



City of Coquitlam

Contract Documents 73038

Scott Creek Bridge Rehabilitation



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Invitation to Tenderers



INVITATION TO TENDER

DATE OF ISSUE: **February 17, 2023**

Tender No. 73038

Scott Creek Bridge Rehabilitation

The City of Coquitlam invites tenders for **Contract 73038 – Scott Creek Bridge Rehabilitation**, generally consisting of the following, but not limited to:

Scott Creek bridge rehabilitation on Lougheed Highway including deck resurfacing, new parapet walls, railing, lane markings, concrete medians, and other miscellaneous and incidental works as further described in the 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

Monday, March 13, 2023

("Closing Date and Time")

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.)

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

Inquiries

All inquiries are to be submitted in writing by email, no later than 3 full business days prior to Tender Closing Time quoting the Tender Name and Number sent to:

Email: bid@coquitlam.ca

Addenda

Tenderers are required to check the City's website for any updated information and Addenda issued before the Closing Date at: www.coquitlam.ca/BidOpportunities

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 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
Purchasing Manager

Instructions to Tenderers

Tender 73038

Scott Creek Bridge Rehabilitation

INSTRUCTIONS TO TENDERERS

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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: **Scott Creek Bridge Rehabilitation**

Reference No. **73038**

- | | | |
|------------|-------------------------|---|
| 1.0 | Introduction | <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> <p>Scott Creek bridge rehabilitation on Lougheed Highway including deck resurfacing, new parapet walls, railing, lane markings, concrete medians, and other miscellaneous and incidental works as further described in the Contract Documents.</p> <p>1.2 All inquiries regarding this Tender are to be submitted in writing referencing the Tender Name and Number sent to:</p> <p>E-mail bid@coquitlam.ca</p> <p>All inquiries will be received a minimum of 3 full business days prior to Tender Closing Time.</p> <p>Inquiries received after that time may not receive a response.</p> |
| 2.0 | Tender Documents | <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>. <u>All sections of this publication are by reference included in the <i>Contract Documents</i>.</u></p> <p>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</p> |

Contract, and neither the Owner nor any representative of the Owner gives any guarantee or representation that the additional information is reliable, accurate, complete or relevant.

3.0 Submission of Tenders

- 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.

Tenders must be received on or before:

***Tender Closing Time:* 2:00 p.m. local time**

***Tender Closing Date:* March 13, 2023**

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.

Instructions for Tender Submission

- 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>**

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 email: bid@coquitlam.ca)

Tenderers are responsible to allow for ample time to complete the submission process. For assistance, phone 604-927-3037 or Fax 604-927-3035.

- 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.

- 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 received by fax (604-927-3035) or email: bid@coquitlam.ca.

BIDS RECEIVED IN-PERSON OR BY COURIER 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

- 4.01** Proposed bridge rehabilitation site is located at Scott Creek crossing, which is a red coded watercourse as per FLNRO Streamside Protection Regulation and subject to conform to all DFO/FLNRO regulations.

**Obtaining
Documents**

- 4.1 The following documents which are referred to and form part of the Contract Document package may be obtained as follows:
- 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
 - City of Coquitlam Supplementary Specifications and Detailed Drawings to the MMCD 2009 Edition.

City of Coquitlam Engineering & Public Works Department
3000 Guildford Way
Coquitlam, B.C. V3B 7N2
Tel: 604-927-3500
Fax: 604-927-3525

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:

[Supplementary Specifications and Detailed Drawings to MMCD](#)

**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: [City of Coquitlam Business License](#)

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	<p>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.</p>
	Cancellation of Tender	4.8	<p>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.</p>
	Conflict of Interest	4.9	<p>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.</p>
	Collusion	4.10	<p>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.</p>
5.0	Instruction to Tenderers – Part II		<p>Delete Instructions to Tenderers – Part II Contained in the Edition of the Publication “Master Municipal Construction Documents 2009” and replace with the following:</p>
	Tender Requirements	5.1	<p>A tender should be on the Form of Tender as provided and be signed by the authorized signatory(s) as follows:</p>
		5.1.1	<p>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>
		5.1.2	<p>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>
		5.1.3	<p>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>

- 5.2 A tender must be accompanied by tender security ("*Bid Security*") in the form of:
- 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 *Owner*;
- 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:
- 5.3.1 Appendix 1 – the Schedule of Quantities and Prices;
 - 5.3.2 Appendix 2 – a "*Preliminary Construction Schedule*", generally in the form attached as Appendix 2 to the Form of Tender, and showing *Substantial Performance* by the date or within the duration, shown in paragraph 2.2 of the Form of Tender.
 - 5.3.3 Appendix 3 – name and brief description of the previous experience of the *Superintendent* the tenderer will use for the *Work*;
 - 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);
 - 5.3.5 Appendix 5 – a complete list of all subcontractors, if any, that the tenderer will use for the *Work* 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 *Notice of Award*, be required to deliver to the *Owner* 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**
- 6.1 Tenders which contain qualifications, or omissions, so as to make comparison which other tenders difficult, may be rejected by the *Owner*.
- 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 *Owner as Approved Equals* as the case may be, 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*.
- 6.3 The only *Alternative Tender* that the *Owner* may accept is an *Alternative Tender* 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 *Owners* in the preference to other conforming tenders, if no *Alternative Tenders* had been invited.

7.0 **Approved
Equals**

- 7.1 Prior to the *Tender Closing Time and Date*, a tenderer may request the *Owner* to approve materials, products, or equipment ("*Approved Equal*") to be included in a tender in substitution for items indicated in the Contract Documents.
- 7.2 Applications for an *Approved Equal* must be in writing, and supported by appropriate supporting information, data, specifications, and documentation.
- 7.3 If the *Owner* decides in its discretion to accept an *Approved Equal*, then the *Owner* will issue an addendum to all tenderers.
- 7.4 The *Owner* is not obligated to review or accept an application for an *Approved Equal*.

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 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 <i>Work</i> , including all items which, whole not specifically listed in the <i>Schedule of Quantities and Prices</i> , are included in the <i>Work</i> specifically or by necessary inference from the <i>Contract Documents</i> ; |
| | | 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 <i>Contractor's</i> 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 <i>Work</i> , and payment of appropriate wages for labour included in or required for the <i>Work</i> . |
| 11.0 | Taxes | 11.1 | The tendered prices shall cover all taxes and assessments of any kind payable with respect to the <i>Work</i> , but shall not include <i>GST</i> . <i>GST</i> 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 or fax, to the office referred to in paragraph 3.4 of the Instructions to Tenderers at any time up until the <i>Tender Closing Date and Time</i> . An amendment or revocation that is received after the <i>Tender Closing Date and Time</i> 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 <i>Tender Price</i> or other material element of the tender such that, in the opinion of the <i>Owner</i> , 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:

(TENDERED 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__.”

- 12.5 If a tender amendment or revocation is sent by fax, the tenderer assumes the entire risk that equipment and staff at the office referred to in paragraph 3.4 of the Instructions to Tenderers will properly receive the fax containing the amendment or revocation before the *Tender Closing Date and Time*. The *Owner* assumes no risk or responsibility whatsoever that any fax will be received as required by paragraph 12.1 of these Instructions to Tenderers, and shall not be liable to any tenderer if for any reason a fax is not properly received.

**13.0 Duration of
Tenders**

- 13.1 After the *Tender Closing Time*, 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 *Work*.

- 15.0** **Award** 15.1 In exercising its discretion, the *Owner* will have regard to the information provided in the Appendices to the Form of Tender as described under IT5.3 including the proven experience of the tenderer, and any listed subcontractors, to do the *Work*.

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.

- 15.4 Upon receiving notification of being the successful Tenderer, the Tenderer shall submit a Pandemic Prevention Policy and Procedures (4P) document detailing occupational health and safety policies to prevent the spread of Covid-19 to the public, the Tenderer's employees, and sub-contractors during construction operations. The Owner reserves the right to require additions or changes to the 4P document prior to the execution of the Contract. After the Contract is in place, the Contractor will be expected to enforce the 4P document to the satisfaction of the Contract Administrator. If the Contract Administrator deems the 4P document is not being satisfactorily followed, the Contract Administrator may stop work at the sole expense of the Contractor until the Contractor's employees and sub-contractors have been provided proper training and orientation in regard to the 4P document.
- 16.0 Subcontractors**
- 16.1 The *Owner* reserves the right to object to any of the subcontractors listed in a tender. If the *Owner* objects to any of the subcontractor(s) then the *Owner* will permit a tenderer to, within 5 days, propose a substitute subcontractor(s) acceptable to the *Owner* provided that there is not resulting adjustment in the *Tender Price* 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 *Owner* objects to a listed *Subcontractor(s)*, the tenderer may, rather than propose a substitute subcontractor(s), consider its tender rejected by the *Owner* and by written notice withdraw its tender. The *Owner* shall, in the event, return the tenderer's bid security
- 17.0 Optional Work**
- 17.1 If the *Schedule of Quantities and Prices* includes any tender prices for *Optional or Provisional Work*, as defined in GC 7.4.1, the tenderers must complete all the unit prices for such *Optional or Provisional Work*. Such tender prices shall not include any general overhead costs, or other costs, or profit, not directly related to the *Optional or Provisional Work*.
- 17.2 Notwithstanding that the *Owner* may elect not to proceed with the *Optional or Provisional Work*, the tender prices for any *Optional or Provisional Work*, including the extended totals for *Optional or Provisional Work* unit prices, shall be included in the *Tender Price* for the purpose of any price comparisons between tenders.

Form of Tender



Form of Tender

Tender No. 73038

Scott Creek Bridge Rehabilitation

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)
Monday, March 13, 2023**

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 or fax 604-927-3035.

March 2023

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: Scott Creek Bridge Rehabilitation

Reference No. 73038

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 31, 2023**; 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: _____ - _____ - _____

Fax: _____ - _____ - _____

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 73038
Scott Creek Bridge Rehabilitation****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. / (Supplementary Contract Specifications)	DESCRIPTION	UNIT	QTY	UNIT PRICE	EXTENDED AMOUNT
1.00	01 55 005	TRAFFIC CONTROL, VEHICLE ACCESS AND PARKING				
1.01	(1.5.1)	Traffic Control and Management			Incidental to Contract	
2.00	01 57 015	ENVIRONMENTAL PROTECTION				
2.01	(1.6.1)	ESC supply & installation, maintenance and removal			Incidental to Contract	
3.00	01 58 015	PROJECT IDENTIFICATION				
3.01	(1.3.1)	Construction Zone Information Signs	ea.	11		
4.00	02 41 165	STRUCTURE DEMOLITION				
4.01	(1.10.1)	Dismantle and Dispose East/West Aluminum Railing System	l.s	1		
4.02	(1.10.2)	Demolishing Existing Deck	l.s	1		
5.00	03 20 015	CONCRETE REINFORCEMENT				
5.01	(1.5.1)	Concrete Reinforcement - Stainless	kg	12,000		
5.02	(1.5.1)	Concrete Reinforcement - Black	kg	1,500		
6.00	03 30 205	CONCRETE WALKS, CURBS AND GUTTERS				
6.01	(1.4.3)	Concrete Barrier Curb & Gutter (C5)	l.m	21		
6.02	(1.4.3)	Concrete Extruded Median Curb (C6)	l.m	160		
6.03	(1.4.5)	Concrete Walks - (100mm depth)	sq.m	18		
6.04	(1.4.5)	Ashlar Slate Stamped Concrete Median Infill (match existing color)	sq.m	18		
7.00	03 30 535	CAST-IN-PLACE CONCRETE				
7.01	(1.5.6)	Preparation of Existing Deck	l.s	1		
7.02	(1.5.7)	CIP Concrete Deck, Bicycle Sidewalk	cu.m	49		
7.03	(1.5.7)	CIP Parapets	cu.m	10		
7.03	(1.5.7)	CIP Median	cu.m	9		
7.04	(1.5.8)	Concrete Deck Sealant	sq.m	470		
8.00	03 40 01	PRECAST CONCRETE				
8.01	1.4.4	Precast Concrete Road Barriers	l.m	60		
9.00	05 12 335	STRUCTURAL STEEL FOR BRIDGES				
9.01	(1.2.1)	Steel Parapet Railing	l.m	43		
9.02	(1.2.2)	Steel Bicycle Railing	l.m	28		
9.03	(1.2.3)	Pipe Support Anchors	ea.	6		
10.00	31 11 01	CLEARING AND GRUBBING				
10.01	1.4	Remove/Trim Vegetation Encroaching on Roadway	l.s	1		
11.00	31 22 16	RESHAPING GRANULAR ROADBED				
11.01	(1.4.1/.2)	Reshaping Road Bed	sq.m	140		
12.00	31 24 13	ROADWAY EXCAVATION, EMBANKMENT, & COMPACTION				
12.01	1.8.4	Removal and Disposal of Existing Concrete Sidewalk and Curb Ramps	sq.m	80		
12.02	1.8.4	Removal and Disposal of Existing Asphalt (all Depths)	sq.m	50		
12.03	1.8.4	Removal and Disposal of Existing C5 Barrier Curb & Gutter	l.m	44		
12.04	1.8.4	Removal and Disposal of Existing C6 Median Curb	l.m	160		
12.05	1.8.4	Removal and Disposal of Existing Concrete Road Barriers	l.m	27		
12.06	1.8.4	Removal and Disposal of Existing Concrete Median Infill	sq.m	103		
12.07	1.8.5	Common Excavation - Off-Site Disposal	cu.m	30		
13.00	32 01 16.7	COLD MILLING				
13.01	1.4.1/1.4.3	50mm Inlay Milling	sq.m	410		
14.00	32 11 16.1	GRANULAR SUBBASE				
14.01	1.4.1/1.4.3	75mm Crushed Minus Granular Subbase	tonne	100		
15.00	32 11 23	GRANULAR BASE				
15.01	1.4.1/1.4.3	25mm Crushed Minus Granular Base	tonne	60		
16.00	32 12 13.1	ASPHALT TACK COAT				
16.01	1.5.1	Asphalt Tack Coat (Trackless)	sq.m	550		

ITEM NO.	MMCD Ref. / (Supplementary Contract Specifications)	DESCRIPTION	UNIT	QTY	UNIT PRICE	EXTENDED AMOUNT
17.00	32 12 16	HOT-MIX ASPHALT CONCRETE PAVING				
17.01	1.5.1	Asphaltic Concrete Paving - (MMCD LC#1)	tonne	30		
17.02	1.5.1	Asphalt Concrete Paving - (19mm MOT Class 1 Medium Mix with 80-100 Group A Asphalt Binder)	tonne	70		
18.00	32 17 23	PAINTED PAVEMENT MARKINGS				
18.01	1.5.3	Thermoplastic Line and Pavement Markings	l.s	1		
19.00	32 91 215	TOP SOIL AND FINISH GRADING				
19.01	(1.4.1)	Imported Topsoil - (150mm Thick for Sodding)	cu.m	10		
20.00	32 92 19	HYDRAULIC SEEDING				
20.01	1.8	Hydraulic Seeding	sq.m	20		
21.00	32 92 23	SODDING				
21.01	1.8	Sodding	sq.m	20		

Total Tendered Price (exclude GST): \$ _____

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

Name of **Contractor:** _____

APPENDIX 3

FORM OF TENDER

**Contract 73038
Scott Creek Bridge Rehabilitation**

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 73038
Scott Creek Bridge Rehabilitation**

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

PROJECT:		VALUE (\$):	
OWNER:		Phone Number:	
Work Description:			

PROJECT:		VALUE (\$):	
OWNER:		Phone Number:	
Work Description:			

PROJECT:		VALUE (\$):	
OWNER:		Phone Number:	
Work Description:			

PROJECT:		VALUE (\$):	
OWNER:		Phone Number:	
Work Description:			

APPENDIX 5

FORM OF TENDER

**Contract 73038
Scott Creek Bridge Rehabilitation**

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 73038
Scott Creek Bridge Rehabilitation**

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
_____, 2023, 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 _____, 2023.

SIGNED, SEALED AND DELIVERED

In the presence of:

)
)
)
)
)

PRINCIPAL

SURETY

APPENDIX 7

FORM OF TENDER

**Contract 73038
Scott Creek Bridge Rehabilitation**

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: **73038**

Contract Name: **Scott Creek Bridge Rehabilitation**

Description of Work:

Scott Creek bridge rehabilitation on Lougheed Highway including deck resurfacing, new parapet walls, railing, lane markings, concrete medians, and other miscellaneous and incidental works as further described in the Contract Documents.

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

Special Coverage Required:	<u>YES</u>	<u>NO</u>	<u>Special Coverage Description</u>
	()	(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 _____ 2023.

Contract: **Scott Creek Bridge Rehabilitation**

Reference No. **73038**

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 31, 2023**, 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, by hand or by fax, 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
Fax: 604-927-3505

The *Contractor*:

Tel:
Fax:
Email:
Attention:

The *Contract Administrator*:

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

Tel:
Fax:
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 fax; 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*.

- 6.4 The sender of a notice by email or fax assumes all risk that the fax will be received properly, and the provisions of paragraph 12.5 of the Instructions to Tenderers Part II apply to the sender.

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

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

(MANAGER, CAPITAL PROJECTS AND INSPECTIONS)
Representative as Per G.C. 17

(MANAGER, DESIGN AND CONSTRUCTION)

Scott Creek Bridge Rehabilitation

Reference No: 73038

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 Drawing, 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

Scott Creek Bridge Rehabilitation

Reference No: 73038

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 Plan

Bound Separately: Full Size Contract Drawings

TITLE	DRAWING NUMBER	REVISION NUMBER	REVISION DATE
COVER SHEET – LOUGHEED HIGHWAY SCOTT CREEK BRIDGE IMPROVEMENTS	00/07	-	-
GENERAL NOTES - SCOTT CREEK BRIDGE IMPROVEMENTS	01/07	D	2023/02/07
CIVIL DETAILS – SCOTT CREEK BRIDGE IMPROVEMENTS	02/07	B	2023/02/07
ROADWORKS – SCOTT CREEK BRIDGE IMPROVEMENTS	03/07	D	2023/02/07
GENERAL ARRANGEMENT – SCOTT CREEK BRIDGE IMPROVEMENTS	04/07	D	2023/02/07
SUGGESTED STAGING – SCOTT CREEK BRIDGE IMPROVEMENTS	05/07	D	2023/02/07
DETAILS – SCOTT CREEK BRIDGE IMPROVEMENTS	06/07	D	2023/02/07
BICYCLE RAIL – SCOTT CREEK BRIDGE IMPROVEMENTS	07/07	D	2023/02/07
SCOTT CREEK BRIDGE - SITE PLAN	B0210-01	-	-
SCOTT CREEK BRIDGE - GENERAL ARRANGEMENT	B0210-02	-	-
SCOTT CREEK BRIDGE - ABUTMENTS	B0210-03	-	-
SCOTT CREEK BRIDGE – BENT	B0210-04	-	-
SCOTT CREEK BRIDGE – SUPERSTRUCTURE	B0210-05	-	-
SCOTT CREEK BRIDGE - STRINGERS	B0210-06	-	-
SCOTT CREEK BRIDGE – APPROACH CURB, DECK SCREED SETTINGS, B.O.M	B0210-07	-	-
SCOTT CREEK BRIDGE – STEEL SCHEDULE	B0210-08	-	-
SCOTT CREE KBRIDGE – PILE DATA AS BUILT	B0210-09	-	-

Supplementary General Conditions

SUPPLEMENTARY GENERAL CONDITIONS

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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.

- 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 the 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	<i>(Add new clause 4.6.8 as follows):</i> 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	<i>(Add new clause 4.7.4 as follows):</i> 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	<i>(Add new clause 4.8.2 as follows):</i> 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	<i>(Add new clause 4.9.3 as follows):</i> The Contractor shall, at their cost, <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	<i>(Replace clause 4.11.3 as follows):</i> 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.

4.12 Test and Inspections

4.12.1

(Replace clause 4.12.1 as follows):

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.

Acceptable test and inspection results will not relieve the Contractor of its obligations under the Contract to correct defects or deficiencies in the Work.

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 wish 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	<i>(Add new clause 7.4.2 as follows):</i> If there are Optional items or Provisional items included in the <i>Schedule of Quantities and Prices</i> , 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	<i>(Replace clause 9.2.4 as follows):</i> 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	<i>(Replace clause 9.4.1 as follows):</i> 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 <i>Schedule of Quantities and Prices</i> (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	<i>(Delete clause 9.4.2 (2))</i>
10.0	FORCE ACCOUNTS		
10.1	Force Account Costs	10.1.1(1)	<i>(Add to clause 10.1.1(1) as follows):</i> 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)	<i>(Replace clause 10.1.1(4) as follows):</i> 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 56th day 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 *Contract Administrator*, as defined herein, shall be the *Payment Certifier* responsible under Section 7 of the *Builders Lien Act* for certifying *Substantial Performance* of the *Work* of the *Contractor*, but not the *Work* of *Subcontractors*. The *Contractor* shall cooperate with and assist the *Contract Administrator* by providing information and assistance in a timely manner as the *Contract Administrator* considers necessary to carry out the duties of the *Payment Certifier* for the *Contract*.

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 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.

**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.

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

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

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

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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:

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

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

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 Oblige 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 Oblige 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 Oblige or by joining the Oblige 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 Oblige against all costs, charges and expense or liabilities incurred thereon and any loss or damage resulting to the Oblige 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 Oblige 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 Oblige, stating with substantial accuracy the amount claimed. Such notice shall be served by mailing the same by registered mail to the Principal, Surety and Oblige 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

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PRINCIPAL

SURETY

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 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: **City of Coquitlam**
3000 Guildford Way
Coquitlam, BC V3B 7N2
- Named Insured and Mailing Address:
- 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 |
| D.7 | () | PROFESSIONAL LIABILITY INSURANCE for Consultant Service Agreements |

The *Consultant* shall obtain and maintain for the duration of the *Services* as described in the Agreement, at its own cost, Professional Liability Insurance on terms and from an insurer satisfactory to the City of Coquitlam.

The Professional Liability Insurance policy shall insure the *Consultant's* legal liability for errors, omissions and negligent acts, to the extent of no less than \$500,000.00 per Claim and \$1,000,000.00 Aggregate.

