



City of Coquitlam

Contract Documents 74774

Lougheed Highway Improvements



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2. **Standard Documents – not supplied**

i) (available in the “MMCD – General Conditions, Specifications and Standard Detail Drawings”)

- Instructions to Tenderers
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 - Schedule 17.5.3 – Letter Agreement with Referee
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- Specifications
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ii) City of Coquitlam Supplementary Specifications for Contract Documents

Invitation to Tenderers



INVITATION TO TENDER

DATE OF ISSUE: **May 9, 2023**

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

Tender No. 74774

Lougheed Highway Improvements

The City of Coquitlam invites tenders for **Contract 74774 – Lougheed Highway Improvements**, generally consisting of the following, but not limited to:

- Asphalt Milling - Approx. 23,000 square metres
- Asphalt Paving – Approx. 4,500 tonnes
- Roadside barriers– Approx. 550 metres
- New streetlight installations
- **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

Tuesday, May 30, 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 74774

Lougheed Highway Improvements

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: **Lougheed Highway Improvements**

Reference No. **74774**

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|------------|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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> <ul style="list-style-type: none">• Asphalt Milling - Approx. 23,000 square metres• Asphalt Paving – Approx. 4,500 tonnes• Roadside barriers– Approx. 550 metres• New streetlight installations• Other miscellaneous and incidental works as further described in the Contract Documents. <p>1.2 All inquiries regarding this Tender are to be submitted in writing referencing the Tender Name and Number sent to:</p> <p>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 Contract Documents.</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</p> |

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 *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:* May 30, 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.

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| 4.0 | Additional Instructions to Tenderers | 4.01 | Lougheed Highway and Pitt River Road have significant vehicular traffic volumes. The Contractor shall ensure safe passage of all pedestrians and all types of vehicles. Contractor is to follow the allowable hours of work as specified in Appendix A – Traffic Management Detail Specifications. |
| | Obtaining Documents | 4.1 | <p>The following documents which are referred to and form part of the Contract Document package may be obtained as follows:</p> <ul style="list-style-type: none">• Copies of the Master Municipal Construction Documents Volume II (2009), General Conditions, Specifications and Standard Detail Drawings are available separately from: Support Services Unlimited Suite 102 211 Columbia Street Vancouver, B.C. V6A 2R5 Tel: 604-681-0295 Fax: 604-305-0424• 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 <p>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</p> |
| | 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. |

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|------------|---------------------------------------------|-------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | 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> |
| | 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> |
| 5.0 | 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</p> |

accepted. Original documents are required upon request by the City.

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 *Work*, including all items which, whole not specifically listed in the *Schedule of Quantities and Prices*, are included in the *Work* specifically or by necessary inference from the *Contract Documents*;
 - 10.1.2 all assessments payable with respect to labour as required by any statutory scheme such as unemployment insurance, holiday pay, insurance, CPP and all employee benefits and the Workers Compensation Act;
 - 10.1.3 all overhead costs, including head office and on-site overhead costs, and all amounts for the *Contractor's* profit.
- 10.2 The tendered prices and all subcontracts must allow for compliance with all applicable laws regarding trade or other qualifications of employees performing the *Work*, and payment of appropriate wages for labour included in or required for the *Work*.
- 11.0** **Taxes**
- 11.1 The tendered prices shall cover all taxes and assessments of any kind payable with respect to the *Work*, but shall not include *GST*. *GST* shall be listed as a separate line item as required by GC 19.3.
- 12.0** **Amendment of Tenders**
- 12.1 A tenderer may amend or revoke a tender by giving written notice, delivered by Email or fax, to the office referred to in paragraph 3.4 of the Instructions to Tenderers at any time up until the *Tender Closing Date and Time*. An amendment or revocation that is received after the *Tender Closing Date and Time* shall not be considered and shall not affect a tender as submitted.
- 12.2 An amendment or revocation must be signed by an authorized signatory of the tenderer in the same manner as provided by paragraph 5.1 of these Instructions to Tenderers.
- 12.3 Any amendment that expressly or by inference discloses the tenderer's *Tender Price* or other material element of the tender such that, in the

opinion of the *Owner*, the confidentiality of the tender is breached, will invalidate the entire tender.

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

"Contract:

(TITLE OF CONTRACT)

Reference No.

(OWNER'S CONTRACT REFERENCE NO.)

TO:

(NAME OF OWNER)

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

(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. 74774

Lougheed Highway Improvements

Summary

Name of **Contractor**: _____

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

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

On or before 2:00 pm (local time)

Tuesday, May 30, 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.

May 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: Loughheed Highway Improvements

Reference No. 74774

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 **September 15, 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 TENDERContract 74774
Lougheed Highway Improvements

SCHEDULE OF QUANTITIES AND PRICES

(see paragraph 5.3.1 of the Instruction to Tenderers)

