finishing level and as per Standard Detail Drawing as described in Schedule of Quantities and Prices. Payment includes excavation, disposal of surplus excavated material, base preparation, bedding, import backfill, catchbasin/lawnbasin preparation to accommodate catchbasin/lawnbasin connection, installation of all in-situ concrete work, all labor, material, equipment and necessary work for installing the catchbasin/lawnbasin. Catchbasin/lawnbasin lead work will be made under Section 33 40 01S – Clause 1.6.5.	
		Delete 1.5.3 and replace with the following	Adjustment of tops of existing units will be measured in units adjusted as defined below and paid for under their respective Item in the Schedule of Quantities. <u>No payment will be made under these items for cleaning Valve Boxes, Monument Boxes, Manhole Frames & Covers and Lids of Castings as part of the operation for asphaltic concrete paving.</u> <u>No Payment will be made for adjusting External Utilities Valve Boxes, Monument Boxes, Gas valve boxes, Lawn Drains, Cleanouts and Inspection Chambers, these adjustments will be treated as incidental work unless otherwise specified.</u> <u>All manholes & valve boxes must be vertically adjusted a minimum of 24 hours prior to paving.</u>	
			1. Manhole frames and lids adjustment and replacement will be defined as supplying and installing a new manhole frame and lid and setting to the finished grade. Adjustments and replacements shall include	

jackhammering, removal and disposal of the existing frame and lid, replacement, removal of concrete bricks, addition or removal of precast concrete riser rings, cement mortar, supply and installation of new manhole frame and lid set to final grade, temporary asphalt ramping and all other incidental work.

Manhole frames and lids adjustments ONLY is the re-use of existing frames and lids and all the necessary work as described above.

2. Water Valve Box replacements will be defined as supplying and installing a new Nelson Type Terminal City Water Valve Box frame & lid and setting to the finished grade. Replacements shall include jackhammering, removal and disposal of the existing frame and lid and all other incidental work. Adjustment of water valves on existing new watermain
3. Catchbasins frame and lid replacement will be defined as setting as supplying and installing a new catchbasin frame & lid to the correct elevation. Adjustments shall include jackhammering, removal of the existing grating and frame and all other incidental work. Payment includes excavation, disposal, removal of concrete bricks, removal or addition of precast concrete riser rings, cement mortar, disposal of surplus excavated material, cast-in-place concrete, pipes, fittings and related materials together with all labour, materials and equipment required. Catch basin lead work is considered to be incidental to payment for catch basin lead work described in other sections.

The use of Steel/Metal Casting Risers Rings will not be accepted to adjust manholes or water valves to the final asphalt elevation.

2.0 PRODUCTS

2.1 Materials Add 2.1.7.3 Any frame and cover assembly creating a point load on the concrete riser rings will not be permitted.

Delete 2.1.12 and replace with the following

Catchbasin lids manufactured to ASTM C478M

Delete 2.1.16.2

Delete 2.1.17

3.0 EXECUTION

3.1 Excavation and Backfill Add 3.1.2 For manholes, when base gravels are complete, excavate for grade rings and manhole frame assembly. Do not disturb the compacted road base beyond the excavation requirement.

3.3 Manhole Installation Delete 3.3.12.2 and replace with the following

Allowable products are precast concrete risers and cast-in-place form system. Individual riser heights shall be 50mm, 75mm, or 100mm.

Delete 3.3.12.5 and replace with the following

Proper layer of grout between the spacers, covering the entire surface of the rings, should be utilized.

		Delete 3.3.15 and replace with the following	Install drop structures as shown on the contract drawings to Coquitlam Standard Detail Drawing COQ-S4 and Standard Detail Drawing S3. Maximum allowable inside ramp shall be 250 mm invert to invert.
		Delete 3.3.17 and replace with the following	Ensure frames conform to design contour of pavement or existing surface. Manhole lids left raised in preparation for overlay paving shall have a rubberized protector ring or asphalt ramp. The use of riser rings for adjusting manhole frames will not be permitted.
3.5	Catchbasin Installation	Delete 3.5.1 and replace with the following	Install catchbasins as shown on Coquitlam Standard Detail Drawings COQ-S11A, COQ-S11B and Standard Detail Drawing S11, to general standards and installation procedures described under 3.3 of this Section.

END OF SECTION

1.0 GENERAL

1.3	Shop Drawings	Delete 1.3.4 and replace with the following	Shop drawings for pole structures, where required, to be sealed by a Professional Engineer registered in British Columbia.
1.4	Electrical Energy Supply	Add 1.4.4	The Electrical <i>Contractor</i> will process a letter of application to the City of Coquitlam for the Utility Company and attain all required permits.
1.5	Contractor Qualifications	Add 1.5.3	All on-site traffic signal installations shall be under the responsibility of a primary journeyman electrician with IMSA Level 2 Signal Certification and have successfully completed at least five (5) traffic signal system installations. This primary journeyman electrician is expected to have to be at the <i>Place of Work</i> and report work progress to City of Coquitlam's Traffic Operations staff, in addition to reporting to the <i>Contract Administrator</i> .
		Add 1.5.4	<p><u>Fibre Optic Cable:</u></p> <p>.1 All fibre optic cable installations workmanship, material and/or installation practices and activity will be equal to or better than the standards established by the CAN/CSA T529-530-M90 Standards and the Canadian Electrical Code.</p> <p>.2 Those retained to complete the work must be authorized, trained and certified by the manufacturers they represent. They must have a minimum of two (2) years experience installing and testing multimode and single mode cables of all types as well as experience with LC and SC connectors.</p> <p>.3 Those retained to complete the work must have experience installing cabling for FDDI (Distribution System Data Interface) compliant 100 Mbit/sec, SONET, ATM, Token Ring or Ethernet networks using industry accepted systems and practices. Experience with leading manufactures fiber products and systems would be beneficial.</p> <p>.4 Those retained to complete the work must be prepared, trained and equipped to properly test the fibre cabling system, including the fibre transmission media and connectors. Each optical fibre of each section of cable will be tested using an "Optical Time Domain Reflectometer" (OTDR) and will meet the specifications before installation. After installation an "Optical Light-loss Testing Sets" (OLTS) will be mandatory to determine cable length, locate any fibre breaks or anomalies, measure attenuation of fibre's, connectors and assess fibre uniformity. Those retained to complete the work will provide a report showing all values measured during these tests.</p>
1.6	Permits and Tests	Add 1.6.5	<i>Contractor</i> shall provide the BC Safety Electrical Permit, and arrange all inspections with the City. The inspection entails, but not limited to, Coquitlam's "Intersection and Cabinet Start-up Checklist", which can be obtained from Coquitlam's Traffic Operations staff.
2.0	PRODUCTS		
2.1	General	Delete 2.1.2 and replace with the following	All products supplied to be new, in accordance with <i>Contract Documents</i> . All products are to meet Canadian Electrical Code requirements and be certified by either CSA, UL®, or Intertek Testing Systems (Warnock Hersey) and be supplied with the certifier's label.

		Delete 2.1.3 and replace with the following	All products shall be in accordance with the City of Coquitlam's List of Approved Materials and Products List. Any products not listed within the Approved List shall default to the current BCMOTI specification.
		Delete 2.1.5 and replace with the following	Equipment models listed within the City of Coquitlam's List of Approved Materials and Products shall be confirmed with the City immediately prior to their order to ensure that they are current. Cut-sheets, equipment make, model and serial number list to be provided to the City by the <i>Contractor</i> for each traffic signal location. Material supplied by City of Coquitlam and installed by <i>Contractor</i> , shall be shown in the <i>Contract Documents</i> .
2.2	Conduit	Add 2.2.1.3	All exposed metallic surfaces to be hot dip galvanized.
2.3	Trench marker Tape	Add 2.3.2	Detectable (magnetic) market tape shall be used in all trenches containing interconnection (communications) conduit.
2.5	Concrete Junction Boxes	Delete 2.5 and replace with the following	Refer to the City of Coquitlam's List of Approved Materials and Products. For Concrete Vaults: Refer to Coquitlam Standard Detail Drawing SS-E2.5.
2.8	Conductor Tags	Delete 2.8 and replace with the following	Refer to the City of Coquitlam's List of Approved Materials and Products.
2.10	Fuse and Fuse Holders	Delete 2.10 and replace with the following	Refer to the City of Coquitlam's List of Approved Materials and Products.
2.11	Service Panels	Add 2.11.5	Refer to the City of Coquitlam's List of Approved Materials and Products.
2.16	Traffic and Pedestrian Signals	<p>Delete 2.16.1 and replace with the following</p> <p>Delete 2.16.2 and replace with the following</p> <p>Add 2.16.3</p>	<p>Traffic signal heads to be yellow polycarbonate with 300 mm round signal indications, and conform to Section 601 Signal and Pedestrian Heads BCMOTI E&SMS V1. All primary and secondary signal heads shall have yellow aluminum backboards with 75 mm border of yellow prismatic retro-reflective sheeting (3M™ Scotchlite™ Diamond Grade™ VIP Reflective Sheeting Series 3990 or approved alternate).</p> <p>Fire signal head assembly as per Coquitlam Standard Detail Drawing SS-E5.19.</p> <p>Signal head backboards with plumbizer gaps or knock out sections will not be accepted for adjustable bracket signal head mounting method.</p>
2.17	LED Signal Modules	Delete 2.17 and replace with the following	Refer to the City of Coquitlam's List of Approved Materials and Products.
2.19	Signal Mounting Hardware	<p>Add 2.19.8</p> <p>Add 2.19.9</p>	<p>Primary signal head safety cable to be 3/32" galvanized steel aircraft cable.</p> <p>Refer to the City of Coquitlam's List of Approved Materials and Products.</p>
2.20	Audible Signals	Delete 2.20 and replace with the following	Refer to the City of Coquitlam's List of Approved Materials and Products.

2.21	Pedestrian /Cyclist Pushbuttons	Delete 2.21 and replace with the following	Refer to the City of Coquitlam's List of Approved Materials and Products.
2.22	Luminaires	Add 2.22.6	Refer to the City of Coquitlam's List of Approved Materials and Products.
2.29	Illuminated Crosswalk Signs	Delete 2.29 and replace with the following	Refer to the City of Coquitlam's List of Approved Materials and Products. Illuminated sign safety cable to be 3/32" galvanized steel aircraft cable.
3.0 EXECUTION			
3.1	General	Add 3.1.5	During the installation of the traffic signal system, maintain the existing traffic signal and/or signs as noted on the <i>Contract Drawing</i> . If temporary or permanent relocations of related traffic signal equipment or signs are required, such equipment shall be reinstated as required under the <i>Contract Documents</i> or as directed by the <i>Contract Administrator</i> .
3.3	Concrete Bases	Add 3.3.7	Concrete service bases detailed on Standard Detail Drawings CE1.3 and CE1.4, Type C1 and C3 service bases shall have five (5) conduits. See Coquitlam Standard Detail Drawing SS-E7.3.
		Add 3.3.8	Lifting cables on concrete controller bases shall be removed after base installation.
		Add 3.3.9	All concrete bases shall be pre-cast concrete only, unless noted on <i>Contract Drawing</i> or directed by the <i>Contract Administrator</i> .
3.4	Junction Boxes and Vaults	Delete 3.4.1 and replace with the following	Install junction boxes as shown on Standard Detail Drawings E2.2 to E2.4. Install vaults as shown on Coquitlam Standard Detail Drawing SS-E2.5.
		Add 3.4.5	Bell end fittings shall be installed in all conduits entering junction boxes or vaults.
		Add 3.4.6	Junction boxes requiring 3 or more sections must be approved by the City of Coquitlam's Traffic Operations staff.
		Add 3.4.7	All junction boxes shall be provided with RPVC bars to support electrical connections and fuse holders. The RPVC bars shall be attached into the junction box side walls with the electrical connections/fuse holders tie-wrapped in place and installed in the up-right position.
3.5	Underground Conduit	Delete 3.5.2 and replace with the following	Minimum cover over conduits to be 600 mm in boulevard areas and 900 mm in roadway areas, unless otherwise specified in the contract documents.

TRAFFIC SIGNALS

	Delete 3.5.3 and replace with the following	Place trench marker tape 300 mm above installed conduit in trench. Trench marker tape not required for conduits installed via trenchless technology.	
	Delete 3.5.5 and replace with the following	Empty conduits shall have a No. 8 HB Yellow/Green Mk pull string and capped at both ends.	
	Add 3.5.6	Conduit run shall contain no more than the equivalent of 4 – 90 degree bends.	
	Add 3.5.7	Conduits shall be blown out with compressed air, from both ends if necessary, then swabbed out to remove stones, dirt, water and other material which may have entered during installation.	
	Add 3.5.8	All conduits entering poles and cabinets shall be sealed with "Duct Seal".	
	Add 3.5.9	Conduit depth of bury to be recorded when a trenchless technology method is used.	
	Add 3.5.10	Traffic signal communications conduit shall enter and leave junction boxes through bell end fittings in the horizontal position (no bends) and shall run straight through the junction box unless a change in alignment occurs, or as otherwise specified on the <i>Contract Drawing</i> .	
	Add 3.5.11	Conduit shall not be bent in the field. Only factory bends will be accepted.	
3.7	Traffic Signal and Pedestrian Head Mounting	Delete 3.7.1 and replace with the following	Install traffic signal and pedestrian signal heads as shown and Standard Detail Drawings E5.2 and E5.9 only. Banding straps shall be used for primary signal heads.
		Add 3.7.5	Primary traffic signal heads shall be safety cabled to the traffic signal pole arm using 3/32" galvanized steel aircraft cable looped through the traffic signal backboard and fastened with a rope clip.
3.8	Audible Signals	Delete 3.8.1 and replace with the following	Install audible signal in accordance with Coquitlam Standard Detail Drawing SS-E5.12.
3.10	Luminaires and Photocells	Add 3.10.4	NEMA wattage label shall be visible at the bottom of the luminaire on all fixtures.

SUPPLEMENTARY CONTRACT SPECIFICATIONS			SECTION 34 41 13S SS 54 2026
			TRAFFIC SIGNALS
3.13	Electrical Service Panels	Delete 3.13.1 and replace with the following	Mount electrical service panels in service base or on poles as shown on Standard Detail Drawings E7.2, E7.6 to E7.9, as well as Coquitlam Standard Detail Drawings SS-E7.3 to SS-E7.5.
3.14	Wiring	Delete 3.14.3 and replace with the following	With the exception of conductor spliced of detector loop wires to shield cables, make conductor splice in pole handholes. Make splices of detector loop wires to shielded cable in junction boxes.
		Delete 3.14.13 and replace with the following	Bond all signal heads and luminaires with No. 12 RW90 green conductor, and steel junction box lids with No. 8 RW90 green conductor.
		Add 3.14.14	Detector loop cable splices shall be soldered with rosin core solder (no acid core or acid flux) then cap with waterproof gel filled wire nut and tape with vinyl di-electric tape. Suspend and ty-wrap splices at top of junction box with open end of wire nut pointing down. Loop shield drain conductor shall cut and be isolated from the system ground. See Coquitlam Standard Detail Drawing SS-E8.4.
3.16	Traffic Controller	Add 3.16.8	Silicone sealant shall be applied to both sides of the rubber gasket, which is placed between the traffic signal cabinet and the concrete base to ensure a weather tight seal.
		Add 3.16.9	Traffic cabinet interior shall be kept dry during inclement weather.
3.19	Advance Warning Signs	Add 3.19.2	Contrary to Standard Detail Drawing E10.3, Item A shall be a 300 mm signal head section with LED display.
		Add 3.19.3	Advance warning signs shall have yellow prismatic retro-reflective sheeting (3M™ Scotchlite™ Diamond Grade™ VIP Reflective Sheeting Series 3990 or approved alternate).
3.20	Grounding & Bonding	Add 3.20.5	Ground plates and grounding conductors are to have a minimum of 5 meters clearance between them and other utility grounding.
		Add 3.20.6	Grounding rod or plate electrodes shall not be installed inside the traffic signal cabinet base.
		Add 3.20.7	Remove all paint around bonding studs on inside of pole to expose the galvanized or metal surface prior to bonding equipment.
3.22	Pole Finish Application	Delete 3.22 and replace with the following	<p>.1 Prior to producing a powder finish product the supplier must provide a Certificate of Compliance indicating that they have met or exceeded the following specifications. The supplier will name their independent testing agency and this information will be submitted to the City for their files.</p> <p>.2 The application process will be as follows:</p>

- .1 The pole or product will be hot dip galvanized.
- .2 Powder will only be applied after the product is completely fabricated. No welding or bending will take place after the powder is applied.
- .3 The pole or product will be thoroughly cleaned by brush blasting in accordance with SSPC-SP7. The brush blast will maintain a minimum profile of 0.5 mils. If brush blasting is done off site then the product will be covered and shielded from any dirt or moisture during its return to the powder applicators facility. Where poles or products are not kept clean and dry or have any signs of flash rust they will be returned for further brush blasting.
- .4 Once at the applicators facility the pole or product will be thoroughly cleaned and dried with an air gun. All hand marks or grease spots will be cleaned with a mild solvent.
- .5 After brush blasting the entire pole or product will be pre-baked in an oven at 220 degrees C for at least 30 minutes to 1 hour, depending on steel thickness. The pre-baking must be done to prevent out-gassing during the curing cycle.
- .6 The base powder coat will then be applied electrostatically while the pole or product is cooling from the 220 degrees C pre-bake period to allow the powder to melt and fuse to the surface. The base coat will be a minimum of 3 mils in thickness.
- .7 After base coat is applied and set the topcoat will be applied to a thickness of 3 to 5 mils. The pole or product will be returned to the oven and heated to 190 to 220 degrees C (temperature will not exceed pre-bake) for a minimum of 25 minutes, depending on steel thickness. Thicker product material may require longer bake cycles to fully cure. Upon removal of the pole or product from the oven it will be left to rest until the pole or product is cool enough to the touch.
- .8 Once the topcoat has cured and the poles or product cooled, they will then be individually wrapped (min 4" overlapping method) with 1/8" foam wrap over the entire pole or product. The poles or product will be bundled together and separated with suitable wood dunnage to avoid contact between the poles, product or other bundles. All bundles themselves will be fully wrapped with foam and with stretch-wrap as noted above. The poles or products will be handled and shipped with great care to prevent damage; damaged product will be cause for rejection of the item(s).