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

Subject: **Prime Contractor Designation**
Contract #: **73038**
Contract Name: **Scott Creek Bridge Rehabilitation** (the "Project")

_____ (the "Contractor") represents, acknowledges and agrees that:

1. in accordance with section 118 of the Workers Compensation Act, R.S.B.C. 1996, c. 492 (the "Workers Compensation Act"), the Contractor shall be the "Prime Contractor" and is qualified to act as the "Prime Contractor" in respect of the Project;
2. the Contractor accepts the duties and responsibilities for coordination of health and safety in accordance with the Workers Compensation Act and further agrees that it will do everything necessary to establish and maintain a system or process that will insure compliance with the Workers Compensation Act and the Regulations thereto;
3. the Contractor shall fulfill all the obligations of an "Owner" under section 119 of the Workers Compensation Act in respect of the Project site; and
4. that the City of Coquitlam has fulfilled its obligations as an "Owner" under section 119 of the Workers Compensation Act, in respect of the Project site.

Prime Contractor Name & Address:

Prime Contractor Signature

Date

Print Name

Please return a signed copy of this memo to the City of Coquitlam. If you have any questions, please contact the City's Health and Safety Advisor at 604-927-3068.

Supplementary Contract Specifications

These Supplementary Contract Specifications must be read in conjunction with the Specifications contained in the Master Municipal Construction Documents, Volume II, Printed 2009 and the City of Coquitlam Supplementary Specifications and Detailed Drawings

File #: 11-5330-20/73038/1 Doc #: 4737107.v1

Supplementary Contract Specifications

to the
MASTER MUNICIPAL SPECIFICATIONS
Volume II – Platinum Book

SCOTT CREEK BRIDGE REHABILITATION CONTRACT 73038

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

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05 12 33S	Structural Steel for Bridges.....	SS 49 to SS 54
07 92 00S	Joint Sealants.....	SS 55 to SS 59
09 91 13.23S	Exterior Painting of Structural Steel	SS 60 to SS 64
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1.00	CONTRACT SPECIFIC INSTRUCTIONS	
1.01	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.
1.02	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 Hydro, FORTIS BC GAS, Kinder Morgan, Telus, in the area of the place of Work where applicable.
1.03	Cooperation with Emergency and Maintenance Activities	<p>The Contractor will be responsible to cooperate with regular maintenance or emergency vehicles and staff for access to the site when required including:</p> <ul style="list-style-type: none"> • Fire, Police, and Ambulance • Garbage/Green Waste/Recycling pick-up • City Utilities Maintenance (or representatives) • City Parks and Recreation Maintenance (or representative) • Other City Contractors
1.04	Waste Collection Coordination	<p>.1 Contractor is responsible to accommodate all waste collection vehicles and cart pick up schedules throughout construction. Collection schedule can be found in https://www.coquitlam.ca/157/Collection-Calendar-Guidelines .</p> <p>.2 If waste collection will be impacted the contractor is responsible to:</p> <ol style="list-style-type: none"> a. Provide advanced notification to: <ol style="list-style-type: none"> i. The City's Solid Waste staff at 604-927-3500 or wastereduction@coquitlam.ca; and ii. The City's Contract Administrator. b. Provide access for collection trucks to closed streets due to road work; or c. Move waste carts for collection: <ol style="list-style-type: none"> i. The Contractor is required to ensure each cart is labelled with the property address and returned to the correct address after collection (each cart has its own individual cart identification code and is specifically assigned to each property). Contractors will be responsible for the costs to replace missing carts. <p>.3 Contractor's Request for Change in Collection Time (e.g. PM to AM):</p> <ol style="list-style-type: none"> i. The Contractor must provide residents with as much notice as possible – minimum 5 working days. ii. The contractor must follow all conditions of Clause 1.04 and is responsible to deal with any missed collections. For example, taking garbage to the Coquitlam Recycling and Waste Centre or covering the cost associated for any missed collection to be rescheduled. <p>Questions: wastereduction@coquitlam.ca</p>
1.05	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 the City of Coquitlam's Utility Control Centre (604-927-6287).
1.06	Lane Closure Restrictions	The contractor shall refer to Contract Supplementary Specifications Section 01 55 00S.
1.07	Hours of Work	The contractor shall refer to Appendix A – Traffic Management Detail Specifications.

CONTRACT SPECIFIC NOTATIONS

1.08	Schedule of Work	All work under this Contract is to be completed within the designated Contract Duration. The Contractor must provide sufficient resources in a <u>continuous effort and site presence</u> to complete all the work within the allotted time, unless otherwise approved by <i>Contract Administrator</i> . As set out in the MMCD the Contractor must provide updates to the construction.
1.09	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.
1.10	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. Fortis Gas Mains & Trans Mountain Pipeline, 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 BC One for location of outside agency utilities.</p> <p>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>
1.11	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.
1.12	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.
1.13	Verification of Dimensions and Quantities	Before proceeding with work visit site and check and verify dimensions and quantities. Report variations between drawings and site conditions to the Contract Administrator before proceeding with work.
1.14	Site Safety	<p>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.</p> <p>Manhole lids, valve boxes and other appurtenances within the roadway that may present a traffic hazard during construction must be clearly marked for traffic.</p> <p>Manhole lids left raised in preparation for paving must have a rubberized protector ring for traffic safety. Supply and use of this equipment is considered incidental to the contract.</p>

CONTRACT SPECIFIC NOTATIONS

2.00 CONSTRUCTION ACTIVITY

2.01 Pavement Markings

The Contractor will be responsible for temporary traffic markings necessary for traffic direction and safety until permanent markings are installed.
The Contractor is responsible for the permanent pavement markings after paving is complete.

2.02 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.

2.03 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.

2.04 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 a 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.

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.

CONTRACT SPECIFIC NOTATIONS

3.02	Contract Schedule, Contract Duration, and Charges	<p>A detailed, realistic construction schedule for this project will be required to 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	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.</p> <p>It will be the responsibility of the Contractor's Contract Superintendent to ensure continuity between the base preparation and the paving process.</p>
3.04	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 work is being performed by Subcontractors.</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 is not responsible for the direction of Subcontractors.</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 all sub-contractors) shall be incidental.</p>

END OF SECTION

GENERAL INFORMATION

1.0	Master Municipal Construction Documents	.1	The Supplementary Specifications contained herein must be read in conjunction with the Master Municipal Specifications contained in the Master Municipal Construction Documents, Volume II (2019) as identified in the Instructions to Tender article 2.2.
2.0	Format and Numbering System	.1	The Supplementary Contract Specifications follow the same format and numbering system as the Master Municipal Specifications, but is differentiated from it by having the letter "S" placed after the section number.
3.0	Construction Survey Layout	.1	The Contractor is responsible for all survey layout required for construction.
		.2	Payment for survey layout shall be considered incidental to the work performed and no additional payment will be made to the contractor.
		.3	All iron pins and wooden witness posts, disturbed by the Contractor shall be re-established by Registered British Columbia Land Surveyors, at the Contractor's cost, and the appropriate authorities advised of the revised elevation and coordinates. Contractors are advised that the Contract Administrator will monitor construction to ensure that disturbed pins are replaced at the Contractor's expense prior to completion of the Contract.
4.0	Dust and Mud Control	.1	The Contractor shall make every reasonable effort to minimize the creation of dust or mud by his/her operations. Special measures may include, but shall not be limited to, cleaning and watering down of concrete surfaces prior to installation of concrete anchors. Refer to MMCD Section 31 15 60, Dust Control, for General Products and Execution.
			Payment for the above items will be considered to be incidental to the work performed and no additional payment will be made to the Contractor.
5.0	Safety - Work Near Overhead and Underground Power Lines or Other Utilities	.1	All works shall be in strict compliance with WorkSafe BC Industrial and Safety Regulations Section 24 when working near or under any overhead power lines.
			The Contractor must be fully aware of the danger to workers and shall take all necessary safety precautions when working near to the existing utilities, such as high pressure gas, water lines, and BC Hydro lines.
6.0	Materials Testing	.1	The Contractor is to conform to all testing requirements as set out in The Provincial Ministry of Transportation and Infrastructure 2020 Standard Specifications for Highway Construction (Volume 1 & 2).
			If the Contract Administrator requests additional tests on the project by the Contractor's appointed testing agency, the contractor shall not claim for any cost associated with the delay of testing i.e. standby or return trips.
7.0	Interfering Services	.1	.1 The Contractor shall, at his/her own expense, provide for the uninterrupted flow of all watercourses, sewers, drains, and any other utility encountered during the work.
		.2	When other utility structures are encountered, the Contractor shall support them to the satisfaction of the Engineer, so as to protect them from damage. The Contractor shall, at his/her own expense, at once repair and make good any damage which may occur to any watermains, service or utility pipes, or facilities, or to any electrical conductor or telephone facility, or to any sidewalk or crosswalk as a result of this operation.
		.3	It is the Contractor's responsibility, wherever necessary, to determine the location of existing pipes, valves, or other underground structures. Wherever it is necessary to explore and excavate to determine the location of the existing underground structures, the Contractor shall do so at his/her own expense.

GENERAL INFORMATION

.4 Where gas mains and/or service lines exist in the vicinity of the proposed work, the Contractor shall consult the officers of the gas company prior to commencing operations and arrange for a mutually agreeable procedure for their protection.

.5 When existing poles conflict with the proposed works, the Contractor shall consult B.C. Hydro and B.C. Telephone prior to commencing operations and advise the Engineer of the works to be undertaken. Costs associated with pole holding/support are incidental to the work.

8.0 Metric Units of Measurement

.1 All the units of measurement for payment in this Contract are metric units as modified by the internationally agreed S.I. Units (System International).

However, as the construction industry is not entirely converted to S.I. Units, some conversions will need to be made for purpose of month end and Final Progress Estimates.

The following conversion factors will be used in this Contract:

1 ton	=	0.907 tonnes
1 cubic yard	=	0.765 cubic metres
1 foot	=	0.3048 metres

9.0 Disposal Site

.1 The Contractor is responsible for the provision of all off-site disposal sites for materials that are to be removed from the construction sites in this Contract. The disposal sites for all types of material must be an approved disposal site.

The Contractor is responsible for all fees, permits and costs associated with the off-site disposal of materials.

10.0 Permits from Outside Agencies

.1 The Contractor is responsible to obtain and pay for all permits required from outside agencies, excluding environmental permits.

11.0 Temporary Drainage Facilities

.1 All required temporary drainage facilities, measures for control of groundwater during construction, and restoration of temporary drainage ditches after construction, shall be considered as incidental to the work being performed under this Contract, and no separate payment will be made for this work.

12.0 Notice to Residents

.1 Deliver a letter written by the Contractor as approved by the Contract Administrator to all properties which may be affected by construction not less than one week (5 days) and not more than two weeks (10 days) prior to construction.

Notify residents directly affected by the work 72 hours in advance of commencement of construction.

Cost of notifying residents of ensuing construction and delivery of letters is incidental to the Contract.

13.0 Health and Safety Plan

.1 The Contractor will prepare and submit a written Health and Safety Plan to the Owner a minimum of ten (10) working days prior to commencement of any work. The Health and Safety Plan shall provide details on safe working above watercourses, maintaining safe access to and from the worksite, required signage and any other applicable items required for managing health and safety on-site during the Construction.

END OF SECTION

SUMMARY OF WORK

1.0	GENERAL		
1.1	Related Requirements	.1	Section 02 41 16S Structure Demolition
		.2	Section 03 20 01S Concrete Reinforcement
		.3	Section 03 30 53S Cast-in-Place Concrete
1.2	Work Covered by Contract Documents	.1	<p>Work of this Contract comprises of the following work located at Scott Creek Bridge on Lougheed Highway in Coquitlam.</p> <ul style="list-style-type: none"> • Provide a Construction Management Plan, Quality Management Plan and a Construction Safety Plan; • Provide Construction Environmental Management Plan (CEMP) as required • Provide a Traffic Management Plan (TMP) • Provide construction schedule • Provide primary survey control • Provide Environmental Monitoring as required • Remove and dispose of existing concrete deck, median and sidewalks • Remove and temporarily support existing utilities • Remove and dispose of existing steel railings • Construct new reinforced concrete deck, median and sidewalk • Supply, transport & install steel sidewalk fencing • Supply, transport & install roadside barriers • Painting new line markings • Re-attach utilities • Reconstruction of the approaches • Provide site restoration, clean up and demobilization from the site
1.3	Contract Method	.1	Construct Work under Unit Price Contract.
1.4	Submittals	.1	Submit in accordance with Section 01 33 00 - Submittal Procedures
		.2	Submit site-specific and Work Plan Health and Safety Plan.
1.5	Work by Others	.1	Co-operate with other Contractors in carrying out their respective works and carry out instructions from Contract Administrator.
1.6	Contractor use of Premises	.1	Use of site until Substantial Completion.
		.2	Co-ordinate use of premises under direction of Contract Administrator.
		.3	Obtain and pay for use of additional storage or work areas needed for operations under this Contract.
		.4	Remove or alter existing work to prevent injury or damage to portions of existing work which remain.
		.5	Repair or replace portions of existing work which have been altered during construction operations to match existing or adjoining work, as directed by Contract Administrator.
		.6	Ensure that operations conditions of exiting work at completion are still the same, equal to or better than that which existed before new work started.
1.7	Existing Services	.1	Within the terms of this clause, the Contractor is responsible for the protection of existing power and telephone poles, fiber optic lines and other facilities of utility companies during the term of the Contract.

SUMMARY OF WORK

- .2 The Contractor shall, at their own expense, provide for the uninterrupted flow of all watercourses, sewers, drains, and any other utility encountered during the work. Notify, Contract Administrator and utility companies of intended interruption of services and obtain required permission.
- .3 Where Work involves breaking into or connecting to existing services, give Contract Administrator 2 weeks notice for necessary interruption of mechanical or electrical service throughout course of work. Minimize duration of interruptions. Carry out work at times as directed by governing authorities with minimum disturbance to pedestrian and vehicular traffic.
- .4 Establish location and extent of service lines in area of work before starting Work. Notify Contract Administrator of findings.
- .5 Submit schedule for approval by Contract Administrator for any shut-down or closure of active service or facility including power and communications services. Adhere to approved schedule and provide notice to affected parties.
- .6 Where unknown services are encountered, immediately advise Contract Administrator and confirm findings in writing. The Contractor shall support them to the satisfaction of the Contract Administrator, so as to protect them from damage.
- .7 Protect, relocate or maintain existing active services. The Contractor shall, at their own expense, at once repair and make good any damage which may occur to any existing active service, or to any sidewalk or crosswalk.
- .8 When inactive services are encountered, cap off in manner approved by authorities having jurisdiction.
- .9 Record locations of maintained, re-routed and abandoned service lines.
- .10 When existing poles conflict with the proposed works, the Contractor shall consult B.C. Hydro, Fortis, Telus, etc., prior to commencing operations and advise the Contract Administrator of the works to be undertaken. Costs associated with pole holding/support are incidental to the work.
- .11 The Contractor shall be responsible for coordinating the Work, where necessary, with third parties, including, but not limited to B.C Hydro, TELUS, telecommunication companies, Fortis BC, Owner forces or other utility corporations, and neither the Owner nor the Contract Administrator shall be liable for any delays caused by such third parties or Owner forces.
- .12 It is the Contractor's responsibility, wherever necessary, to determine the location of existing pipes, valves, or other underground structures. Wherever it is necessary to explore and excavate to determine the location of the existing underground structures, the Contractor shall do so at his/her own expense.
- .13 The Contractor will be responsible for adjusting all third party utilities, unless noted otherwise on the drawings. All adjustments to utilities must be completed to the satisfaction of the Utility Owner. If the Utility Owner decides to complete their own adjustments, the Contractor will not be compensated for these utility adjustments but Contractor will coordinate the adjustments with the Utility Owner.
- .14 Construct barriers, as required.

1.8 Documents Required

- .1 Maintain at job site, one copy of each document as follows:
 1. Contract Drawings.
 2. Specifications.
 3. Addenda.

SUMMARY OF WORK

4. Reviewed Shop Drawings.
5. List of Outstanding Shop Drawings.
6. Change Orders.
7. Other Modifications to Contract.
8. Field Test Reports.
9. Copy of Approved Work Schedule.
10. Health and Safety Plan and Other Safety Related Documents.
11. Other documents as specified.

2.0 PRODUCTS

2.1 Not Used .1 Not used

3.0 EXECUTION

3.1 Work Near Overhead Power Lines .1 All works shall be in strict compliance with WorkSafe BC Industrial and Safety Regulations Section 24 when working near or under any overhead power lines. The Contractor must be fully aware of the danger to workers and shall take all necessary safety precautions when working near to the existing BC Hydro lines.

3.2 Permits for Outside Agencies .1 The Contractor is responsible to obtain and pay for all permits required from outside agencies which are not provided by the City of Coquitlam.

END OF SECTION

SUBMITTAL PROCEDURES

1.0 GENERAL

1.1 Intent

- .1 To define the workflow by which documentation and drawings are submitted to the Contract Administrator by the Contractor and reviewed for adherence to the Contract Documents. This Section provides specific direction with regards to the submission of shop drawings.
- .2 The general and supplementary conditions of the contract, addenda, drawings and all other Sections of the Contract Documents shall form part of and be read in conjunction with this Section.

1.2 Conditions and Definitions

- .1 "Shop drawings" refer to drawings, diagrams, illustrations, schedules, performance charts, brochures and other data which are to be provided by the Contractor to illustrate details of a portion of the Work.

1.3 Responsibilities

- .1 Contract Administrator's Responsibilities:
 - .1 Review all submittals in reference to the Contract Document and provide a response to the Contractor within a period of ten (10) working days.
- .2 Contractor Responsibilities:
 - .1 Provide a submittal for each requirement requested within the Contract Documents and as the Contract Administrator may reasonably request.
 - .2 Coordinate and provide submittals to the Contract Administrator for review, such that a response can be provided, as noted above, without impacting the construction schedule.
 - .3 Verify that all parameters, materials, field measurements and field construction criteria has been checked and coordinated with the requirements of the Contract Documents.
 - .4 Coordinate the interfaces between individual elements of the Work and eliminate clashes between systems and components across all disciplines.
 - .5 Ensure that all review returns are distributed to the appropriate parties.

1.4 Submittal Requirements

- .1 The Contractor shall prepare, review, sign and submit to the Contract Administrator any and all Shop Drawings, Manufacturers' Project Data, Job References, Certificates, Procedures and Samples required by the Contract Documents.
- .2 Where drawings and information will not be prepared due to standardized manufacture of a product and its intended use, submit product datasheets or brochures for the requirements specified within the Contract Documents or as requested by Contract Administrator.
- .3 The act of making a submittal represents that the Contractor has determined and verified all materials, field measurements and field construction criteria related thereto, and has checked and coordinated the information contained within such submittals with the requirements of the Contract Documents.
- .4 The Contractor shall carefully:
 - .1 Review and coordinate all aspects of each item being submitted.
 - .2 Review the Contract Documents and verify that all the Work as laid out or indicated meets the applicable codes and standards.
 - .3 Review and confirmed with manufactures the compatibility of the products and materials applied for the use intended. This includes but is not limited to chemical capability and dissimilar metals

SUBMITTAL PROCEDURES

- .5 The Contractor shall verify all site conditions and provide all required dimensions and measurements in Shop Drawings.
- .6 Each submittal shall be accompanied with a cover sheet that shall include the following information:
 - .1 Contract Administrator project title and number.
 - .2 Unique submittal tracking number
 - .1 This tracking number shall be applied to all re-submittals if required
 - .3 Submittal or re-submittal date
 - .4 Name and address of
 - .1 Subcontractor.
 - .2 Supplier, and
 - .3 Manufacturer.
 - .5 Applicable Drawings and Sections from Contract Documents
 - .6 Contractor's sign-off by the Contractor's authorized representative certifying that the submittal has been reviewed and verified as compliant with the Contract Documents.
- .7 Shop drawings shall include the following details where applicable:
 - .1 Date and revision dates.
 - .2 Project title and number.
 - .3 Name and address of:
 - .1 Subcontractor.
 - .2 Supplier.
 - .3 Manufacturer.
 - .4 Contractor's stamp, signed by Contractor's authorized representative certifying approval of submissions, verification of field measurements and compliance with Contract Documents.
 - .5 Fabrication and manufacturing details.
 - .6 Dimensioned drawings
 - .7 Layout drawings, showing dimensions, including identified field dimensions, connection details and required clearances.
 - .8 Setting or erection details.
 - .9 Design capacities
 - .10 Manufacturers installation instructions
 - .11 Performance characteristics including curves where applicable
 - .12 Applicable standards with regards to the Work.
 - .13 Valid certification applicable to the Work
 - .14 Design calculations (upon Contract Administrator's request)
 - .15 Cross-references to particular details of contract drawings and specifications section number for which shop drawing submission addresses.

SUBMITTAL PROCEDURES

- .16 Supplemental information necessary to provide clarity.
- .17 Any additional information as requested by the Contract Administrator.
- .8 Indicate within all submittals: materials, methods of construction (including attachment or anchorage), erection diagrams, connections, explanatory notes and other information necessary for completion of Work.
- .9 Where portions of the Work attach or connect to other portions of the Work, indicate within the submittal that such items have been coordinated, regardless of the Section under which adjacent items will be supplied and installed. Indicate cross-references to design drawings and Sections.
- .10 The Contractor may be required to provide drawings, setting diagrams and similar information necessary for proper coordination of Work. Such data shall remain between the Contractor and Contractor's Subcontractors and will not require review, unless specifically requested by the Contract Administrator.
- .11 Where the Work includes delegated design or requires drawings prepared and stamped by a Professional Engineer, the Contract Administrator will return and will not review any submittal that is not prepared and stamped by a Professional Engineer registered in the Province where the Work is being undertaken. This return will be categorized as Revise & Resubmit.
- .12 The Contract Administrator will not review any submittal requiring coordination with other submittals until such other submittals or required information are received by the Contract Administrator.
- .13 Highlight information that is applicable to Work within all submittals. If the applicable information is not highlighted or if there is excessive information not related to the Work within the submittal, it will be Rejected.
- .14 When making a submittal the Contractor shall provide written notification of any deviations from requirements of Contract Documents, stating the reasons for deviations.
- .15 The Contractor shall keep one reviewed copy of each submittal on-site for use and reference by all parties.
- 1.5 Submittal Format**
 - .1 The Contractor shall submit all shop drawings and product data shall be provided in SI Metric Units.
 - .2 Where items or information is not manufactured or produced in SI Metric units, the Contractor shall convert values within the metric measurement tolerances.
 - .3 The Contractor shall submit all electronic documentation in a legible Portable Document Format (*.PDF) unless requested otherwise by the Contract Administrator. The PDF shall be provided in an unlocked format such that the Contract Administrator can insert comments directly into the submittal.
 - .4 Individual submittals shall consist of a single PDF that is logically organised and contains all the required information necessary to complete the review.
- 1.6 Submittal and Review Workflow**
 - .1 The Contractor shall make submittals with reasonable promptness and in an orderly sequence so as to not cause delay in Work. Failure to submit in ample time is not considered sufficient reason for an adjustment of Contract Price or Contract Time.
 - .2 Work-related to a submittal shall not proceed until the Contract Administrator's review is complete.