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

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

| ITEM NO. | MMCD Ref. / (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. | 3 | | |
| 3.02 | (1.3.2) | Changeable Message Sign (Qty 2) | per month | 3 | | |
| 4.00 | 03 30 205 | CONCRETE WALKS, CURBS AND GUTTERS | | | | |
| 4.01 | (1.4.3) | Extruded Concrete Median Curb – MMCD C6 | l.m | 20 | | |
| 5.00 | 03 40 015 | PRECAST CONCRETE | | | | |
| 5.01 | 1.4.4/(1.4.4) | Concrete Road Barriers, 810mm (c/w transition, bull nose, drainage slots as required) as shown in contract drawings, Appendix B and documents | l.m | 541 | | |
| 5.02 | 1.4.6/(1.4.6) | Diamond Grade Reflective Concrete Barrier flexible marker, white (1 side), 3" x 2" (installed at top and side of barrier, every 18m) | ea. | 62 | | |
| 6.00 | 26 56 01 | ROADWAY LIGHTING | | | | |
| 6.01 | 1.9.2 | Supply & installation of Roadway and Pedestrian Lighting (ALL) Works including any removal, adjustments, disposal and transfers needed to complete the work, including relocation of speed reader board, service panel modifications, breakers and as shown on the Contract Drawing. | l.s. | 1 | | |
| 6.02 | 1.9.2 | Supply & installation of communication ducts and junction boxes (ALL) Works including all labor, material and equipment to complete the work and as shown on the Contract Drawing. (Provisional) | l.s. | 1 | | |
| 7.00 | 31 11 015 | CLEARING AND GRUBBING | | | | |
| 7.01 | (1.4.1) | Remove/Trim Vegetation Encroaching on Roadway | l.s. | 1 | | |
| 8.00 | 31 24 135 | ROADWAY EXCAVATION, EMBANKMENT AND COMPACTION | | | | |
| 8.01 | (1.8.4) | Removal and disposal of Existing Asphalt Medians (all depths) | sq.m | 25 | | |
| 8.02 | (1.8.4) | Removal and disposal of Existing Concrete Median Curb and Interim Curbs, C6 | l.m | 40 | | |
| 8.03 | (1.8.4) | Removal and disposal of Existing Precast Concrete Barriers | l.m | 495 | | |
| 8.04 | (1.8.5/1.8.10) | Common Excavation - includes off site disposal (Provisional) | cu.m | 220 | | |
| 9.00 | 32 01 16.75 | COLD MILLING | | | | |
| 9.01 | (1.5.4) | Inlay Milling - 75mm | sq.m | 22,690 | | |
| 10.00 | 32 11 16.1 | GRANULAR SUBBASE | | | | |
| 10.01 | 1.4.2 | 75mm Minus Granular Sub Base (Provisional) | tonne | 380 | | |
| 11.00 | 32 11 235 | GRANULAR BASE | | | | |
| 11.01 | (1.4.1) | 25mm Minus Granular Base, variable thickness (Provisional) | tonne | 250 | | |
| 12.00 | 32 12 165 | HOT-MIX ASPHALT CONCRETE PAVING | | | | |
| 12.01 | (1.5.1) | Machine Laid Asphaltic Concrete Paving - MMCD Lower Course #1 | tonne | 250 | | |
| 12.02 | (1.5.1) | Machine Laid Hot Mix Asphalt (19mm MOT Class 1 Medium Mix with 80-100 Group A Asphalt Binder) | tonne | 4,300 | | |
| 12.03 | (1.5.3) | Hand Laid Asphaltic Concrete Paving - MMCD Upper Course #2 - Infill areas (Provisional) | tonne | 5 | | |
| 12.04 | (1.5.9) | Centreline Rumble Strips as shown in contract drawings and specified in the documents | l.m | 670 | | |
| 13.00 | 32 17 235 | PAINTED PAVEMENT MARKINGS | | | | |
| 13.01 | (1.5.3) | Supply & Installation Thermoplastic Pavement Markings and as shown in contract drawings | l.s. | 1 | | |
| 13.02 | (1.5.4) | Supply & Install of Traffic Signage on new base and post - City to supply all new sign tabs | ea. | 18 | | |
| 13.03 | (1.5.4) | Supply & Install of Traffic Signage on new pole or existing pole/post - City to supply all new sign tabs | ea. | 16 | | |
| 13.04 | (1.5.5) | Remove and dispose offsite existing signs, posts and bases as shown in contract drawings | l.s. | 1 | | |
| 14.00 | 32 91 215 | TOP SOIL AND FINISH GRADING | | | | |
| 14.01 | (1.4.1) | Imported Topsoil - 150mm Thick for Sod (Ditch Reconstruction) | cu.m | 150 | | |
| 15.00 | 32 92 19 | HYDRAULIC SEEDING | | | | |
| 15.01 | 1.8.1 | Hydroseeding (Ditch Reconstruction) - Sun and shade#1 | sq.m | 650 | | |
| 16.00 | 33 42 135 | PIPE CULVERTS | | | | |
| 16.01 | (1.5.2) | 300mm Concrete Culvert (C-76 IV) | l.m | 24 | | |
| 17.00 | 33 44 015 | MANHOLES AND CATCHBASINS | | | | |
| 17.01 | (1.5.2) | Lawn Drain Type 2 - MMCD S12 | ea. | 2 | | |

| ITEM NO. | MMCD Ref. / (Supplementary Contract Specifications) | DESCRIPTION | UNIT | QTY | UNIT PRICE | EXTENDED AMOUNT |
|--------------|-----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|------------|-----------------|
| 17.02 | (1.5.3) | Manhole Frame and Lid Replacement & Adjustments (Provisional) | ea. | 2 | | |
| 17.03 | (1.5.3) | Catch Basin Frame and Grate Adjustment Only | ea. | 1 | | |
| 17.04 | (1.5.3) | Catch Basin Frame and Grate Replacement & Adjustment (Provisional) | ea. | 5 | | |
| 18.00 | 34 41 135 | TRAFFIC SIGNALS | | | | |
| 18.01 | (1.9.2) | Supply & installation of Advanced Warning Flash pole, new retroreflective signs, LED fixture, island flasher and (ALL) Works including any removal, transfers, adjustments and disposal needed to complete the work and as shown on the Contract Drawing. Payment includes removal of existing signs, poles and bases as shown in contract drawings. | l.s. | 1 | | |
| 18.02 | (1.9.2) | Supply & installation of congestion flashers, powdered coated RAL6028 poles, mounting hardwares, junction boxes, bases, signs, cabinet, and (ALL) Works including any removal, transfers, adjustments and disposal needed to complete the work and as shown on the Contract Drawing. Payment includes programming, testing and commissioning. (Provisional) | l.s. | 1 | | |
| 18.03 | (1.9.4) | Supply and installation of Detector Loops | ea. | 8 | | |
| 18.04 | (1.9.4) | Supply and installation of Detector Loops (Provisional) | ea. | 4 | | |

Total Tendered Price (exclude GST): \$ _____

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

Name of Contractor: _____

APPENDIX 2

FORM OF TENDER

**Contract 74774
Lougheed Highway Improvements**

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

INDICATE SCHEDULE WITH BAR CHART WITH CONSTRUCTION DURATIONS

| CONSTRUCTION ACTIVITY | JUNE | JULY | | | | AUGUST | | | | | SEPT. | |
|------------------------------|------|------|---|---|---|--------|---|---|---|---|-------|---|
| | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 5 | 1 | 2 |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

Substantial Completion Date: **September 15, 2023**

Proposed Disposal Site: _____

APPENDIX 3

FORM OF TENDER

**Contract 74774
Lougheed Highway Improvements**

EXPERIENCE OF SUPERINTENDENT
(See paragraph 5.3.3 of the Instructions to Tenderers)

Proposed Project Superintendent _____

List of Project Experience

| | | | |
|--------------------------|--|------------------|--|
| PROJECT: | | Dates: | |
| Work Description: | | | |
| Responsibility: | | | |
| Owner/Reference: | | Phone NO: | |

| | | | |
|--------------------------|--|------------------|--|
| PROJECT: | | Dates: | |
| Work Description: | | | |
| Responsibility: | | | |
| Owner/Reference: | | Phone NO: | |

| | | | |
|--------------------------|--|------------------|--|
| PROJECT: | | Dates: | |
| Work Description: | | | |
| Responsibility: | | | |
| Owner/Reference: | | Phone NO: | |