.3 Testing process will be as follows:

- .1 Each run of product in an oven will have at least one sample tested for:
- .2 Adhesion – The finished powder surface will have minimum pull-off strength exceeding 1000 PSI as tested in accordance with ASTM D4541.
- .3 Quality – The finished powder surface will be free from any holidays (skips or misses) as tested in accordance with ASTM D4541. The product will also be free from wrinkles, orange peel, cracking, pinholes, fish eyes, blisters, etc by visual inspection.

- .4 Color – The color will be verified to be within 3 DE of specialized color.
- .5 An independent firm such as CanSpec Testing who are qualified to test powder finish will do the testing at the supplier's expense. The result of tests must accompany the Certificate of Compliance and will be made available to the City or their representative upon request. A supplier who fails to test product as noted above will have their product rejected until the testing is completed and the product deemed acceptable by the testing agency.
- .6 Where the tested product fails on a given production run then a minimum of 30 % of the entire production run will be tested. If no other failures are found then the individual failed product will be stripped, reapplied and re-tested until it passes. If any of the 30% of product tested fails then the entire order will be stripped, reapplied and retested until it passes.
- .4 Field repairs will be undertaken as required to fix any scratches or imperfections in the final finish. Field repairs will be done as follows:
 - .1 Feather the damaged area with sandpaper.
 - .2 Clean area with solvent.
 - .3 Let dry.
 - .4 Neatly brush on an application of Aliphatic Urethane Acrylic Semi-Gloss High Build applied at 2-4 mils DFT over the entire sanded and damaged area. The ambient conditions will be dry and over 10 degrees C when the paint is applied.
 - .5 The pole supplier will warranty the integrity of the surface for a minimum of 1 year from the date of installation. The warranty will include all labour and materials required to provide replacement product if required. The powder finish will be the responsibility of the pole supplier. The warranty will apply to fading, blistering, cracking or chipping of the surface.

3.26	Uninterruptable Power Supply	Add 3.26.2	Uninterruptable power supply/cabinet to be installed on the side of the traffic controller cabinet as detailed on the <i>Contract Drawing</i> and Coquitlam Standard Detail Drawing SS-E7.24.
3.28	Illuminated Street Name Signs	Add 3.28.1	Install illuminated street name signs as detailed on the <i>Contract Drawing</i> and Coquitlam Standard Detail Drawing SS-E5.18
		Add 3.28.2	Illuminated street name signs shall be safety cabled to the traffic signal pole arm using 3/32" galvanized steel aircraft cable.
3.29	Emergency Vehicle Pre-emption	Add 3.29.1	Emergency vehicle pre-emption system to be installed as detailed on the <i>Contract Drawing</i> and Coquitlam Standard Detail Drawing SS-E5.16.
		Add 3.29.2	Cable shall be continuous with a minimum of 2m of cable slack to be provided at each end, with no splices. Cabinet termination to be completed by City.

3.32	Owner Supplied Materials	Add 3.32.1	Those retained to complete the work must notify the City in writing (seven) 7 days prior to the time materials are required.
		Add 3.32.2	Unless otherwise noted, those retained to complete the work will make all necessary arrangements and pay all costs for the collection of the materials and for delivery to the <i>Place of Work</i> . They will assume responsibility for materials at the time they are picked up.
		Add 3.32.3	<p>Owner supplied materials generally consist of the following:</p> <ul style="list-style-type: none">.1 Traffic controller equipment and cabinet..2 Uninterruptable power supply equipment and cabinet..3 Emergency pre-emption equipment. <p>The exact list of materials supplied by the Owner to be confirmed with the City of Coquitlam Traffic Operations staff and <i>Contract Administrator</i>. In the case of private development projects requiring City supplied materials, the cost for supply and installation of these materials will be borne by the Developer.</p>
3.33	Fibre Optic Cable	Add 3.33	<ul style="list-style-type: none">.1 Fibre optic cables will be terminated to a twelve (12) port LC coupler panel..2 When installing Fibre Optic Communications Conduit, Fibre optic warning tape (150 mm wide orange plastic tape labelled "WARNING FIBRE OPTIC COMMUNICATIONS CABLE") and Detectable (Magnetic) marker tape is to be placed over all conduits containing fibre optic cable..3 During installation of new boxes or with all existing boxes ensure that they have been cleared of any soil, sand or gravel and other materials that have accumulated in the base of the junction box. Ensure that all empty conduits have a proper RPVC coupling and cap inserted (friction fit - DO NOT GLUE) into each duct. Once the conduit is populated, replace cap with bell coupling and glue in place..4 All communication conduits will be flushed with water and dried with compressed air. This process will be followed by pulling through a suitable size Blowing Mouse, a clean soft cloth and new No. 8 HB Yellow/Green Mk pull string.5 Perform a visual inspection of the proposed cable route and be aware of any potential problem areas. Locations in which cables will be terminated must be inspected and plans made for hardware and cable slack storage. Space and access for termination of the cable should be considered prior to starting the job. Develop a cable placement plan based upon the cable route survey and your available equipment and personnel resources. Submit a plan to the City for acceptance prior to starting work..6 Be aware that any damage due to excessive pulling, bending, or crushing, may alter the cable's transmission characteristics to the extent that the cable section will have to be replaced at the Project's expense..7 Fibre optic cables will be installed in continuous runs in conduit between the traffic signal controller cabinets (no splices are allowed).

- .8 DO NOT EXCEED THE MINIMUM BEND RADIUS OF THE FIBRE. During installation do not exceed the minimum bend radius as specified by the manufacturer.
- .9 DO NOT IMPROPERLY PULL OR EXCEED THE CABLE'S RATED PULLING TENSION as specified by the cable manufacturer. Excess pulling may not actually break the fibre, but it can cause the fibre attenuation to increase so that the installed system may not operate within the specified requirements.
- .10 DO NOT EXCEED THE VERTICAL RISE SPECIFICATION as specified by the cable manufacturer unless intermediate tension relief is used. Secure the cable to new or existing supports wherever possible.
- .11 Take precautions to protect reeled and unreeled cable from any source of damage, whether attended or unattended. Be particularly careful with pre-connected sections of cable produced to meet specific length requirements as any damage to the cable may require replacement of the entire section.
- .12 If the cable must be unreeled during installation, the "figure--eight" configuration should be used to prevent kinking or twisting. Do not coil the cable in a continuous direction except for lengths of 30 meters or less. The preferred size of the "figure-eight" is about 4.5 meters in length, with each loop about 1.5 meters to 2.4 meters in diameter.
- .13 If a cable puller is used, ensure that the recommended pulling tension of the cable is not exceeded. Do not pull through junction boxes, especially 90-degree conduit fittings, unless precautions are taken to maintain the minimum bend radius.
- .14 When installing cable in conduits, ensure the conduit does not exceed the minimum bend radius. Avoid pull boxes unless the maximum bend radius can be maintained. In controller cabinets, fibre optic cables will be tied together with ty-wraps. Each cable will be labelled within 10 cm of the terminated ends with a tag and text stating the street intersection of the opposite cable end. Cables will be tagged in the controller cabinet and all other access points with "CAUTION, FIBRE OPTIC CABLE" tags. Leave enough cable slack at termination points to allow the cable to be routed through the termination hardware to a polishing/splicing table, plus a minimum of 3 meters additional slack. Cable slack will be coiled and secured with Velcro ties for breakaway protection. Cable to termination panel will be secured to cabinet with ty-wraps
- .15 If cable lubricants are necessary, ensure that they are compatible with the cable's outer sheath. Refer to the lubricant specification sheet to ensure compatibility. In all cases avoid the use of detergent-based lubricants, as these types of lubricants promote stress cracks.
- .16 Excess cable inside pull boxes will be coiled and mechanically secured in place with Velcro straps such that the minimum bend radius is not exceeded and the cable is suspended above the pull box. The Velcro straps are to provide 'breakaway' protection in the event of an accidental dig-up between pull boxes.
- .17 Adhesive warning labels 3M – 5016 – FO type or accepted alternate will be affixed to each fibre optic cable in each access point. Access points include pull boxes and traffic signal controller cabinets. Decal strip holders, 3M – 5012 or accepted

alternate, will be used and will be secured in place using cable ties. Warning labels will be oriented so they are visible and are not blocked by other cables or equipment.

- .18 After installation, each segment of each fibre will be tested using an Optical Time Domain Reflectometer (OTDR) and power meter equipment. Testing will be done in each direction on each fibre and at both 1310nm and 1550nm wavelengths. Launch cable will be used as per the OTDR manufacturer's specifications. Those retained to complete the work will provide a report detailing the results of each test including OTDR test results in graphical format, cable length, any fibre breaks or anomalies, attenuation of fibre's, connectors and fibre uniformity.
- .19 Final testing and inspection of the cable installation will be conducted with the City on-site.

END OF SECTION

Appendix A -

Traffic Management Detail

Specifications

These supplementary Specifications must be read in conjunction with the Master Municipal Specifications contained in the Master Municipal Construction Documents (Platinum), Volume II, 2009.

1.0 GENERAL

- .1 This Traffic Management detail specification refers to the Contractor's specific plans to identify project traffic risks (including pedestrian traffic) affecting the *Work*, provide Traffic and Pedestrian Control Plans, and to implement the traffic control for the safe passage of vehicles and pedestrians through the work zone.
- 1.1 Related Works .1 Traffic Regulation MMCD Section 01 55 00S.
- 1.2 References .1 WorkSafe BC, Occupational Health and Safety (OHS) Regulation, Section 18 – Traffic Control.
.2 B.C. Ministry of Transportation (MOT) Traffic Control Manual for Work on Roadways.
- 1.3 Project Requirements .1 A Road and Sidewalk Closure Permit is required by Coquitlam for all work affecting traffic flow related to construction. A permit is required for each specific construction interference with traffic flow. A digital copy of the Road and Sidewalk Closure Permit form can be obtained for use during the contract from the City's website at www.coquitlam.ca/closure.
.2 A Road and Sidewalk Closure Permit form application must be submitted to the City's Traffic Operation Division 10 working days prior to start of work.
- 1.4 Measurement and Payment .1 For this Contract, payment for all work performed under this section, unless included in the Schedule of Quantities and Prices shall be treated as incidental work, including a Traffic Management Plan including Pedestrian Management (TMP), Traffic Control Persons (TMP), traffic markings & all temporary traffic signs, devices as required for traffic & pedestrian safety; and all other items described in the Section 01 55 00S.

2.0 PRODUCTS

- 2.1 Traffic Management Plan .1 The Contractor is required to assign a Traffic Manager for the Contract with the responsibility of preparing the Traffic Management Plan and the Traffic Control Plans, as well as the responsibility for continuing implementation of traffic control for the *Work*.
.2 The Traffic Management Plan (TMP) will consist of the following components:

These supplementary Specifications must be read in conjunction with the Master Municipal Specifications contained in the Master Municipal Construction Documents (Platinum), Volume II, 2009.

- .1 Category identification through risks and project category assessment as per MOTI Traffic Management Manual for Work on Roadways;
- .2 Traffic Control Plans for individual stages of the construction;
- .3 Incident Management Plan for the response to an unplanned event and recording of incident information;
- .4 Category 3 TMP must be signed and sealed by a qualified Professional Engineer.
- .5 Pedestrians Management

.3 Submission of the TMP is to be made to the *Contract Administrator* within five (5) days of the *Notice of Award* of the *Contract*, and must be approved by the *Contract Administrator* prior to start of the *Work*.

.4 Review of the TMP will be performed by the Contract Administrator. Comments for revisions to the TMP will be returned to the *Traffic Manager* for implementations.

.5 The Contractor shall comply with all the requirements of applicable laws, rules, regulations, codes and orders of the municipal and other appropriate authorities concerned with work on streets or highways and shall post proper notices and/or signals, and provide necessary barriers, guards, lights, flagmen or watchmen as may be necessary for proper maintenance of traffic and protection of persons and property from injury or damage. All costs involved in respect to the above requirements will be deemed to be included in the Contract Price.

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

.7 The Contractor, during the progress of the work, shall make adequate provision to accommodate the normal traffic along streets and highways immediately adjacent to or crossing the work so as to cause the minimum of inconvenience to the general public.

.8 The Contractor is required to maintain local traffic and driveway access during all stages of construction. This includes

These supplementary Specifications must be read in conjunction with the Master Municipal Specifications contained in the Master Municipal Construction Documents (Platinum), Volume II, 2009.

maintaining a 1.5m width walkway or pathway through the construction site for pedestrians.

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

2.2 Incident Management and Reporting .1 The Contractor shall facilitate incident response vehicles and staff and move traffic safely and expeditiously through or around an incident on site and provide assistance to emergency response personnel as required. An incident includes, but is not limited to, motor vehicle accidents, emergency road repairs, disabled vehicles, and debris on the road. The immediate response to an emergency shall by necessity make use of available devices and equipment.

.2 If an incident occurs on site, the Contractor will be required to submit a report to the Contract Administrator documenting details of the incident including event, location, date, time, action taken, duration and restoration of site.

2.3 Traffic Control Plans .1 The Contractor shall designate a qualified Traffic Control Supervisor for the works, per the requirements of WCB regulations Section 18.

The designated Traffic Control Supervisor may be the same individual that is designated as the Traffic Manager, or may be a separate individual qualified for the responsibilities of this function.

.2 The Contractor shall prepare weekly the anticipated traffic and pedestrian control activities, locations, and durations for the upcoming week.

.3 Permissible delays shall only be considered outside Peak Hours. Permissible delays are categorized as follows:

a) Minor Delays - Less than two (2) minutes in duration; for occasional interruption due to construction activities. These delays shall be coordinated with available breaks in the traffic flow.

b) Major Delays - Maximum five (5) minutes in duration; for occasional interruption of traffic for construction

These supplementary Specifications must be read in conjunction with the Master Municipal Specifications contained in the Master Municipal Construction Documents (Platinum), Volume II, 2009.

activities if traffic volumes permit. These delays shall be coordinated with available breaks in the traffic flow.

.4 The Contractor is responsible for ensuring that the flow of traffic is unimpeded by construction-related activities.

3.0 EXECUTION

3.1 Traffic Control Plan

.1 A copy of the approved current Traffic Plan must be held on site by both the Site Superintendent as well as the person/company responsible for the traffic control implementation.

.2 Failure to produce a valid approved Traffic Plan on site, or having work not follow the Traffic Control Plan will result in immediate shut-down of the work. The Contractor will be required to safely restore facility conditions to allow traffic flow at their expense. The Contractor must take all steps to acquire an approved Traffic Control Plan before work can re-start on site. No claim will be accepted by the Owner for costs associated with this work shut-down.

3.2 Road and Sidewalk Closure Permits

.1 The Contractor must have, on-site, a copy of an approved Road and Sidewalk Closure Permit valid for the work being done. Failure to produce a valid Road and Sidewalk Closure Permit on-site will result in shut-down of the work. Failure to comply on what is stated on the approved permit will result in shut-down of the work. The Contractor will be required to safely restore facility conditions to allow traffic flow at their expense. The Contractor must take all steps to acquire a Road and Sidewalk Closure Permit before work can re-start on site. No claim will be accepted by the Owner for costs associated with this work shut-down.

.2 Contractor will be required to obtain separate approval/lane closure permits from the City of Coquitlam and City of Burnaby. The costs associated with the road and sidewalk closure permits are the responsibility of the Contractor and are considered incidental to other pay items.

3.3 Traffic Control Personnel & Equipment

.1 The Contractor shall supply all necessary traffic control devices required to perform traffic control services for the project. Signs and traffic control devices not applying to existing conditions shall be removed. Where operations are carried out in stages, only those traffic control devices that apply to the current stage are to be left in place.

These supplementary Specifications must be read in conjunction with the Master Municipal Specifications contained in the Master Municipal Construction Documents (Platinum), Volume II, 2009.

.2 There must be sufficient Traffic Control Persons (TCPs) on site to appropriately and safely direct traffic in all sections of the Work.

3.4 Signage

.1 Supply, installation, maintenance and removal of all works-related signs shall be the responsibility of the Contractor. The location and type of each sign shall be indicated on the approved Traffic Control Plan, for each stage of the works.

Traffic control signs and devices must be positioned and used as specified in the Traffic Control Plan and signs and devices must be located so as to allow traffic to move by or through the work area in a controlled manner and, if necessary, to come to a controlled stop with due regard for the prevailing weather and road conditions.