SUBMITTAL PROCEDURES

- .3 Should the Contractor proceed with the execution of the Work prior to the completion of a review, then the Contractor does so at their own risk and the Contract Administrator is not liable for any costs for changes that are required as a result of the review.
- .4 All document submittals and the return of review comments shall be made electronically. The mechanism for these submittals and their return shall be agreed by the Contractor and the Contract Administrator.
- .5 Submittals not signed-off, dated, identified as to specific project, and attesting to their being reviewed and verified by the Contractor will be returned to the Contractor by the Contract Administrator without being examined and shall be considered Rejected.
- .6 The Contract Administrator will return and will not review any unrelated submittals.
- .7 The Contractor's responsibility for deviations, errors or omissions in a submittal from the requirements of Contract Documents is not relieved by Contract Administrator review.
- .8 The Contract Administrator shall review submittals for general conformance with the design intent only. The review does not in any way relieve the Contractor of responsibility for its accuracy or for compliance with the Contract Documents.
- .9 Submittals shall be returned to the Contractor by the Contract Administrator with one of the following notations:
 - .1 When stamped "Reviewed", the Contract Administrator has reviewed the submittal and found it to be in general conformance with the Contract Documents.
 - .2 When stamped "Exceptions Noted", the Contract Administrator has reviewed the submittal and found it to be in general conformance with the Contract Documents, with some minor modifications required.
 - .1 The Contractor will review the comments provided by the Contract Administrator and shall include them within the Work, subject to Clause 1.7.11 within this Section
 - .2 Should the Contract Administrator require confirmation that the minor modifications have been incorporated, the Contract Administrator shall make this request in writing within the returned submittal.
 - .3 When stamped "Revise & Resubmit", the Contract Administrator has reviewed the submittal and found the submittal NOT to be in general conformance with the Contract Documents.
 - .1 The Contractor shall review the comments provided by the Contract Administrator in conjunction with the Contract Documents, and recompile a revised submission that meets the requirements of the Contract Documents and addresses the comments provided by the Contract Administrator.
 - .2 When resubmitting, notify Contract Administrator in writing of any revisions other than those requested in the previous review.
 - .3 Once compiled the Contractor shall resubmit the submission to the Contract Administrator for review.
 - .4 When stamped "Rejected", the Contract Administrator has reviewed the submittal and found the submittal to not meet the requirements of the Contract Documents.

- .1 The Contractor shall review the Contract Documents and provide the required submittals for review.
 - .10 The Contractor shall make adjustments in the Work as indicated by the Contract Administrator within the reviewed submittal.
 - .11 The Contractor shall ensure that the adjustments are consistent with the Contract Documents and the Manufacturer's Recommendations. If the requested adjustment results in a conflict between the Contract Documents or the Manufacturer's Recommendations, then the Contractor shall promptly notify the Contract Administrator in writing.
 - .12 Adjustments made on reviewed submittals by the Contract Administrator are not intended to change the Contract Time or Contract Price. If in the view of the Contractor, the adjustments affect the Contract Time and Contract Price, the Contractor shall indicate as such in writing to the Contract Administrator prior to proceeding with Work, such that the Contract Administrator can generate a Change Order.
- 1.7 Requirements for Submittals**
- .1 The requirements for submittals other than shop drawings include, but are not limited to the following:
 - .1 Certificates
 - .2 Material testing results
 - .3 Performance testing reports
 - .4 Any supplementary procedures required to complete the Work, as requested by the Contract Administrator.

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 (PDF or CAD) prior to applying for Substantial Performance including any video report. Record documents to include changes in the Issued for Construction/Contract Drawings, new elevation & location of all walkways/sidewalks, roadway paving areas, all utilities, manhole rim, catchbasin rim, vaults, valve boxes and inverts affected by the work.

The Contract Administrator will not authorize the release of holdbacks until the record documents have been submitted and accepted.

**1.7 Recording Actual
Site Conditions**

Add 1.7.5

The Contractor will keep one set of drawings on-site that will be marked up in red ink identifying all work completed and any changes made during the construction. This copy will be turned over to the Contract Administrator within 5 days of completion of all works.

The Contractor shall be responsible for the detailed setting out of the work and recording all data required to compile record drawings. All test results and reports shall be sent to the Contract Administrator no more than five (5) days after the tests have been performed.

Payment for recording data for record drawings shall be considered incidental to the work performed and no additional payment will be made to the Contractor.

END OF SECTION

1.0	GENERAL		
1.1	Related Requirements	.1	Section 01 11 00S Summary of Work.
1.2	Reference Standards	.1	Canada Labour Code, Part 2, Canada Occupational Safety and Health Regulations
		.2	Province of British Columbia
		1.	Workers Compensation Act, Revised 2020.
1.3	Action and Informational Submittals	.1	Submit in accordance with Section 01 33 00 - Submittal Procedures.
		.2	The Contractor will prepare and submit a written Health and Safety Plan to the Contract Administrator a minimum of ten (10) working days prior to commencement of any work. The Health and Safety Plan shall provide details on safe working near excavations, during demolition and dismantling, maintaining safe access to and from the worksite, required signage and any other applicable items required for managing health and safety on-site during the Construction.
			All works shall be in strict compliance with WorkSafe BC Industrial and Safety Regulations Section 24 when working near or under any overhead power lines. The Contractor must be fully aware of the danger to workers and shall take all necessary safety precautions when working near to existing utilities, such as high-pressure gas, water line and BC Hydro lines.
		.3	Submit copies of Contractor's authorized representative's work site health and safety inspection reports to Contract Administrator if requested.
		.4	Submit copies of reports or directions issued by Federal, Provincial and Territorial health and safety inspectors.
		.5	Submit copies of incident and accident reports.
		.7	Contract Administrator will review Contractor's site-specific Health and Safety Plan and provide comments to Contractor within 14 days after receipt of plan. Revise plan as appropriate and resubmit plan to Contract Administrator within 7 days after receipt of comments from Contract Administrator.
		.8	Contract Administrator review of Contractor's final Health and Safety plan should not be construed as approval and does not reduce the Contractor's overall responsibility for construction Health and Safety.
		.10	On-site Contingency and Emergency Response Plan: address standard operating procedures to be implemented during emergency situations.
1.4	Filing of Notice	.1	File Notice of Project with authorities prior to beginning of Work.
		.2	Contractor shall be responsible and assume the Principal Contractor role for this project. Contractor shall provide a written acknowledgement of this responsibility with 3 weeks of contract award.
		.4	Contractor shall agree to install proper site separation and identification in order to maintain time and space at all times throughout life of project.
1.5	Safety Assessment	.1	Perform site specific safety hazard assessment related to project.
1.7	Regulatory Requirements	.1	Do Work in accordance with Section [01 41 00 - Regulatory Requirements]
1.9	General Requirements	.1	Develop written site-specific Health and Safety Plan based on hazard assessment prior to beginning site Work and continue to implement, maintain, and enforce plan until final demobilization from site. Health and Safety Plan must address project specifications.

- | | | | |
|-------------|-------------------------------------|-----|---|
| | | .2 | Contract Administrator may respond in writing, where deficiencies or concerns are noted and may request re-submission with correction of deficiencies or concerns. |
| 1.10 | Responsibility | .1 | Be responsible for health and safety of persons on site, safety of property on site and for protection of persons adjacent to site and environment to extent that they may be affected by conduct of Work. |
| | | .4 | Comply with and enforce compliance by employees with safety requirements of Contract Documents, applicable federal, provincial, territorial and local statutes, regulations, and ordinances, and with site-specific Health and Safety Plan. |
| 1.11 | Compliance Requirements | .2 | Comply with Workers Compensation Act, B.C. |
| | | .11 | Comply with Occupational Health and Safety Regulations (BC) |
| | | .12 | Comply with Occupational Health and Safety Act, General Safety Regulations, O.I.C. |
| | | .13 | Comply with Canada Labour Code, Canada Occupational Safety and Health Regulations. |
| 1.12 | Unforeseen Hazards | .1 | When unforeseen or peculiar safety-related factor, hazard, or condition occur during performance of Work, follow procedures in place for Employee's Right to Refuse Work in accordance with Acts and Regulations of Province having jurisdiction and advise Contract Administrator verbally and in writing. |
| | | .2 | When unforeseen or peculiar safety-related factor, hazard, or condition occur during performance of Work, advise Safety Officer and follow procedures in accordance with Acts and Regulations of Province having jurisdiction and advise Contract Administrator verbally and in writing. |
| 1.14 | Posting of Documents | .1 | Ensure applicable items, articles, notices and orders are posted in conspicuous location on site in accordance with Acts and Regulations of Province having jurisdiction, and in consultation with Contract Administrator. |
| 1.15 | Correction of Non-compliance | .1 | Immediately address health and safety non-compliance issues identified by authority having jurisdiction or by Contract Administrator. |
| | | .2 | Provide Contract Administrator with written report of action taken to correct non-compliance of health and safety issues identified. |
| | | .3 | Contract Administrator may stop Work if non-compliance of health and safety regulations is not corrected. |
| 1.18 | Work Stoppage | .1 | Give precedence to safety and health of public and site personnel and protection of environment over cost and schedule considerations for Work. |
| 2.0 | PRODUCTS | | |
| 2..1 | Not Used | | |
| 3.0 | EXECUTION | | |
| 3.1 | Not Used | | |

END OF SECTION

REFERENCE SPECIFICATIONS

1.0	GENERAL	.6S	The Supplementary Specifications contained herein must be read in conjunction with the Master Municipal Specifications contained in the Master Municipal Construction Documents, Volume II (Platinum Edition 2009) as identified in the Instructions to Tender.
		.7S	The Supplementary Contract Specifications follow the same format and numbering system as the Master Municipal Specifications, but is differentiated from it by having the letter "S" placed after the section number.
1.2	REFERENCED SPECIFICATIONS	.25S	<p>The Provincial Ministry of Transportation and Infrastructure has produced a 2020 Standard Specifications for Highway Construction (Volume 1 & 2), which applies to heavy civil materials and bridge construction and will be referenced in this document as SS. Description of the supply, shipping, installation and payment of the structural materials are described in this publication. This contract will refer to this provincial document as a reference and will be binding. To view or to obtain a digital copy of these specifications go to:</p> <p>Standard Specifications for Highway Construction - Province of British Columbia (gov.bc.ca)</p>
		.26S	<p>The Government of Canada has produced master specification for construction projects in Canada. The MMCD specification numbering system follows the National Master Specifications. For specifications in this document that do not correspond to a MMCD specification, the Contractor shall follow the NMS specification. This contract will refer to this document as a reference and will be binding. To obtain a digital copy of these specifications go to:</p> <p>https://nrc.canada.ca/en/certifications-evaluations-standards/canadian-national-master-construction-specification/nms-overview</p>

END OF SECTION

1.0 GENERAL

1.1 Summary

.1 This Section describes administrative and procedural requirements for reactive activities to verify that completed Work conforms to Contract Documents requirements.

1.2 Related Requirements

.2 Having inspection and testing agencies by Contractor or Owner does not relieve the Contractor of their responsibility to perform Work in accordance with Contract Documents.

.1 Section 01 11 00 Summary of Work

.2 Section 03 10 00S Concrete Forming and Accessories

.3 Section 03 20 01S Concrete Reinforcement

.4 Section 03 30 53S Cast-in-Place Concrete

.5 Section 05 12 33S Structural Steel for Bridges

.6 Section 32 11 16.1 Granular Subbase

.7 Section 32 11 23 Granular Base

.8 Section 32 12 16 Hot-Mix Asphalt Concrete Paving

1.3 Administrative Requirements

.1 Cash Allowances for independent inspection and testing services to be retained and paid for by the Contractor as described in Section [01 21 00 – Allowances]. This Cash Allowance(s) excludes any inspection and testing that is for the Contractor's own quality control, and excludes inspection and testing required by authority having jurisdiction.

.2 Allow and coordinate access to Work on site, manufacturing off site, and fabrication off site with inspection and testing agencies.

.3 Retain and pay for inspection and testing that are designated for Contractor's own quality control plan, and when testing and inspection are required by [AHJ].

.4 Give advanced notice to Contract Administrator and to each inspection/testing agency for inspection and testing required by Contract Documents or by AHJ.

.5 In advance of each test, notify appropriate agency [and] Contract Administrator in the order that attendance arrangements can be made.

1.4 Action and Informational Submittals

.1 Submit in accordance with Section 01 33 00 – Submittal Procedures.

.2 Submit schedule of testing and inspection activities to Contract Administrator, applicable Subcontractors, testing agencies, and other affected parties. Include the following:

.1 List each testing and inspection agency

.2 Identify types of tests and inspections for each agency, and cross reference to applicable specification Section number-title in Contract Documents

.3 Description of test and inspection

.4 Identify applicable reference standard

.5 Identify test and inspection method

.6 Indicate number of each test and inspection required

.3 Submit one digital copy of each quality assurance inspection and test report to Contract Administrator, except where a technical specification Section indicates otherwise.

.4 Submit reports for inspection and testing required by Contract Documents and performed by Contractor-retained inspection and testing agencies within 10 days after inspection or test is completed, except where a technical specification Section indicates a different time period.

- .5 Submit one digital copy of each quality control inspection and test report to Contract Administrator, except where a technical specification Section indicates otherwise.
- 1.5 Site Quality Control Procedures**
- .6 Deliver copies of quality control reports to Subcontractor of work being inspected or tested.
- .1 Provide labour, [Construction Equipment] [Plant], and temporary facilities to obtain and handle test samples and materials on site. Arrange for sufficient space to store and cure test samples.
- .2 Deliver samples and materials required for testing, as requested in technical specification Sections. Submit with reasonable promptness and in an orderly sequence to avoid delays in Work.
- 1.6 Testing and Inspection Services**
- .1 The Contractor will perform all of the Quality Control (QC) testing to the satisfaction of the Contract Administrator to ensure that the requirements of the Contract are being met. The quality control plan shall be made available to the Contract Administrator for review.
- .2 The Contract Administrator will implement a quality assurance (QA) program by auditing the Contractor's quality control program and by inspection at its discretion. The Contractor shall notify the Contract Administrator at least 14 days before fabrication is to commence. In addition, the Contractor shall provide a minimum of 48 hours' notice to the Contract Administrator that a product will be available for inspection and/or certification by the Owner's Inspector. If the schedule is subsequently changed, the Contractor shall provide the 48 hours' notice from the time that the Contract Administrator is notified of this change.
- .3 Provide equipment required for executing inspection and testing by appointed agencies.
- .4 Correct defects and deficiencies when they are revealed during inspection or testing as advised by Contract Administrator at no change to Contract Price. Pay costs for retesting and re-inspection. Appointed agency will request additional inspections or tests to ensure full degree of defects or deficiencies are revealed and corrected.
- .5 Quality control testing and inspection reports to include the following:
1. Project name and number
 2. Testing/Inspection agency's name, address, telephone number, and website
 3. Date of issuing report
 4. Dates and locations of tests, inspections, or samples
 5. Description of the Work and test and inspection method
 6. Numbers and titles of associated specification Sections
 7. Test and inspection data and interpretation of test results (e.g., pass or fail)
 8. Ambient conditions at time of test, inspection, or sampling
 9. Recommendations on re-testing and re-inspecting, if applicable
- 1.7 Concrete Testing**
- .1 Concrete testing will be performed to the latest version of CSA A23.2. The concrete samples must be taken as close to the point of final deposit into the form as is practicable. All testing personnel shall be certified under CSA A283 or certified as an (ACI) Concrete Field Testing Technician – Grade 1 (minimum).
- .2 Concrete Quality Control strength testing will be carried out by the Contractor and shall be the Contractor's cost. Where initial tests fail and subsequent testing is deemed necessary by the Contract Administrator, the cost of the subsequent testing shall be the responsibility of the Contractor.
- .3 If the Contract Administrator requests additional tests on the project by the Contractor's appointed testing agency, the Contractor shall not claim for any cost associated with the delay of testing i.e. standby or return trips.
- .4 Any independent quality assurance testing carried out or requested by the Contract Administrator will be paid for by the City.

- 1.8 Compaction Testing** .1 A compaction testing plan shall be submitted by the Contractor to the Contract Administrator for review prior to construction. All results from compaction testing shall be provided to the Contract Administrator. All QC testing and verification shall be incidental to the work performed and no additional payment will be made to the Contractor.
- 1.9 Additional Testing** .1 Further materials and Quality Assurance (QA) testing may be carried out as directed by the Contract Administrator on behalf of the City. All QA testing carried out at the Contract Administrator's direction will be paid for by the Owner. Where initial tests fail and subsequent QA testing is deemed necessary by the Contract Administrator, the cost of the subsequent testing shall be the responsibility of the Contractor.
- 1.10 Manufacturing Facility Inspection Procedures** .1 The Contractor shall notify the Contract Administrator at least 14 days before fabrication of railings is to commence. In addition, the Contractor shall provide a minimum of 48 hours' notice to the Contract Administrator that a product will be available for inspection and/or certification by the Owner's Inspector. If the schedule is subsequently changed, the Contractor shall provide the 48 hours' notice from the time that the Contract Administrator is notified of this change.
- 2.0 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.
- 2.01 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.
- 2.02 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.

2.1 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.

2.2 Survey Layout

All Survey Layout will be completed by the Contractor 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.

2.3 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.

**2.4 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

2.5 Access to Work

Allow inspection testing agencies access to Work.

2.6 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 / 25 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
2.2 Sieve: 1 test / placed material / 250 TONNES

3. Granular Subbase

- 3.1 Compaction: 1 test/500m² / 300mm depth of granular subbase
3.2 Sieve: 1 test / placed material / 250 TONNES

4. Embankment (Subgrade)

- 4.1 Compaction: 1 test/ 50m² / 300mm depth of fill
4.2 Sieve: 1 test / placed material / 100 TONNES

5. Asphalt

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

5.2 Superpave: 1 test per 250 TONNES placed, 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

7. Concrete Tests

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

**2.7 Measurement for
Payment**

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

3.0 PRODUCTS

3.1 Not Used

4.0 EXECUTION

4.1 No Used

END OF SECTION

1.6 Payment

Delete 1.6.1 and
replace with the
following:

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.

END OF SECTION

1.0 GENERAL

Delete 1.0.5 and
replace with

Inform all owners or occupants of properties where access is affected in advance of proposed road and/or sidewalk closures. Deliver a letter written to the Contract Administrator for the property owners which may be affected by construction not less than one week (5 days) and not more than two weeks (10 days) prior to construction.

Notify to the property owners directly affected by the work 72 hours in advance of commencement of construction.

Cost of notifying the owners of ensuing construction and delivery of letters is incidental to the Contract.

Add 1.0.6

The *Contractor* is responsible for all temporary traffic control on the streets required for completion of the work. The *Contractor* will be responsible to provide a Traffic Management Plan (TMP) for approval (5) five working days prior to any lane closures taking place. TMP is to be prepared by a professional certified by the American Traffic Safety Services Association.

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.

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.

Add 1.0.7

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 City's Traffic Operations for approval.

Add 1.08

Refer to Appendix A – Traffic Management Detail Specifications

1.4 Traffic Control

Delete 1.4.5 and
replace with

The Contractor will not be allowed to close the Lougheed Highway completely while executing the work required under this agreement. The Contractor must maintain access to all public roads and adjacent pedestrian bridge at all times unless otherwise authorized by the Contract Administrator.

**Traffic Management
Plan**

Add 1.14

The Contractor will be responsible for providing a written Traffic Management Plan. The traffic management plan(s) require a seal by a BC Registered Professional Engineer.

No work that affects traffic will be permitted until the Owner accepts the Traffic Management Plan (TMP). The TMP shall be developed in accordance with the standards defined in the latest version of the following documents:

- MoT Traffic Management Manual for work on Roadways (TMM);
- TAC Supplement to TAC Geometric Guide; and

- Worker's Compensation Board (WCB) Regulations.

The Contractor will prepare and submit a written Traffic Management Plan to the Contract Administrator a minimum of ten (10) working days prior to commencement of any work affecting traffic. The Contractor will update and resubmit that plan for review as necessary for acceptance by the Contract Administrator.

No work that affects traffic will be permitted until the Contract Administrator accepts the Traffic Management Plan. The Contract Administrator will not control or direct the traffic control or direct the traffic control activities of the Contractor, but may require an immediate stop to any work where, in the Contract Administrator's opinion, the provided traffic control does not meet the requirements of the Agreement.

Add 1.4.15

Contractor shall provide advance information signs regarding road construction details and changeable message sign (CMS) boards. The Contractor shall supply the Contract Administrator with the proposed commencement dates in advance to allow for advertisement and proper public notice. The signage must meet the specifications and must be approved by the Contract Administrator prior to installation.

Delete 1.4.1 and
replace with the
following

The Contractor shall conduct his operations so as 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.

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.

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.

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.

**1.5 Measurement for
Payment**

Delete 1.5.1 and
replace with the
following

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. The price will include all the costs to produce the TMP as specified in the Special Provisions, preparing and modifying traffic management and detour plans for final approval by the Contract Administrator.