APPENDIX 4

FORM OF TENDER

**Contract 74774
Lougheed Highway Improvements**

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 74774
Lougheed Highway Improvements**

SUBCONTRACTORS

(See paragraph 5.3.5 of the Instructions to Tenderers)

| | | | |
|--------------------------|--|---------------------|--|
| Trade: | | Tender Item: | |
| Work Description: | | | |
| Subcontractor: | | Phone No: | |

| | | | |
|--------------------------|--|---------------------|--|
| Trade: | | Tender Item: | |
| Work Description: | | | |
| Subcontractor: | | Phone No: | |

| | | | |
|--------------------------|--|---------------------|--|
| Trade: | | Tender Item: | |
| Work Description: | | | |
| Subcontractor: | | Phone No: | |

| | | | |
|--------------------------|--|---------------------|--|
| Trade: | | Tender Item: | |
| Work Description: | | | |
| Subcontractor: | | Phone No: | |

| | | | |
|--------------------------|--|---------------------|--|
| Trade: | | Tender Item: | |
| Work Description: | | | |
| Subcontractor: | | Phone No: | |

APPENDIX 6

FORM OF TENDER

**Contract 74774
Lougheed Highway Improvements**

Bid Bond

NO. _____

\$ _____

KNOW ALL MEN BY THESE PRESENTS THAT

As Principal, hereinafter called the Principal, and

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

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

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

WHEREAS, the Principal has submitted a written Tender to the Obligee, dated the _____ day of
_____, 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 74774
Lougheed Highway Improvements**

CERTIFICATE OF COMPLIANCE for CONTRACT INSURANCE

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

Contract Number: **74774**

Contract Name: **Lougheed Highway Improvements**

Description of Work:

- Asphalt Milling - Approx. 23,000 square metres
- Asphalt Paving – Approx. 4,500 tonnes
- Roadside barriers– Approx. 550 metres
- New streetlight installations

Other miscellaneous and incidental work as contained 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: **Lougheed Highway Improvements**

Reference No. **74774**

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 **September 15, 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)

Lougheed Highway Improvements

Reference No: 74774

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

Lougheed Highway Improvements

Reference No: 74774

Schedule 2

LIST OF DRAWINGS

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

Bound in this Document:

Appendix A: Traffic Management Detail Specifications

Appendix B: Additional Information

Bound Separately:

Full Size Contract Drawings

| TITLE | SHEET NO. | REVISION NO. | DATE |
|----------------------------------------------------------------------------------|-----------|--------------|------------|
| Lougheed Highway Improvements – Cover Sheet | | | |
| Lougheed Highway Improvements – General Notes | 1 of 7 | C | 2023/05/02 |
| Lougheed Highway Improvements – Roadworks - Typical Sections | 2 of 7 | C | 2023/05/02 |
| Lougheed Highway Improvements – Roadworks - STA 1+000 to 1+390 | 3 of 7 | C | 2023/05/02 |
| Lougheed Highway Improvements – Roadworks - STA 1+390 to 1+770 | 4 of 7 | C | 2023/05/02 |
| Lougheed Highway Improvements – Roadworks - STA 1+770 to 2+140 | 5 of 7 | C | 2023/05/02 |
| Lougheed Highway Improvements – Roadworks - STA 2+140 to 2+500 | 6 of 7 | C | 2023/05/02 |
| Lougheed Highway Improvements – Roadworks - STA 2+500 to Pitt River Road | 7 of 7 | C | 2023/05/02 |
| Lougheed Highway Improvements – Cover Sheet, Notes and Legends – Street Lighting | 1 of 11 | 3 | 2023.05.03 |
| Lougheed Highway Improvements – Site Plan - STA1+080 to 1+439 – Street Lighting | 2 of 11 | 3 | 2023.05.03 |
| Lougheed Highway Improvements – Site Plan - STA 1+439 to 1+824 – Street Lighting | 3 of 11 | 3 | 2023.05.03 |
| Lougheed Highway Improvements – Site Plan - STA 1+824 to 2+200 – Street Lighting | 4 of 11 | 3 | 2023.05.03 |
| Lougheed Highway Improvements – Site Plan - STA 2+200 to 2+569 – Street Lighting | 5 of 11 | 3 | 2023.05.03 |
| Lougheed Highway Improvements – Site Plan - STA 2+569 to 2+942 – Street Lighting | 6 of 11 | 3 | 2023.05.03 |
| Lougheed Highway Improvements – Cross Sections and Lighting Calculations | 7 of 11 | 3 | 2023.05.03 |
| Lougheed Highway Improvements - Cross Sections and Lighting Calculations | 8 of 11 | 3 | 2023.05.03 |
| Lougheed Highway Improvements – Elevations and Details – Street Lighting | 9 of 11 | 3 | 2023.05.03 |
| Lougheed Highway Improvements – Congestion Flasher and Flasher Signal Details | 10 of 11 | 3 | 2023.05.03 |
| Lougheed Highway Improvements – Congestion Flasher Cabinet – Typical Details | 11 of 11 | 3 | 2023.05.03 |

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

)
)
)
)
)

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

)
)
)
)
)

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: Liability Limit:
Policy Number: Expiry Date:
Effective 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's 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 #: **74774**
Contract Name: **Lougheed Highway Improvements** (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 #: 11-5330-20/74774/1 Doc #: 4832666.v1

Supplementary Specifications

to the
MASTER MUNICIPAL SPECIFICATIONS
Volume II – Platinum Book

Lougheed Highway Improvements
CONTRACT 74774

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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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1.00 CONTRACT SPECIFIC INSTRUCTIONS

1.01 Coordination of Work

The Contractor shall be responsible to consult with the Coast Mountain Bus Company (CMBC) regarding delays, detours, temporary bus stop closures and any other works affecting the transit service in the area.

Contractor shall be responsible to coordinate work with other contractors working on different project/s in the area. Contractor cannot be at the same work zone area as these other contractors. If Contractor decides to work within the same work zone, he shall assume the Prime Contractor Designation for all the work area involved.

Costs for any delay caused by coordination of Work will be incidental to the contract.

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, Railway Company, Telus, Trans Mountain Pipeline in the area of the place of Work where applicable.

1.03 Cooperation with Emergency and Maintenance Activities

The Contractor will be responsible to cooperate with regular maintenance or emergency vehicles and staff for access to the site when required including:

- 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

1. Contractor is responsible to accommodate all waste collection vehicles and cart pick up schedules throughout construction.
2. If waste collection will be impacted the contractor is responsible to:
 - a. Provide advanced notification to:
 - 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:
 - 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.**
 - d. Change collection time (e.g. PM to AM):
 - i. The Contractor must provide residents with as much notice as possible – minimum 5 working days.
 - ii. The contractor is responsible to deal with any missed collections. For example, taking garbage to the United Boulevard Recycling and Waste Centre or covering the cost associated for any missed collection to be rescheduled.