Signs shall be checked daily for legibility, damage, suitability and location. Signs and delineators shall be cleaned as frequently as necessary to ensure full legibility and reflectance.

3.5 Detours

.1 Any proposed detours must be approved by the Contract Administrator and conducted in accordance with the approved Traffic Plan and the Traffic Control Manual for Work on Roadways.

3.6 Abrupt Changes in Surface Elevations

.1 The Contractor shall minimize any abrupt changes in roadway elevation left exposed to traffic during both working and non-working hours.

A wedge of asphalt must be used as a transition to vertical differences in travelled areas and have a slope of 4:1 or less.

3.7 Cyclist and Pedestrian Access

.1 The Contractor shall make provision for pedestrians, wheel chairs and bicycles to have safe access across the work zone at all times. If this cannot be readily accommodated, then acceptable detours and appropriate signs shall be provided as approved by City Staff.

3.8 Temporary Pavement Markings

.1 The Contractor shall be responsible for the application and removal of all temporary pavement markings and reflective devices.

All temporary markings must be removed after installation of permanent markings.

These supplementary Specifications must be read in conjunction with the Master Municipal Specifications contained in the Master Municipal Construction Documents (Platinum), Volume II, 2009.

4.0 TRAFFIC RESTRICTIONS

4.1 Road and Sidewalk Closure Permits

.1 Minimum of Single Lane Traffic in each direction and all local traffic must be accommodated at all times. Detours and full road closure (with Local Traffic Only) will only be allowed during placement of asphalt paving.

.2 A City of Coquitlam Road and Sidewalk Closure Permit is required for each instance of closure and will be valid for a maximum period of one (1) week and, if still necessary, re-submittal of a Road and Sidewalk Closure Request is required.

A copy of the approved Road and Sidewalk Closure and Lane Closure Permit must be held on site by both the Site Superintendent and the person/company responsible for the traffic control implementation.

.3 Total Road Closure is Not Permitted

.4 Detours will only be permitted as approved by the Contract Administrator and must have a complete Traffic Control Plan indicating detour route, signing, and duration. Detours will not be allowed without sufficient lead time for commercial and retail operation to react appropriately to detour information provided to them.

4.2 Lane Closure Restrictions

.1 For each of the road sections affected:

- Road and Sidewalk Closures will be reviewed for appropriateness during the allowable hours of work.
- Access to properties to be maintained

Sufficient Traffic Control Persons are required for each Road and Sidewalk Closure (or any work activities), including side street intersections, to safely guide traffic through the work site.

5.0 HOURS OF WORK

.1 **The hours of work shall be from 0700h to 1900h for Monday to Friday and 0900h to 1800h for Saturdays , unless noted otherwise**

.2 All road work on SW corner will be carried out during hours of **9:00AM to 4:00PM from Monday to Friday**. Daytime hours of 7:00AM to 7:00PM can be allowed if work does not affect any of the lanes, as per approved TMP/Lane closure Permit.

These supplementary Specifications must be read in conjunction with the Master Municipal Specifications contained in the Master Municipal Construction Documents (Platinum), Volume II, 2009.

- .3 For traffic signal work, affecting traffic in two lanes, will be carried out during night time only, from 7:00PM to 5:00AM, unless approved otherwise by City Traffic Operations and Contractor Administrator.
- .4 Some allowances may be made for paving operations, depending on a proposal acceptable to the Contract Administrator.
- .5 Line Marking work may be performed at night, (9:00PM to 05:00AM).

No work is allowed on Sundays without specific written permission from Contract Administrator.

6.0 CONSTRUCTION OPERATIONS

6.1 Truck Routes	.1 The Contractor is restricted to the City's designated Truck Routes. The current Truck Route Map is available on the City's website at www.coquitlam.ca and can be found under Residents, Transit & Transportation, Trucking Routes.
6.2 Road Specific Considerations	.1 Ensure that Traffic Management Plan accommodates businesses and residences during construction activities. .2 The Contractor is responsible for coordinating with the Contract Administrator and City Traffic Operations immediately after Notice to Proceed to discuss the Traffic Management and Detour plans. .3 Pedestrians and Cyclists must be allowed to pass through the construction at all times.
6.3 Work Stoppage Due to Traffic	.1 The City will not control or direct traffic control activities of the Contractor, but may require an immediate stop to any work where, in the sole opinion of the Contract Administrator, the provided traffic management plan is ineffective or creating unreasonable delays.
6.4 Construction Activity and Signage	.1 The Contractor will be responsible to place other construction information signs as required to inform the public of construction activities, and ensure safe travel through the work site.
6.5 Construction Zone Information Signs	.1 The Contractor is required to provide, one week prior to start of work, four stationary signs at intersections, one in each direction, to inform traffic of existing and anticipated conditions

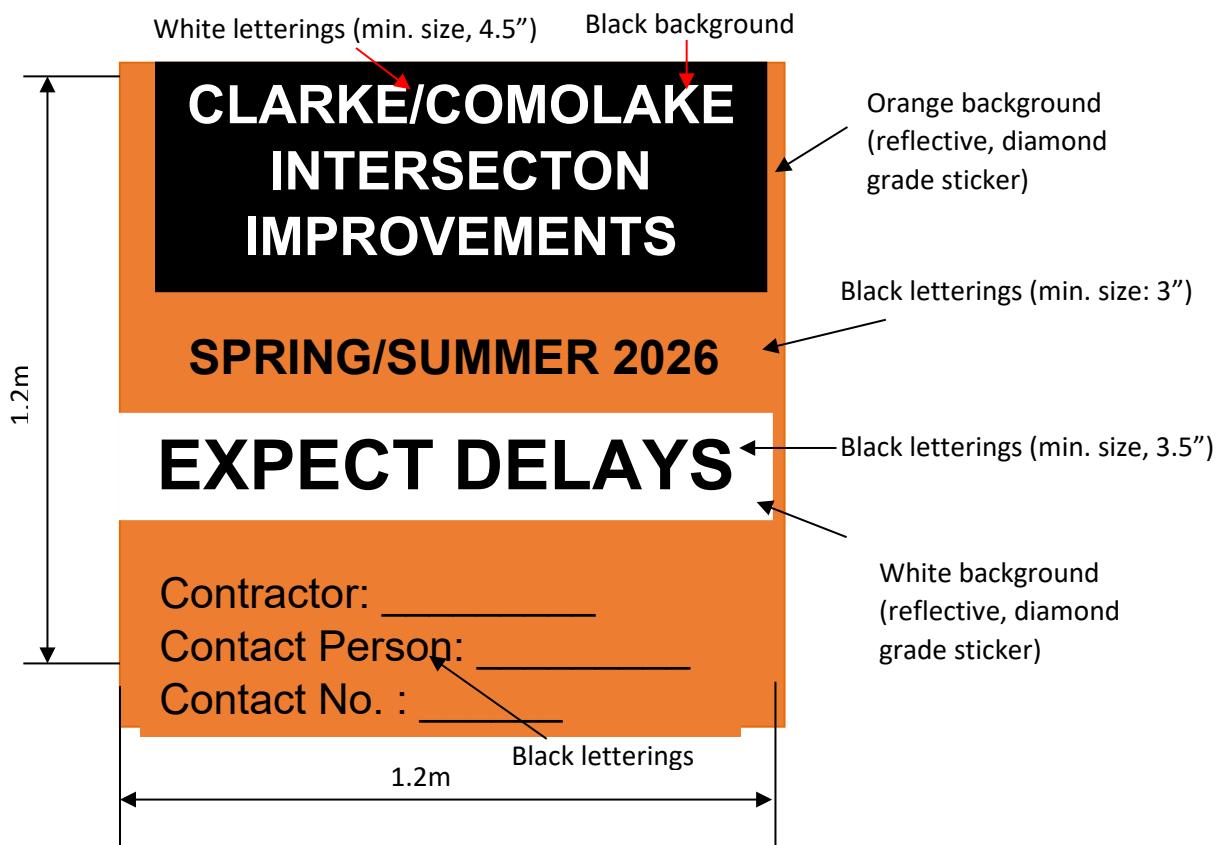
These supplementary Specifications must be read in conjunction with the Master Municipal Specifications contained in the Master Municipal Construction Documents (Platinum), Volume II, 2009.

at entry points of the lane to be worked on, locations for these signs will be provided by the Contract Administrator.

Ensure that signs and locations are addressed in the Traffic Management Plan. All signs are to be removed at the end of the construction period.

Exact locations to be determined on site by Contract Administrator.

Construction Zone Information Signs to follow specifications below:



These supplementary Specifications must be read in conjunction with the Master Municipal Specifications contained in the Master Municipal Construction Documents (Platinum), Volume II, 2009.



APPENDIX 1

City of Coquitlam
Road and Sidewalk
Closure Permit Request

Traffic and Street Use Management Section

3000 Guildford Way, Coquitlam BC V3B 7N2

Phone: [604-927-6250](tel:604-927-6250) Email: StreetPermits@coquitlam.ca

~~Initial Permit: \$150~~ ~~Renewal Permit: \$75~~

79042A

Application Date: _____

City Project or Film Permit Number (if applicable): _____

- An Initial Permit is required for all new applications and when the location, type of work, or the type of traffic controls change from what was approved for the Initial Permit. The application needs to be received a minimum of 10 business days prior to the intended closure date.
- A Renewal Permit extends the rights and privileges of the approved Initial Permit and is required when the timeline needs to be extended. The application must be received a minimum of 5 business days prior to the intended extension date.

Development Site Address (if applicable): _____

Work location (street name, block number, to/from, at, etc.): _____

Contact Information

Applicant Company Name: _____

Applicant (person completing application form)

Name: _____ Title: _____

Phone: _____ Email: _____

Applicant's Signature: _____

Company Name (Prime Contractor): _____

Site Superintendent

Name: _____ Title: _____

Phone: _____ Mobile: _____ Email: _____

Permit Information

Start Date: _____ End Date: _____

Day(s) and Time(s): Monday Tuesday Wednesday Thursday Friday From: 00:00 To: 00:00
 Saturday From: 00:00 To: 00:00 Sunday From: 00:00 To: 00:00

Specific Lanes: Curb Inside/Centre Lane Left Turn Lane Right Turn Lane Parking Lane
 All Lanes Sidewalk/MUP Bicycle Lane

Direction: Northbound Southbound Westbound Eastbound

Purpose of Work: Concrete Pour Utility Installation Curb Installation Other _____

This permit is related to: City Design and Construction City Parks External Environmental
 Development External/Utilities

City Contact (if applicable): _____

Office Use Only

Permit Conditions/Comments:

Approved by _____

Date _____

These supplementary Specifications must be read in conjunction with the Master Municipal Specifications contained in the Master Municipal Construction Documents (Platinum), Volume II, 2009.

Application Checklist

⚠ The following information must be provided. Incomplete applications will not be reviewed.

1. Traffic Management Plan (TMP); **OR**
 Traffic Management Manual for Work on Roadways Figure Number: _____
2. **Project Category Determination** (per [2020 Traffic Manual for Work or Roadways](#)).
 Initial Project Category Assessment
 Project Risk Analysis
 Category 1 Category 2 Category 3
3. **Prime Contractor Designation Letter**
4. **City of Coquitlam Certificate of Insurance**
5. **Notification Letter and Map** (required for all full road closures). A Notification Letter must be provided to all affected residents and businesses.
 Yes No Not Applicable
6. **Traffic Control Persons** (flag persons) **required?** All operations within the road right-of-way must comply with WorkSafe BC regulations and BC Ministry of Transportation standards for work on roadways.
 Yes No If yes, how many? _____
7. **Bus routes/stops impacted?** Applicant is to contact Coast Mountain Bus Company (with a minimum of 3 days' notice) [Temporary Transit Changes Request Form](#). General information can be found by visiting [Temporary Transit Changes](#).
8. **City of Coquitlam Solid Waste has been contacted?** Coquitlam Environmental Services contacted regarding impact to garbage/recycling routes and pick up Phone: [604-927-4300](tel:604-927-4300) Email: wastereduction@coquitlam.ca
 Yes No
Are operations impacted? Yes No
If Yes:
 - a plan to ensure continuous collection has been provided: Yes No
 - Day(s) of the week impacted: _____
 - Time(s) of the day impacted: a.m. p.m.
9. **Pedestrian / Bike Lanes impacted?** Please describe sidewalks and/or bicycle facilities that will be impacted by the proposed work.

10. **Is the work on, or will it impact a road along our Major Road Network?**
 Yes No

Additional information

- Only vehicles actively engaged in the performance of cleaning, clearing, maintenance, repair, construction or other work are permitted within work zones. Vehicles being used by Superintendents, Traffic Control Persons, and other construction personnel that are not actively engaged in work described above are not permitted within the work zone and are not permitted parking /stopping prohibitions.
- Closures of sidewalks, cycling facilities, lanes, and full road closures are only permitted during the time periods indicated on the approved permit. Traffic controls are not permitted outside of these approved permit hours.

These supplementary Specifications must be read in conjunction with the Master Municipal Specifications contained in the Master Municipal Construction Documents (Platinum), Volume II, 2009.

Appendix B - Permits and Approvals

BC HYDRO**INSTRUCTIONS/NOTES**Working near Power Lines – BC HydroForm 30M33

A Form 30M33 will be required for working under the overhead transmission lines.

Information for the Contractor for Form 30M33

Circuit: 60L017

Location: southwest corner of Como Lake & Clarke, Coquitlam

Subject: Road works & Traffic Signal modification

Applicant: Binnie on behalf of City of Coquitlam

PA1252805 has been assigned to this **temporary use activity**. Please contact Lower Mainland Transmission (LMT) at 604-590-7644 to arrange an on-site safety meeting and issuance of WorkSafeBC's form 30M33.

Conditions include but not limited to:

- Vehicles in excess of 4.15 metres in height, including load and reach, will not be permitted on the Right of Way at any time unless the Applicant has first obtained an approval from LMT in writing.
- In accordance with the WorkSafe BC Occupational Health and Safety Regulation ("OHSR"), persons and any moving equipment operated by those persons must not come within the WorkSafe BC limits of approach for the specified voltage of the powerline conductor at any time
- WorkSafeBC Policy Item R19.25-1 specifies the responsibility of the worker and the employer on working close to energized high voltage equipment and conductors: Line Design Voltage: 69kV; Limits of Approach: 3.0 metres
- The conductor to ground clearance is to be checked and confirmed by BC Hydro's Transmission Field Staff during the required on-site WorkSafeBC 30M33 meeting

- See the attached Standard Terms and Conditions (some conditions may not apply to your work) for working in the BC Hydro ROW
- If during construction you will be within limit of approach of overhead distribution lines, you will need to have a separate WSBC 30M33 form issued to you and perhaps further instructions and costs (e.g. flagging, safety watcher) to be borne by you. Please contact 1-877-520-1355 to make the arrangements.

BC Hydro Standard Terms and Conditions for All Compatible Uses of Rights of Way

The following additional terms and conditions are incorporated into and form a part of the attached letter. Capitalized terms contained in this schedule not otherwise defined have the respective meanings ascribed to them in the attached letter.

1. These requirements are to be read together with the rights and obligations of the parties set out in the Right of Way registered against title to the Property. Nothing in the attached letter or this schedule shall be interpreted as limiting BC Hydro's rights pursuant to the Right of Way.
2. This letter applies to the interest of BC Hydro only. The Applicant must also obtain permits or consents from all other applicable parties with an interest in or jurisdiction over the Proposed Use and/or the Property (including landowners, other charge holders and regulators).
3. The Applicant must comply and ensure compliance with all applicable legislation, regulations, guidelines, orders and standards, including all environmental laws and Part 19 Electrical Safety of the OHSR (a copy of this regulation is available at www.WorkSafeBC.com).
4. BC Hydro will not be responsible for any damage to or interference with the Applicant's activities, equipment or the Proposed Use arising out of BC Hydro's activities or works pursuant to the Right of Way. The Applicant hereby releases each of BC Hydro and its officers, directors, employees, agents and contractors (collectively, the "**BC Hydro Parties**") from any and all claims, demands, actions and causes of action, proceedings, losses, damages, costs (including legal, consulting or other professional fees), fines, orders or expenses arising from any injuries (including injuries causing death), property damage or any other matter of whatsoever nature or kind (collectively, "**Losses**"), whether direct or indirect, whenever and howsoever arising which the Applicant or any of the Applicant's directors, officers, employees, contractors, agents, invitees, permittees or licensees, as the case may be, may suffer, incur or sustain on the Right of Way or in relation to the Proposed Use, except to the extent caused by the negligence of BC Hydro.
5. The Applicant assumes any and all risks and liabilities whatsoever, whether known or unknown, in relation to the Proposed Use and indemnifies BC Hydro from and against any and all Losses, whether direct or indirect, suffered or incurred by any of the BC Hydro Parties to the extent caused by or attributable to the Proposed Use, or any activity within the Right of Way by the Applicant or those for whom the Applicant is responsible at law. This indemnity will survive the expiry or termination of the agreement formed by the Applicant's acceptance of this letter, the Right of Way, and any other agreement entered into pursuant to this letter.
6. No part of the Proposed Use within the Right of Way may be enlarged, moved, or added to without the prior written agreement of BC Hydro. Uses or installations other than those contemplated in the attached letter require additional written agreement from BC Hydro.
7. BC Hydro may revoke its consent and terminate the agreement formed by the Applicant's acceptance of this letter if the Applicant or any of the Applicant's employees, agents or contractors fail to comply with the terms and conditions contained herein.
8. During the construction, existence, operation, maintenance or repair of the Proposed Use, as the case may be, the Applicant will take all steps necessary to protect BC Hydro's equipment and works within the Right of Way and will be responsible and will compensate BC Hydro for any damage to BC Hydro's equipment or works. If the Proposed Use impacts or interferes with any present or future BC Hydro works, the Applicant will, at the Applicant's expense, make any adjustments to the Proposed Use reasonably required by BC Hydro, or, upon receiving not less than 90 days' prior written notice from Hydro, relocate the Proposed Use to an alternate location approved by BC Hydro.
9. The Proposed Use must comply with all *Fire Services Act* (British Columbia) requirements, and the British Columbia Fire Code, including Section 3.3, Outdoor Storage. Section 3.3 prohibits the storage of specified wood products, flammable substances, and other potentially hazardous materials beneath electrical powerlines.