END OF SECTION

1.0	GENERAL	Add 1.0.3	<p>The project will require work above the natural boundary of watercourses that meets the definition of a 'stream' pursuant to the Water Sustainability Act.</p> <p>While the Contractor is not responsible for environmental notifications or approvals, the Contractor is required to review and understand provincial best management practices for working in and about water contained within:</p> <p><i>Standards and Best Practices for Instream Works:</i> www.env.gov.bc.ca/wld/documents/bmp/iswstdsbpsmarch2004.pdf</p> <p><i>A Users Guide for Working Around Water:</i> A USERS GUIDE (gov.bc.ca)</p> <p>This section of the supplemental specifications do not supercede MMCD Clause 20.4.</p>
1.2	Temporary Erosion and Sediment Controls	Delete 1.2.1.1 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.
		Add 1.2.5	The Contractor will prepare a Spill Response Plan prior to Construction. Costs of the preparation of the spill response plan are incidental to the Contract.

The Contractor will develop and identify waste receptacles for the safe disposal of hydrocarbons and lubricant fouled waste material, and use those receptacles. Contractor shall ensure that any fuel stored on-site is located at least 30m from the nearest stream, and is placed within a bermed and lined area, in order to prevent leaks or spills into the environment.

There will be no machine refueling within 30 m of a watercourse. The Contractor must keep emergency spill kit at each bridge repair site. The Environmental Monitor will inspect and confirm that a spill kit is onsite prior to commencement of bridge repair work. Each spill kit will at a minimum have the following:

- 2 - 5 m long absorbent spill booms
- 50 - 16" x 20" Sorbent Pads (Oil, Gas & Diesel)
- 6 - 48" x 3" Sorbent Socks (Oil, Gas & Diesel)
- 4 - 120" x 3" Sorbent Socks (Oil, Gas & Diesel)
- 4 - 8" x 18" Sorbent Pillows (Oil, Gas & Diesel)
- Nitrile Gloves
- Hand Wipes
- 2 - Disposable Respirators N958 HD
- Hazmat Disposal Bags

Spills of any substance toxic to aquatic life of reportable quantities will be immediately reported to the Provincial Emergency Program 24-hour phone line at 1-800-663-3456.

Contractor shall immediately contain and clean up any leaks and spills of prohibited materials on the Project Site.

Contractor shall immediately notify the Contract Administrator of any leaks or spills of prohibited materials that occur on the job site.

The Contractor is wholly responsible for costs associated with clean-up of spills originating from their equipment or work practices.

Add 1.2.6

The Contractor is required to complete construction in a manner that will prevent the release of sediment or sediment laden waters to the watercourses, ditches, and swales draining to fish habitat.

Add 1.2.7

There will be no disposal of solid wastes into sumps, ditches, streams, culverts, road edges or private property.

The Contractor's will supply trash cans for the disposal of crew generated wastes.

Littering is prohibited and monitoring for this activity will be on-going throughout the project.

Add 1.2.8

The Contractor shall undertake all concrete/grouting work with caution, as wet cement/grout is highly toxic to aquatic organisms. The Contractor shall comply with, at a minimum, the following procedures:

1. The Work shall be isolated from watercourses through the use of berms, pits or tarpaulins.
2. There shall be no direct contact between work activity and any watercourse through spillage, hosing off surfaces, rain or cleaning of tools.
3. Complete isolation of all cast-in-place concrete and

			grouting from any watercourse for a minimum of 72 hours.
			4. Exposed concrete will be covered if there are forecast rains.
			5. No wash water shall be allowed to discharge to any watercourse.
			6. Any water that contacts uncured or partly cured concrete shall be isolated and held (and treated until the pH is between 6.5 and 9.0.
			7. The Contractor must follow BC Environmental Management Act – Spill reporting regulation procedures relating to emergency mitigation and clean up measures for managing the cleanup and recover of concrete materials.
			8. All wash water from concrete works shall be contained and removed from site.
			9. All accepted temporary disposal area locations must be cleaned up and re-seeded prior to demobilization.
			10. Concrete dust from saw cutting and drilling shall be prevented from entering any watercourse.
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's</i> employees are familiar with appropriate spill response techniques. Any spill of reportable quantities must be immediately reported to the Provincial Emergency Program's 24 hour phone line at 1-800-663-3456.
		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 metres 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 metres of any water course 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	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. These works for Erosion and Sediment Control (ESC) will include silt fencing, interceptor channel/swale/ditch construction, interceptor drain pipe, check dams, catch basin, socks, and all materials to complete the work as shown on the Contract Drawings or as directed by the Contract Administrator
		Add 1.6.2	Payment for this item as directed by the Contractor Administrator includes supply, placement, maintenance, materials, removal and incidentals required for environmental protection.

ENVIRONMENTAL PROTECTION

		Add 1.6.3	Payment for the poly cover or temporary tarps over stock pile materials or exposed road subgrades shall be treated as incidental work.
1.9	Archaeological / Historical Resources	Add 1.9	<p>Immediately cease work and inform the <i>Contract Administrator</i> and the City, if any archaeological or historical resources are encountered during construction. Leave these resources in place and do not disturb them in any way.</p> <p>The Contractor must allow the Archaeological and Historical Resources group to perform duties around the site during construction. The Contract Administrator shall coordinate all other work being performed at the site with the Contractor.</p>
1.10	Contractor's Hydrocarbon Wastes and Fuel Spill Mitigation Measures	Add 1.10	<p>The Contractor will prepare a Spill Response Plan prior to Construction. Costs of the preparation of the spill response plan are incidental to the Contract.</p> <p>The Contractor will develop and identify waste receptacles for the safe disposal of hydrocarbons and lubricant fouled waste material, and use those receptacles.</p> <p>There will be no machine refueling within 30 m of a watercourse. The Contractor must keep emergency spill kit at each bridge repair site. The Environmental Monitor will be inspect and confirm that a spill kit is on site prior to commencement of bridge repair work. Each spill kit will at a minimum have the following:</p> <ul style="list-style-type: none"> • 2 - 5 m long absorbent spill booms • 50 - 16" x 20" Sorbent Pads (Oil, Gas & Diesel) • 6 - 48" x 3" Sorbent Socks (Oil, Gas & Diesel) • 4 -120" x 3" Sorbent Socks (Oil, Gas & Diesel) • 4 - 8" x 18" Sorbent Pillows (Oil, Gas & Diesel) • Nitrile Gloves • Hand Wipes • 2 - Disposable Respirators N958 HD • Hazmat Disposal Bags <p>Spills of any substance toxic to aquatic life of reportable quantities will be immediately reported to the Provincial Emergency Program 24 hour phone line at 1-800-663-3456.</p> <p>The Contractor is wholly responsible for costs associated with clean-up of spills originating from their equipment or work practices.</p>
1.11	Non-Hazardous Waste Handling Requirements	Add 1.11	<p>There will be no disposal of solid wastes into sumps, ditches, streams, culverts, road edges or private property.</p> <p>The Contractor's will supply trash cans for the disposal of crew generated wastes.</p> <p>Littering is prohibited and monitoring for this activity will be ongoing throughout the project.</p>
1.12	Control of Cement and Cement Grouts	Add 1.12	The Contractor shall undertake all concrete/grouting work with caution. The Contractor shall comply with, at a minimum, the following procedures:

The Work shall be isolated from watercourses through the use of berms, pits or tarpaulins.

- .1 There shall be no direct contact between work activity and any watercourse through spillage, hosing off surfaces, rain or cleaning of tools.
- .2 Complete isolation of all grouting from any watercourse for a minimum of 72 hours.
- .3 No wash water shall be allowed to discharge to any watercourse.
- .4 The Contractor must follow BC Environmental Management Act – Spill reporting regulation procedures relating to emergency mitigation and clean up measures for managing the cleanup and recovery of concrete materials.
- .5 All wash water from concrete works shall be contained and removed from site.
- .6 If required, concrete wash water may be disposed in a temporary disposal location that has been reviewed and accepted by the Owner. This location may be a rock pit or grassy area, provided the wash water will be contained in an upland location at least 30m away from the high water mark, and at least 30m away from the top of bank of watercourses and there is landowner approval.
- .7 All accepted temporary disposal area locations must be cleaned up and re-seeded prior to demobilization.

Concrete dust from saw cutting and drilling shall be prevented from entering any watercourse.

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 includes supply, placement, removal, labor, material and equipment required to complete the installation and 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) including supply, placement, communication management & removal as required for traffic & pedestrian safety and as shown in in Appendix A – Traffic Management Detail Specifications will be incidental to payment for work described in other Sections, unless shown otherwise in the Schedule of Quantities and Prices.

When shown in the Schedule of Quantities and Prices, payment for CMS used for only a fraction of a month will be paid prorata.

END OF SECTION

1.0 GENERAL

1.1 Summary

- 1.1.1 This Section includes requirements for management of construction waste and disposal, which forms the Contractor's commitment to reduce and divert waste materials from landfill.
- 1.1.2 Owner has established that this Project shall generate the least amount of waste possible and that processes that ensure the generation of as little waste as possible due to error, poor planning, breakage, mishandling, contamination, or other factors be employed by the Contractor.

1.2 Related Requirements

- 1.2.1 Section 01 57 01S Environmental Protection.
- 1.2.2 Section 02 41 16S Structure Demolition

1.3 Definitions

- 1.3.1 Clean Waste: Untreated and unpainted; not contaminated with oils, solvents, sealants or similar materials.
- 1.3.2 Construction and Demolition Waste: Solid wastes typically including building materials, packaging, trash, debris, and rubble resulting from construction and demolition operations.
- 1.3.3 Hazardous: Exhibiting the characteristics of hazardous substances including properties such as ignitability, corrosiveness, toxicity, or reactivity.
- 1.3.4 Non-hazardous: Exhibiting none of the characteristics of hazardous substances, including properties such as ignitability, corrosiveness, toxicity, or reactivity.
- 1.3.5 Non-toxic: Not poisonous to humans either immediately or after a long period of exposure.
- 1.3.6 Recyclable: The ability of a product or material to be recovered at the end of its life cycle and remanufactured into a new product for reuse by others.
- 1.3.7 Recycle: To remove a waste material from the Project site to another site for remanufacture into a new product for reuse by others.
- 1.3.8 Recycling: The process of sorting, cleansing, treating and reconstituting solid waste and other discarded materials for the purpose of using the altered form; recycling does not include burning, incinerating, or thermally destroying waste.
- 1.3.9 Return: To give back reusable items or unused products to vendors for credit.
- 1.3.10 Reuse: To reuse a construction waste material in some manner on the Project site.
- 1.3.11 Salvage: To remove a waste material from the Project site to another site for resale or reuse by others.
- 1.3.12 Sediment: Soil and other debris that has been eroded and transported by storm or well production run off water.
- 1.3.13 Source Separation: The act of keeping different types of waste materials separate beginning from the first time they become waste.
- 1.3.14 Toxic: Poisonous to humans either immediately or after a long period of exposure.

		1.3.15	Trash: Any product or material unable to be reused, returned, recycled, or salvaged.
		1.3.16	<p>Volatile Organic Compounds (VOC's): Chemical compounds common in and emitted by many building products over time through outgassing:</p> <ol style="list-style-type: none"> 1. Solvents in paints and other coatings; 2. Wood preservatives; strippers and household cleaners; 3. Adhesives in particleboard, fiberboard, and some plywood; and foam insulation. 4. When released, VOC's can contribute to the formation of smog and can cause respiratory tract problems, headaches, eye irritations, nausea, damage to the liver, kidneys, and central nervous system, and possibly cancer.
		1.3.17	Waste: Extra material or material that has reached the end of its useful life in its intended use. Waste includes salvageable, returnable, recyclable, and reusable material.
1.4	Reference Standards	1.4.1	<p>ASTM International (ASTM)</p> <ol style="list-style-type: none"> 1. ASTM E1609 01, Standard Guide for Development and Implementation of a Pollution Prevention Program
		1.4.2	<p>Recycling Certification Institute (RCI)</p> <ol style="list-style-type: none"> 1. RCI Certification Construction and Demolition Materials Recycling
1.5	Administrative Requirements	1.5.1	Coordination: Coordinate waste management requirements with all Divisions of the Work for the Project.
1.6	Action and Informational Submittals	1.6.1	Submit required information in accordance with Section 01 33 00 - Submittal Procedures.
1.7	Project Closeout Submittals	1.7.1	Not Used
1.8	Quality Assurance	1.8.1	Not Used
1.9	Delivery, Storage, and Handling	1.9.1	Storage Requirements: Implement a recycling/reuse program that includes separate collection of waste materials as appropriate to the Project waste and the available recycling and reuse programs in the Project area.
		1.9.2	<p>Handling Requirements: Clean materials that are contaminated before placing in collection containers and ensure that waste destined for landfill does not get mixed in with recycled materials:</p> <ol style="list-style-type: none"> 1. Deliver materials free of dirt, adhesives, solvents, petroleum contamination, and other substances deleterious to recycling process. 2. Arrange for collection by or delivery to the appropriate recycling or reuse facility.
		1.9.3	Hazardous Waste and Hazardous Materials: Handle in accordance with applicable regulations.
2.0	PRODUCTS		
2.1	Not Used		
3.0	EXECUTION		

- | | | |
|------------|---------------------------------------|--|
| 3.1 | Implementation | <p>3.1.1 Manager: Contractor is responsible for designating an on site party or parties responsible for instructing workers and overseeing the waste management for the Project.</p> <p>3.1.2 Instruction: Provide on-site instruction of appropriate separation, handling, and recycling, salvage, reuse, composting and return methods being used for the Project to Subcontractors at appropriate stages of the Project.</p> <p>3.1.3 Separation Facilities: Lay out and label a specific area to facilitate separation of materials for potential recycling, salvage, reuse, composting and return:</p> <ol style="list-style-type: none">1. Recycling and waste bin areas are to be kept neat and clean and clearly marked in order to avoid contamination of materials.2. Hazardous wastes shall be separated, stored, and disposed of in accordance with local regulations. <p>3.1.4 All demolished materials shall become the property of the Contractor and shall be removed from the Site. Disposal of all demolished materials shall be in accordance with SS 145.27.</p> <p>3.1.5 The Contractor is responsible for the provision of all off-site disposal sites for materials that are to be removed from the construction sites in this Contract. The disposal sites for all types of material must be approved by the Owner prior to disposal use.</p> <p>3.1.6 The Contractor is responsible for all fees, permits and costs associated with the off-site disposal of materials.</p> <p>3.1.7 The Contractor shall reinstate all disturbed areas outside the area of removal of the structures to conditions which existed prior to commencement of the Work, or as directed by the Contract Administrator.</p> |
| 3.2 | Subcontractor's Responsibility | <p>3.2.1 Subcontractors shall cooperate fully with the Contractor to implement their environmental goals.</p> <p>3.2.2 Failure to cooperate may result in the Owner not achieving their environmental goals, and may result in penalties being assessed by the Contractor to the responsible Subcontractor.</p> |

END OF SECTION

1.0 GENERAL

1.1 Summary

- 1.1.1 This Section includes requirements for the following:
1. This section does not include for the removal of Hazardous Substances or asbestos abatement.
 2. Drawings contain details that suggest directions for solving some of the major demolition and removal requirements for this Project. Contractor representative is required to develop these details further by submitting a demolition plan prepared by a professional engineer registered in BC.
 3. Record drawings of the existing bridge are provided as part of the set of Drawings for this Contract. The Drawings provided outline the features of the existing structures to be demolished.

1.2 Related Requirements

- 1.2.1 Section 01 74 19S Waste Management and Disposal
Section 01 57 01S Environmental Protection

1.3 Definitions

- 1.3.1 Demolition: Rapid destruction of building following removal of Hazardous Substances.
- 1.3.2 Hazardous Substances: Dangerous substances, dangerous goods, hazardous commodities and hazardous products, may include but not limited to: asbestos PCB's, CFC's, HCFC's poisons, corrosive agents, flammable substances, ammunition, explosives, radioactive substances, or other material that can endanger human health or wellbeing or environment if handled improperly as defined by the federal Hazardous Products Act including latest amendments.
- 1.3.3 Contractor representative responsible for supervising waste management activities as well as coordinating related, required submittal and reporting requirements.

1.4 Reference Standards

- 1.4.1 CSA Group (CSA):
1. CSA S350- M1980 (R2003), Code of Practice for Safety in Demolition of Structures
- 1.4.2 Department of Justice Canada (Jus):
1. Canadian Environmental Protection Act (CEPA), 1999
 - a. SOR/2003-2, On-Road Vehicle and Engine Emission Regulations
 - b. SOR/2006-268, Regulations Amending the On-Road Vehicle and Engine Emission Regulations
 - c. Transportation of Dangerous Goods Act (TDGA), 1992, c. 34
 - d. Motor Vehicle Safety Act (MVSA), 1995
 - e. Hazardous Substances Information Review Act, 1985
 2. Hazardous Products Act, RSC 1985, c H-3
 3. National Fire Protection Association (NFPA)
 - a. NFPA 241- 22, Standard for Safeguarding Construction, Alteration, and Demolition Operations
 4. National Research Council Canada (NRC):
 - a. National Building Code of Canada 2020 (NBC)
 5. Underwriters' Laboratories of Canada (ULC):
 - a. CAN/ULC-S660- 08, Standard for Nonmetallic Underground Piping for Flammable and Combustible Liquids
 - b. ULC/CAN-S661-21, Standard for Overfill Protection Devices for Flammable Liquid Storage Tanks
 - c. ULC/ORD-C58.19- 1992, Spill Containment Devices for Underground Flammable Liquid Storage Tanks

1.5 Administrative Requirements

- 1.5.1 Coordination: Coordinate with Contract Administration for the material ownership as follows:
1. Except for items or materials indicated to be reused, salvaged, reinstalled, demolished materials shall become Contractor 's property and shall be

			removed from Project site.
		2.	Historic items, relics, and similar objects that may be encountered during demolition remain Owner 's property: <ol style="list-style-type: none"> Carefully remove and salvage each item or object in a manner to prevent damage and deliver promptly to Contract Administrator. Coordinate with Contract Administrator, who will establish special procedures for removal and salvage operations.
		1.5.2	Pre-Demolition Meetings: <ol style="list-style-type: none"> Convene pre-installation meeting before beginning work to: <ol style="list-style-type: none"> Verify project requirements. Verify existing site conditions adjacent to demolition work. Coordination with other construction subtrades.
1.6	Action and Informational Submittals	1.6.1	<p>Action Submittals: Provide the following submittals before starting any work of this Section:</p> <ol style="list-style-type: none"> The Contractor shall submit three (3) sets of complete plans and details of the proposed demolition to the Contract Administrator for review at least four (4) weeks prior to the commencement of any demolition work. The demolition procedure shall be prepared by the Contractor and sealed by a professional engineer registered with EGBC, and shall clearly define procedures, equipment and the proposed schedule of work. Demolition work shall not start until the Contract Administrator has completed the review of the demolition procedure. Submit in accordance with Section 01 33 00 - Submittal Procedures and Section 01 74 19 - Waste Management Disposal. Schedule of Demolition Activities: Indicate the following: <ol style="list-style-type: none"> Detailed sequence of demolition and removal work, with starting and ending dates for each activity Interruption of utility services Coordination for shutoff, capping, and continuation of utility services Locations of temporary partitions and means of egress Temporary support of existing utilities, as required Demolition Plan: Submit a plan of demolition area indicating extent of temporary supports, methods of removal and demolition prepared by a professional engineer in accordance with requirements of Authority Having Jurisdiction. Proposed Dust Control and Noise Control Measures: Submit statement or drawing that indicates the measures proposed for use, proposed locations, and proposed time frame for their operation.
1.7	Quality Assurance	1.7.1	<p>Regulatory Requirements: Ensure Work is performed in compliance with CEPA, CEAA, TDGA, and applicable Provincial/Territorial and Municipal regulations.</p> <ol style="list-style-type: none"> Comply with hauling and disposal regulations of Authority Having Jurisdiction. Standards: Comply with ANSI A10.6 and NFPA 241
		1.7.2	<p>Regulatory Requirements: Perform work of this Section in accordance with the following:</p> <ol style="list-style-type: none"> Worksafe BC Government of Canada, Labour Program: Workplace Safety.
1.8	Site Conditions	1.8.1	<p>Environmental protection:</p> <ol style="list-style-type: none"> Ensure Work is done in accordance with Section 01 57 01S - Environmental Protection. Ensure Work does not adversely affect adjacent watercourses, groundwater and wildlife, or contribute to excess air and noise pollution.

3. Fires and burning of waste or materials is not permitted on site.
 4. Do not bury rubbish waste materials.
 5. Do not dispose of waste or volatile materials including but not limited to: mineral spirits, oil, petroleum based lubricants, or toxic cleaning solutions into watercourses, storm or sanitary sewers.
 6. Ensure proper disposal procedures are maintained throughout project.
 - 1.8.2 Do not pump water containing suspended materials into watercourses, storm or sanitary sewers, or onto adjacent properties.
 - 1.8.3 Control disposal or runoff of water containing suspended materials or other harmful substances in accordance with as directed by Contract Administrator.
 - 1.8.4 Protect trees, plants and foliage on site and adjacent properties where indicated.
 - 1.8.5 Prevent extraneous materials from contaminating air beyond application area, by providing temporary enclosures during demolition work.
 - 1.8.6 Cover or wet down dry materials and waste to prevent blowing dust and debris. Control dust on all temporary roads.
 - 1.8.7 Conduct structure demolition so access to adjacent pedestrian bridge is not affected.
 - 1.8.8 Contract Administrator assumes no responsibility for structures being demolished:
 1. Conditions existing at time of inspection for bidding purpose will be maintained as far as practical.
 2. Remove, protect and store salvaged items as directed by Contract Administrator before structure demolition.
 3. Salvage items as identified by Contract Administrator.
 4. Deliver to Contract Administrator as directed.
- 1.9 Existing Conditions
 - 1.9.1 Existing Conditions: Condition of materials identified as being salvaged or demolished are based on their observed condition.
 - 1.9.2 Discovery of Hazardous Substances: Immediately notify Contract Administrator if materials suspected of containing hazardous substances are encountered and perform the following activities:
 1. Hazardous substances will be as defined in the Hazardous Products Act.
 2. Stop work in the area of the suspected hazardous substances.
 3. Take preventative measures to limit users' and workers' exposure, provide barriers and other safety devices and do not disturb.
 4. Hazardous substances will be removed under a separate contract or as a change to the Work.
- 1.10 Measurement and Payment
 - 1.10.1 Payment for the demolition and removal of handrails will be made at the Lump Sum Price shown on the Schedule of Quantities and Unit Prices. Payment shall include the preparation and submission of demolition procedures, the supply of all labour, materials, equipment and services required for the demolition, off-site disposal and all other costs associated with the demolition. Payment includes all environmental protection shown in contract drawings and as described in contract documents.
 - 1.10.2 Payment for the demolition and removal of concrete will be made at the Lump Sum Price shown on the Schedule of Approximate Quantities and Unit Prices. Payment shall include the preparation and submission of demolition procedures, the supply of all labour, materials, equipment and services required for the complete demolition of the structure, off-site disposal of demolition debris, backfilling, fees and permits, site clean-up and all other costs associated with the demolition. Payment includes all environmental protection shown in contract drawings and as

described in contract documents.