Questions: wastereduction@coquitlam.ca

1.05 Lane Closure Restrictions

Refer to: Appendix A: Traffic Management Detail Specifications.

A 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.

The Contractor must take the above information into account in the preparation and submission of the Tender.

Costs to complete the works taking the above restrictions into consideration shall be included in the prices bid in the Schedule of Quantities and Prices.

1.06 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 continuous effort and site presence to complete all the work within the allotted time. As set out in the MMCD the Contractor must provide updates to the construction schedule monthly, preferably biweekly.

1.07 Site Safety

The Contractor is responsible to ensure the construction site is safe at all times for workers, pedestrians, and vehicle traffic. During non-working hours, the Contractor must ensure that the site has all potentially hazardous areas appropriately identified and protected, and also must provide appropriate signage, lighting, and markings for the direction of vehicle and pedestrian traffic, all to ensure the safety of the public. Supply and use of this equipment is considered incidental to the contract.

Manhole lids, valve boxes and other appurtenances within the roadway that may present a traffic hazard during construction must be clearly marked for traffic.

Manhole lids left raised in preparation for paving must have a rubberized protector ring painted with bright color for traffic safety. Supply and use of this equipment is considered incidental to the contract.

1.08 Survey Layout

Construction layout will be the responsibility of the Contractor. The Contract Administrator will provide AUTOCAD Drawings to the Contractor.

1.09 Location of Existing Utilities

The contractor is responsible to verify the depth and location of all utilities (watermains, storm mains, sanitary mains, electrical & etc.), including outside agency utilities (i.e. Fortis BC Gas Mains & etc.) and service connections (water, storm & sanitary services at the mains & property lines) by hand digging or by Hydro-Vac in the presence of the Inspector.

Pre-locates must be completed as soon as possible after award of the contract so changes can be completed by the Engineer prior to site construction. Contact Metro Vancouver for location of their utilities and BC One for location of other outside agency utilities. The contractor will not receive any compensation or allowance for delays if work is halted due to utilities & services connections not located prior to commencing construction.

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.

Payment for this work will be treated as incidental to payment for work described in other Sections.

1.10 Manholes & Valves

Access to manholes and valves must be maintained at all time for city utilities crews and external utility companies. In case of an emergency the cost for exposing any buried manhole or valve covers during construction will be paid by the contractor.

**1.11 Utility Adjustments -
City Infrastructure and/or**

The Contractor is responsible for adjusting all utilities, belonging to Coquitlam and/or other agencies that are affected by the works. All adjustments to utilities must be

CONTRACT SPECIFIC NOTATIONS

**Other Agency
Infrastructure**

completed to the satisfaction of the utility owner. Utility adjustment will be considered incidental to the contract unless otherwise noted in the Contract Documents.

The Contractor should note that certain utility owners may decide to complete their own adjustments. The Contractor will be required to cooperate with any utility company providing their own adjustments.

The Contractor shall be responsible to contact the appropriate utility company with in minimum of seventy-two (72) hours of the work. No adjustment shall be made without the written approval of the utility company.

All manholes must be vertically adjusted a minimum of twenty-four (24) hours prior to paving

**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 Approved Materials

Refer to City of Coquitlam website (Coquitlam.ca/specifications) for the *List of Approved Materials and Products* which are to be incorporated into the work.

2.00 CONSTRUCTION ACTIVITY

**2.01 Construction Materials in
Sewer Manholes and Pipe**

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

**2.02 Site Clean-up During
Construction and End of
Construction**

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

The work will include cleaning of all catch basins periodically or as directed by the Contract Administrator within the Work area, or nearby location as affected by the Work. 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.

**2.03 Asphalt Milling
Operations**

Asphalt milling activities shall be done in such manner so as to cause the least disruption and inconvenience to traffic and area residents. The Contractor will be required to provide a plan and schedule for milling sections and the subsequent paving activities and have that approved by the Contract Administrator. This schedule is to be updated as required and take into consideration weather conditions and weather forecasts to ensure work subsequent to milling can be completed in appropriate weather.

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

Appropriate signs must be installed and as directed by the Contract Administrator to warn motorists and public of the current conditions of the road.

CONTRACT SPECIFIC NOTATIONS

**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, COVID19 Prevention Policy and portion showing latest revision date.

**3.02 Contract Schedule,
Contract Duration, and
Charges**

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.

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.

**3.03 Pre-Paving
Site Meeting**

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.

The Contractor must provide information to the Contract Administrator, for review, regarding proposed paving elevation control method, mat thickness control method, and rolling patterns. The Contractor Administrator must be in attendance at this meeting.

It will be the responsibility of the Contractor's Contract Superintendent to ensure continuity between the base preparation and the paving process.

**3.04 Contract Superintendent
and Subcontractors**

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.

This (FULL TIME) attendance is also required when work is being performed by Subcontractors.

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. The Owner is not responsible for the direction of Subcontractors.

**3.05 Changes of Contractor
Representatives &
Subcontractors**

The Superintendent and Subcontractors indicated in the Form of Tender shall not be changed unless:

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.

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 Drawings, new elevation, inverts & location of all walkways/sidewalks, all utilities, manhole rim, catchbasin rim, vaults and valve boxes affected by the work. The Contract Administrator will not authorize the release of holdbacks until record documents have been submitted and accepted.