10. The following are not permitted within the Right of Way unless expressly authorized in writing by BC Hydro:

• log decking	• stock piling of excavated, building or other material
• blasting	• storage or handling of flammable or explosive material
• burning	• fueling of vehicles and equipment
• deposit of any fill material	• regular or organized parking of vehicles
• buildings or portions of buildings, including foundations and eaves	

11. The Applicant acknowledges that minor levels of electrical induction may be experienced due to the proximity of electrical lines and agrees that BC Hydro shall not be liable or responsible for any effect or occurrence caused or contributed to by any such electrical induction.

12. BC Hydro's personnel must be able to access the Right of Way at all times. Interruption of the Applicant's activities and operations relating to the Proposed Use may be necessary for electrical line repair, maintenance, replacement or construction.

13. Landscaping within the Right of Way is restricted to low-growing trees, shrubs and plants not exceeding 3.0 meters in height at maturity. For vegetation immediately outside of the Right of Way, BC Hydro recommends that the Applicant not plant any vegetation that grows tall at maturity or grows with weak root systems that have a high probability of falling on BC Hydro's electrical works. BC Hydro (including its agents and contractors) shall have the right to remove any tall-growing trees, shrubs and plants from underneath and adjacent to BC Hydro's powerlines for line security and safety purposes from time to time.

14. All fencing must be reviewed and approved by BC Hydro prior to installation.

15. The Applicant must not make any changes in ground elevations of more than 0.5 metres from the original grade of the Right of Way without the prior written consent of BC Hydro. The Proposed Use must not cause any deterioration of drainage patterns or soil stability within the Right of Way.

16. Upon the completion or removal of the Proposed Use, the Right of Way must be restored as closely as is practically possible to its original condition (or better) at the Applicant's expense.

17. Prior to assigning BC Hydro's consent to the Proposed Use contained in the attached letter, the Applicant must provide BC Hydro with the written agreement of any such assignee to be bound by these terms and conditions. Any purported assignment without such written agreement of the assignee will revoke BC Hydro's consent contained in this letter.

18. No obligation in this letter will be considered to have been waived by BC Hydro unless the waiver is in writing and signed by BC Hydro, regardless of BC Hydro's knowledge of any breach of such obligation or the passage of time.

19. If more than one person comprises the Applicant, then each such person is jointly and severally bound by the terms and conditions contained in the attached letter and this schedule of terms and conditions.

Fortis BC

INSTRUCITONS/NOTES

Pipeline and ROW Works Permit

Attached is permit #4200026349.

The applicant shall notify the FortisBC onsite representative and arrange for an inspection date. Notification must not be less than 3 days, **excluding Saturdays, Sundays and holidays**, prior to commencing the proposed works. Applicants are asked to provide the onsite representative with as much notice as possible. Inspection scheduling is based on staff availability and FortisBC cannot guarantee that an onsite representative will be available on short notice, especially during peak construction periods.

The applicant will be charged for inspection costs that require a FortisBC representative to be on site to meet the contractor's needs beyond the two (2) days of normal working hours. See details regarding "**More about fee structure for site inspection**" on this link - [Applying for a right of way permit \(fortisbc.com\)](http://fortisbc.com)

If you have questions, please email us at protectionandpermitting@fortisbc.com. You can also visit our website to learn more about [Pipeline and right of way permits \(fortisbc.com\)](http://fortisbc.com).

Letter of Authorization

FortisBC determined the only activity requiring a permit is **pavement rehabilitation (mill/overlay)**. The following activities can be completed under a Letter of Authorization (LOA) obtained from FortisBC:

- Pulling 120/240V cables through existing conduits
- Junction box installation
- Water main/hydrant installation
- Bollard installation
- Curb/gutter construction
- Re-use of existing lamp standard bases (no excavation only changing out above grade post)

To initiate the LOA process, please obtain a construction BCOne Call ticket. This will trigger FortisBC's review. Do not proceed with any work until you've spoken with FortisBC regarding your LOA request. You can inform them that you are awaiting mill/overlay permit #11510.



Pipeline and/or Right of Way Permit (Pursuant to the Oil and Gas Activities Act of British Columbia)

Date Issued(Y/M/D)	Expiry Date(Y/M/D)	Permit Number: (Use this number when requesting info)	BCOne Reference Number
2025/06/24	2026/06/24	4200026349	20250602356

Applicant Information

Applicant Name Paul Docherty	Telephone Number 778-945-6189	Applicant Company Name Binnie	Drawing #(s):
Mailing Address: Street No & Name/Apt No./Town/Province 300-4940 Canada Way Burnaby, BC, CA			Postal Code V5G 4K6

Location of Works

Applicant Names(s) Paul Docherty	Contact Number 778-945-6189	Pipeline Type IP
-------------------------------------	--------------------------------	---------------------

On-Site Contact Information

Person On-Site and Contact Number:

Permit Approval Information

Permission is hereby granted to construct the following facilities across or near pipelines and/or within pipeline right of way belonging to FortisBC Energy Inc. (hereinafter referred to as FortisBC):
--

Pavement Rehabilitation: Mill/Overlay
Sidewalk/Curb/Gutter

Work Location and Pipeline Specifications

Location/Station:	CLARKE ROAD AND COMO LAKE AVENUE COQUITLAM	Class:
1	O.D.	M.O.P.
2	O.D.	M.O.P.
3	O.D.	M.O.P.
4	O.D.	M.O.P.

FortisBC Information Only:

Functional Location: B-LN-COQ-005 E(X) Coordinates: N(Y) Coordinates: UTM Zone :	ROW File #: 	Employee Charge Number, Service Order Number: 31443703	Plate Map/Mosaic #:
--	-----------------------------	--	---------------------

Inspection and Notification

FOR INSPECTION CALL	Gord Spelley 7am -3pm Mon-Fri (604) 328-9203
----------------------------	---

FortisBC Permit Consent

Michelle Simister Print Name	Date	2025/06/24	Page 1 of 8
--	------	------------	-------------



**Pipeline and/or
Right of Way Permit** (Pursuant to the Oil and Gas Activities Act of British Columbia)

Date Issued(Y/M/D)	Expiry Date(Y/M/D)	Permit Number: (Use this number when requesting info)	BCOne Reference Number
2025/06/24	2026/06/24	4200026349	20250602356

*** VERY IMPORTANT *** (Must be read and understood)

Attached is your permit. The applicant shall notify the FortisBC onsite representative and arrange for an inspection date. Notification must not be less than 3 days, excluding Saturdays, Sundays and holidays, prior to commencing the proposed works. Applicants are asked to provide the onsite representative with as much notice as possible. Inspection scheduling is based on staff availability and FortisBC cannot guarantee that an onsite representative will be available on short notice, especially during peak construction periods. The Applicant will be responsible for any inspection costs charged by FortisBC, in its sole and absolute discretion, including, but not limited to: (a) inspection costs related to a FortisBC representative being on site (i) for more than two days working normal business hours (07:00-15:00) Monday to Friday; (ii) on weekends and (iii) on statutory holidays; and (b) all overtime costs related to a FortisBC representative being on site. The Applicant will pay for such inspection costs within 30 days of the invoice date.

A copy of this Permit and related drawings must be on the job site prior to commencement of any work.

Do not proceed without a FortisBC Representative on site. Construction, excavation or backfilling may not take place on a FortisBC Right of Way or in the vicinity of FortisBC facilities unless a FortisBC Representative is present.

Non compliance with any of the Terms and Conditions of this permit will result in construction delays or permit cancellation.

SPECIAL CONDITIONS

General Conditions

1. All conditions contained in this permit are subject to the on site approval of the FortisBC representative. No activity is to take place within 2.0m of an intermediate pressure Pipeline ("IP pipeline") without prior approval from a FortisBC representative on site.

The permit holder is to ensure that all applicable WorkSafeBC Regulations are complied with prior to the commencement of any work near FortisBC assets. (WorkSafeBC Regulation 20.79)

The FortisBC consent granted under this permit is contingent on the applicant first obtaining consent from the registered property owner, and all affected stakeholders where separate approval is required. These stakeholders include, but are not limited to; BC Hydro, WorkSafeBC, Municipal, Provincial and Federal authorities.

FortisBC will not be responsible for re-instatement of the permitted activities outlined in this permit.

2. This permit is strictly for pavement rehabilitation works only. It must not be used for any other work purpose. If the permit holder wants to do any other work then they must obtain another permit specific to that job. The activities in question must not be in problematic or marginally stable soil areas such as soft peat or burns bog, swamp soil areas and potentially unstable slopes.

3. The permit holder is responsible for ensuring that their proposed works, will not damage, impair the usefulness or safety of, or interfere with the existing FortisBC assets and, prior to commencing the work



**Pipeline and/or
Right of Way Permit** (Pursuant to the Oil and Gas Activities Act of British Columbia)

Date Issued(Y/M/D)	Expiry Date(Y/M/D)	Permit Number: (Use this number when requesting info)	BCOne Reference Number
2025/06/24	2026/06/24	4200026349	20250602356

under this permit, the permit holder shall undertake the necessary due diligence and engineering assessment to ensure its proposed facilities will not damage, impair the usefulness or safety of, or interfere with the existing FortisBC assets. The applicant shall provide copies of all reports and assessments to FortisBC upon request.

4. All works in this permit will be done as per the attached drawing "Clarke Rd and Como Lake Ave Intersection Improvements" dated 05/20/2025, sheets 1 - 8.
5. Prior to all proposed works, the location of FortisBC assets shall be determined accurately with visible marking to ensure that the proposed activities do not physically disturb or damage any FortisBC assets.
6. The permit holder must ensure that the whole operation is cautiously executed and at no times the FortisBC assets are subject to risk.
7. The stockpiling of excavated, building or other materials is prohibited within 2.0m of a FortisBC IP pipeline*, within a road allowance.
8. No spoil, material or equipment shall be placed/stored over top of the pipeline at any time.
9. There is to be no deterioration of soil stability or drainage patterns within 2.0m of a FortisBC IP pipeline*, within a road allowance.
10. All fill material placed, if any, must be clean and free of any hazardous substances within 2.0m of a FortisBC IP pipeline*, within a road allowance.
11. Exact location of the pipeline shall be determined by hand excavation. Machine excavation is not permitted within 1.0m of the pipeline.
12. Access for FortisBC representative must be maintained at all times.
13. FortisBC on site representative must be present at all times during all works covered under this permit.
14. No vehicles or equipment are permitted to cross the pipeline unless approved by the on site FortisBC representative.
15. The Pipeline signs/markers displaced during the proposed works must be placed back making sure that the pipeline locations are well marked.
16. The FortisBC representative shall have ultimate control of the job site as it relates to the safety of FortisBC assets. The FortisBC representative may stop all activities near FortisBC assets should he/she deem the work activities around the FortisBC pipeline are unsafe.
17. If applicable, the conditions of this permit are to be read in conjunction with the statutory right-of-way (SRW) agreement charged on the land and shall not be construed as diminishing the terms of the right-of-way agreement.
18. The designed depth of cover over FortisBC IP pipeline must satisfy the following standard unless written consent has been provided by FortisBC:
 - i. Minimum Depth of Cover: 1.2m (4')



**PIPELINE AND/OR
RIGHT OF WAY PERMIT** (Pursuant to the Oil and Gas Activities Act of British Columbia)

Date Issued(Y/M/D)	Expiry Date(Y/M/D)	Permit Number: (Use this number when requesting info)	BCOne Reference Number
2025/06/24	2026/06/24	4200026349	20250602356

ii. Maximum Depth of Cover: 1.8m (6')

19. Additional activities not identified on the permit are not permitted without the prior written consent of FortisBC.

* measured from the closest outside edge of the pipeline.

Pavement Rehabilitation Works

20. No Works shall proceed if changes and/or modifications are made to the drawings, equipment or methodology. FortisBC must review and accept the design of the proposed works prior to works commencing/continuing.

21. Soils with a high potential for volume change should not be used as backfill for proposed works. Existing soil conditions must be free of organic silts, clays or topsoil, and boulders and consist of select structural granular fill.

22. As a result of the proposed road works (pavement rehabilitation works, curb, gutter and sidewalk), there must not be any significant ground settlement and any significant Pipeline settlement. If the permit holder anticipates any settlement, all works must be stopped and FortisBC must be contacted for further assessment. In this situation, corrective actions should be implemented at the cost of the permit holder / developer / contractor.

23. For pavement rehabilitation works over FortisBC IP pipeline, excavation will not exceed 0.3m from existing grade.

24. The Permit Holder will excavate above the FortisBC IP pipeline and replace the soil in lifts before driving on it.

25. Organics and oversize materials must be removed from within the FortisBC IP pipeline trench zone, prior to construction of the road surface.

26. The Permit Holder is responsible to maintain the road surface free of ruts, potholes and reduction of grade.

27. The Permit Holder must ensure that a good stable crossing surface is installed so that there is no loss of soil cover over FortisBC IP pipeline.

28. The pavement rehabilitation (repaving) will only be done on existing paved sections. There is to be no new paved sections and no vehicle crossing over new paved sections.

29. See attached FortisBC drawing 99000-C-100-100-R3 for backfill and compaction details.

30. The final grade over FortisBC pipeline must not change as a result of the proposed roadworks (pavement rehabilitation works, curb, gutter and sidewalk).

31. There will be no road widening (widening of the existing travel portion of the road over FortisBC pipeline).



Pipeline and/or Right of Way Permit (Pursuant to the Oil and Gas Activities Act of British Columbia)

Date Issued(Y/M/D)	Expiry Date(Y/M/D)	Permit Number: (Use this number when requesting info)	BCOne Reference Number
2025/06/24	2026/06/24	4200026349	20250602356

32. For existing travel portions of the road, vehicle crossings of FortisBC pipelines are restricted to not exceeding approved highway loading.

33. Final depth of cover above the pipeline within the road allowance shall be a minimum of the following:

- 1200mm under all traveled road surfaces
- 1000mm within any other portion of the road right-of-way

34. When compacting asphalt for pavement, vibrational rollers shall cross FortisBC IP pipeline in the angles of 45 degrees to 90 degrees from the centerline of the IP pipeline. Vibrational levels from the rollers shall not exceed more than 25mm per second.

35. Selection, placement and compaction of the soil used for embedment and backfill shall meet the requirement outlined in FortisBC internal standard.

36. All proposed street poles, lighting standards, anchors, catch and lawn basins, manholes, junction boxes, chambers, service boxes etc., are not permitted within 2.0m of FortisBC IP pipeline within a road allowance (measured from the closest outside edge of the Pipeline).

Compaction Procedures

37. For backfill or embedment thickness, less than 600mm, lightly compact the embedment/backfill materials using a 1000 pound vibratory plate compactor or tamping equipment, ensuring that it runs parallel to the FortisBC IP pipeline at all times. A Vibro-hoe may be used for compaction with due care not to impact and/or damage the FortisBC IP pipeline.

38. Except immediately next to the FortisBC IP pipeline, mechanical or air operated tamping equipment must be used. Hand equipment such as a T-bar may be used next to the FortisBC IP pipeline, if necessary.

39. Care must be taken when compacting under, alongside and immediately above the FortisBC IP pipeline to prevent crushing, fracturing, or shifting the FortisBC IP pipeline.

40. Compaction may be carried out using self-propelled vibratory compactors of a suitable size when the total cover over the FortisBC IP pipeline exceeds 600mm. When total soil cover over the FortisBC IP pipeline exceeds 1.0m, suitable mechanical compaction equipment may be used.

41. Unless otherwise specified in the drawings or in the construction specification, mechanical compaction must be achieved with a minimum of 10 passes of a vibratory drum compactor (or a sheepfoot roller) having a drum weight of at least 4,500kg and a dynamic force of at least 9,000kg. Achieve compaction to 95% Maximum Dry Density for embedment soil and to 98% Maximum Dry Density for all backfill as determined by ASTM D1557/ASTM D698, as applicable.

42. The number of passes will depend on the type and mass of the compaction equipment and on the thickness of the soil layer being compacted.

43. For achieving better compaction results, maintain the optimum moisture content of the fill materials (estimated optimum moisture content between 1% and 3%) to attain the required compaction density.