2.0 PRODUCTS

2.1 Equipment

- 2.1.1 Equipment and Heavy Machinery:
1. On-road vehicles to: CEPA-SOR/2003-2, On-Road Vehicle and Engine Emission Regulations and CEPA-SOR/2006-268, Regulations Amending the On-Road Vehicle and Engine Emission Regulations.
 2. Leave machinery running only while in use, except where extreme temperatures prohibit shutting machinery down.

2.2 Temporary Support Structures

- 2.2.1 Design temporary support structures required for demolition work and underpinning and other foundation supports necessary for the project using a qualified professional engineer registered or licensed in Province of the Work.

3.0 EXECUTION

3.1 Examination

- 3.1.1 Survey existing conditions and correlate with requirements indicated to determine extent of structure demolition required.
- 3.1.2 Review Project Record Documents of existing construction provided by Contract Administrator.
- 3.1.3 Contract Administrator does not guaranty that existing conditions are the same as those indicated in Project Record Documents.
- 3.1.4 Inventory and record the condition of items being removed and salvaged.
- 3.1.5 When unanticipated mechanical, electrical, or structural elements are encountered, investigate and measure the nature and extent of the element.
- 3.1.6 Promptly submit a written report to Contract Administrator.
- 3.1.7 Verify that Hazardous Substances have been remediated before proceeding with structure demolition operations.

3.2 Preparation

- 3.2.1 Protection of in-place conditions:
1. Work in accordance with Section 01 57 01 - Environmental Protection.
- 3.2.2 Prevent movement, settlement or damage of adjacent structures, services, walks, paving, trees, landscaping, parts of existing structure to remain.
1. Provide bracing, shoring as required.
 2. Repair damage caused by demolition as directed by Contract Administrator.
- 3.2.3 Support affected structures and, if safety of structure being demolished, adjacent structures or services appears to be endangered, take preventative measures, stop Work and immediately notify Contract Administrator.
- 3.2.4 Prevent debris from blocking surface drainage system, elevators, mechanical and electrical systems which must remain in operation.

3.3 Demolition

- 3.3.1 The Contractor shall provide all labour, materials and equipment for the demolition as shown on the drawings.
- 3.3.2 The Contractor shall carry out demolition in accordance with CSA S350 M80 (R2003), "Code of Practice for Safety in Demolition of Structures", with these Special Provisions and the requirements of Part 20 of the Workers Compensation Act, Occupational Health and Safety Regulations, BC.

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| | | 3.3.3 | Protect demolition work. Care must be taken to not damage existing prestressed box girders and keyways, and #3 tie bars. |
| | | 3.3.4 | Remove contaminated or dangerous materials as defined by authorities having jurisdiction, relating to environmental protection, from site and dispose of in safe manner to minimize danger at site or during disposal. |
| | | 3.3.5 | Before start of Work remove contaminated or hazardous materials, if applicable from site and dispose of in safe manner and in accordance with applicable requirements. |
| | | 3.3.6 | Demolish parts of structure to permit construction as indicated. |
| | | 3.3.7 | Crush concrete generated due to demolition to size suitable for recycling. <ol style="list-style-type: none"> 1. Where possible identify markets which will accept crushed material as aggregate. |
| | | 3.3.8 | Remove existing equipment, services, and obstacles where required for refinishing or making good of existing surfaces, and replace as work progresses. |
| | | 3.3.9 | At end of each day's work, leave Work in safe and stable condition. <ol style="list-style-type: none"> 1. Protect interiors of parts not to be demolished from exterior elements at all times. |
| | | 3.3.10 | Demolish to minimize dusting. Keep materials wetted as directed by Contract Administrator. |
| | | 3.3.11 | Contain fibrous materials to minimize release of airborne fibres while being transported within facility. |
| | | 3.3.12 | Remove and dispose of demolished materials except where noted otherwise and in accordance with authorities having jurisdiction. |
| 3.4 | Site Restoration | 3.4.1 | Provide a smooth transition between adjacent existing grades and new grades. |
| 3.5 | Repairs | 3.5.1 | General: Promptly repair damage to adjacent construction caused by structure demolition operations. |
| | | 3.5.2 | Where repairs to existing surfaces are required, patch to produce surfaces suitable for new materials. |
| | | 3.5.3 | Restore exposed finishes of patched areas and extend restoration into adjoining construction in a manner that eliminates evidence of patching and refinishing. |
| 3.6 | Cleaning | 3.6.1 | Waste Management: Separate waste materials for reuse and recycling |
| | | 3.6.2 | Divert excess materials from landfill to site approved by Contract Administrator. |
| | | 3.6.3 | Designate appropriate security resources / measures to prevent vandalism, damage and theft. |
| | | 3.6.4 | Stockpile materials designated for alternate disposal in location which facilitates removal from site and examination by potential end markets, and which does not impede disassembly, processing, or hauling procedures. <ol style="list-style-type: none"> 1. Label stockpiles, indicating material type and quantity. |
| | | 3.6.5 | Supply separate, clearly marked disposal bins for categories of waste material. |
| | | 3.6.6 | Remove stockpiled material as directed by Contract Administrator when it |

interferes with operations of project construction.

- 3.6.7 Dispose of materials in accordance with applicable regulations.

END OF SECTION

CONCRETE FORMING AND ACCESSORIES

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|-----|-----------------------------|--|--|
| 3.1 | Fabrication and
Erection | <i>Delete 3.1.4
and replace
with</i> | Formwork shall be in accordance with SS 211. |
| 3.3 | Payment | Add 3.3.1 | Formwork for the cast-in-place concrete work will be included in the price per cubic meter for cast-in-place concrete. No separate payment will be made for the supply, transport and installation of the formwork required as part of another Item. Payment shall be considered incidental to the concrete work being considered. |

END OF SECTION

CONCRETE REINFORCEMENT

1.0	General	<i>Delete 1.0.1</i> and <i>replace</i> with	Section 03 20 01 refers to those portions of the work that require nominal reinforcement such as cast-in-place products for any structural facilities requiring site specific structural engineering design. This section includes the supply, fabrication and installation of reinforcing for concrete structures as specified in BC MoTI Standard Specifications SS412.
1.3	Certification	<i>Add 1.3.3</i>	All certificates for the reinforcement steel shall be provided to the Contract Administrator.
1.5	Measurement and Payment	<i>Delete 1.5.1</i> and <i>replace</i> with	Reinforcing steel for the cast-in-place concrete work will be made at the Unit Price per kg of reinforcing. No payment will be made under this Item for the supply, transport or installation of the reinforcing steel required as part of another Item.
2.1	Materials	<i>Delete 2.1.1</i> and <i>replace</i> with	Reinforcing steel shall comply with CAN/CSA G30.18, 400W unless otherwise specified on the Drawings. Reinforcement to be stainless steel unless otherwise noted.
3.2	Placing Reinforcement	<i>Delete 3.2.1</i> and <i>replace</i> with	Reinforcing steel shall be supplied and installed in accordance with MoTI Standard Specifications SS412 unless otherwise specified on the Drawings. Welding of reinforcing steel shall be permitted only where shown on the Drawings or when acceptable to the Contract Administrator and shall be in accordance with CSA W186-M.

END OF SECTION

CONCRETE WALKS, CURBS AND GUTTER

1.4	Measurement and Payment	Delete 1.4.3 and replace with the following	<p>Payment for machine placed or hand formed C5 wide base concrete curb & gutter and C6 extruded concrete curb, excluding granular base, includes supply and placing of the concrete curb and gutter and will cover all straight and curve sections and will be made separately for each specified type.</p> <p>C6 extruded concrete curb shall be keyed in to existing asphalt.</p> <p>Payment for granular base under curb and gutter will be made under payment items in Section 32 11 23S, Granular Base.</p>
		Delete 1.4.5 and replace with the following	<p>Payment for concrete sidewalks, driveways, walkways, infills, stamped concrete, coloring and all concrete ramps, excluding granular base, includes supply and placing of the concrete, 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>Clearing and disposal of any vegetation to complete the work will be incidental to work described in this section.</p> <p>Payment for granular base will be made under payment items in Section 32 11 23S, Granular Base.</p>
		Add 1.4.10	<p>Payment for Truncated Dome Detectable or Tactile Warning Surface Indicator Tile for the specified type or for Tactile Walking Surface Indicator Wayfinding Tile includes supply and placing of replaceable cast in place - Yellow Color, or as described in Schedule of Quantities and Prices, and installation as per the Manufacture's Specifications.</p>
2.1	Materials	Delete 2.1.5.1 and replace with the following	<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>
		Add 2.1.7	<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>Minimum size of the panel shall be 600 mm by 1200 mm or as described in the Schedule of Quantities and Prices.</p>
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</p>

cooperate with any utility company providing their own adjustments.

The *Contractor* 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. All manholes must be vertically adjusted a minimum of twenty-four (24) hours prior to concrete placement.

3.9 Expansion Joints

Delete 3.9.1 and replace with the following

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.

END OF SECTION

CAST-IN-PLACE CONCRETE

1.0	General	Delete 1.0.1 and replace with	The concrete work shall be in accordance with MoTI Standard Specifications SS 211, 413, 931 and 933, and the general notes and Specifications shown on the drawing 32801-01.
1.4	Construction Quality Control	Add 1.4.2	The Contractor shall be responsible for the design and quality control for all concrete used on this project. All concrete materials and admixtures for concrete shall conform to the requirements of SS 211.04, unless otherwise specified in these Provisions and the Drawings.
1.5	Measurement and Payment	Add 1.5.6	Payment for preparation of existing concrete deck for new concrete will be made Lump Sum Price Bid listed in the Schedule of Quantities and Unit Prices.
		Add 1.5.7	Payment for concrete will be made in accordance with MoTI Standard Specifications SS 211.21.02 at the applicable Unit Price per cubic metre as listed in the Schedule of Quantities and Unit Prices. No payment will be made under this Item for concrete supplied as part of another Item.
			All concrete work shall be in accordance with MoTI Standard Specifications SS 211 and 933, unless otherwise specified in these Special Provisions. Payment shall also include quality control, submissions and any falsework and bracings for the formwork as required.
		Add 1.5.8	Payment for preparation and the installation of the sealer will be made at the Unit Price per square meter of concrete surface.
2.2	Concrete Mixes	Delete 2.2.1 and replace with	Concrete design mixes will be delivered to the Contract Administrator for approval.
2.3	Forms	Delete and replace 2.3.1 with	Formwork and falsework shall be in accordance with MoTI Standard Specifications SS 211.
			All formwork or falsework for any cast-in-place components will be considered as formwork.
2.5	Concrete Deck Sealant	Add 2.5.1	The new deck surface shall have an application of silane surface treatment per SS 418. Sealer to be installed per manufacturer's specification. Sealant to be Master Builder Master Protect H1000 or approved equivalent.
3.5	Inspection	Add 3.5.1	Immediately prior to placement of concrete, carefully inspect all formwork to ensure forms are properly set at required horizontal and vertical alignment, sufficiently rigid, clean, surface treated and ready for placement of concrete. Obtain Contract Administrator's approval of formwork and compacted base.

END OF SECTION

1.0	GENERAL		
1.1	Related Requirements	1.1.1	Section 01 11 00S – Summary of Work
1.2	Prices and Payment Procedures	1.2.1	Payment for supply, fabrication, shipping and erection of parapet railing shall be made at the Unit Price(s) per meter bid.
		1.2.2	Payment for supply, fabrication, shipping and erection of bicycle railing shall be made at the Unit Price(s) per meter bid.
		1.2.3	Payment for supply, fabrication, shipping and installation of hangers and/or pipe support anchors shall be made at the price for each hanger.
		1.2.4	Cost of supply, fabrication, shipping and installation of all other miscellaneous steelwork for the miscellaneous steelwork components shall be incidental to the Contract.
1.3	Definitions	1.3.1	Not used
1.4	Reference Standards	1.4.1	American Association for State Highway and Transportation Officials (AASHTO) <ul style="list-style-type: none"> 1. AASHTO HB Standard Specifications for Highway Bridges-17th Edition 2002.
		1.4.2	ASTM International (ASTM) <ul style="list-style-type: none"> 1. ASTM A123/A123M-17, Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products. 2. ASTM A490M-14, Standard Specification for High-Strength Steel Bolts, Classes 10.9 and 10.9.3, for Structural Steel Joints. 3. ASTM F3125/F3125M-22], Standard Specification for High Strength Structural Bolts, Steel and Alloy Steel, Heat Treated, 120 ksi (830 MPa) and 150 ksi (1040 MPa) Minimum Tensile Strength, Inch and Metric Dimensions
		1.4.3	CSA Group (CSA) <ul style="list-style-type: none"> 1. CSA G40.20-13/G40.21-13 (R2018), General Requirements for Rolled or Welded Structural Quality Steel/Structural Quality Steel. 2. CSA G164-018, Hot Dip Galvanizing of Irregularly Shaped Articles. 3. CSA S6-19, Canadian Highway Bridge Design Code. 4. CSA S16-19, Design of Steel Structures. 5. CSA S269.1-16 (R2021), Falsework & formwork. 6. CSA W48-18, Filler Metals and Allied Materials for Metal Arc Welding. 7. CSA W59-18, Welded Steel Construction, (Metal Arc Welding).
		1.4.4	NACE International <ul style="list-style-type: none"> 1. ANSI/NACE No. 13/SSPC-ACS-1-2016-SG, Industrial Coating and Lining Application Specialist Qualification and Certification.
1.5	Administrative Requirements	1.5.1	Before start of Work arrange for site visit with Contract Administrator to examine existing site conditions adjacent to demolition work.
1.6	Action and Informational Submittals	1.6.1	Submit in accordance with Section 01 33 00 - Submittal Procedures.

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| | | 1.6.2 | Product Data: <ul style="list-style-type: none">1. Submit manufacturer's instructions, printed product literature and data sheets for structural steel and include product characteristics, performance criteria, physical size, finish and limitations.2. Submit WHMIS Safety Data Sheet (SDS). |
| | | 1.6.3 | Shop Drawings: <ul style="list-style-type: none">1. Submit drawings, including fabrication and erection documents, stamped and signed by professional engineer registered or licensed in BC, Canada.2. Erection drawings: indicate details and information necessary for assembly and erection purposes including:<ul style="list-style-type: none">a. Description of methods.b. Sequence of erection.c. Type of equipment used in erection.3. Temporary bracings (if required)4. Indicate shop and erection details including shop splices, cuts, copes, connections, holes, bearing plates, threaded fasteners, rivets and welds. Indicate welds by CSA W59, welding symbols.5. Proposed welding procedures to be stamped and approved by Canadian Welding Bureau.6. Submit description of methods, temporary bracing and strengthening, sequence of erection and type of equipment proposed for use in erecting structural steel. |
| | | 1.6.4 | Certificates: <ul style="list-style-type: none">1. Submit certifications for Application Specialists to demonstrate compliance to the requirements of ANSI/NACE No.13. |
| 1.7 | Delivery, Storage, and Handling | 1.7.1 | Deliver, store and handle materials in accordance with manufacturer's written instructions. |
| | | 1.7.2 | Delivery and Acceptance Requirements: deliver materials to site in original factory packaging, labelled with manufacturer's name and address. <ul style="list-style-type: none">1. Ensure Contract Administrator has delivery schedules 7 days minimum before shipping. |
| | | 1.7.3 | Storage and Handling Requirements: <ul style="list-style-type: none">1. Provide protective blocking for lifting, transportation and storing.<ul style="list-style-type: none">a. Exercise care during fabrication, transportation and erection.b. Do not notch edges of members.c. Do not cause excessive stresses.2. Protect unpainted weathering steel, before erection, with waterproof covering.3. Ensure that no portion of steel comes into contact with ground.<ul style="list-style-type: none">a. Replace defective or damaged materials with new. |
| 1.8 | Quality Assurance | 1.8.1 | Preconstruction Testing: <ul style="list-style-type: none">1. Provide suitable facilities and cooperate with Contract Administrator in carrying out inspection and tests required. |
| | | 1.8.2 | Qualifications: <ul style="list-style-type: none">1. Ensure that specialists, who perform concrete and steel surfaces preparation and coating applications, are certified by a recognized Applicator Certification Agency, in accordance with NACE 13 /SSPC ACS-I, Applicator Certification Standard (ACS). |

2. Maintain a current and valid ACS certification during project period.
 - a. Application specialists who perform surface preparation and coating application work on this project must have a current ACS.
3. Notify Contract Administrator of any change in application specialist certification status.
 - a. Any delays to the completion of the Project due to invalid certifications will not be considered, and liquidated damages shall not be waived for any non-performance by Contractor.
4. Submit 1 copy of mill test reports 4 weeks prior to fabrication of structural steel.
 - a. Mill test reports to show chemical and physical properties and other details of steel to be incorporated in project.
 - b. Provide mill test reports certified by metallurgists qualified to practice in province of BC, Canada.

2.0 PRODUCTS

2.1 Materials

- 2.1.1 Structural steelwork shall be supplied, fabricated, shipped and installed as shown on the Drawings and in accordance with MoTI Standard Specifications SS 422.
 1. All miscellaneous steelwork shall be galvanized (or otherwise protected against corrosion or otherwise noted) after fabrication unless otherwise noted on the drawings. Steelwork will also include anchors, bolts and insert as required to fasten the miscellaneous steelwork.
- 2.1.2 Structural steel: to CSA G40.20/G40.21, grade and types to 350W.
- 2.1.3 High strength bolts, nuts and washers: to ASTM F3125/F125M.
- 2.1.4 Anchor bolts, washers and nuts: to CSA G40.20/G40.21, grade 300W galvanized.
- 2.1.5 Welding electrodes: to CSA W48 series
- 2.1.6 Hot dip galvanizing: to ASTM A123/A123M, minimum zinc coating of 600 g/m2, Coating Grade 85.
- 2.1.7 Shrinkage compensating grout: premixed compound consisting of non-metallic aggregate, cement, water reducing and plasticizing agents.

2.2 Source Quality Control

- 2.2.1 Steel producer qualifications: certified in accordance with CSA G40.20/G40.21
- 2.2.2 Provide suitable facilities and co-operate with Contract Administrator in carrying out inspection and tests required.

3.0 EXECUTION

3.1 Examination

- 3.1.1 Verification of Conditions: verify conditions of substrates previously installed under other Sections or Contracts are acceptable for structural steel installation in accordance with manufacturer's written instructions.
- 3.1.2 Inform Contract Administrator of unacceptable conditions immediately upon discovery.

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| | | 3.1.3 | Proceed with installation only after unacceptable conditions have been remedied and after receipt of written approval to proceed from Contract Administrator. |
| 3.2 | Preparation | 3.2.1 | Clean steel surfaces as directed by Contract Administrator when staining or defacing occurs. |
| | | 3.2.2 | Verify location of location of anchor bolts before erection of structural steel; report discrepancies to Contract Administrator. |
| | | 3.2.3 | Restrict drifting during assembly to minimum required to bring parts into position without enlarging or distorting holes, and without distorting, kinking or sharply bending metal of any unit. <ul style="list-style-type: none">1. Enlarge holes if necessary by reaming only after receipt of written approval from Contract Administrator.2. Ensure reamed holes are 2 mm maximum larger than bolt size used. |
| | | 3.2.4 | Fabricate and install bearings as indicated. |
| | | 3.2.5 | Place anchor bolts at elevations and locations indicated. <ul style="list-style-type: none">1. Protect holes against entry of water and foreign material.2. Provide heating and protection as directed by Contract Administrator and completely fill space around anchor bolts with grout. |
| 3.3 | Installation | 3.3.1 | Do falsework in accordance to CSA S269.1 |
| | | 3.3.2 | Do fabrication and erection of structural steel in accordance with CSA S6, Design of Highway Bridges. |
| | | 3.3.3 | Do welding in accordance with CSA W59, except where specified otherwise <ul style="list-style-type: none">1. Do welding in shop unless otherwise permitted by Contract Administrator.2. Weld only at locations indicated. |
| | | 3.3.4 | High strength bolting: in accordance with CAN/CSA S6. Use 'turn-of-nut' tightening method. |
| | | 3.3.5 | Finish: members true to line, free from twists, bends, open joints, sharp corners and sharp edges. |
| | | 3.3.6 | Allowable tolerance for bolt holes: <ul style="list-style-type: none">1. Matching holes for bolts to line up so that dowel 2 mm less in diameter than hole passes freely through assembled members at right angles to such members.2. Finish holes not more than 2 mm in diameter larger than diameter of rivet or bolt unless otherwise specified by Contract Administrator.3. Centre-to-centre distance between any two holes of group to vary by not more than 1 mm from dimensioned distance between such holes.4. Centre-to-centre distance between any two groups of holes to vary not more than maximum of the following: |

Centre-to-Centre distance in metres	Tolerance in plus or minus mm
less than 10	1
10 to 20	2
20 to 30	3

5. Correct mispunched or misdrilled members only as directed by Contract Administrator.

3.3.7 Shop splices:

1. Use complete joint penetration groove welds finished flush.
2. Details of butt joints to CSA W59
3. Use only as approved by Contract Administrator.