END OF SECTION

- 1.0 QUALITY**
- The Contractor shall provide a final product conforming to the Contract Documents and the intent of the work.
- The work is to be accurate to the dimensional and tolerance requirements of the contract.
- Payment will be subject to adjustments based on quality assurance tests performed by the Contract Administrator.
- 1.1 Quality Control (QC) by Contractor**
- The MMCD (2009) definition of “Quality Control” is the process by which the Contractor checks specific materials, products, and workmanship to ensure strict conformance with the Contract Documents.**
- The Contractor is fully responsible for quality control of the materials, production, and construction processes.
- Quality control tests shall be performed by the Contractor, at their own expense, to ensure that products meet the contract specifications.
- Failure by the Contractor to conduct adequate quality control testing during production and construction will negate the Contractor’s ability to appeal the quality assurance tests used for acceptance/rejection of the work.
- Under no circumstances will QC test results produced after completion of the Quality Assurance (QA) results be considered for appeal purposes
- Any changes in the Work with respect to the location, grade, or line shall be approved in advance by the Contract Administrator. Failure to notify the Contract Administrator of changes in writing may result in rejection of Work.
- 1.2 Inspection of Work, Quality Assurance, and Material Testing, by the Owner**
- The MMCD (2009) definition of “Quality Assurance” means the process by which the Owner evaluates if the work is being constructed in accordance with the Contract Documents. This definition will be used for this contract**
- The *Contract Administrator* will provide construction review through spot inspections and spot materials testing for Quality Assurance.
- Any materials testing results indicating a non-conformance to the Contract Documents will require construction corrective action by the Contractor.**
- All subsequent testing to corrective action to verify conformance to the Contract Documents will be the full responsibility of the Contractor.**
- Inspection review by the Owner will not relieve the Contractor from providing a product that meets or exceeds the requirements of the Contract Documents.
- 1.3 Inspection**
- Materials testing shall be as described in MMCD General Conditions, Section 4.12 with the following change:
- Delete Section 4.12.2(a) and insert the following:
- Where the MMCD specification clauses for Inspection and Testing indicate the Contract Administrator will arrange for all testing for work described in this section will be amended to read The Contractor will arrange for and pay for all testing for work described in this section. The testing shall take place at the following prescribed rates and as directed by the contract administrator. The contract administrator has the authority to call for testing, up to the rates and frequencies specified, at the Contractors cost.

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

1.4 Survey Layout

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.

1.5 Testing

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

The Contractor shall provide test results prior to the preparation of the payment certificate.

**1.6 Contractors
Responsibilities**

Furnish labour and facilities to:

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

1.7 Access to Work

Allow inspection testing agencies access to Work.

1.8 Tests

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

1. Trench Backfilling and Compaction

1.1 Compaction: 1 test / 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 / 200mm 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: test per 250 TONNES placed, per mix specified, min. 1 / day
ASTM D1559, D3203, C117, C136

5.2 Superpave: test per 250 TONNES placed, per mix specified, min. 1 / day
CAI-SP2, ASTM D3203, C117, C136

5.3 Cores: 1 per 500 m²/lift

5.4 Continuous asphalt density testing during paving.

6. Subgrade Preparation

6.1 Compaction & Moisture: 1 test / 500 m²

7. Concrete Tests

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

**1.9 Measurement for
Payment**

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

END OF SECTION

| | | | | |
|-----|-------------------------|--------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| 1.0 | GENERAL | Add 1.0.6 | The <i>Contractor</i> is responsible for all temporary traffic control on the streets required for completion of the work. The <i>Contractor</i> will be responsible to provide a Traffic Management Plan (TMP) for approval (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. | |
| | | 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 1.4.1 and replace with the following | The Contractor shall conduct their operation so as to cause minimum obstruction and inconvenience to traffic, places of businesses and residences adjacent to the Place of Work. No greater quantity of work shall be undertaken at any one time that cannot 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, they 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 <i>Contractor</i> , as required by the <i>Contract Administrator</i> and the City, is to supply Construction Zone information signs (stationary), refer to MMCD 01 58 01 for the required identification signage. | |
| | | | The <i>Contractor</i> 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. | |

END OF SECTION

1.0 GENERAL

1.0.3 Erosion and Sediment Control Supervisor

Add 1.0.3

The Erosion and Sediment Control (ESC) Supervisor is the Qualified Professional who is experienced in implementing ESC Plans and who is responsible for the inspection and monitoring of ESC Facilities to ensure these are installed and maintained in accordance with the ESC Plan, and if necessary, are modified during construction to ensure compliance with the Stream and Drainage System Protection Bylaw No. 4403, 2013.

1.2 Temporary Erosion and Sediment Controls

Delete 1.2.1 and replace with the following

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 *Contractor* 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.

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.

Sweep streets, and clean catch basins, manhole sumps, detention tanks, and maintain siltation controls as often as the *Contract Administrator* and the City deems necessary.

Follow all Federal and Provincial regulations and guidelines respecting protection of fish, fish habitat, and watercourses.

Follow all Federal and Provincial regulations and guidelines respecting protection of fish, fish habitat, and watercourses.

Delete 1.2.2.2 and replace with the following

Do not operate construction equipment in watercourses.

1.4 Environmental Protection

Add 1.4.3.5

Immediately contain and clean up any leaks and spills of prohibited materials at the *Place of Work*.

Add 1.4.3.6

Ensure that a well-stocked spill kit is on-site at all times and that the *Contractor's* employees are familiar with appropriate spill response techniques.

Add 1.4.3.7

Immediately notify the *Contract Administrator* and the City of any leaks or spills of prohibited materials that occur at the *Place of Work*.

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.

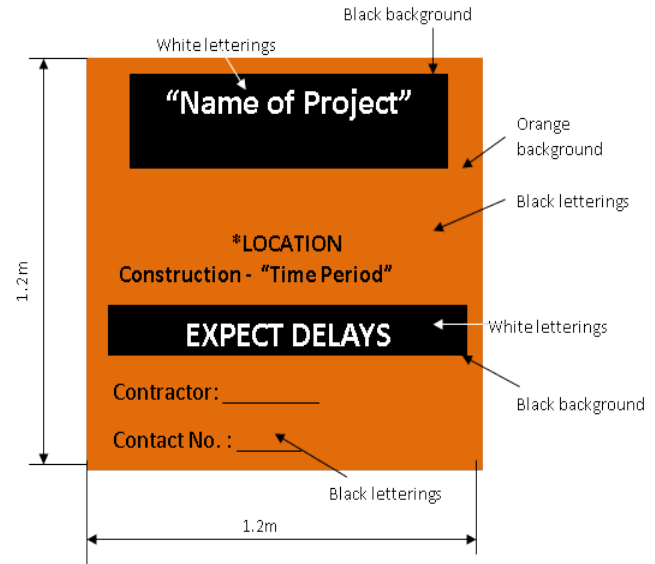
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|-----|----------------------------------------------|---------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | Add 1.4.3.9 | Ensure that no equipment fueling or servicing is conducted within 15 metres of a stream. |
| 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. |
| 1.9 | Archaeological / Historical Resources | Add 1.9 | 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. |

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 notification signs (shown below) includes all posts, supply, placement & removal, and all labour, material and equipment required to complete the work. Unless identified in the Schedule of Quantities, payment will be incidental to work described in other sections.



Refer to Appendix A – Traffic Management Detail Specifications for details.

Add 1.3.2

Payment for changeable message signs (CMS) includes supply, placement, communication management, relocation & removal as required for traffic & pedestrian safety, and as described in Appendix A – Traffic Management Detail Specifications.