44. Do not backfill over porous, wet, frozen, or spongy sub-grade surfaces.



**PIPELINE AND/OR
RIGHT OF WAY PERMIT** (Pursuant to the Oil and Gas Activities Act of British Columbia)

Date Issued(Y/M/D)	Expiry Date(Y/M/D)	Permit Number: (Use this number when requesting info)	BCOne Reference Number
2025/06/24	2026/06/24	4200026349	20250602356

45. Before compacting wet soils, remove all the soft soils of the last 300mm of the final sub-grade elevation using smooth-edged cutting buckets (avoid disturbing the sub-grade) and place 75mm downgraded sand and gravel for initial lift of the fill.

46. If the backfill placed does not require a higher degree of compaction, it will be compacted to approximately the same density as the adjacent native/undisturbed soil.

TERMS AND CONDITIONS

A. It shall be the responsibility of the Applicant to hand-expose the gas pipeline facility, in the presence of the FortisBC Representative, to ascertain its exact location and to excavate and backfill a minimum of one (1) metre in any direction of the gas pipeline by hand, with particular attention being taken not to damage the gas pipeline coating.

B. Once the proposed works have commenced, they shall be carried out as expeditiously as possible and backfilling over the gas pipeline shall be completed as soon as possible.

C. Gas pipelines left suspended in excavations greater than three (3) metres in length shall be adequately supported. In all excavations where a gas pipeline has been exposed, backfill shall be compacted to at least the top of the pipe.

D. Any changes made to the design or the conditions under this Permit must be approved by FortisBC prior to commencement of Works, as required by the Energy Resource Activities Act of British Columbia or any amendments thereto which may come into force from time to time. Approval for minor changes may be obtained by verbal communication followed by as-built drawings within fifteen (15) days of the installation. For major changes, re-application will be necessary.

E. Any person assigned by FortisBC to inspect the proposed works shall have unrestricted access to the job site at all times, but full responsibility for the safe performance of the work remains with the owner of the proposed works and the contractor responsible for the proposed works. FortisBC personnel will not enter an unsafe work area that is not in compliance with WorkSafeBC regulations.

F. The Applicant shall ensure that all subcontractors comply with all the requirements as contained herein and that they are adhered to in all respects.

G. The Applicant shall indemnify and save harmless FortisBC against any and from all costs, damages, actions, proceedings, claims and demands, whatsoever arising and by whosoever incurred, brought, made or prosecuted, caused directly or indirectly as a result of the proposed works, except in so far as caused or contributed to directly or indirectly by the negligence of FortisBC. This indemnity shall survive the expiry or earlier cancellation of this Permit.

H. The Applicant releases FortisBC of and from all manner of action, suit, debts, dues, sums of money, claims, demands whatsoever, either at law or in equity, which it has or may at some time have, by reason of the existence or operation of the gas pipeline(s) except insofar as a caused or contributed to directly or indirectly by the negligence of FortisBC.

I. The Applicant agrees that prior to commencing the proposed works within the FortisBC pipeline right of way or near FortisBC facilities it will obtain the necessary permits, orders or authorization from all Authorities having jurisdiction over such activities and all parties having an interest in any lands affected by such



**Pipeline and/or
Right of Way Permit** (Pursuant to the Oil and Gas Activities Act of British Columbia)

Date Issued(Y/M/D)	Expiry Date(Y/M/D)	Permit Number: (Use this number when requesting info)	BCOne Reference Number
2025/06/24	2026/06/24	4200026349	20250602356

activities.

J. This approved Permit may be cancelled at any time prior to or after commencement of the proposed works stipulated on this Permit by FortisBC should the Applicant fail to observe and perform the conditions outlined in this Permit and instructions of the FortisBC Representative on site.

K. This Permit is valid for a period of up to one year after the date issued. If the proposed works have not been completed within one year then re-application for the proposed works will be necessary.

L. WORKSAFEBC

Regulation 20.79 - Underground Utilities

(1) Before excavating or drilling with powered tools and equipment, the location of all underground utility services in the area must be accurately determined, and any danger to workers from services must be controlled.

(2) Excavation or drilling in proximity to an underground service must be undertaken in conformity with the requirements of the owner of the service and with the requirements of the applicable regulations of the provincial or federal authority having jurisdiction.

(3) Pointed tools must not be used to probe for underground gas and electrical services.

(4) Powered equipment used for excavating must be operated so as to avoid damage to underground utility services or danger to workers.

M. If necessary, the applicant must obtain prior approvals from landowners and other concerning agencies before the commencement of proposed works.

*** The following two(2) clauses are applicable to BC Hydro only ***

N. Notwithstanding any to the contrary contained in this Permit, relation to this Permit, neither the Applicant nor FortisBC will be liable to the other in contract or tort (including in negligence or in any tort imposing strict liability) or otherwise, for indirect, special, incidental, consequential, exemplary or punitive damages for loss of use, loss of work in process, down time or loss of profits.

O. Nothing in this Permit will in any way abrogate from or affect any rights, powers, exemptions or privileges, including powers of expropriation which the Applicant may have under any private or public statutes, orders, regulations or any other laws.



Pipeline and/or Right of Way Permit (Pursuant to the Oil and Gas Activities Act of British Columbia)

Date Issued(Y/M/D)	Expiry Date(Y/M/D)	Permit Number: (Use this number when requesting info)	BCOne Reference Number
2025/06/24	2026/06/24	4200026349	20250602356

Applicant Information

Applicant Name Paul Docherty	Telephone Number 778-945-6189	Applicant Company Name Binnie	Drawing #(s):
Mailing Address: Street No & Name/Apt No./Town/Province 300-4940 Canada Way Burnaby, BC, CA			Postal Code V5G 4K6

As-Built Details

Depth of gas pipeline m	Separation of Works from pipeline	Horizontal	Vertical	Gas Pipeline Exposed <input type="checkbox"/> No <input type="checkbox"/> Yes (If Yes, complete form 1434)
Backfill <input type="checkbox"/> Sand <input type="checkbox"/> Native Material	<input type="checkbox"/> Gravel with Sand Padding	<input type="checkbox"/> Other (Specify)	Compacted <input type="checkbox"/> Yes <input type="checkbox"/> No	

Follow-up Required No Yes Deviation from Permit (Specify)

Comments:

GPS Coordinates

X

Y

ROW File #:

PRIOR TO EXCAVATION

The following responsibilities were reviewed with the crew leader and excavator operator on site:

Terms and Conditions A

Worksafe BC 20.79 (Terms and Conditions L)

Potential for unrecorded jogs and fittings on the gas pipeline

Inspector Signature

Date (Y/M/D)

Print Name

Crew Leader Signature

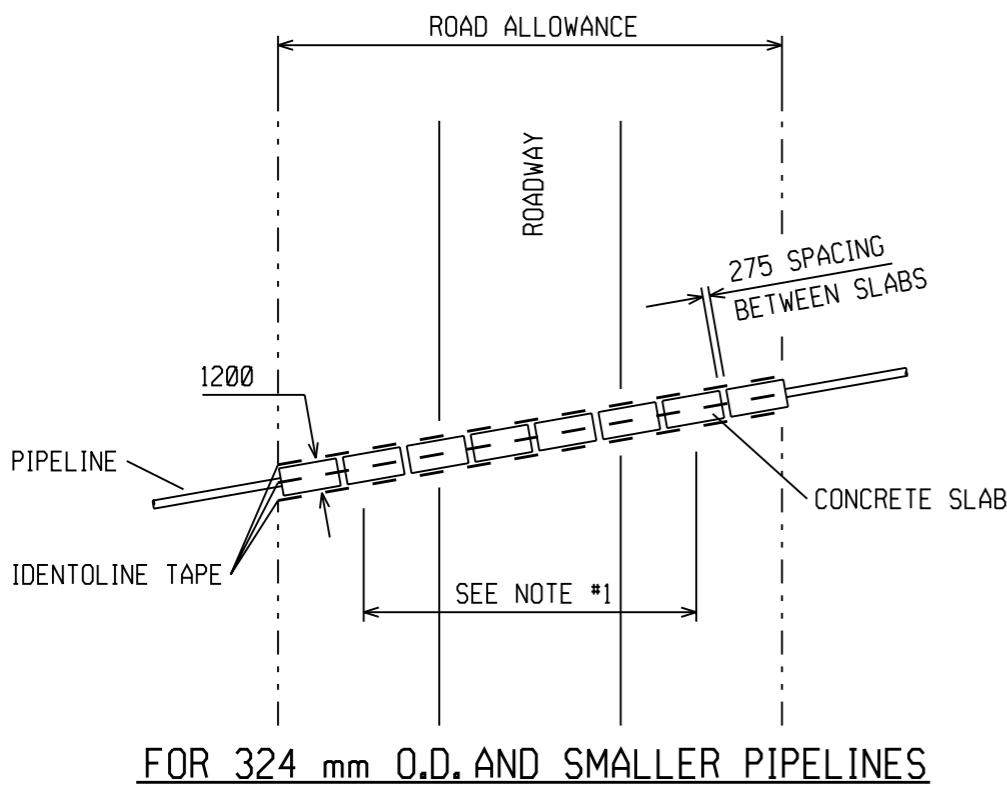
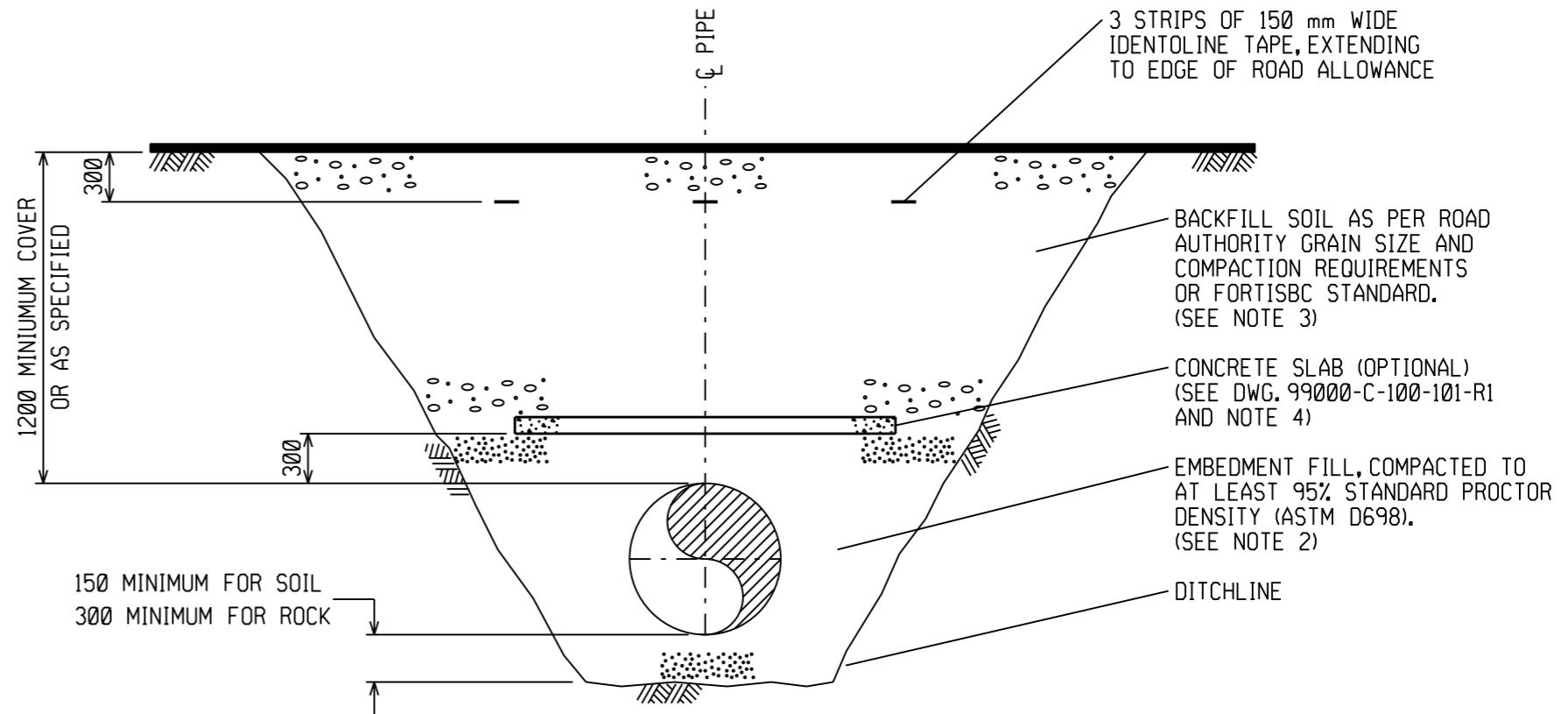
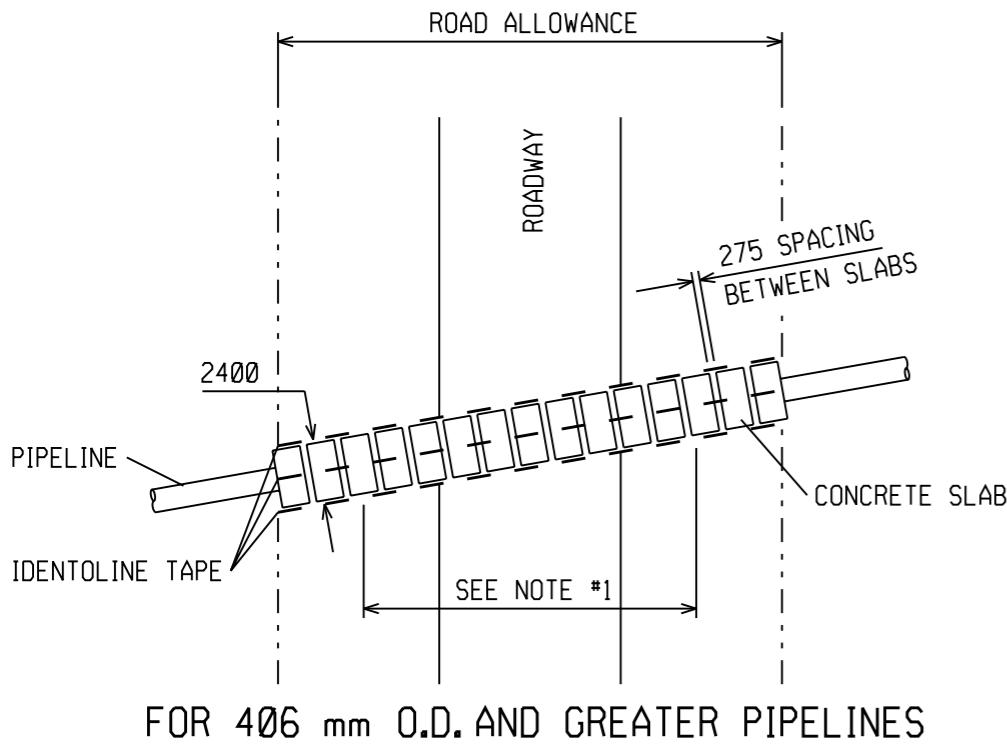
Date (Y/M/D)

Print Name

Excavator Operator Signature

Date (Y/M/D)

Print Name



NOTE:

INTENDED FOR TRANSMISSION PRESSURE PIPELINES ONLY

NOTES:

1. COMPACTED SELECT EMBEDMENT SOIL AND BACKFILL SHALL EXTEND LATERALLY BEYOND THE TRAVELED PORTION OF THE ROAD TO AT LEAST THE INVERT OF THE ROAD DITCHES OR A DISTANCE EQUAL TO THE THICKNESS OF SOIL COVER OVER THE PIPE, WHICHEVER IS GREATEST.
2. EMBEDMENT SOIL SHALL CONSIST OF SELECT SAND WITH < 5% SILT CONTENT (PARTICLES FINER THAN 0.075 mm) COMPACTED TO AT LEAST 95% STANDARD PROCTOR DENSITY (ASTM D698) FOR ITS FULL THICKNESS. ALTERNATIVE EMBEDMENT SOIL MAY BE USED PROVIDED IT IS DETERMINED TO BE COMPATIBLE WITH THE PIPE COATING AND APPROVED BY A QUALIFIED FORTISBC PROFESSIONAL ENGINEER PRIOR TO PLACEMENT.
3. BACKFILL SOIL SHALL MEET ROAD AUTHORITY GRAIN SIZE AND COMPACTION REQUIREMENTS OR FORTISBC STANDARD. FORTISBC STANDARD SHALL CONSIST OF 75 mm MINUS PITRUN SAND AND GRAVEL WITH < 5% SILT CONTENT (PARTICLES FINER THAN 0.075 mm) COMPACTED TO AT LEAST 98% STANDARD PROCTOR DENSITY (ASTM D698) FOR ITS FULL THICKNESS.
4. TOP OF SLAB SHOULD NOT APPEAR ABOVE THE INVERT OF ANY UTILITY WHICH CROSSES ABOVE THE PIPELINE.
5. ALL DIMENSIONS IN MILLIMETRES UNLESS NOTED OTHERWISE.
6. THIS DRAWING SHOULD NOT BE USED FOR THE PURPOSE OF MATERIAL QUANTITY ESTIMATES.