3.3.8 Site splices: to approval of Contract Administrator.

3.3.9 Mark members in accordance with CSA G40.20/G40.21

1. Do not use die stamping.
2. Place marking at locations hidden when viewed from exterior after erection when steel is to be left in unpainted condition.

3.3.10 Match marking: shop mark.

3.3.11 Maintain protection of concrete for 7 days after completion of steel erection.

1. Remove waterproof covers and drains and holding structures when steel erection complete.

3.3.12 Clean with mechanical brush and touch up shop primer to bolts, welds and burned or scratched surfaces at completion of erection.

3.3.13 Continuously seal members by continuous welds where indicated. Grind smooth.

3.4 Site Quality Control

3.4.1 Manufacturer's Field Services:

1. Obtain written report from manufacturer verifying compliance of Work, in handling, installing, protecting and cleaning of steel.
2. Submit manufacturer's site services consisting of product use recommendations and periodic site visits for inspection of product installation in accordance with manufacturer's instructions.
3. Companies to be certified under Division 1 or 2.1 of CSA W47.1 for fusion welding of steel structures and/or CSA W55.3 for resistance welding of structural components.
4. Inspection and testing of materials and workmanship will be carried out by testing laboratory designated by the Contractor. Quality Assurance will be performed by the Owner as required.
5. Schedule site visits:
 - a. Twice during progress of Work at 25% and 60% complete.
 - b. Upon completion of the Work, after cleaning is carried out.
6. Provide safe access and working areas for testing on site, as required by testing agency and as authorized by Contract Administrator
7. Submit test reports to Contract Administrator within one week of completion of inspection.

3.5 Cleaning

3.5.1 Progress Cleaning:

1. Leave Work area clean at end of each day.

- 3.5.2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment.

END OF SECTION

1.0 GENERAL

1.1 Summary

- .1 Comply with requirements of this Section when performing following Work:
Expansion joint replacement.

1.2 Related Requirements

- .1 Section 01 33 00 – Submittal Procedures.
- .2 Section 50 00 00 – Structural Construction
- .3 Section 60 00 00 – Environmental Protection

1.3 Reference Standards

- .1 Canadian General Standards Board (CGSB)
- .2 Department of Justice Canada
 - .1 Canadian Environmental Protection Act, 1999 (CEPA).
- .3 Health Canada
 - .1 Workplace Hazardous Materials Information System (WHMIS), Material Safety Data Sheets (MSDS).
- .4 CAN/CGSB-19.24-M90, Multi-component, Chemical Curing Sealing Compound.
- .5 Transport Canada (TC)
 - .1 Transportation of Dangerous Goods Act, 1992 (TDGA).

1.4 Submittals

- .1 Submit product data in accordance with Section 01 33 00 – Submittal Procedures.
- .2 Manufacturer's product to describe.
 - .1 Caulking Compound.
 - .2 Primers.
 - .3 Sealing compound, each type, including compatibility with different sealants are in contact with each other.
- .3 Submit manufacturer's instructions in accordance with Section 01 33 00 – Submittal Procedures.
 - .1 Instructions to include installation instructions for each product used.

1.5 Delivery, Storage, and Handling

- .1 Deliver, handle, store and protect materials in accordance with Manufacturer's instructions.
- .2 Deliver and store materials in original wrappings and containers with manufacture's seals and labels, intact. Protect from freezing, moisture, water and contact with ground or floor.

1.6 Waste Management and Disposal

- .1 Separate waste materials for reuse and recycling in accordance with Manufacturer's instructions.
- .2 Remove from site and dispose packaging materials at appropriate recycling facilities.
- .3 Collect and separate for disposal paper, plastic, polystyrene, corrugate cardboard, packaging material, in appropriate on-site bins, for recycling.
- .4 Place materials defined as hazardous or toxic in designated containers.

JOINT SEALANTS

- .5 Handle and dispose hazardous materials in accordance with the CEPA, TDGA, Regional and Municipal regulations.
- .6 Unused sealant material must not be disposed of into sewer system, into streams, lakes, onto ground or in other location where it will pose health or environmental hazard.
- .7 Divert unused joint sealing material from landfill to official hazardous material collections site approved by Departmental Representative.
- .8 Empty plastic joint sealer containers are not recyclable. Do not dispose of empty containers with plastic materials destined for recycling.
- .9 Fold up metal banding, flatten, and place in designated area for recycling.
- 1.7 Existing Conditions**
 - .1 Environmental Limitations:
 - .1 Do not proceed with installation of joint sealants under following conditions:
 - .1 When ambient and substrate temperature conditions are outside limits permitted by joint sealant manufacture or are below 4.4 degrees C.
 - .2 When joint substrates are wet.
 - .2 Joint-Width Conditions
 - .1 Do not proceed with installation of joint sealants where joint widths are less than those allowed by joint sealant manufacturer for applications indicated.
 - .3 Joint-Substrate Conditions
 - .1 Do not proceed with installation of joint sealants until contaminants capable of interfering with adhesion are removed from joint substrates. including spalled, cracked or deteriorating concrete.
- 1.8 Environmental Requirements**
 - .1 Comply with requirements of Workplace Hazardous Materials Information System (WHMIS) regarding use, handling, storage, and disposal of hazardous materials; regarding labelling and provision of Material Safety Data Sheets (MSDS) acceptable to Labour Canada.
 - .2 Conform to manufacturer's recommended temperatures, relative humidity, and substrate moisture content for application and curing of sealants including special conditions governing use.
 - .3 Collect and separate for disposal paper, plastic, polystyrene, corrugate cardboard, packaging material, in appropriate on-site bins, for recycling.
 - .4 Place materials defined as hazardous or toxic in designated containers.
 - .5 Handle and dispose hazardous materials in accordance with the CEPA, TDGA, Regional and Municipal regulations.
 - .6 Unused sealant material must not be disposed of into sewer system, into streams, lakes, onto ground or in other location where it will pose health or environmental hazard.
 - .7 Divert unused joint sealing material from landfill to official hazardous material collections site approved by Departmental Representative.

JOINT SEALANTS

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|------------|--|----|---|----|--|----|---|----|---|----|---|----|---|----|--|
| | | .8 | Empty plastic joint sealer containers are not recyclable. Do not dispose of empty containers with plastic materials destined for recycling. | | | | | | | | | | | | |
| | | .9 | Fold up metal banding, flatten, and place in designated area for recycling. | | | | | | | | | | | | |
| 1.9 | Measurement of Payment | .1 | Payment for joint sealant will be included in Deck Joint Replacement. | | | | | | | | | | | | |
| 2.0 | PRODUCTS | | | | | | | | | | | | | | |
| 2.1 | Materials | .1 | Where sealants are qualified with primers use only these primers. Install WaboSiliconeSeal two-part joint sealant or approved equivalent. | | | | | | | | | | | | |
| | | .2 | WaboSiliconeSeal: <table border="0"> <tr> <td>.1</td> <td>Install as per manufacturer.</td> </tr> <tr> <td>.2</td> <td>Joint seal shall be a rapid cure, two-component silicone seal. The silicone seal shall be designed to accept +100% / -50% of the joint installation opening and bond to the joint interface without the use of any primers.</td> </tr> </table> | .1 | Install as per manufacturer. | .2 | Joint seal shall be a rapid cure, two-component silicone seal. The silicone seal shall be designed to accept +100% / -50% of the joint installation opening and bond to the joint interface without the use of any primers. | | | | | | | | |
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| .2 | Joint seal shall be a rapid cure, two-component silicone seal. The silicone seal shall be designed to accept +100% / -50% of the joint installation opening and bond to the joint interface without the use of any primers. | | | | | | | | | | | | | | |
| 2.2 | Sealant Material Designations | .1 | Polyurethane Sealant: <table border="0"> <tr> <td>.1</td> <td>Multi-component self-levelling polyurethane sealant to CAN/CGSB-19.24, M90, Classification MCG-1-40-B-L, No. 91031, Premium Grade, colour to match concrete.</td> </tr> <tr> <td>.2</td> <td>Non-sag to CAN/CGSB-19.24, colour to match concrete.</td> </tr> <tr> <td>.3</td> <td>Meets ASTM C920, Type M, Grade P, Class 25.</td> </tr> <tr> <td>.4</td> <td>Federal specifications TT-S-00227E, Type 1, Class A.</td> </tr> <tr> <td>.5</td> <td>Service temperature range of -40 to 82°C.</td> </tr> <tr> <td>.6</td> <td>Manufacturer shall be ISO-9001:2008, RC14001:2008 certified and shall provide written confirmation that a formal Quality Management System and Quality Processes have been adopted in the areas of, (but not limited to) Engineering, Manufacturing, Quality Control and Customer Service for all processes, products and their components. Alternate manufacturers will be considered provided they submit written proof that they are ISO 9001:2008, RC14001:2008 certified prior to the project bid date.</td> </tr> </table> | .1 | Multi-component self-levelling polyurethane sealant to CAN/CGSB-19.24, M90, Classification MCG-1-40-B-L, No. 91031, Premium Grade, colour to match concrete. | .2 | Non-sag to CAN/CGSB-19.24, colour to match concrete. | .3 | Meets ASTM C920, Type M, Grade P, Class 25. | .4 | Federal specifications TT-S-00227E, Type 1, Class A. | .5 | Service temperature range of -40 to 82°C. | .6 | Manufacturer shall be ISO-9001:2008, RC14001:2008 certified and shall provide written confirmation that a formal Quality Management System and Quality Processes have been adopted in the areas of, (but not limited to) Engineering, Manufacturing, Quality Control and Customer Service for all processes, products and their components. Alternate manufacturers will be considered provided they submit written proof that they are ISO 9001:2008, RC14001:2008 certified prior to the project bid date. |
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| .2 | Non-sag to CAN/CGSB-19.24, colour to match concrete. | | | | | | | | | | | | | | |
| .3 | Meets ASTM C920, Type M, Grade P, Class 25. | | | | | | | | | | | | | | |
| .4 | Federal specifications TT-S-00227E, Type 1, Class A. | | | | | | | | | | | | | | |
| .5 | Service temperature range of -40 to 82°C. | | | | | | | | | | | | | | |
| .6 | Manufacturer shall be ISO-9001:2008, RC14001:2008 certified and shall provide written confirmation that a formal Quality Management System and Quality Processes have been adopted in the areas of, (but not limited to) Engineering, Manufacturing, Quality Control and Customer Service for all processes, products and their components. Alternate manufacturers will be considered provided they submit written proof that they are ISO 9001:2008, RC14001:2008 certified prior to the project bid date. | | | | | | | | | | | | | | |
| | | .2 | Preformed Compressible and Non-Compressible back-up materials. <table border="0"> <tr> <td>.1</td> <td>Polyethylene or Neoprene Foam. <table border="0"> <tr> <td>.1</td> <td>Extruded closed cell foam backer rod.</td> </tr> <tr> <td>.2</td> <td>Size: oversize 25% to 50%</td> </tr> <tr> <td>.3</td> <td>A non-gassing closed-cell expanded polyethylene foam rod, approximately 25% larger in diameter than the joint gap is positioned in the joint opening such that the top of the rod is 25mm from top of the riding surface.</td> </tr> </table> </td> </tr> <tr> <td>.2</td> <td>Neoprene or Butyl Rubber <table border="0"> <tr> <td>.1</td> <td>Round solid rod, Shore A hardness 40-80.</td> </tr> </table> </td> </tr> </table> | .1 | Polyethylene or Neoprene Foam. <table border="0"> <tr> <td>.1</td> <td>Extruded closed cell foam backer rod.</td> </tr> <tr> <td>.2</td> <td>Size: oversize 25% to 50%</td> </tr> <tr> <td>.3</td> <td>A non-gassing closed-cell expanded polyethylene foam rod, approximately 25% larger in diameter than the joint gap is positioned in the joint opening such that the top of the rod is 25mm from top of the riding surface.</td> </tr> </table> | .1 | Extruded closed cell foam backer rod. | .2 | Size: oversize 25% to 50% | .3 | A non-gassing closed-cell expanded polyethylene foam rod, approximately 25% larger in diameter than the joint gap is positioned in the joint opening such that the top of the rod is 25mm from top of the riding surface. | .2 | Neoprene or Butyl Rubber <table border="0"> <tr> <td>.1</td> <td>Round solid rod, Shore A hardness 40-80.</td> </tr> </table> | .1 | Round solid rod, Shore A hardness 40-80. |
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| .1 | Extruded closed cell foam backer rod. | | | | | | | | | | | | | | |
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| .1 | Round solid rod, Shore A hardness 40-80. | | | | | | | | | | | | | | |
| 2.3 | Sealant Selection | .1 | Expansion and control joints in exterior surfaces of existing placed concrete: Sealant type: self-leveling, premium-grade polyurethane sealant. | | | | | | | | | | | | |

JOINT SEALANTS

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| 2.4 | Joint Cleaner | .1 | Non-corrosive and non-staining type, compatible with joint forming materials and sealant recommended by sealant manufacturer. |
| | | .2 | Primer: as recommended by manufacturer. |
| 3.0 EXECUTION | | | |
| 3.1 | Protection | .1 | Protect installed Work of other trades from staining or contamination. |
| 3.2 | Preparation | .1 | Examine joint sizes and conditions to establish correct depth to width relationship for installation of backup materials and sealants. |
| | | .2 | Clean bonding joint surfaces of harmful matter substances including dust, rust, oil, grease, and other matter which may impair Work. |
| | | .3 | Do not apply sealants to joint surfaces treated with sealer, curing compound, water repellent, or other coatings unless tests have been performed to ensure compatibility of materials. Remove coatings as required. |
| | | .4 | Ensure joint surfaces are dry and frost free. |
| | | .5 | Prepare surfaces in accordance with manufacturer's directions. |
| 3.3 | Priming | .1 | Where necessary to prevent staining, mask adjacent surfaces prior to priming and caulking. |
| | | .2 | Prime sides of joints in accordance with sealant manufacturer's instructions immediately prior to caulking. |
| 3.4 | Backup Material | .1 | Apply bond breaker where required to manufacturer's instructions. |
| | | .2 | Install joint filler to achieve correct depth and shape, with approximately 30% compression. |
| 3.5 | Mixing | .1 | Mix materials in strict accordance with sealant manufacturer's instructions. |
| 3.6 | Application | .1 | Sealant |
| | | .1 | Apply sealant in accordance with manufacturer's written instructions. |
| | | .2 | Mask edges of joint where irregular surface or sensitive joint border exists to provide neat joint. |
| | | .3 | Apply sealant in continuous beads. |
| | | .4 | Apply sealant using gun with proper size nozzle. |
| | | .5 | Use sufficient pressure to fill voids and joints solid. |
| | | .6 | Form surface of sealant with full bead, smooth, free from ridges, wrinkles, sags, air pockets, embedded impurities. |
| | | .7 | Tool exposed surfaces before skinning begins to give a slightly concave shape. |
| | | .8 | Remove excess compound promptly as work progresses and upon completion. |
| | | .2 | Cleanup. |
| | | .1 | Clean adjacent surfaces immediately and leave Work neat and clean. |
| | | .2 | Remove excess and droppings, using recommended cleaners as work progresses. |
| | | .3 | Remove masking tape after initial set of sealant. |

- .4 Remove sealed waste containers and equipment used in Work and remove from work areas at appropriate time in cleaning sequence.
 - .5 Conduct final check to ensure no dust or debris remain on surfaces as a result of dismantling operations.
 - 3.7 **Re-establishment of Objects and Systems**
 - .1 Repair or replace objects damaged in the course of work to their original state or better, as directed by the Contract Administrator.

END OF SECTION

SUPPLEMENTARY CONTRACT SPECIFICATIONS		EXTERIOR PAINTING OF STRUCTURAL STEEL		SECTION 09 91 13.23S SS 60 2023
1.0	GENERAL			
1.1	Related Requirements	.1	Section 01 57 01 Environmental Protection	
1.2	Price and Payment Procedures	.1	Cleaning of structural steel and components and field painting will be included in the lump sum bid for steel recoating.	
1.3	Reference Standards	.1	<ul style="list-style-type: none"> .1 Canada Green Building Council (CaGBC) latest edition <ul style="list-style-type: none"> .1 LEED Canada-NC Version 1.0, LEED (Leadership in Energy and Environmental Design): Green Building Rating System Reference Package for New Construction and Major Renovations (including Addendum). .2 LEED Canada-CI Version 1.0, LEED (Leadership in Energy and Environmental Design): Green Building Rating System Reference Guide for Commercial Interiors. .2 The Master Painters Institute (MPI) latest edition <ul style="list-style-type: none"> .1 Exterior Structural Steel and Metal Fabrications. <ul style="list-style-type: none"> .1 EXT 5.1D, Alkyd. .2 EXT 5.1G, Polyurethane, Pigmented (over epoxy zinc rich primer and high build epoxy). .3 EXT 5.4, Aluminum. .3 Environmental Choice Program (ECP) latest edition <ul style="list-style-type: none"> .1 CCD-047, Architectural Surface Coatings. .2 CCD-048, Surface Coatings - Recycled Water-borne. .4 Federal Standard (FS) latest edition <ul style="list-style-type: none"> .1 FED-STD-595B, Colours Used in Government Procurement. .5 The Society for Protective Coatings (SSPC) latest edition <ul style="list-style-type: none"> .1 SSPC-SP 1 Solvent Cleaning. .2 SSPC-SP 2, Hand Tool Cleaning. .3 SSPC-SP 3, Power Tool Cleaning. .4 SSPC-SP 6/NACE No. 3, Commercial Blast Cleaning. .5 SSPC-SP 7/NACE No. 4, Brush-off Blast Cleaning. .6 SSPC-Vis-1, Visual Standard for Abrasive Blast Cleaned Steel (Standard Reference Photographs) Editorial Changes September 1, 2000 (Steel Structures Painting Manual, Chapter 2 - Surface Preparation Specs.). .7 SSPC-SP 10/NACE No. 2, Near White Blast Cleaning. .8 SSPC-PA 2, Measurement of Dry Coat Thickness with Magnetic Gauges. .9 SSPC Good Painting Practices, Volume 1, 4th Edition. 	
1.4	Action and Informational Submittals	.1	<p>Product Data:</p> <ul style="list-style-type: none"> .1 Provide manufacturer's instructions, printed product literature and datasheets for painting exterior metal surfaces and include product characteristics, performance criteria, physical size, finish and limitations. 	

SUPPLEMENTARY CONTRACT SPECIFICATIONS		EXTERIOR PAINTING OF STRUCTURAL STEEL		SECTION 09 91 13.23S SS 61 2023
		.2	Submit 1 copy of WHMIS MSDS.	
		.2	Certificates: Provide product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.	
		.3	Test Reports:	
		.1	Provide test reports showing compliance with specified performance characteristics and physical properties.	
1.5	Quality Assurance	.1	Certificates: product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.	
1.6	Delivery, Storage and Handling	.1	Deliver, store and handle materials in accordance with manufacturer's written instructions.	
		.2	Delivery and Acceptance Requirements: deliver materials to site in original factory packaging, labelled with manufacturer's name and address.	
		.3	Develop Construction Waste Management Plan related to Work of this Section.	
2.0	PRODUCTS			
2.1	Materials	.1	Paint:	
		.1	Sustainability Characteristics:	
		.1	VOC limit: 100 g/L maximum to CCD-047.	
		.2	Ensure paint does not contain chemical restrictions to CCD-047 and CCD-048.	
		.2	Termarust TR2200HS/TR2100 HRSA:	
		.1	Tinted sufficiently off finish colour to show where coat is applied.	
		.2	Tinting material: compatible with primer and not detrimental to its service life.	
3.0	EXECUTION			
3.1	Examination	.1	Verification of Conditions: verify conditions of substrates previously installed under other Sections or Contracts are acceptable for painting exterior metal surfaces installation in accordance with manufacturer's written instructions.	
		.1	Visually inspect substrate in presence of Contract Administrator. Existing galvanizing must be checked for chromate or another inhibitor contamination on the surface after surface preparation. If present the contamination must be removed prior to overcoating.	
		.2	Overcoating material must be compatible with the newly painted zinc surface. See the Manufacturer's product data sheets for recommended coating types prior to overcoating.	
		.3	Since overcoating produces a mixed (more than one Manufacturer) coating system, some overcoat paint Manufacturers may not recommend use, or guarantee the result of some touchup products. A letter from the overcoat manufacturer stating that the touchup paint and the overcoat paint are	

compatible is required prior to application. Inform Contract Administrator of unacceptable conditions immediately upon discovery.

- .4 Proceed with installation only after unacceptable conditions have been remedied and after receipt of written approval to proceed from the Contract Administrator.

3.2 Preparation

- .1 Remove existing loose and rusted paint from exterior metal surfaces by hand tools only. Blasting equipment are not permitted.
- .2 Ensure frequent stirring to prevent the settling of zinc in the paint product.
- .3 New metal surfaces:
 - .1 Clean surfaces of new metal to be painted by removing rust, loose mill scale, welding slag, dirt, oil, grease and foreign substances in accordance with the following:
 - .1 Solvent cleaning: to SSPC-SP 1.
 - .2 Hand tool cleaning: to SSPC-SP 2.
- .4 Metal surfaces to be repainted:
 - .1 Clean surfaces by removing loose, cracked, brittle or non-adherent paint, rust, loose mill scale, welding slag, dirt, oil, grease and other foreign substances in accordance with the following.
 - .1 Solvent cleaning: to SSPC-SP 1.
 - .2 Hand tool cleaning: to SSPC-SP 2.
 - .2 Scrape edges of old paint back to sound material where remaining paint is thick and sound, feather exposed edges.
- .5 Apply paint after prepared surfaces have been accepted by the Contract Administrator.
- .6 Prior to starting paint application ensure a degree of cleanliness of surfaces is to SSPC-Vis 1.
 - .1 Apply primer, paint, or pretreatment after surface has been cleaned and before deterioration of surface occurs.
 - .2 Clean surfaces again if rusting occurs after completion of surface preparation.
- .7 Mixing paint:
 - .1 Do not dilute or thin paint for brush application.
 - .2 Mix ingredients in container before and during use and ensure breaking up of lumps, complete dispersion of settled pigment, and uniform composition.
 - .3 Do not mix or keep paint in suspension by means of air bubbling through paint.
 - .4 Thin paint for spraying according to manufacturer's written instructions. If directions are not on container, obtain instructions in writing from manufacturer and provide copy of instructions to Contract Administrator.
- .8 Number of paint coats:
 - .1 Repainting existing metal surfaces.