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

| | | | |
|-----|-------------------------|-----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.4 | Measurement and Payment | Delete 1.4.3 and replace with the following | Payment for machine placed or hand formed C6 extruded concrete curb, includes granular base, 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. C6 extruded concrete curb shall be keyed in to existing asphalt. |
| 2.1 | Materials | Delete 2.1.5.1 and replace with the following | Hand-formed and hand-placed concrete: Slump: 80 mm Air entrainment: 5 to 8%. Maximum aggregate size: 20 mm. Minimum cement content: 335 kg/m ³ . Minimum 28-day compressive strength: 32 MPa. |
| 3.0 | EXECUTION | | |
| 3.5 | Concrete Placement | Delete 3.5.9 and replace with the following | The <i>Contractor</i> is responsible for adjusting all utility manhole frames and valve boxes, belonging to Coquitlam and/or other agencies that are affected by the road works. All adjustments to utilities must be completed to the satisfaction of the utility owner. Riser rings will not be accepted. The <i>Contractor</i> should note that certain utility owners may decide to complete their own adjustments. The <i>Contractor</i> will be required to cooperate with any utility company providing their own adjustments. The <i>Contractor</i> shall be responsible to contact the appropriate utility company within a minimum of seventy-two (72) hours of the work. No adjustment shall be made without the written approval of the utility company. <u>All manholes must be vertically adjusted a minimum of twenty-four (24) hours prior to concrete placement.</u> |
| 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

**1.4 Measurement and
Payment**

Add to 1.4.4

Payment includes incorporating the drainage slots as specified in the contract drawings where required and Appendix B (810mm-CPB-E-A).

Add 1.4.6

Payment includes supply and installation of diamond grade reflective concrete barrier flexibe marker and all labor, material and equipment necessary to complete the work and as specified and shown on the Contract Drawings or as directed by the Contract Administrator.

END OF SECTION

1.0 GENERAL

- | | | |
|--------------------------------------|---------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.3 Shop Drawings | Delete 1.3.4 and replace with the following | Shop drawings for pole structures, where required, to be sealed by a Professional Engineer registered in British Columbia. |
| 1.4 Electrical Energy Supply | Add 1.4.4 | The Electrical <i>Contractor</i> shall process a letter of application to the City of Coquitlam for the Utility Company and attain all required permits. |
| 1.5 Contractor Qualifications | Add 1.5.3 | All on-site traffic signal installations shall be under the responsibility of a primary journeyman electrician with IMSA Level 1 Roadway Lighting Certification and have a minimum of three (3) years experience maintaining and installing street lighting systems. This primary journeyman electrician is expected to be on the work site and report work progress to City of Coquitlam's Traffic Operations staff, in addition to reporting to the <i>Contract Administrator</i> . |
| 1.6 Permits and Tests | Add 1.6.4 | <i>Contractor</i> shall provide the BC Safety Electrical Permit, and arrange all inspections with the City. The inspection entails, but not limited to, Coquitlam's Street Lighting Inspection Report, which can be obtained from Coquitlam's Traffic Operations staff. |
| | Add 1.6.5 | <i>Contractor</i> to obtain approval of all buried portions of the installation from the City Inspector before any backfill is commenced. |
| 1.8 Record Drawings | Add 1.8.2 | Final payment(s) will be withheld until record drawings are received. |

2.0 PRODUCTS

- | | | |
|-------------------------------|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2.1 General | Delete 2.1.2 and replace with the following | All products supplied to be new, in accordance with <i>Contract Documents</i> . All products are to meet Canadian Electrical Code requirements and be certified by either CSA, UL®, or Intertek Testing Systems (Warnock Hersey) and be supplied with the certifier's label. |
| | Delete 2.1.3 and replace with the following | All products shall be in accordance with the City of Coquitlam's List of Approved Materials and Products List. Any products not listed with in the Approved List shall default to the current BCMOTI specification. |
| | Delete 2.1.5 and replace with the following | Equipment models listed within the City of Coquitlam's List of Approved Materials and Products shall be confirmed with the City immediately prior to their order to ensure that they are current. Cut-sheets, equipment make, model and serial number list to be provided to the City by the <i>Contractor</i> . |
| 2.2 Conduit | Add 2.2.1.3 | All exposed metallic surfaces to be hot dip galvanized. |
| 2.3 Trench marker Tape | Add 2.3.2 | Detectable (Magnetic) marker tape shall be used in all trenches containing interconnection (communications) conduit. |
| 2.6 Concrete Bases | Add 2.6.2 | Maximum of four (4) conduits shall enter the base of a luminaire pole, however more than four (4) may enter a service base. |

| | | | |
|-------------|----------------------------------|-----------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2.8 | Conductors and Cables | Add 2.8.5 | .1 Minimum conductor size to be as follows, unless specified otherwise on <i>Contract Drawing</i> : .1 No 6 AWG for feeder conductors in conduit. .2 No 8 AWG for bond conductors in conduit. .3 No 12 AWG for luminaire conductors in poles. |
| 2.9 | Conductor Tags | Delete 2.9 and replace with the following | Refer to the City of Coquitlam's List of Approved Materials and Products. |
| 2.11 | Fuses and Fuse Holders | Delete 2.11 and replace with the following | Refer to the City of Coquitlam's List of Approved Materials and Products. |
| 2.13 | Receptacles | Add 2.13.3 Add 2.13.4 | Receptacles shall have a spring loaded cast aluminum covers. Refer to the City of Coquitlam's List of Approved Materials and Products. |
| 2.14 | Luminaires | Add 2.14.6 | Refer to the City of Coquitlam's List of Approved Materials and Products. |
| 2.19 | Service Panels | Add 2.19.1 Add 2.19.2 | Type 40A 120/240V, 60A 120/240V roadway lighting and 100A 120/240V combination roadway lighting / traffic signal, per <i>Contract Drawing</i> to include items listed within the 2009 MMCD Section 34 41 13 - Traffic Signals - 2.11.2 Refer to the City of Coquitlam's List of Approved Materials and Products. |
| 2.20 | Wire Anti-Theft Devices | Add 2.20.1 | Handhole access shall utilize security covers with reinforced backing bars. |
| 3.0 | EXECUTION | | |
| 3.1 | General | Add 3.1.5 | During the installation of the lighting system, maintain the existing system as noted on the <i>Contract Drawing</i> . If temporary or permanent relocations of related lighting equipment are required, such equipment shall be reinstated as required under the <i>Contract Documents</i> or as directed by the <i>Contract Administrator</i> . |
| 3.3 | Concrete Bases | Add 3.3.7 Add 3.3.8 | Concrete service bases detailed on Standard Detail Drawings CE1.3 and CE1.4, Type C1 and C3 service bases shall have five (5) conduits. See Coquitlam Standard Detail Drawing SS-E7.3. All concrete bases shall be pre-cast concrete only, unless noted on <i>Contract Drawing</i> or directed by the <i>Contract Administrator</i> . |
| 3.4 | Junction Boxes and Vaults | Delete 3.4.1 and replace with the following Add 3.4.5 Add 3.4.6 | Install junction boxes as shown on Standard Detail Drawings E2.2 to E2.4. Install vaults as shown on Coquitlam Standard Detail Drawing SS-E2.5. Bell end fittings shall be installed in all conduits entering junction boxes or vaults. All junction boxes shall be provided with RPVC bars to support electrical connections and fuse holders. The RPVC bars shall be attached into the junction box side walls with the electrical |