OLD DWG. No. 90000-C-000-011-3-0

							FORTIS BC™	DRAWING SIGNED AND SEALED BY A.J. MITCHELL, P. ENG. 2004/07/05	CORPORATE
ENGINEERING SERVICES	R1	SIGNED	ADDED NOTE 6	I. METCALF	A. MITCHELL	A. MITCHELL			
ENGINEERING SERVICES	R2	SIGNED	ADDED NOTE 6 CHANGED TITLE	IMETCALF		A. MITCHELL	03-06-27		
ENGINEERING SERVICES	R3		FORTIS LOGO	FSEDLAR			11-03-02		STANDARD OPEN-CUT ROAD CROSSING DETAILS
BY	No.	REVISION	DRAWN	DESIGNED	CHECKED	DATE (YY-MM-DD)			
PREVIOUS DR. NO.-		SAP ID:		MICROFILMED		SCALE- N.T.S.	ENGINEER SEAL	DRAWING NUMBER	99000-C-100-100-R3

BC TRANSLINK

INSTRUCTIONS/NOTES

Once the Contractor is awarded the Contract; the Contractor has to submit:

- A Safe Work Procedure (SWP) must be submitted for review (template attached).
- A BCRTC work permit will be required for any activities within the guideway zone (template will be provided).

Attached are:

- Limit of Approach Card, and
- BCRTC Safe Work Procedure template for reference.

Other Notes:

- As a standard practice, BCRTC (BC Rapid Transit Authority) require any work within 1 m of our infrastructure to be carried out using hand tools only.
- There are equipment restrictions. Heavy equipment is not permitted to operate beneath TransLink infrastructure without the supervision of a BCRTC monitor (Limit-2). Please refer to the attached Limit of Approach Detail Sheet for further information and compliance requirements.
- A minimum of three weeks' notice is required prior to the start of construction to allow time for the BCRTC work permit process.

Limits of Approach

Safety requirements for work near transit operations and infrastructure

CONTACT NUMBERS

Work Planning:

Adjacent & Integrated
Developments (AID) Program
& Trolley Overhead (TOH)
Program **778.375.7500**
AIDreview@translink.ca
TOHreview@translink.ca

In the event of an emergency, please contact:

SkyTrain Emergency (Expo/
Millenium Lines) ... **604.520.5555**
Canada Line **604.247.5703**
TOH **778.593.5536 / 911**

Limit 1

- Within **10 METERS** of the guideway dripline or structure, above or below ground

Limit 2

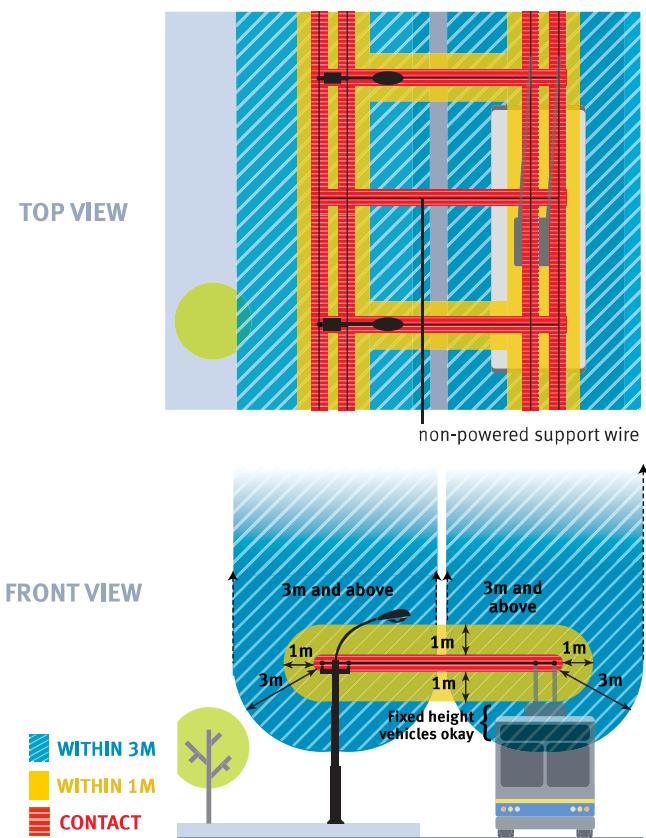
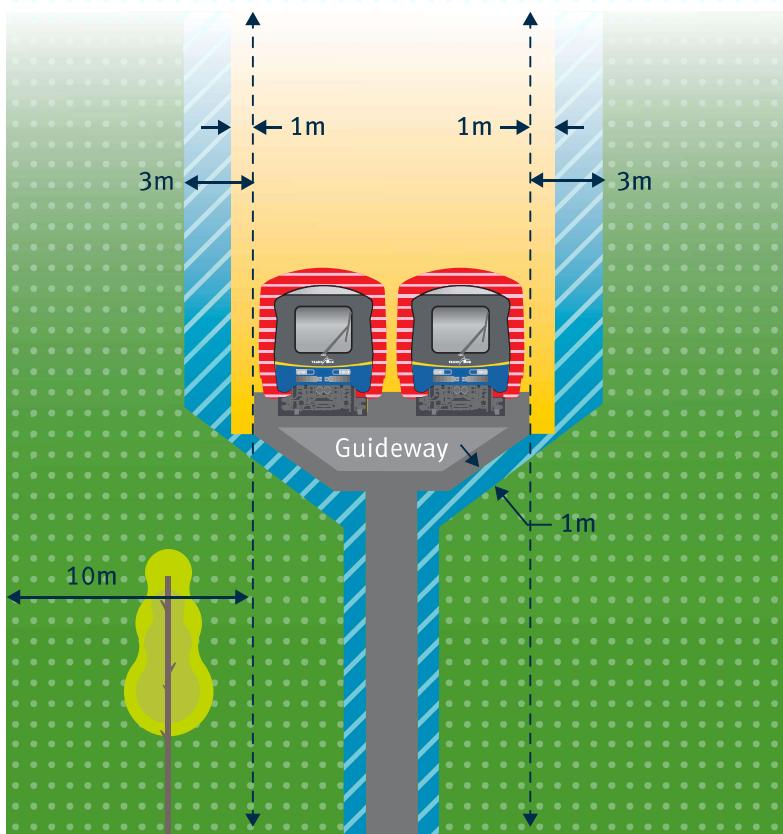
- Within **3 METERS** of the guideway at or above track level of any powered or non-powered TOH infrastructure, or within **1 METER** of the underside of the guideway, column or **below ground structure**
- TransLink authorized monitor may be required

Limit 3

- Within **1 METER** of the guideway of any powered or non-powered TOH infrastructure, or within any tunnel or station platform
- TransLink authorized workers only
- TransLink authorized monitor required
- Generally no work during regular operating hours
- Lockout may be required

Limit 4

- Train envelope or contact with any TOH wires



The BCRTC Safe Work Procedure (SWP) must be submitted 3 weeks before the scheduled work start date. Incomplete SWP's will be returned to the contractor and this may delay the review process. Contractors **MUST** have the reviewed SWP and the associated documents on site at all times.

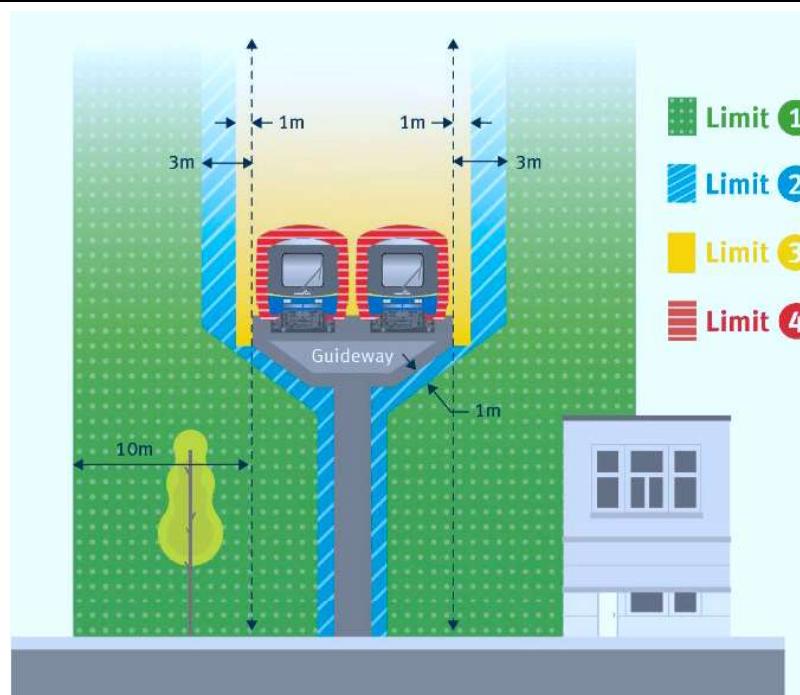
For Contractor Use: (Complete Sections 1-13)

1. General Information

Company Name:			
Project Name:			
Project Manager Name:	Prime Contractor	<input type="checkbox"/> BCRTC	<input type="checkbox"/> Third-Party
Scope of work:			
Location(s) of work:			
Work Start Date:		Start Time:	
Work Completion Date:		End Time:	
Work Timeframe:	<input type="checkbox"/> Revenue Peak Service 06:30-09:30 & 15:30-18:30		<input type="checkbox"/> Revenue Non-Peak Service <input type="checkbox"/> Non-Revenue

2. Limits of Approach

<input type="checkbox"/> Limit 1	<input type="checkbox"/> Limit 2	<input type="checkbox"/> Limit 3	<input type="checkbox"/> Limit 4
WITHIN 10 METERS OF THE GUIDEWAY DRILINE OR OF A STATION EXTERIOR WALL ✓ Notify BCRTC ✓ Workers Trained	WITHIN 3 METERS OF THE GUIDEWAY DRILINE, OR WITHIN 1 METER OF A COLUMN BELOW THE GUIDEWAY ✓ Monitor May Be Required ✓ May Require OP	WITHIN 1 METER OF THE GUIDEWAY DRILINE OR WALKWAY ✓ Monitor May Be Required ✓ May Require OP	VEHICLE ENVELOPE ✓ Monitor Required ✓ OP Required ✓ Power Isolation Required ✓ Lockout Required
<input type="checkbox"/> Project does <u>NOT</u> occur within any of the above mentioned limits (i.e. Office area)			



PLEASE REFER TO SKYTRAIN LIMITS OF APPROACH FOR A MORE DETAILED DESCRIPTION OF EACH LIMIT

3. Tooling Resources

List all Equipment required to complete the task:
(e.g. Hammer drill, grinder, ladder, compressor, scissor lift)

4. Specialized Training

Is specialized training required?
(e.g. Working from heights, specialized equipment etc.)

Yes No

List all required specialized training:

Have all applicable training certificates been sent to BCRTC Safety or sent to the Asset Integration Office (AIO)?

Yes No N/A

Contractors must ensure copies of applicable training certificates are available on site (e.g. fall protection, crane operator etc.)

5. High Risk Hazards

If any of the following is checked off, a risk assessment is required to be submitted to the BCRTC Safety Department. The BCRTC Safety Department may request a risk assessment for any task if deemed as high risk.



Excavation



Hazardous Materials



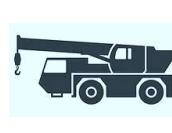
Electrical



Working in a Confined Space



Working Near High Voltage (600V & above)



Heavy Equipment



Fall From Elevation

6. Documentations

If any of the following are checked off as Yes, submit the document to the BCRTC Safety Department for review

Is lockout required?	Yes <input type="checkbox"/> No <input type="checkbox"/>	LOTO safety program/procedures	Yes <input type="checkbox"/> N/A <input type="checkbox"/>
Work done at a Height?	Yes <input type="checkbox"/> No <input type="checkbox"/>	Fall protection plan and rescue plan	Yes <input type="checkbox"/> N/A <input type="checkbox"/>
Are chemicals involved?	Yes <input type="checkbox"/> No <input type="checkbox"/>	Safety data sheet	Yes <input type="checkbox"/> N/A <input type="checkbox"/>
Is demolition involved?	Yes <input type="checkbox"/> No <input type="checkbox"/>	Hazmat survey	Yes <input type="checkbox"/> N/A <input type="checkbox"/>
Are designated substances involved?	Yes <input type="checkbox"/> No <input type="checkbox"/>	Exposure control plan	Yes <input type="checkbox"/> N/A <input type="checkbox"/>
Are rigging or lifting operations involved?	Yes <input type="checkbox"/> No <input type="checkbox"/>	Lift plan / Critical lift plan	Yes <input type="checkbox"/> N/A <input type="checkbox"/>
Work will impede movement of vehicles and/or pedestrians?	Yes <input type="checkbox"/> No <input type="checkbox"/>	Traffic/Passenger/Pedestrian management plan	Yes <input type="checkbox"/> N/A <input type="checkbox"/>
Is hot work involved?	Yes <input type="checkbox"/> No <input type="checkbox"/>	Valid Hot Work Permit	Yes <input type="checkbox"/> N/A <input type="checkbox"/>
Working inside confined space?	Yes <input type="checkbox"/> No <input type="checkbox"/>	Confined space entry hazard assessment	Yes <input type="checkbox"/> N/A <input type="checkbox"/>

7. Environment

Are there any environmental hazards?	<input type="checkbox"/> Handling/Transporting/Storage of liquids <input type="checkbox"/> Refueling <input type="checkbox"/> Wastewater discharge and runoff <input type="checkbox"/> Operation of generators (non road diesel engines) <input type="checkbox"/> Dust control <input type="checkbox"/> Stockpiling (erosion / sediment) <input type="checkbox"/> Hazardous waste <input type="checkbox"/> Non hazardous waste <input type="checkbox"/> Noise <input type="checkbox"/> Disturbance of wildlife and/or vegetation/soil <input type="checkbox"/> Other _____	If selected, explain mitigation plan or provide company procedure	

8. Personal Protective Equipment (PPE) Required: (Check All Applicable)

							
Hand Protection <input type="checkbox"/>	Breathing Protection <input type="checkbox"/>	Eye Protection <input type="checkbox"/>	Head Protection <input type="checkbox"/>	Foot Protection <input type="checkbox"/>	Hearing Protection <input type="checkbox"/>	Protective Clothing <input type="checkbox"/>	Welding Mask <input type="checkbox"/>
Additional equipment or instructions related to PPE:							

9. Impacts to Customers

Will hoarding be required?	Yes <input type="checkbox"/> No <input type="checkbox"/>	Explain the impact of the hoarding:	
Will signage be obscured?	Yes <input type="checkbox"/> No <input type="checkbox"/>	Explain how this will be mitigated:	
Is a customer, business, or resident notification required?	Yes <input type="checkbox"/> No <input type="checkbox"/>	Explain how this will be achieved:	
Are there impacts to the fire alarm or Fire Suppression Systems?	Yes <input type="checkbox"/> No <input type="checkbox"/>	Explain how this will be mitigated:	
Will emergency exits or refuge areas be blocked?	Yes <input type="checkbox"/> No <input type="checkbox"/>	Explain how this will be mitigated:	
Will there be an impact to CCTV or communication systems?	Yes <input type="checkbox"/> No <input type="checkbox"/>	Explain how this will be mitigated:	

10. Task Procedure

Contracted Work: This section is not required if the Contractor has completed and attached their own Safe Work Procedure (SWP) that meets the requirements of BCRTC.

Steps	Hazards	Control
1.		

2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

11. Any Additional Information (Attached photos, drawings, maps, etc.)

--

12. Contractors On Site

All Contractors working on BCRTC property must have completed their BCRTC Contractor Training **AND** display a valid contractor ID badge at all times when on site. If not, they will be asked to leave.

Worker Name	BCRTC Contractor ID#	Contractor ID Expiry Date * (i.e. July, 2023)
		*ID expire on the 1 st of the month

13. Contractors' Supervisor Sign off

Supervisor Name	Supervisor Signature	Date

I acknowledge that this safe work procedure is accurate. Should there be any changes that are listed in this procedure included but not limited to equipment, personnel, process changes etc. during the work period. It is my responsibility to contact BCRTC before the work begins.