- .1 Apply TR2100 to bare and commercial sandblasted areas as per manufacturer's instructions.
- .2 Apply TR2200 penetrant/sealer as per manufacturer's instructions.

3.3 Application

- .1 Manufacturer's Instructions: comply with manufacturer's written data, including product technical bulletins, product catalogue installation instructions, product carton installation instructions, and datasheets.
- .2 Apply paint by brushing only. Aerosol application is not permitted. Use sheepskins or daubers when no other method is practical in places of difficult access.
- .3 Use dipping or roller coating method of application when specifically authorized by Contract Administrator in writing.
- .4 Where surface to be painted is not under cover, do not apply paint when:
 - .1 Air temperature is below 5 degrees C or when temperature is expected to drop to 0 degrees C before paint has dried.
 - .2 Temperature of surface is over 50 degrees C unless paint is specifically formulated for application at high temperatures.
 - .3 Fog or mist occur at site; it is raining or snowing; there is danger of rain or snow; relative humidity is above 85%.
 - .4 Surface to be painted is wet, damp or frosted.
 - .5 Previous coat is not dry.
- .5 Supply cover when paint must be applied in damp or cold weather. Supply, shelter, or heat surface and surrounding air to comply with temperature and humidity conditions specified. Protect until paint is dry or until weather conditions are suitable.
- .6 Remove paint from areas which have been exposed to freezing, excess humidity, rain, snow or condensation. Prepare surface again and repaint.
- .7 Apply each coat of paint as a continuous film of uniform thickness. Repaint thin spots or bare areas before the next coat of paint is applied.
- .8 Brush application:
 - .1 Work paint into cracks, crevices and corners and paint surfaces not accessible to brushes by spray, daubers or sheepskins.
 - .2 Brush out runs and sags.
 - .3 Remove runs, sags and brush marks from finished work and repaint.
- .9 Handling painted metal:
 - .1 Handle painted metal after paint has dried, or when necessary for handling for painting or stacking for drying.
 - .2 Scrape off and touch up paint which is damaged in handling, with same number of coats and kinds of paint as were previously applied to metal.

3.4 Cleaning

- .1 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment.

SUPPLEMENTARY CONTRACT SPECIFICATIONS	EXTERIOR PAINTING OF STRUCTURAL STEEL	SECTION 09 91 13.23S SS 64 2023
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| | .2 | Remove recycling containers and bins from site and dispose of materials at appropriate facility. |
| 3.5 Protection | .1 | Protect painted surfaces from damage during construction. |
| | .2 | Protection of surfaces: |
| | .1 | Protect surfaces not to receive paint. |
| | .2 | Prevent contamination of cleaned surfaces by salts, acids, alkalis, corrosive chemicals, grease, oil and solvents before prime coat is applied and between applications of remaining coats of paint. Remove contaminants from surface and apply paint immediately. |
| | .3 | Protect cleaned and freshly painted surfaces from dust to approval of Contract Administrator. |
| | .3 | Repair damage to adjacent materials caused by painting exterior metal surface application installation. |
| 3.6 Payment | .1 | Payment for steel recoating shall be made at the Lump Sum Price bid. Payment shall be for cleaning, containment and recoating. Payment shall also cover all materials and equipment to complete the recoating. |
| | | Payment includes ensuring no debris, paint or any material falling into the travelled portion of Lougheed Highway. |

END OF SECTION

1.3	Measurement and Payment	Delete 1.3.1 and replace with the following	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.
2.0	PRODUCTS		
2.1	Materials	Add 2.1.10	Protective Fencing: Posts - Pressure treated wood 100 mm dia.; Post to be 1.8 m to 2.0m in height at 2.0 m O.C. Snow fence as per Coquitlam Approved Products List; Flagging Tape - 4" Orange glow - 'Tree Retention Area'.
2.0	EXECUTION		
3.1	Existing Trees	Add 3.1.7	The Contractor is responsible to minimize damage to all trees which are to remain.
		Add 3.1.8	The Contractor will be responsible for all claims and costs including the cost of examination by an Arborist, repair, removal and replacement of trees, as required by the Arborist, the Contract Administrator and the City for tree damage where proper notification was not received from the Contractor. Damage will be assessed based on the International Society of Arboriculture Guidelines. The term shall be for a period of one year following the date of Substantial Performance of the Work.
		Add 3.1.9	Place protective fencing/barricades as detailed on Coquitlam Standard Detail Drawings COQ-R26, where shown on <i>Contract Drawings</i> . Contractor shall maintain fence in good condition during construction.
		Add 3.1.10	When work is to be performed inside fenced areas, Contractor shall take care to avoid damage to existing vegetation. Work to be done inside areas of existing vegetation to be retained includes: <ul style="list-style-type: none"> .1 Removal of isolated trees as directed by the Contract Administrator and the City. .2 Selective pruning and tree removal at edges to create tidy and well-shaped forest edge. .3 Placing planting soil and planting of trees.
		Add 3.1.11	Do not park, service or fuel vehicles within the vegetation retention areas.
3.4	Pruning	Add 3.4.2	Do not cut roots or branches of retained trees without approval of the Contract Administrator and the City.

END OF SECTION

DUST CONTROL

3.3	Dust and Mud Control	Add 3.3.1	The Contractor shall make every reasonable effort to minimize the creation of dust or mud by their operations. Special measures may include, but shall not be limited to, frequent sweeping of existing roads used as haul routes; control of traffic speeds; frequent watering of dirt access and egress routes; watering of the construction areas; re-routing of traffic; modification of construction procedures; and cleaning of off-site haul routes on a regular basis as required by the City.
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END OF SECTION

1.0 GENERAL

1.0 General Requirements

Delete 1.0.1 and replace with the following

- .1 Section 32 91 21 refers to those portions of the *Works* that are unique to the supply, placement and finish grading of *Growing Medium*. This section must be referenced to and interpreted simultaneously with all other sections pertinent to the *Works* described herein.

For the purpose of this specification, the term "*Growing Medium*" shall mean a soil produced offsite by homogeneous blending of mineral particulates, micro-organisms and organic matter which provides suitable medium for supporting intended plant growth and the term "*Topsoil*" shall mean on-site native or surface soil material which may be used as *Growing Medium* provided it meets standards set for imported material *Growing Medium* and can be modified to meet the requirements set out for specified *Growing Medium*.

Add 1.0.3

- .3 For the purpose of this specification, the term '*Soil-Testing Laboratory*' shall mean an independent laboratory, recognized by the landscape nursery industry, with the experience and capability to conduct the testing indicated and that specializes in types of tests to be performed.

1.4 Measurement and Payment

Delete 1.4.1 and replace with the following

Payment includes supply and installation of growing medium, boulevard tree trench, burk mulch and imported top soil that is free from any noxious weeds, fungal growth, mushroom, and any contaminants, and as described in the Schedule of Quantities and Prices. Payment will be made separately and includes supply of material, on-site handling, preparing the landscape area subgrade, placing, grading, raking, compacting top soil and application of fertilizers. Payment for top soil will be for actual volume placed onsite at specified thickness.

1.5 Inspection and Testing

Delete 1.5 and replace with the following

- .1 The *Contractor* is responsible for testing imported *Growing Medium* and all related cost incurred. Testing shall be carried out by an approved *Soil Testing Laboratory*.
- .2 The sample analysis shall be of tests done on the proposed *Growing Medium* from samples taken at the supply source within a minimum of 14 days in advance of *Growing Medium* placement. Allow 7 days for soil testing by the laboratory for each sample. The sample shall be picked up by the *Soil Testing Laboratory* from the supply source. The *Growing Medium* sample shall be a composite of at least three (3) samplings for the proposed source and shall be at least one (1) litre in volume.
- .3 Forward a copy of all test results directly to the *Contract Administrator* and the City for review. The analysis shall outline the testing laboratory's required amendments such as sand, organic matter, fertilizers and lime to achieve adequate growing conditions.
- .4 The *Contractor* shall not deliver any *Growing Medium* to the site until the test results have been reviewed and approved by the *Contract Administrator* and the City.
- .5 All submitted soil analysis must be dated and include supplier name and phone number, project location and submitted to

- Contract Administrator* and the City for approval prior to commencing work. Soil analysis shall include measurements of:
- .1 Percent sand, fines, silt and clay
 - .2 Organic matter to 100%
 - .3 pH, acidifying additive required to achieve noted herein
 - .4 Water soluble salts
 - .5 Total carbon to nitrogen ration
 - .6 Total nitrogen and available levels of phosphorus, potassium, calcium & magnesium
- .6 At the discretion of the *Contract Administrator* and the City submit up to two (2) additional samples, at intervals outlined by the *Contract Administrator* and the City, of *Growing Medium* taken from material delivered to the site. Samples shall be taken from a minimum of three (3) random locations and mixed to create a single uniform sample of testing. Results of these tests shall be forwarded to the *Contract Administrator* and the City for review.
- .7 The *Contractor* is responsible for soil analysis and requirements for amendments to supply *Growing Medium* as specified. Failure to satisfy these contractual requirements could result in the *Contractor* being required to remove unacceptable *Growing Medium* at their expense.
- .8 Notify the Contract Administrator at least forty-eight (48) hours prior to *Growing Medium* placement for inspection.
- .9 Refer to General Conditions, Clause 4.12 Tests and Inspections.
- 1.6 Product Handling** Add 1.6
- .1 All materials to be handled and adequately protected to prevent damage. Do not handle *Growing Medium* in an excessively wet, extremely dry, frozen condition or in any manner in which structure may be adversely affected. *Growing Medium* whose structure has been damaged by handling under these conditions shall be rejected and shall be replaced by the *Contractor* at their expense.
- .2 Stockpile materials in bulk form in paved areas or in pre-approved areas of the site. Provide additional protection of storage under roof or tarpaulins.
- .3 Take all precautions to prevent contamination of *Growing Medium* and amendments from windblown soil particles, weed seeds and from insects. Contamination of the *Growing Medium* and amendments may result in their rejection for use.
- .4 Store fertilizer and chemical amendments in the manufacturer's original containers.
- .5 All *Growing Medium* shall be delivered to site premixed from a recognized *Growing Medium* source ensuring consistency throughout the mix.
- 2.0 PRODUCTS** Delete 2.0 and replace with the following
- 2.1 Materials**
- .1 *Growing Medium* Preparation
- .1 Shall be prepared from Compost Material with Sand and other Soil Amendments as required to meet the specifications herein.
 - .2 Ensure commercial processing and mixing of *Growing Medium* components are done thoroughly by a mechanized screening process. Do not mix the components by hand.

Ensure the resulting product is a homogeneous mixture having the required properties throughout free of stones 25 mm or larger in any dimension, woody plant parts, toxic materials, foreign object and other extraneous materials harmful to plant growth. Provide composted soil free from crabgrass, couch grass, equisetum, convolvulus, or other noxious weeds or seed or parts thereof.

.2 Inorganic Soil Amendments

- .1 Sand: Imported pit sand or river pump sand, free of impurities, chemicals, horsetails, and other noxious weeds. The saturation extract electrical conductivity of salinity shall not be greater than 3.0 millimhos/cm at 25 degrees C.

<u>Sieve Size (mm)</u>	<u>Percent passing (%)</u>
4.75	95-100
0.50	0-40
0.050	0-5

- .2 Fertilizers: Uniform in composition, free flowing and dry, granular, pill form, or pelleted commercial product with 50% of total nitrogen (if applicable) derived from natural organic material in a slowly available form delivered in unopened water proof containers with the manufacturer's guaranteed N-P-K analysis, type and trade name attached to each container. The planting soil test results will specify a formulation and application rate to achieve the levels of nitrogen, phosphorous and potassium required. Fertilizer to meet the requirements of the Canada Fertilizer Act.

- .1 Lime: ASTM C 602, agricultural limestone containing a minimum 80 percent calcium carbonate equivalent and as follows:

- .1 Class: Class T, with a minimum 99 percent passing through No. 8 (2.36 mm) sieve and a minimum 75 percent passing through No. 60 (0.25 mm) sieve.
.2 Provide lime in form of dolomitic limestone.

- .3 Perlite: Horticultural perlite, soil amendment grade.

.3 Organic Soil Amendments

- .1 Compost: Well-composted, stable, and weed-free organic matter, pH range of 5.5 to 8; moisture content 35 to 55 percent by weight; 100 percent passing through 25 mm sieve; soluble salt content of 5 to 10 decisiemens/m; not exceeding 0.5 percent inert contaminants and free of substances toxic to plantings; and as follows:

- .1 Organic Matter Content: 50 to 60 percent of dry weight containing no cedar, redwood, wood or bark.
.2 Colour: dark brown to black in colour.

.2 Peat:

- .1 Finely divided or granular texture, with a pH range of 6 to 7.5, containing partially decomposed moss peat, native peat, or reed-sedge peat and having a water-absorbing capacity of 1100 to 2000 percent.

.3 Wood Residual

- .1 Content of wood residuals such as Fir or Hemlock sawdust present in the *Growing Medium* shall not

cause the total carbon to total Nitrogen ration to exceed 40:1.

.2 Cedar or redwood sawdust shall not be present in *Growing Medium*.

.4 Manure

.1 Well-rotted, unleached, stable or cattle manure containing not more than 25 percent by volume of straw, sawdust, or other bedding materials; free of toxic substances, stones, sticks, soil, weed seed, and material harmful to plant growth and free from salt or other harmful chemicals, such as any used to artificially hasten decomposition.

.2 All particles in manure to pass a 6.35 mmm sieve.

.3 Salt content shall give a reading of less than 0.5 millimhos/cm at 25 degrees C.

2.2 Nutrient Requirements

.1 Nutrient requirements shall meet the BCSLA/BCNTA Landscape Standard *Growing Medium* requirements for nitrogen, phosphorus, potassium, calcium, magnesium, boron, sodium cation exchange capacity, carbon to nitrogen ratio.

.1 Boron: not to exceed 1.0ppm

.2 Sodium: Sodium absorption ratio(SAR) not to exceed 8.0

.3 Total Nitrogen: to be 0.2-0.4% by weight

.4 Available Phosphorous: to be 50-100 ppm

.5 Available Potassium: to be 50-70 ppm

.6 Cation Exchange Capacity: to be 30 to 50 meq.

.7 Carbon to nitrogen ratio: Maximum 40:1.

2.3 Salinity

.1 The electrical conductivity of the liquid taken from the soil pH evaluation shall not exceed 3.0 millimhos/cm at 25 degrees C before additions of fertilizers and/or liming agents.

2.4 Drainage Rate

.1 Percolation shall be such that mixing, handling and placement to be done in such a manner that the minimum saturated hydraulic conductivity show on Table – '*Growing Medium Properties for Different Applications*' (found herein these specifications) is achieved and no standing water is visible 60 minutes after at least 10 minutes of moderate to heavy rain or irrigation.

2.5 Growing Medium Source

.1 Import planting medium or manufactured planting medium from off-site sources. Do not obtain from agricultural land, bogs or marshes.

.2 Supplier of Growing Medium shall be as per the Coquitlam Approved Products List.

2.6 Bark Mulch

.1 Mulch backfilled surfaces of planting beds and other areas indicated on drawings.

.1 Organic Mulch: Apply 50 mm average thickness of organic mulch, and finish level with adjacent *Finish Grades*. Do not place mulch against plant stems.

.2 Supplier of Bark Mulch shall be as per the Coquitlam Approved Products List.

.3 Dark brown in colour and free of all soil, stones, roots or other extraneous matter, and free of weeds, seeds and spores.

2.7 Growing Medium Properties for

Properties	Low Traffic Lawn Areas,	High Traffic Lawn Areas	Planting Areas, Planters
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These Supplementary Contract Specifications must be read in conjunction with the Specifications contained in the Master Municipal Construction Documents, Volume II, Printed 2009 and the City of Coquitlam Supplementary Specifications and Detailed Drawings

Different
Applications

	Trees and Large Shrubs		Shrubs & Groundcover
Texture: Particle size classes by Canadian System of Soil Classification	Percent of Dry Weight Mineral Fraction (%)		
Gravel (greater than 2 mm less than 75 mm)	0-10	0	0
Sand (greater than 0.05 mm and less than 2 mm)	50-70	80-90	50-70
Silt (larger than 0.002 mm and less than 0.5 mm)	10-30	5-20	10-30
Clay (less than 0.002 mm)	7-20	2-5	7-20
Organic Content Percent of Dry Weight	5-10	3-5	25-30
Drainage Minimum saturated hydraulic conductivity (cm/hr) in place	2.0	7.0	2.0
Acidity (pH)	6.0-6.5	6.0-6.5	5.0-6.0

2.8 Miscellaneous
Products

- .1 Root Barrier: 400x610 mm linear root barrier, copolymer polypropylene, 50% recycled plastic, black in colour. Supplier of Root Barrier shall be as per the Coquitlam Approved Products List.
- .2 Construction Adhesive shall be as per the Coquitlam Approved Products List.
- .3 Drain Mat: Light duty, uv stable, impermeable cuspated core bonded to a layer of non-woven filter fabric with the following minimum properties:
 - .1 Compressive Strength -718 kN/m2 as per ASTM D-1621
 - .2 Flow Rate – 188 l/min/Metre as per ASTM D-4716
 - .3 Approximate profile thickness of 10 mm.
 - .4 Supplier of Drain Mat shall be as per the Coquitlam Approved Products List.
- .4 Filter Fabric: Install root barriers in accordance with manufacturer's reviewed installation instructions where indicated on reviewed drawings with vertical root directing ribs facing inwards towards trees or plants; connect panels together as required.
 1. Supplier of Filter Fabric shall be as per the Coquitlam Approved Products List.
- .5 Drain Rock: Shall consist of clean round stone or crushed rock. Acceptable material includes 19 mm drain rock or torpedo gravel conforming to the following gradations.

Percent Passing		
Sieve Designation	Coarse	Fine (Torpedo gravel)
25 mm	100	
19 mm	0-100	

9.5 mm	0-5	100
4.75 mm	0	50-100
2.36 mm		10-35
1.18 mm		5-15
0.60 mm		0-8
0.30 mm		0-5
0.15 mm		0-2

2.9 Structural Soil

- .1 Soil stabilizer shall be friable, containing a minimum of 4% and maximum of 6% organic matter by dry weight, free from stones and debris over 30 mm. Acidity (ph.) shall be in the range 5.5-7.5. Carbon to nitrogen ratio shall not exceed 40:1, and salinity shall not exceed 3.0 milliohms at 25 deg C. Gravel greater than 2 mm shall not exceed 10% of total weight.
- .2 Supplier of Structural Soil shall be as per the Coquitlam Approved Products List.
- .3 *Growing Medium* to be a gap-graded mixture.
- .4

Texture of Growing Media	Percentage of mixture
Gravel: greater than 2 mm-less than 75 mm	0%
Sand: greater than 0.0 5mm-less than 2 mm	max 60%
Silt: greater than 0.002-less than 0.0 5mm	max 35%
Clay: less than 0.002mm	max 15%
Clay and silt combined	max 40%
Acidity (pH)	6.0-7.0
Drainage: minimum saturated hydraulic Conductivity (cm/hr) in place	3.0
Salinity: saturated extract conductivity shall not exceed at 25 degC	3.0 milliohms/cm
Organic content: percent of dry weight	8-12%
- 5 Stone ballast: Clean inert stone of high angularity is preferred over washed gravel. Stone dimension aspect ratio should be 1:1:1 with a maximum 2:1:1 length: width: depth. Single size stone, 60 mm-75 mm clear sieve designation: Blasted Quarry Rock. Aggregate to be used for structural soil shall be free of any foreign elements or material.
- .6 Structural Geotextile

Shall be installed as a structural filter layer directly above the compacted structural soil mixture. Do not install fabric until adequate compaction of the structural soil mixture has been confirmed. Filter fabric shall be selected and deigned to withstand wear and tear during construction without deterioration of its strength and filtering properties.

 - .1 Supplier of Geotextile shall be as per the Coquitlam Approved Products List.

			<p>.7 Ground dolomite limestone containing no less than 85% of its total weight as calcium carbonate and magnesium carbonate shall be used to control ph level. The degree of grind for the limestone shall allow 100% of the total weight to pass a #10 (2 mm) sieve, 90% to pass a #18 (1 mm) sieve and 20% to pass a #40 (0.105 mm) sieve. Spread-easy fertilizer shall be used as a slow release fertilizer source of calcium and magnesium.</p> <p>.8 Mixing of structural soil: Blend as per following ratios:</p> <p>.1 5 metric tones (MT) of aggregate</p> <p>.2 1 cubic meter of growing media</p> <p>.3 2 kg soil stabilizer</p> <p>.9 Moisten mixture with fine spray of clean potable water while mixing to activate soil stabilizer product. Do not over mix. Place mixture in 300 mm lifts through entire area of structural soil mixture. Compact each lift to 95% MPD prior to placement of next lift. Install filter fabric such to ensure a minimum of 60 cm overlap of all fabric seams and beyond edge of structural soil.</p>
3.0	EXECUTION		
3.2	Preparation of Subgrade	Delete 3.2.4 and replace with the following	Remove debris, roots, branches, stones in excess of 50 mm diameter and other deleterious materials, soil contaminated with calcium chloride, toxic materials and petroleum products, and debris which protrudes more than 25 mm above the surface. Dispose of all removed material off site to approved offsite disposal area at no additional cost to the <i>Owner</i> .
		Delete 3.2.5 and replace with the following	Course cultivate entire area which is to receive <i>Growing Medium</i> to depth of 250mm. Cross cultivate those areas where equipment used for hauling and spreading has compacted soil.
		Add 3.2.6	Grade transitions shall be smooth and even and shall blend into surrounding areas as determined by the <i>Contract Administrator</i> and the City.
		Add 3.2.7	Provide erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.
3.3	Processing Growing Medium	Add 3.3.4	<p><i>Growing Medium</i> shall be imported and stockpiled on site in a location approved by the <i>Contract Administrator</i> and the City.</p> <p>.1 Carry out stock piling operation such that the <i>Growing Medium</i> structure is not compromised through compaction, vibration or other actions.</p> <p>.2 Stock piled <i>Growing Medium</i> shall be protected from rain, drying and contaminants.</p> <p>.3 <i>Growing Medium</i> shall be free of subsoil, pests, roots, wood, construction debris, undesirable grasses including crabgrass or couch grass, noxious or weeds and weed seeds or parts thereof foreign objects and toxic materials. Presence of these contaminants shall be grounds for rejection of <i>Growing Medium</i> and replacement at no cost to the <i>Owner</i>.</p>
3.4	Placing Growing Medium	Delete 3.4.2 and replace with the following	Place <i>Growing Medium</i> to the required finished grades with adequate moisture, in uniform lifts of 100 mm to 150 mm compacted to 80 MPD during dry weather, over dry, unfrozen <i>Sub Grade</i> where planting is indicated free of any standing water.