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| | | | connections/fuse holders tie-wrapped in place and installed in the up-right position. |
| | | Add 3.4.7 | Junction boxes requiring 3 or more sections must be approved by the City of Coquitlam's Traffic Operations staff. |
| 3.5 | Underground Conduit | Delete 3.5.2 and replace with the following | Minimum cover over conduits to be 600 mm in boulevard areas and 900 mm in roadway areas. |
| | | Delete 3.5.3 and replace with the following | Place trench marker tape 300 mm above installed conduit in trench. Trench marker tape not required for conduits installed via trenchless technology. |
| | | Delete 3.5.5 and replace with the following | Empty conduits shall have a No. 8 HB Yellow/Green Mk pull string and capped at both ends. |
| | | Add 3.5.6 | Conduit run shall contain no more than the equivalent of 4 – 90-degree bends. |
| | | Add 3.5.7 | Conduits shall be blown out with compressed air, from both ends if necessary, then swabbed out to remove stones, dirt, water and other material which may have entered during installation. |
| | | Add 3.5.8 | All conduits entering poles and cabinets shall be sealed with "Duct Seal". |
| | | Add 3.5.9 | Conduit depth of bury to be recorded when a trenchless technology method is used. |
| | | Add 3.5.10 | Conduit shall not be bent in the field. Only factory bends will be accepted. |
| 3.7 | Electrical | Delete 3.7.2 and replace with the following | Mount electrical service panels in service base or on poles as shown on Standard Detail Drawings E7.2, E7.6 to E7.9, as well as Coquitlam Standard Detail Drawings SS-E7.3 to SS-E7.5. |
| 3.8 | Wiring | Delete 3.8.3 and replace with the following | Make conductor splices in handholes. See Standard Detail Drawing E7.11 for splice details. |
| | | Delete 3.8.6 and replace with the following | Wire each luminaire and receptacle separately from the base of pole. |
| | | Delete 3.8.7 and replace with the following | Neatly arrange and bundle wiring in junction boxes, pole handholes and service panels. Conductor connections in all access points to be installed in the up-right position, allowing for easy access |
| | | Delete 3.8.11 and replace with the following | Bond all luminaires and receptacles with No. 12 RW90 green conductor, and steel junction box lids with No. 8 RW90 green conductor. |
| 3.9 | Pole Mounted Receptacle | Delete 3.9.1 and replace with the following | Pole mounted receptacles to be installed as detailed on the <i>Contract Drawing</i> and Coquitlam Standard Detail Drawings SS-E7.19 to SS-E7.23. |
| 3.10 | Luminaires and Photocells | Add 3.10.4 | NEMA wattage label shall be visible at the bottom of the luminaire on all fixtures. |
| 3.11 | Grounding & Bonding | Add 3.11.5 | Ground plates and grounding conductors are to have a minimum of 5 meters clearance between them and other utility grounding. |

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| | | Add 3.11.6 | Remove all paint around bonding studs on inside of pole to expose the galvanized or metal surface prior to bonding equipment. |
| 3.13 | Pole Finish Application | Delete 3.13 and replace with the following | <p>.1 Prior to producing a powder finish product the supplier must provide a Certificate of Compliance indicating that they have met or exceeded the following specifications. The supplier will name their independent testing agency and this information will be submitted to the City for their files.</p> <p>.2 The application process will be as follows:</p> <p>.1 The pole or product will be hot dip galvanized.</p> <p>.2 Powder will only be applied after the product is completely fabricated. No welding or bending will take place after the powder is applied.</p> <p>.3 The pole or product will be thoroughly cleaned by brush blasting in accordance with SSPC-SP7. The brush blast will maintain a minimum profile of 0.5 mils. If brush blasting is done off site then the product will be covered and shielded from any dirt or moisture during its return to the powder applicators facility. Where poles or products are not kept clean and dry or have any signs of flash rust they will be returned for further brush blasting.</p> <p>.4 Once at the applicators facility the pole or product will be thoroughly cleaned and dried with an air gun. All hand marks or grease spots will be cleaned with a mild solvent.</p> <p>.5 After brush blasting the entire pole or product will be pre-baked in an oven at 220 degrees C for at least 30 minutes to 1 hour, depending on steel thickness. The pre-baking must be done to prevent out-gassing during the curing cycle.</p> <p>.6 The base powder coat will then be applied electrostatically while the pole or product is cooling from the 220 degrees C pre-bake period to allow the powder to melt and fuse to the surface. The base coat will be a minimum of 3 mils in thickness.</p> <p>.7 After base coat is applied and set the topcoat will be applied to a thickness of 3 to 5 mils. The pole or product will be returned to the oven and heated to 190 to 220 degrees C (temperature will not exceed pre-bake) for a minimum of 25 minutes, depending on steel thickness. Thicker product material may require longer bake cycles to fully cure. Upon removal of the pole or product from the oven it will be left to rest until the pole or product is cool enough to the touch.</p> <p>.8 Once the topcoat has cured and the poles or product cooled, they will then be individually wrapped (min 4" overlapping method) with 1/8" foam wrap over the entire pole or product. The poles or product will be bundled together and separated with suitable wood dunnage to avoid contact between the poles, product or other bundles. All bundles themselves will be fully wrapped with foam and with stretch-wrap as noted above. The poles or products will be handled and shipped with great care to prevent damage; damaged product will be cause for rejection of the item(s).</p> <p>.3 Testing process will be as follows:</p> |

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

END OF SECTION

2.0 PRODUCTS

2.3 Pit Run Gravel

Add to 2.3.2

The use of recycled concrete shall be approved by the *Contract Administrator* and the City prior to use.

Add 2.3.3

Asphalt millings free from contaminated and other extraneous material, conforming to the specified gradations may be used as pit run gravel. The use of asphalt millings shall be approved by the *Contract Administrator* and the City prior to use.

2.7 Granular Pipe Bedding and Surround Material

Add to 2.7.1

All recycled or other extraneous materials shall be approved by *Contract Administrator* and the City prior to use.