14. For BCRTC Department Use:

This section is for a BCRTC Project Manager (AIS/ Department manager or supervisor) to complete:

Is an Occupancy Permit required? (21 days notice required for OP)	Yes <input type="checkbox"/> No <input type="checkbox"/>	Additional info:		
Power isolation required?	Yes <input type="checkbox"/> No <input type="checkbox"/>	Level of isolation required:	A <input type="checkbox"/> SCADA (Powers Down)	B <input type="checkbox"/> SCADA + Ground Strap or Ground Disconnect Switch
			C <input type="checkbox"/> SCADA + Ground Strap or Ground Disconnect Switch + Racking Out Breaker at Substation	
Are monitors required?	Yes <input type="checkbox"/> No <input type="checkbox"/>	Number of monitors required:	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/>	
Are station attendants required to fulfill this plan?	Yes <input type="checkbox"/> No <input type="checkbox"/>	If Yes , confirm the plan and requirements with the Asset Integration Office and the Field Operations Departments.		
Is a communication plan required?	Yes <input type="checkbox"/> No <input type="checkbox"/>	If Yes , include in the plan: <ul style="list-style-type: none"> An explanation of the project scope. Public messaging – notify the Public about the work, a FAQ, etc. How BCRTC will respond to media requests. 		
<i>This Safe Work Procedure (section 1 to 13) was reviewed by:</i>		Name	Date	
AIS or Department Manager/Supervisor				
Provide any comments:				

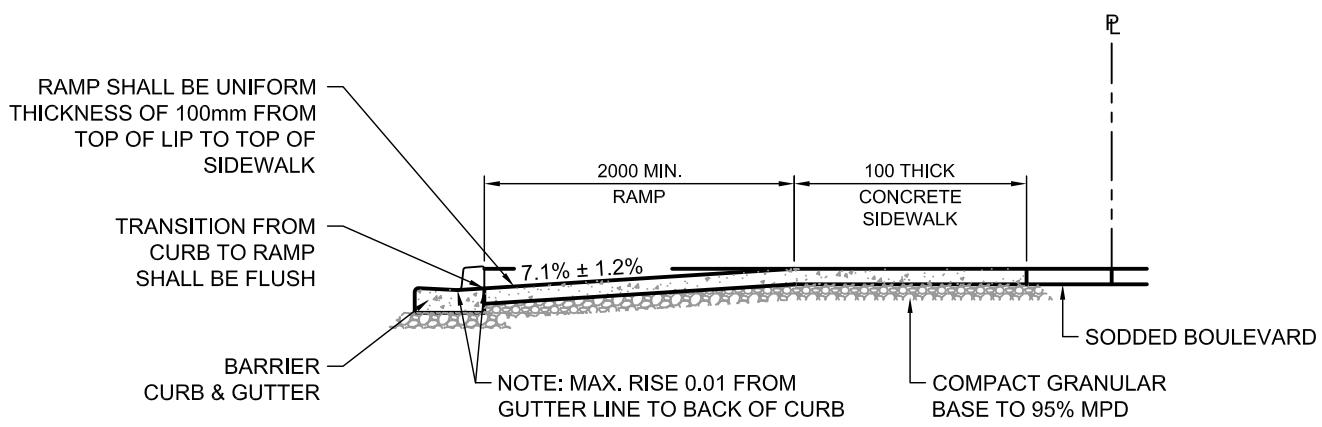
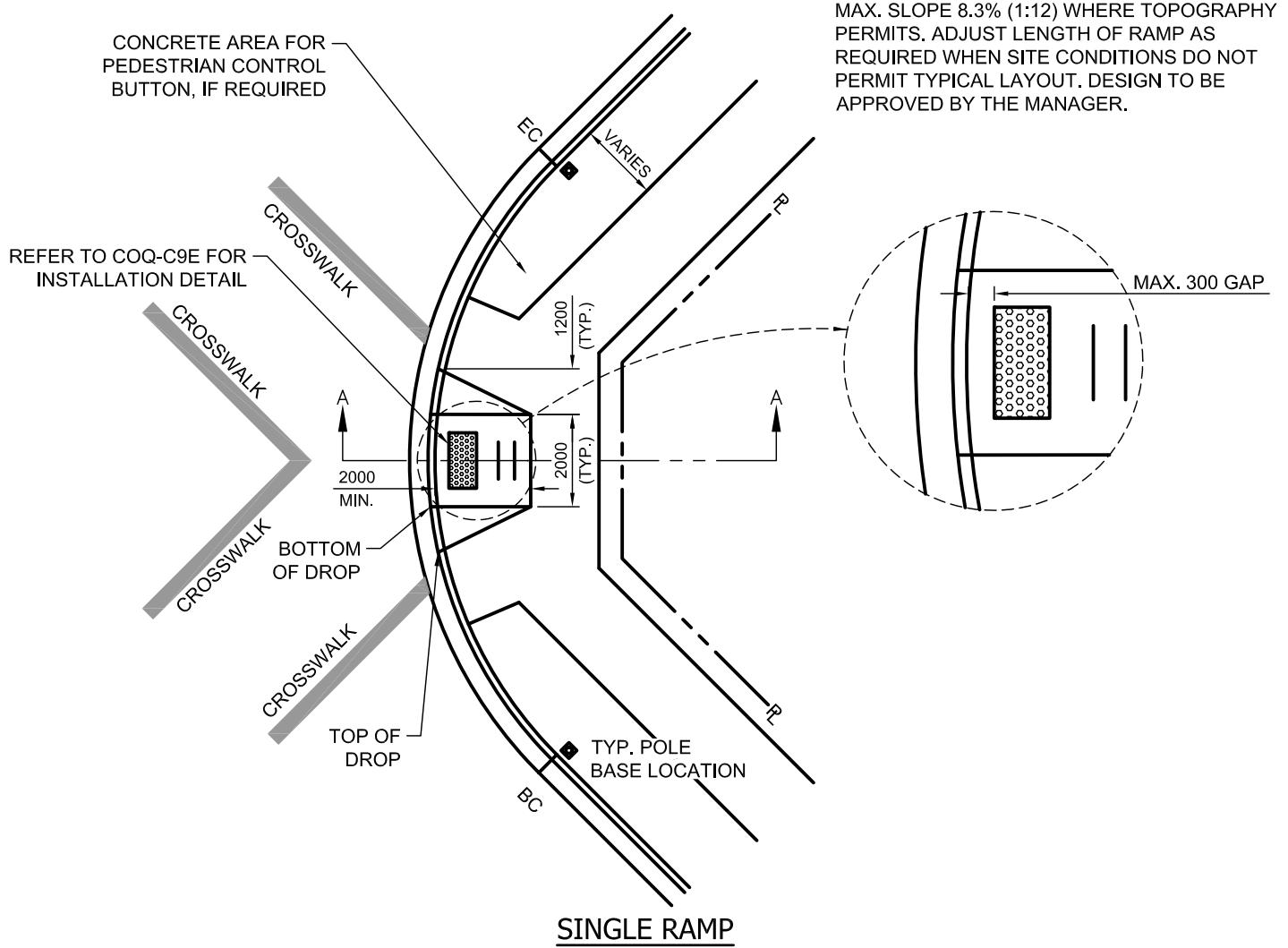
15. For BCRTC Safety Use:

- Third-Party as Prime: BCRTC acknowledges and receives the Safe Work Procedure (SWP). It is the responsibility of Third-Party Prime to review the SWP.*
- This is an O & M Preventive Maintenance work. It subjected to annual review*
- BCRTC as Prime: This Safe Work Procedure (section 1 to 13) was reviewed by:*

Name	Date
Safety Advisor:	
Environment Officer:	
Provide any comments:	

Appendix C -

Standard Detail Drawings

SECTION A-A CURB RAMP

PLOTTED: 26-Feb-16

ALL DIMENSIONS IN METRES.

**SINGLE LETDOWN AT INTERSECTION
BOULEVARD LESS THAN 3m WITH TACTILE**

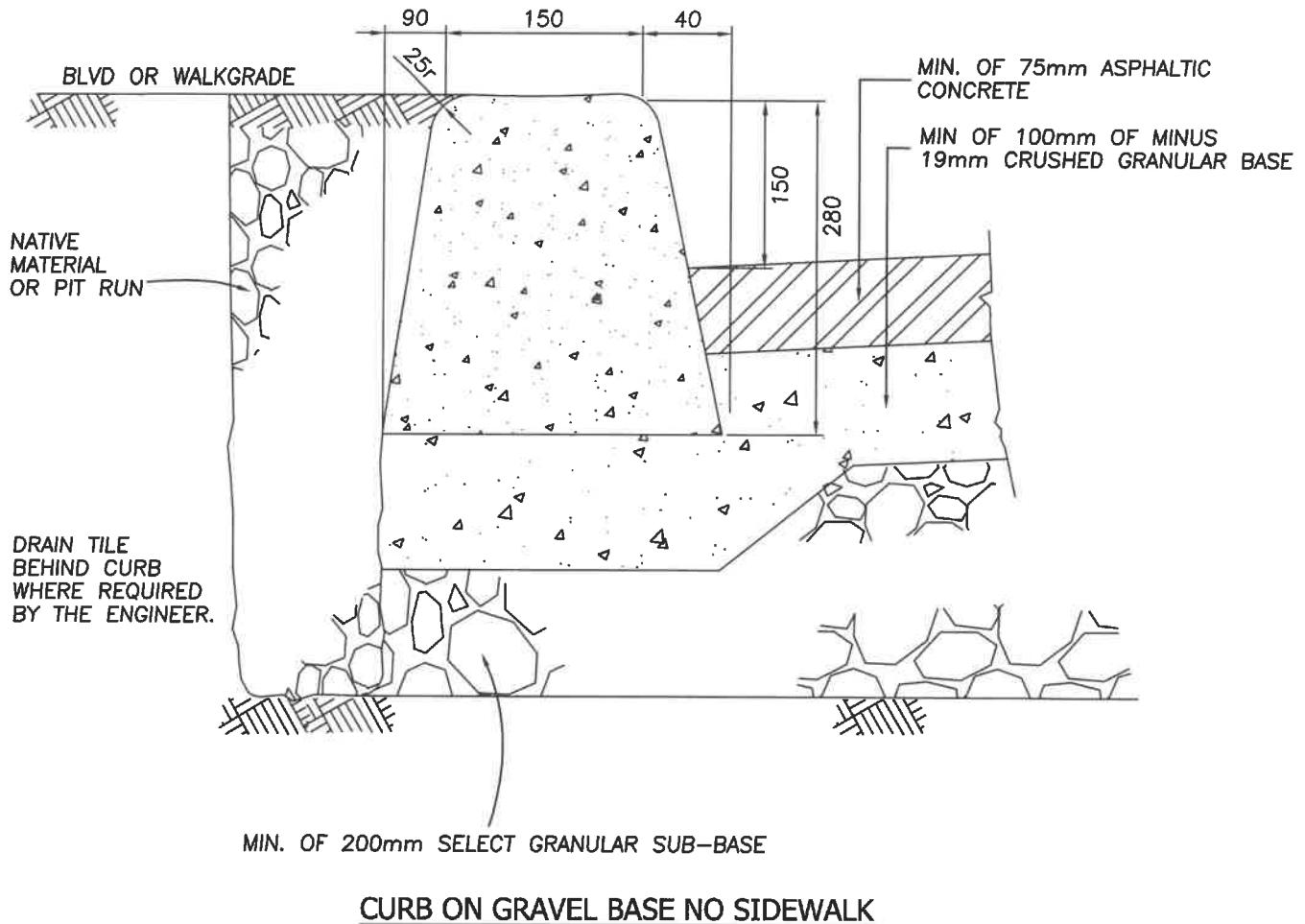
DATE: NOV/2015

DRAWN: REY

SCALE: N.T.S.

DRAWING NUMBER:

COQ-C9C



PLOTTED: 22-Feb-16

CURB ON GRAVEL BASE

DATE:	NOV/2015
DRAWN:	REY
SCALE:	N.T.S.

DRAWING NUMBER:
COQ-C6

Appendix D - As-built Records

As-built Records Download links

Appendix D – As-built Records.zip (File size 75 MB):

<https://qfile.coquitlam.ca/download/6D62F20A-EE74-4BDC-8605-3B3ECC6DA8BC/Appendix%20D%20-%20As-built%20Records.zip>

As built record drawings for City of Coquitlam are **also** available in QtheMap, the City of Coquitlam's online interactive map
(<http://coquitlam.ca/QtheMap>)

Appendix E -
Archaeological Chance Find
Procedures

Archaeological Chance Find Procedures

City of Coquitlam

DRAFT 2

November 2021 (version 2)



Table of Contents

Introduction.....	3
Purpose	3
Archaeological Sites in British Columbia	4
HCA Legislation and Policies	4
First Nation Cultural Heritage Management.....	4
Potential to Encounter Archaeological Sites	6
Types of Archaeological Sites.....	6
Archaeological Chance Find Procedure.....	6
Archaeological Chance Find Procedure - Suspected Ancestral (Human) Remains.....	7
Management Options.....	7
Best Practices for CFP Implementation	8
Contact List	10
Archaeological Site and Materials Identification	10
Artifacts	10
Beads	12
Indigenous Historical Artifacts.....	12
Hearths	13
Fire-Altered Rock.....	13
Shell and Non-Shell Midden	14
Surface Features	15
Rock Shelters and Caves	15
Ancestral (Human) Remains.....	15
Petroglyphs and Pictographs (Rock Art).....	16
Fish Weirs and Traps.....	17
Wet Sites.....	17
Culturally Modified Trees (CMTs)	18
Additional Resources	19
References Cited	19

Introduction

This document is presented as an accompaniment to Kwikwetlem Cultural Heritage and Archaeology Chance Find Procedures training provided by Brown & Oakes Archaeology to City of Coquitlam (or the “City”) staff and contractors.

The Chance Find Procedure (CFP) is intended to provide City planners and onsite project personnel guidelines for the appropriate response to an unanticipated discovery of known or suspected archaeological or cultural heritage materials during City operations. A CFP is NOT a substitute for professional archaeological assessment of project areas considered to hold archaeological potential. Thorough archaeological assessment will always reduce project risk of harms to protected archaeological sites and minimize the potential for encountering unanticipated material. This CFP training is intended to promote the preservation and proper management of heritage resources that are unexpectedly encountered during City activities.

The document presents a summary of archaeology site protection legislation, steps to follow in the case of suspected or observed archaeological materials, a list of appropriate authorities to contact in the case of archaeological site encounters, and a guide to archaeological site and materials recognition. Information on Kwikwetlem culture history and connections to traditional lands is not presented in this document and this information is best shared via virtual or in-person presentations.

Purpose

The purpose of CFP documentation is to aid in the protection and proper management of archaeological materials encountered during City of Coquitlam activities. Many land-altering activities have the potential to expose and/or negatively impact undocumented archaeological materials.

The purpose of this document is to:

- Ensure project personnel are aware that undocumented archaeological sites are likely to be present in the City of Coquitlam.
- Promote awareness of activities that may lead to the exposure of archaeological materials, including excavations, vegetation clearing, field survey and inspections, and more.
- Provide personnel the appropriate steps to follow if suspected or observed archaeological resources are encountered during work or personal activities.
- Provide education and resources to assist recognition of archaeological site types and materials in the lower Fraser River region.

Archaeological Sites in British Columbia

Archaeological sites are places that exhibit physical evidence of past human activity. Archaeological sites in British Columbia are automatically protected under the *Heritage Conservation Act* (HCA) when located on provincial, crown, municipal, or private land¹. The vast majority of archaeological sites in BC include places and belongings of Indigenous peoples. Some post-1846 sites related to newcomer history may also be registered and protected under the HCA if of significance to a place, industry, or region, for example. HCA protection is extended to ship and plane wrecks more than 2 years old.

Many First Nations consider the widely accepted definition of an archaeological site as a place featuring only the material remains of human activity too restrictive and instead advocate for the recognition and protection of a wider range of “cultural heritage” site types, including places of spiritual significance, named locales, known travel routes, and other places of cultural value.

The majority of the City of Coquitlam has not been surveyed for archaeological sites and it is reasonable to expect that many archaeological sites are buried and/or undetected. These sites are collectively referred to as undocumented archaeological sites.

HCA Legislation and Policies

Archaeological sites are automatically protected under the terms of the *Heritage Conservation Act* whether known or undocumented. Sites are protected whether previously disturbed by historic activities or intact. The HCA prohibits the alteration or disturbance of archaeological sites in whole or in part, on provincial public and private lands, whether impacts are intentional or inadvertent, and irrespective of previous land disturbance.

The HCA provides substantial penalties for the destruction or unauthorized disturbance of archaeological sites including imprisonment for up to two years and fines of up to \$1,000,000.

Alterations to archaeological sites may proceed under appropriate HCA permits held by professional archaeologists following provincial assessment guidelines². Work plans and methodologies related to archaeological site investigations must meet provincial regulatory standards and are expected to conform to participating First Nation cultural heritage policies and best-practice standards.

Archaeological materials on federally managed lands may be protected by other legislation and policies. Many federal agencies will adhere to the requirements outlined in the HCA when managing archaeological sites.

¹ <http://www.for.gov.bc.ca/archaeology/index.htm>.

² The HCA is administered by the Archaeology Branch, Ministry of Forests, Lands, Natural Resources and Rural Development.

First Nation Cultural Heritage Management

Many BC First Nations maintain cultural heritage policies and/or heritage permitting systems to assert oversight over Indigenous cultural heritage management and to ensure a high standard of archaeological practice. Contact should be made with locally affected Nations prior to any heritage study or project work with the potential to encounter cultural heritage materials to ensure adherence to Nation-preferred heritage protections, permits, and policy.

Potential to Encounter Archaeological Sites

Any project involving ground alterations has the potential to expose undocumented archaeological sites. Common forms of ground disturbances that have led to site discoveries include land grading, vegetation clearing/grubbing, excavation, asphalt/concrete removal, geotechnical drilling, access road or trail building, foundation demolition, heavy equipment movement, habitat planting, stream and pond channeling or dredging.

Other kinds of work activities where teams may encounter undocumented archaeological sites include field teams working in proximity to natural, undeveloped or minimally disturbed terrain. Teams involved in field surveys, field inspections, or inventories of natural ground and waterways, riparian areas, municipal parks and trails, forested areas, cut bank or erosion area, and so on may encounter exposed archaeological materials.

City workers or contractors engaged in any activity that may result in archaeological materials identification should be made aware of HCA site protection legislation and field supervisors properly versed CFP procedures.

Types of Archaeological Sites

The following site types are well-known across the lower Fraser River region and may be encountered in the City of Coquitlam. The following site types may contain a range of artifact types and sediment signatures.

- **Stone tool sites** containing isolated artifacts or accumulations of stone tool working debris.
- **Habitation sites** show accumulations of food remains, tools, and evidence such as hearths indicating short term and seasonal camps and settlements used for travel and resource procurement as well as large and permanent villages.
- **Surface features** such as cultural depressions created by former habitations, earthen fortifications, burial mounds, and rock cairns.
- **Wet sites** contain preserved organic materials like woven basketry or wood tools in addition to other cultural material; these sites form under special preservation conditions typically anaerobic water saturated sediments along waterways and floodplains.
- **Culturally Modified Trees (CMTs)** include bark stripped trees, planks, and territory markers.
- **Rock art** including pictographs (painted rock images) and petroglyphs (images carved or pecked into rockfaces or boulders).