		Delete 3.4.5 and replace with the following	Minimum depths after settlement and 80% compaction: .1 Trees pits: 900 mm .2 Shrub beds: 450 mm .3 Ground cover areas: 300 mm .4 Lawn areas: 300 mm .5 Blvd. areas: 150 mm
		Add 3.4.6	Increase sand content to 90% in the planting soil below lawns where heavy wear by pedestrians or maintenance equipment is anticipated. Increase sand content in a 1.5m wide strip at the bottom of swales, banks or other wet areas and as directed by the Landscape Architect. On steep south or west facing banks, reduce sand content in lawns and planting beds to 50 - 60% for better moisture retention.
3.5	Applying Fertilizers	Delete 3.5 and replace with the following	.1 Addition of amendment components shall be at the rates indicated in the <i>Growing Medium</i> analysis recommendations via the following methods: .1 Lime: Applied with mechanical spreaders over entire planting areas and contained planters. .1 Do not apply by hand. .2 Mix thoroughly into the top 100 mm of <i>Growing Medium</i> . .3 Do not allow lime to come into direct contact with nitrogen - phosphate - potash fertilizers. .2 Fertilizer: Applied with mechanical spreaders over entire planting areas and contained planters. Do not apply by hand. Do not mix into <i>Growing Medium</i> .
3.6	Finish Grading	Delete 3.6.1 and replace with the following Add 3.6.3	Manually fine grade <i>Growing Medium</i> installation to contours and elevations shown on drawings or as directed by <i>Contract Administrator</i> and the City. Eliminate rough spots and low areas to ensure positive drainage. <i>Finish Grade</i> of <i>Growing Medium</i> shall be 25 mm from finished elevation of adjacent curb or planter wall unless otherwise noted on drawings.
3.9	Clean-up	Delete 3.9 and add the following	.1 Ensure all paved areas, tops of planters, adjacent surfaces have been thoroughly cleaned. Ensure all discoloration of adjacent surfaces as a result of <i>Growing Medium</i> installation have been removed. .2 Dispose of materials not required and repair any damage to adjacent surfaces (as determined by the <i>Contract Administrator</i> and the City) off site at no additional cost to the <i>Owner</i> .
3.10	Weed Control	Add 3.10	.1 Ensure all weeds and weed roots that have germinated during the course of work of this section have been eliminated from <i>Growing Medium</i> . .2 Provide the City Representative and Consultant with a written outline of weed removal methodology seven (7) days prior to starting weed removal operations.
3.11	Structural Soil	Add 3.11	.1 Refer to 2.9 in this specification and as shown on the Contract Drawings.

END OF SECTION

1.01 General Information

Payment for work will be made at the prices bid for the Items appearing in the Schedule of Approximate Quantities and Prices.

Any work called for which is not listed as an Item in the Schedule of Approximate Quantities and Prices will not be paid for separately. The cost of such work shall be included in the prices bid for the Items in the Schedule of Approximate Quantities and Prices.

The Owner may require an acceptable declaration from the Contractor transferring ownership of materials to The Owner.

Progress payments will be made monthly, on the basis of progress estimates prepared by The Contract Administrator. Unless more particularly specified in these Special Provisions, each progress estimate will assess the contract value of materials supplied and work done.

The Provincial Ministry of Transportation and Infrastructure has produced a 2020 Standard Specifications for Highway Construction (Volume 1 & 2), which applies to bridge construction and will be referenced in this document as SS. To view or to obtain a digital copy of these specifications go to:

[Standard Specifications for Highway Construction - Province of British Columbia \(gov.bc.ca\)](http://gov.bc.ca)

1.02 Mobilization

Payment for mobilization will be incidental to other Sections unless otherwise noted in the Schedule of Quantities and Prices. Mobilization consists of the necessary Work and operations including, but not limited to, the movement of personnel, equipment, supplies, and incidentals to the Sites including working platforms, the establishment of facilities necessary to undertake the Work and all other Work Items and operations which must be initiated and finished as part of completion of the Work.

1.03 Concrete Surface Repairs

Concrete cracks 50mm deep shall be considered surface repairs.

Existing concrete shall be removed to solid concrete. The Contractor shall provide full containment and disposal of all removed concrete and debris. Thoroughly clean out loose material by shot blasting, hydro blasting or hydro-milling to remove all bruised, loose, and deteriorated concrete.

The method of surface preparation shall have sufficient energy to remove 1 to 2 mm of the sound concrete paste. Pressure washing is not considered adequate for surface preparation. All exposed reinforcing to be cleaned of rust and debris.

Saturate repair area with water to a saturated, surface dry condition and brush-coat the area to be patched with a slurry coat of structural repair mortar. Place structural repair mortar before slurry coat has dried. Protect and cure repair mortar.

Apply Sikagard SN40 Lo-Voc or an approved equivalent. Apply as per manufacturer's instructions.

Payment for concrete surface repairs shall be made at the Unit Price(s) bid per square meter. Payment shall be for sawcutting, surface preparation, concrete surface repair and sealant. Payment shall also cover falsework if necessary.

**1.04 Concrete Repairs –
Concrete Demolition**

The existing concrete shall be removed to a depth as shown on the Drawings or to sound concrete 10mm deeper than the maximum depth of the patch at pier cap and columns. Girder repairs shall have a minimal concrete removal during repairs. The Contractor shall provide full containment and disposal of all removed concrete and debris.

**1.05 Concrete Repairs –
Surface Preparation**

After removal of the existing concrete, exposed concrete and reinforcing surfaces shall be cleaned and prepared to accept topping concrete. Sikatop Armatec 110 or an approved equivalent bonding agent shall be applied to exposed reinforcing.

The exposed concrete shall be prepared by hand-milling or a suitable alternative to remove all bruised, loose, and deteriorated concrete. The method of surface preparation shall have sufficient energy to remove 1 to 2 mm of the sound concrete paste and not damage existing reinforcing. Pressure washing is not considered adequate for surface preparation.

The method of surface preparation shall have sufficient energy to remove 1 to 2 mm of the sound concrete paste. Hydro-milling equipment shall have a minimum operating pressure of 140 MPa (20,000 psi). Pressure washing is not considered adequate for surface preparation.

If hydro-milling is used for surface preparation, all slurry shall be contained, collected and disposed of in accordance with applicable regulations.

Prepared concrete surfaces shall have a rough, dust-free and open texture meeting ICRI Concrete Surface Profile CSP 6 to 9.

Immediately prior to placing new concrete, the prepared surface shall be thoroughly pressure washed (3000 to 5000 psi) and flushed to remove all dust, laitance, grease, oil and other contamination.

Existing concrete surfaces shall be in a saturated surface dry condition when placing new concrete.

The concrete substrate shall maintain a tensile bond strength of at least 1.2 MPa when tested in accordance with CSA A23.2-6B.

Payment for preparation of existing concrete surfaces will be made at the Unit Price per square metre bid. Payment shall include the preparation process, removal and disposal of all debris and application of the bonding agent. The area to be paid for will be measured within the lines shown on the Drawings or as ordered by the Contract Administrator.

**1.06 Concrete Repairs -
Bonding Agent**

The bonding agent shall consist of a slurry of Type GU (10) cement and water mixed to the consistency of heavy paint. Refer to CSA A23.1-09, Section 7.6.4. Latex or epoxy bonding agents are not permitted.

Apply Sikatop Armatec 110 or an approved equivalent bonding agent. Apply as per manufacturer's instructions.

Payment for bonding agent will be included in the cost for Concrete Repairs – Surface Preparation.

**1.07 Concrete Repairs -
Concrete**

Select concrete mix proportions in accordance with Alternative 1 of Table 5 of CSA A23.1-09 to provide the following properties:
CSA A23.1-0 Exposure class N. Apply Sika 212 for girder repairs and Sika 211 for column and pile cap repairs or approved equivalents. Apply as per manufacturer's instructions.

All cementing materials shall conform to A3000-08.

Portland Cement: Shall conform to CSA A3001 Type GU.

Fly ash shall be Type F or CI.

Ground granulated blast-furnace slab Type S.

Normal Weight Aggregates in accordance with CSA A23.1. Provide aggregates from a single source throughout the project.

Water shall be clean and potable

Minimum compressive strength at 28 days: 35 MPa

Maximum Water/Cementing Materials Ratio: 0.40

Nominal Size of Coarse Aggregate: 40 mm

Maximum supplementary cementing materials shall be 20% by mass of total cementing materials.

Slump prior to addition of high range water reducer: 80 ± 30 mm

Plastic air content per CSA A23.1-09 for exposure class C-2

Concrete shall meet the requirements of CSA A23.1-09, Section 8.8 for low shrinkage concrete. The shrinkage after 28 days of drying shall not exceed 0.040% when tested in accordance with CSA A23.2-21C

Minimum average tensile bond strength of the new concrete topping to the substrate shall be 1.2 MPa with no individual test less than 1.0 MPa. Tensile bond shall be tested in accordance with CSA A23.2-6B.

Payment for concrete will be made at the applicable Unit Price(s) per square metre as listed in the Schedule of Approximate Quantities and Unit Prices. No payment will be made under this Item for concrete supplied as part of another Item.

Payment for concrete will also include the preparation of formwork and reinforcing steel as indicated on the Drawings. All concrete work shall be in accordance with MoTI Standard Specifications SS 211 and 933, unless otherwise specified in these Special Provisions. Payment shall also include quality control, submissions and any falsework and bracings for the formwork as required.

**1.08 Concrete Repairs -
Sealant**

All surfaces must be clean, sound, frost-free and dry (maximum depth of penetration is achieved when substrates are dry, with no damp patches). Any existing coatings, surfaces treatments, accumulated pollutants, dust, dirt, oil and efflorescence must be removed.

Uncoated surfaces must be free from curing compound residues and any material or contaminants detrimental to penetration.

Apply Sikagard SN40 Lo-Voc or an approved equivalent. Apply as per manufacturer's instructions.

Payment for preparation and the installation of the sealer will be made at the Unit Price per square meter of concrete surface.

1.09 Deck Joint Replacement .1S

The joint seal shall be supplied in a single length, without splices (curb to curb). Before the joint seal is installed, the joint shall be thoroughly cleaned with a wire brush and all moisture removed from the joint. The seal shall be installed in accordance with all of the manufacturer's recommendations.

Compression seals shall be installed almost fully compressed and shall be 12mm below the surface of the deck, unless shown otherwise on the Drawings.

Contractor to submit a deck joint installation plan to the Contract Administrator for review prior to start of installation.

Payment for deck joints will be made at the Unit Price per meter bid. Payment shall include quality control, all necessary material, shop drawings, supply, fabrication of Wabo Siliconeseal, epoxy bonding agent, installation of the joint and backer rod, supply and installation of cover plate and anchors, and removal of existing cover plate and anchorage.

END OF SECTION

Appendix A - Traffic Management Detail Specifications

- | | |
|-----------------------------|--|
| 1.0 GENERAL | |
| | .1 This Traffic Management detail specification refers to the Contractor's specific plans to identify project traffic risks affecting the <i>Work</i> , provide Traffic Control Plans, and to implement the traffic control for the safe passage of vehicles and pedestrian 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 City's Traffic Operation Division 5 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 (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 <i>Work</i> .

.2 The Traffic Management Plan (TMP) will consist of the following components:
.1 Identification of risks to traffic during the <i>Work</i>
.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.

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

.4 Review of the TMP will be performed by the Contract Administrator. Comments for revisions to the TMP will be returned to the <i>Traffic Manager</i> for implementations. |

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- .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 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 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 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.
- 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.
 - .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. |
| 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. |

4.0 TRAFFIC RESTRICTIONS

- | | | |
|-----|-----------------------------------|---|
| 4.1 | Road and Sidewalk Closure Permits | .1 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. |
| | | .2 Total Road Closure Is Not Permitted |
| | | .3 Traffic cross over will only be permitted as approved by the Contract Administrator and must have a complete Traffic Control Plan indicating the cross over, signing, and delineation. |
| | | .4 Minimum single lane on each direction must be accommodated at all times, and is subject to restrictions as per Clause 4.2, and approval of Traffic Department. |

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- 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.
 - .2 **Due to the area's significant high volumes of commuter traffic, construction activities shall be restricted to the following unless specified otherwise and must be clearly identified in Traffic Management Plan.**
Lougheed Hwy
Minimum single lane on each direction with cross over traffic through the work zone area must be maintained at all times.

All City Traffic Counts are available on the City's web site at:

<http://www.coquitlam.ca/city-services/roads-and-transportation/traffic-operations-construction/traffic-data.aspx>

5.0 HOURS OF WORK

- 5.1 Allowable Hours of Work
- .1 **The hours of work shall be from 0700 h to 1900 h inclusive Monday to Friday and 0900 h to 1800 h inclusive Saturdays, unless noted otherwise.**
 - .2 Some allowances may be made for paving operations, depending on a proposal acceptable to the Contract Administrator.
 - .3 Line Marking work may be performed at night, (2100 h to 0500 h).
- 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 City Pump Station access, businesses and residences during construction activities.
 - .2 Suggested construction staging was provided for guide and reference only. Contractor is responsible to make the appropriate plan to accommodate the pedestrian and vehicular traffic as per the requirements of the contract.

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

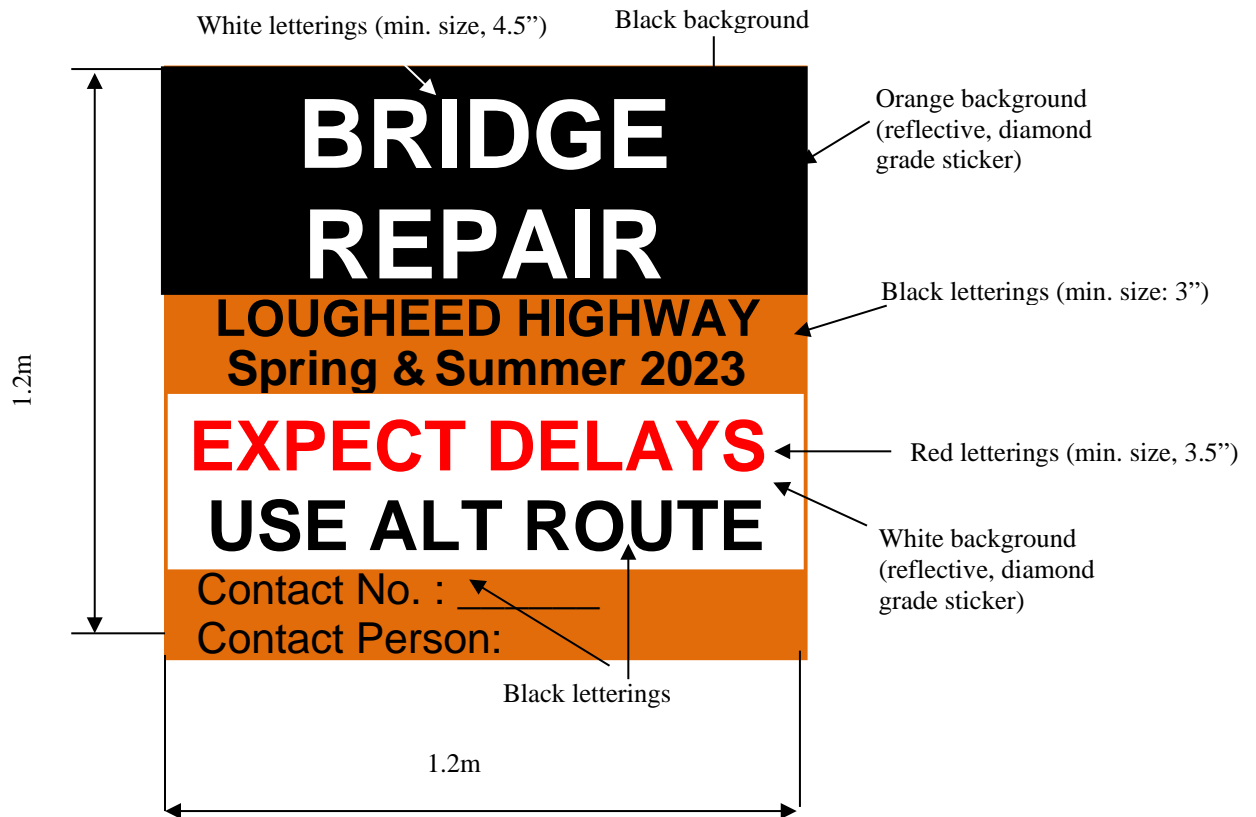
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|-----|-------------------------------------|--|
| 6.3 | Work Stoppage Due to Traffic | .1 The City will not control or direct traffic control activities of the Contractor, but may require an immediate stop to any work where, in the sole opinion of the Contract Administrator, the provided traffic management plan is ineffective or creating unreasonable delays. Contractor is responsible for the costs associated with this work shut-down. |
| 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, nine stationary signs at intersections, one in each direction, to inform traffic of existing and anticipated conditions at entry points of the street 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.

- Eastbound, SW corner of Mariner Way and Dewdney Trunk Road
- Southbound, NW corner of Mariner Way and Dewdney Trunk Road
- Northbound, SE corner of Mariner Way and Dewdney Trunk Road
- Southbound, NW corner of Mariner Way and Barnet Hwy
- Southbound, NW corner of Pinetree Way and Lougheed Hwy
- Eastbound, SW corner of Lougheed Hwy and Dewdney Trunk Road
- Westbound, NE corner of Lougheed Hwy and Dewdney Trunk Road
- Northbound, SE corner of Lougheed Hwy and Dewdney Trunk Road
- Eastbound, SW corner of Lougheed Hwy and Chilko Drive
- Westbound, NE corner of Lougheed Hwy and Chilko Drive
- Northbound, SE corner of Lougheed Hwy and Chilko Drive

Construction Zone Information Signs to follow specifications below. Draft must be submitted to Contract Administrator prior to sending to production:



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APPENDIX 1



City of Coquitlam Road and Sidewalk Closure Permit Request

Traffic Operations Division
3000 Guildford Way, Coquitlam BC V3B 7N2
Phone: 604-927-6250 Fax: 604-927-6255
Email: trafficoperations@coquitlam.ca

Submit to the Traffic Operations Division a minimum of 5 business days prior to the intended closure date.

Permit Fee - ~~\$75.00 (Effective February 1, 2025)~~

Payment Methods – After review, and if approved, payment options will be emailed to the applicant.

Application Date: _____

City Project Number (if applicable): **73038**

Contact Information

Company Name: _____

Applicant Name: _____

Name of Contractor doing work for Company/Applicant: _____

Phone: _____ Fax: _____

24 Hour Emergency Phone: _____ Email: _____

Location, date and time, and traffic control plan information

I request approval to close (check all that apply): Direction: ☐ Northbound ☐ Southbound ☐ Eastbound ☐ Westbound

☐ Curb/Outside Lane ☐ Centre/Inside Lane ☐ Right Turn Lane ☐ Left Turn Lane ☐ Cycling Lane ☐ Sidewalk

☐ Single Lane Alternating Traffic ☐ Full Closure

Road/Street Name: _____

Location Description: _____

Date & Time Information: Dates: _____
Starting Ending

Hours: _____
Starting Ending

Purpose: _____

Will this closure disrupt: Bus Routes or Stops? ☐ Yes ☐ No If yes, the Applicant will need to contact Coast Mountain Bus Company regarding disruptions.

Will this closure disrupt: Garbage/Recycling Routes or Pick Up? ☐ Yes ☐ No If yes, the Applicant will need to assist the contractor and/or contact the City's Environmental Services Group. www.coquitlam.ca/trashtalk

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Traffic Control Plan*:

- (a) Traffic Management Manual for Work on Roadways Figure Number _____, or
(b) A Traffic Control Plan (*attach separately*) indicating signage, taper lengths, direction of traffic, work area, and north arrow

Traffic control persons (flag persons) on duty? ☐ Yes ☐ No If yes, specify how many: _____

** Important Notice: All operations within the road right-of-way must comply with Worksafe BC regulations and BC Ministry of Transportation standards for work on roadways.*

Application Checklist

- ☐ Permit Fee
- ☐ Prime Contractor Designation Letter
- ☐ City of Coquitlam Certificate of Insurance
- ☐ Traffic Control Plan or Traffic Management Manual for Work on Roadways Figure Number _____
- ☐ Coast Mountain Bus Company (Phone: 778-593-5774 | Email: special.events@coastmountainbus.com) contacted regarding impact to bus routes and bus stops
- ☐ City of Coquitlam Environmental Services Group (Phone: 604-927-3500 | Email: wastereduction@coquitlam.ca) contacted regarding impact to garbage/recycling routes and pick up

I HEREBY AGREE to the terms stipulated herein and further agree to indemnify and save harmless the City against any and all claims, actions, or expenses whatsoever or by whomsoever brought against the City by the reason of the City granting us this Road and Sidewalk Closure Permit. I further agree to accept responsibility to ensure proper situation control and street sweeping for the duration of the road or sidewalk obstruction.

Date

Applicant Signature

Office Use Only PERMIT STATUS

- ☐ Permit Fee ☐ Prime Contractor Letter ☐ Certificate of Insurance
- ☐ Traffic Control Plan ☐ Impact to bus service ☐ Impact garbage and recycling collection
- ☐ Request is denied for the following reason(s): _____
- ☐ Request is approved with the following change(s): _____
- ☐ Request is approved as submitted

Date

Traffic Technologist or Designate

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