Archaeological Chance Find Procedure

In the event of found or suspected archaeological material, follow the procedures outlined below.

STEP 1: WATCH for potential archaeological materials

- ⇒ Know that undocumented archaeological sites are expected throughout Coquitlam.
- ⇒ Know that archaeological materials are protected by law and must be reported.
- ⇒ If you believe you may have encountered archaeological materials (either intact or disturbed) follow the steps outlined below.

STEP 2: STOP work in proximity to the material

- ⇒ If known or suspected archaeological materials are encountered, STOP work in the immediate vicinity.
- ⇒ Do not disturb, move, relocate, or collect the material.

STEP 3: REPORT observed materials

- ⇒ Alert the site supervisor that suspected archaeological materials have been observed.
- ⇒ The site supervisor will ensure appropriate contact is made with City managers who will in turn reach out to archaeological professionals.

STEP 4: CONTACT archaeological professionals

- ⇒ Seek immediate advice from an archaeological professional.
- ⇒ Teams may be advised to protect the area with flagging or cones until the area can be assessed by the appropriate representative.
- ⇒ Teams may be requested to provide locational details or photographs of the material.

STEP 5: AWAIT advisement

- ⇒ Wait for instructions from the appropriate representative; do not begin ground disturbing work until cleared to do so.
- ⇒ Prepare and submit an incident report to ensure compliance with appropriate regulators and interest groups.

Archaeological Chance Find Procedure - Suspected Ancestral (Human) Remains

In the event of found or suspected human remains, follow the procedures outlined below*.

STEP 1: STOP all activity at the job site immediately, including the removal of backfill. Do not rebury the remains.

STEP 2: REPORT to the City Project Manager. The Project Manager will contact an archaeological professional and determine the appropriate course of action. In most cases, the archaeology professional will visit the site to determine if the materials are reasonably expected to be human and archaeological. If warranted, the consultant will notify the Archaeology Branch and the RCMP, the Office of the Coroner, and affected First Nations. The Coroner will affirm whether the remains are archaeological and not of forensic concern. The archaeologist will inform the Archaeology Branch and First Nations will be consulted to determine culturally appropriate handling protocols and subsequent project management options.

STEP 3: PROTECT the affected location with flagging or cones to prevent additional disturbance and for privacy. Do not photograph the material.

STEP 4: TREAT the remains with dignity and respect. Do not allow bystanders to take photographs or video.

STEP 5: AWAIT advisement.

* If it is reasonable to think the human remains are not archaeological but forensic in nature, an immediate call to the RCMP is required.

Management Options

If determined that an archaeological or cultural heritage site (intact or disturbed) is present, an archaeologist will coordinate communications with the City, local affected First Nations, and the Archaeology Branch to evaluate management options. Archaeology Branch and First Nations approval and additional permitting may be required prior to the implementation of management options.

Examples of potential management options are provided below. Options will vary based on site characteristics, proponent needs, and Archaeology Branch and First Nation requirements.

Option A: Site avoidance through project redesign or relocation. Site avoidance is always preferred. Avoidance minimizes impacts to irreplaceable archaeological sites and reduces cost and schedule impacts.

Option B: Systematic data recovery through controlled archaeological excavation or other method. Data recovery is destructive to archaeological sites and will entail consideration of costs and schedule coordination.

Option C: Monitoring of construction activities by a professional archaeological team. Monitoring is appropriate where project impacts cannot be evaluated before construction (due to impenetrable surfaces or underground facilities, for example) or where potential to encounter archaeological materials is present following impact assessment or systematic data recovery.

Best Practices for CFP Implementation

- A Chance Find Procedure is best applied as an outcome stemming from archaeological assessment – as a last step verification that archaeological materials have not been overlooked in project area assessments, or where there is a professional assessment that documents a low expectation for encountering archaeological materials in a work area.
- A Chance Find Procedure is not an acceptable replacement for a professional archaeological overview (AOA) or archaeological impact assessment (AIA) or a well-designed and implemented archaeological construction monitoring plan for many areas. Engagement with professional archaeological teams, affected First Nations, or the Archaeology Branch will assist in appropriate heritage study approaches.
- Chance Find Procedure training must be delivered by professional archaeologists and local area First Nations who wish to contribute to CFP presentations.
- Chance Find Procedures should be summarized regularly as part of job or project requirements, and CFP training repeated by the archaeological and First Nation team for new employees, project teams, and subcontractors.
- Chance Find Procedures do not supersede any requirements or policies pertaining to cultural heritage management by First Nations with interests in the area. Proponents are encouraged to seek input from interested First Nations on area-specific CFPs as part of any project engagement process.

Contact List

Archaeology Branch

Paula Thorogood	Planning and Assessment Manager	250-953-3300	Paula.Thorogood@gov.bc.ca
Nathan Friesen	Planning and Assessment Supervisor	250-953-3306	Nathan.P.Friesen@gov.bc.ca

City of Coquitlam

Main Reception	604-927-3000
----------------	--------------

Police and Coroner

RCMP (Non-emergency)	Coquitlam	604-945-1550
BC Coroners Service	Lower Mainland Region	604-660-7708

Area First Nations

Kwikwetlem First Nation	604-540-0680
Katzie First Nation	604-465-8961
Kwantlen Nation	604-888-2488
Musqueam Indian Band	604-263-3261
Stó:lō Nation	604-824-2420
Tsleil Waututh Nation	604-929-3454

Archaeological Site and Materials Identification

The following archaeological sites and artifacts are common to the lower Fraser River region. This guide is to assist in the recognition and protection of archaeological materials found by chance. If you identify any archaeological material, stop work immediately and contact a professional archaeologist.

Artifacts

Artifacts are objects made or modified by humans and may be formed of stone, bone, antler or wood. Bone, antler and wood tools were produced in abundance, but stone artifacts are the most common artifacts found in the lower Fraser region because of the preservation durability of stone. Bone and antler were fashioned into a variety of items, including needles, knives, points, jewelry, awls and scrapers. Wood was used to make implements like spoons and bowls, handles, ceremonial objects, canoes, houses, and much more.



Photo Credit: RBCM, Archaeology Collection. Antler and wood tools (<https://learning.royalbcmuseum.bc.ca>)

Stone tools common to this region include projectile points, knives, adzes (axes), scrapers, mauls (hammers), net weights, beads, and more. Archaeologists distinguish chipped stone from ground stone artifacts, each distinguished by the mode of manufacture, either flaking scars or grinding and polishing marks. Stone flakes or 'debitage' is produced during the process of making stone tools. These flakes were sometimes used as tools themselves or were left behind at the stone tool working site. Culturally produced debitage shows features distinctive from naturally broken rock, gravel or crush, but these signatures can be difficult to identify to an untrained eye. Stone artifacts were produced from dacite, quartzite, slate and nephrite as well as obsidian, chert, and other materials. Stone was acquired locally or transported or traded over long distances; high-quality materials like obsidian has been traced to locations from Prince Rupert to Oregon and beyond.

Artifacts may be found as isolated finds or in association with other cultural materials.

Archaeological Chance Find Procedure



Photo Credit: B&OA, Chipped stone artifacts from Coquitlam Lake.



Photo Credit (left): B&OA, Nephrite ground stone adze from Port Coquitlam. Photo Credit (right): RBCM, Archaeology Collection. Ground stone hand mauls (<https://learning.royalbcmuseum.bc.ca>)

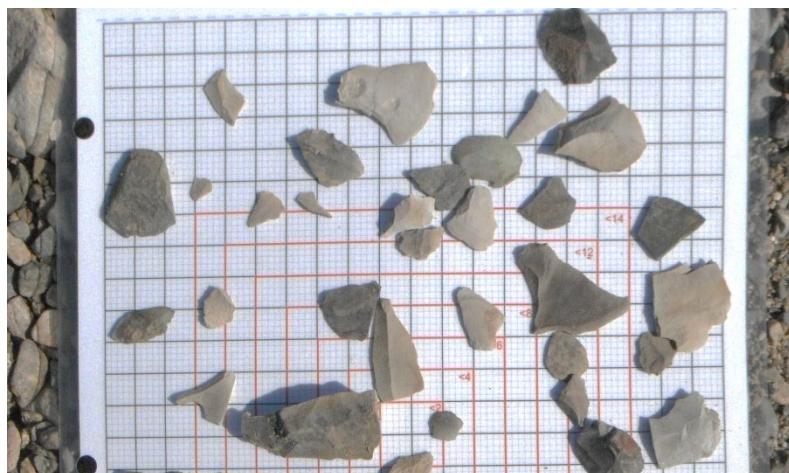


Photo Credit: B&OA, Stone tool debitage from BC Interior.

Beads

Beads were made from a variety of materials including stone, shell, bone and glass (in more recent times). Shell and stone disc beads were used in jewelry, regalia and in mortuary practices across the Northwest Coast. On the Lower Fraser it is most common to find stone beads at archaeological sites fashioned from mud or silt stone, slate, or other softer stone. At some burial sites, individuals of rank were laid to rest with thousands of stone and shell beads.



Photo Credit: B&OA, Ground stone beads from near Agassiz.

Indigenous Historical Artifacts

Indigenous use of European materials in the years following contact are often found in early historic sites. Ceramics, glass, and metal were valued for their strength, durability, ease of access, or aesthetic properties. Glass was worked using traditional stone tool techniques in the same way as obsidian (a natural volcanic glass). Clay pipes were adopted by Indigenous peoples who several centuries earlier had introduced the practice of tobacco smoking to European traders. Glass beads were used by European fur traders to trade with Indigenous peoples; trade beads were initially valued for their vibrant colour and the expectation of beads as a wealth item.

Photo Credit (left): B&OA, Worked glass and clay stone pipe, Coquitlam.



Photo Credit (middle): <https://www.canadahistory.ca/explore/fur-trade/tobacco-pipes>. Photo Credit: Oregon Museum of Natural and Cultural History, Glass trade beads (<https://mnch.uoregon.edu/index.php/collections-galleries>).

Hearths

Hearths are the remnants of fires identifiable by dense black charcoal, ash and heat oxidized sediments. While natural forest fires may also leave traces of burning, hearths tend to be more defined and frequently show concave bases, evidence of repeated use, and contain or are in proximity to burned bone, fire-altered rock, and artifacts.

Fire-Altered Rock

Fire-altered rock (FAR) is rock modified by repeated heating and cooling. Heating small, rounded river cobbles and immersing the hot stones in water filled baskets or boxes was a frequently used cooking technique called 'stone boiling'. Heated stones were also used to warm clothing and bedding. The repeated heating and cooling of FAR created distinctive fracture and colour patterns that are easily distinguished from naturally broken rock. FAR shows irregular breakage patterns, is frequently deeply pitted, is often deep rust or black in colour, and may be found mixed in charcoal and ash laden sediments. As FAR is often found in abundance around settlement areas or near cooking features and hearths, it is a frequent first indicator of the presence of archaeological sites. Often mixed in FAR deposits are boiling stones—small, rounded pebbles that have not yet been fractured by thermal processes



Photo Credit: B&OA, Fire altered rock, Coquitlam.

Shell and Non-Shell Midden

Midden deposits are generally indicative of camp or village sites. Middens accumulate through the repeated, ongoing use of an area where food remnants or the debris of daily living build up in layers at a site over time. In coastal areas, shellfish provided an abundant food source and, middens contain abundant fragmented or whole shell typically embedded in dark, greasy, sediments rich in charcoal, ash, fire cracked rock, burnt materials, and artifacts. Because shell neutralizes the acidity in soil, shell middens enhance preservation of organic food remains and tools, and fish and mammal bone, wood, antler, and botanical remains are often well-preserved in shell midden sites.

Non-shell middens are accumulations of living materials formed at camps and settlements away from marine waterways. Non-shell midden shows layered deposits of dark sediments, ash, and sometimes sand and clay in sediments with little to no shell. These deposits rarely contain bone, antler, or wood remains due to poorer preservation environments.

In Coquitlam, non-shell middens are the more common site type but there are a few examples of inland shell midden sites associated with camps or settlements where shellfish was transported to locations by travel or trade.



Photo Credit (left): B&OA, Non-shell stratified midden Port Coquitlam. Photo Credit (right): Shell midden, Vancouver Island (<https://learning.royalbcmuseum.bc.ca/pathways/can->)

Surface Features

Surface features are non-portable cultural formations visible on the landscape. Features may include pits or depressions, earthen mounds or rock cairns, petroforms (rock arrangements) or trails. Cultural depressions may indicate the location of semi-subterranean winter dwellings, plank houses where midden accumulated around the outside of structures, cache pits used for tool or food storage, or pits and trenches used for food cooking or processing. Cultural depressions are identifiable by their uniform shape (usually round or rectangular), a berm may be present around the edge of features, the presence of associated artifacts, or concentrations of charcoal, ash, and fire altered rock.

Cultural mounds or rock cairns are other familiar surface features. Earthen burial mounds and rock cairns are part of a mortuary tradition found throughout the lower Fraser region over the past 1,500 years. Cultural mounds and cairns range in size from around a meter in diameter to more than 12 meters across. Individual occurrences or clusters of well-formed oval or circular mounds of earth and rock should trigger archaeological assessment.



Photo Credit: SFU Museum, Winter pit house village, Lillooet.

Rock Shelters and Caves

Rock shelters were used, among other purposes, as camps, spiritual or burial locations, and storage caches. Shelters can be found associated with overhangs of large boulders, indentations in rock bluffs or in caves. Shelters often associate with artifacts, rock art, and hearth features.

Ancestral (Human) Remains

Human remains are especially sensitive and significant finds. Any potential human bone requires immediate implementation of the CFP. Ancestral remains are frequently present at archaeological locations and may be found articulated in a burial context or as scattered fragments.

Petroglyphs and Pictographs (Rock Art)

Northwest Coast rock art includes images depicted on boulders, rock overhangs, rock faces, or other exposed rock surfaces. Pictographs are drawings or designs painted on rock using pigments like ochre or charcoal mixed with grease. Petroglyphs are images incised or pecked into stone. Designs vary widely and often depict animals, humans, or an extensive variety of geometric shapes.



Photo Credit: B&OA, Portion of petroglyph panel at Petroglyph Provincial Park, Nanaimo.



Photo Credit: B&OA, Portion of pictograph panel at Pitt Lake.

Fish Weirs and Traps

Fish weirs are structures constructed to funnel and trap fish for harvesting. Traps were built in intertidal areas along marine and river shorelines and near stream mouths. Weirs vary in form and structure depending on water and shoreline conditions, fish species targeted for harvest, intended volume of harvest, and community preferences. Fish weir sites are identifiable by linear or patterned arrangements of wooden stakes protruding from beach or bank edges or boulder alignments along waterways.



Photo Credit: Washington State Archives, Yelm Jim Fish Trap 1885
(<http://www.digitalarchives.wa.gov/Record/View/DAA73FC7A57E989D65B6DBEA419FC89E>)

Wet Sites

Wet sites are special preservation environments that form in low oxygen water saturated environments along waterways, in bogs and on floodplains. These locations permit enhanced preservation of organic artifacts like wood, bark, and botanicals. Artifacts found in wet sites have included basketry, twine and rope, wooden tools and weapons, architectural structures, and ceremonial implements made of wood and bone.



Photo Credit (left): Mike Blake. Ground slate knife with wooden handle, Agassiz. Photo Credit (right): Katherine Bernick, Waterlogged and preserved basket, Coquitlam.

Culturally Modified Trees (CMTs)

Culturally Modified Trees are trees that have been utilized by Indigenous Peoples for a broad range of cultural uses. Wood was used to build houses, canoes, tools, and weapons. Branches, boughs, and leaves were used to fashion tools, for medicine and in cultural ceremony. Harvesting cedar bark and roots was undertaken regularly to make clothing, cordage, basketry, and sleeping mats, ceremonial regalia, and much more.

Triangular bark stripped cedars are the most common form of CMT; a long, linear triangular bark scar will show where bark was removed from the trunk of a living tree. The exposed scar will heal over time creating a seam on the outer tree bark. This form of sustainable harvesting allowed the same tree to be used multiple times for bark harvesting. CMTs can also show evidence of wood removal where wedges were used to pry rectangular planks of wood from standing, living trees.

Logging and clearing throughout much of Coquitlam municipality reduces the chance that archaeological CMTs remain in most forested areas today, but more recent CMTs where bark or wood was harvested from second-growth forest by Kwikwetlem for cultural uses may be present.



Photo Credit: B&OA, Bark stripped cedars, Coquitlam.

Additional Resources

Learning Portal, Royal BC Museum - <https://learning.royalbcmuseum.bc.ca>

SFU Museum of Archaeology & Ethnology - <https://www.sfu.ca/archaeology/museum.html>

References Cited

Archaeology Branch (1999). Found Human Remains. On file with the Archaeology Branch, Victoria, BC. From http://www.tca.gov.bc.ca/archaeology/policies/found_human_remains.htm

Archaeology Branch (2010). Heritage Conservation Act (RSBC 1996). On file with the Ministry of Tourism, Culture, and the Arts, Victoria, BC. From