2.10 Granular Base

Delete 2.10.2

Add 2.10.3

All 25 mm minus granular base is to conform to the following gradation specifications:

| Sieve Designation (mm) | Percent Passing (%) |
|------------------------|---------------------|
| 25 | 100 |
| 19 | 80-100 |
| 12.5 | 75-90 |
| 9.5 | 50-85 |
| 4.75 | 35-70 |
| 2.36 | 25-50 |
| 1.18 | 15-35 |
| 0.30 | 5-20 |
| 0.075 | 0-5 |

Add 2.10.4

The intention of the Gradation Chart is to identify the desired mix of size of aggregate in the granular base. The Target Percentage Passing is the middle of the shown Range.

Tests that show sieve values of Percent Passing that are consistently low or consistently high in two (2) or more consecutive tests will be considered to be non-conforming.

2.11 Recycled Aggregate Material

Delete 2.11.1 and replace with the following

Aggregates containing recycled material may be utilized if approved by the *Contract Administrator* and the City. In addition to meeting all other conditions of the specifications, recycled material should not reduce the quality of the construction achievable with quarried materials. Recycled material shall consist only of aggregates, crushed portland cement concrete, or asphalt that is free of impurities.

END OF SECTION

CLEARING AND GRUBBING

**1.4 Measurement and
 Payment**

Delete 1.4.1 and
replace with the
following

Payment for all roadside vegetation clearing includes removal and disposal of all branches and other vegetation required to complete the work outlined in the Contract Documents. Payment will be made as a lump sum amount.

1.0 GENERAL

1.8 Limitations of Open Trench

1.8.1
Replace last sentence
with the following

If circumstances do not permit complete backfilling of all trenches, and where permitted by the *Contract Administrator* and the City, adequately protect all open trenches or excavations with approved fencing or barricades, road plates and, where required, with flashing lights.

2.0 PRODUCTS

2.2 Use of Specified Materials

Delete 2.2.1.2

Delete Pit Run Sand

Delete 2.2.3.3

Delete Pit Run Sand

3.0 EXECUTION

3.3 Excavation

Delete 3.3.1.2 and
replace with the
following

Connections to existing waterworks systems are to be made by the *Contractor* under the inspection / supervision of the *Contract Administrator* and the City.

3.6 Surface Restoration

Delete 3.6.2.4 and
replace with the
following

Restore lawns with approved topsoil and sod to match existing lawn.

Delete 3.6.3.1 and
replace with the
following

Restore surface with a minimum 100 mm of 19 mm granular road base material.

Delete 3.6.7.5 and
replace with the
following

Restore Pavement as detailed on Coquitlam Standard Detail Drawing COQ-G4. Temporary patch shall be a minimum thickness of 50 mm thickness. Permanent restoration to existing asphalt thickness (minimum of 75 mm) with a 35 mm key where existing thickness permits. A 50 mm key is required on Arterial and Collector Roadways. Dry if necessary and paint clean, dry edge with asphalt emulsion (tack coat).

END OF SECTION

1.8 Measurement and Payment

Delete 1.8.4 and replace with the following

Payment under this item will only apply to removal of the components included in this item under a separate operation as shown on the Contract Drawings or as directed by the Contractor Administrator. No payment will be made under this item for removal of these components as part of the operation for common excavation, and such removal will be treated as common excavation.

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

Delete 1.8.5 and replace with the following

Payment for Common Excavation includes:

1. Unless noted in the Schedule of Quantities and Prices as removal in square meters, common excavation will be measured in cubic metres calculated from measurements taken by the Contract Administrator in the areas of excavation (stripping inclusive).
2. Cross-sections will be taken after clearing and grubbing and stripping of existing topsoil immediately prior to excavation of material to be incorporated into work.
3. Cross-section will be taken after excavation to design elevation and prior to placement of fill.
4. Where determined by the Contract Administrator that truck box volume will be used to determine excavation quantities, the table below will be used.

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

5. Contractor to provide truck slips detailing location type of common excavation, time loaded and location of dump site. The slips are to be given to Contract Administrator by the end of shift or Contract Administrator can deny quantities subsequently submitted.
6. Payment for on-site reuse includes grading, adjustment of moisture content and compaction of the reused material

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

Delete 1.8.10 and replace with the following

Payment for replacement of areas of unsuitable granular base, granular subbase or sub-grade revealed during proof rolling will include excavation with off-site disposal, and all remedial work

required to achieve a suitable base. Payment will be based on the cubic metre volume removed. Payment for this item includes all applicable materials and work described in 1.8.5.

Payment for granular subbase will be made under payment items in Section 32 11 16.1, Granular Subbase.

Payment for granular base will be made under payment items in Section 32 11 23S, Granular Base.

2.0 PRODUCTS

- 2.2 Specified Materials**
- | | |
|----------------|--------------|
| Delete 2.2.1.3 | Pit Run Sand |
| Delete 2.2.1.4 | River Sand |
| Delete 2.2.2 | |

END OF SECTION

COLD MILLING

1.5 **Measurement and
Payment** Add 1.5.4

Payment for this item will be made for the depth specified in the Schedule of Quantities in the Form of Tender is for the removal of existing asphalt, granular & native materials within the roadway to the depth specified, as detailed in the Contract Documents, regardless of removal method, as conditions of the existing asphalt pavement may or may not be suitable for removal by cold milling operations. If asphalt removal is done by excavation methods, there will be no common excavation quantity associated with the removal of granular to the removal depths indicated below design elevations.

Payment will be made for each square metre of asphalt removed, to the depths indicated in the Form of Tender, and includes the off-site disposal of all milled material. Payment includes mobilization, demobilization, demonstration milling test section, the cost of transport & disposal off-site, saw cutting, street sweeping or cleaning to allow for the placement of required thickness of asphaltic concrete. Saw cutting and milled key at project limits will be incidental under payment item 32 12 16S – Hot Mix Asphaltic Concrete Paving.

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

No additional payment will be made for multiple passes or remobilization, as required, to mill to the depth(s) specified in the Schedule of Quantities in the Form of Tender.

Removal of asphalt curb, all heights, will be treated as incidental work.

END OF SECTION

GRANULAR BASE

| | | | |
|------------|--------------------------------|---------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.4 | Measurement and Payment | Delete 1.4.1 and replace with the following | Measurement for granular base of variable thickness will be for actual quantity placed based on weigh tickets provided to Contract Administrator as loads are delivered. |
| | | Delete 1.4.2 and replace with the following | Measurement for granular base for each specified thickness will be for the actual area placed. |
| | | Delete 1.4.4 and replace with the following | Payment for removal of unsuitable subgrade including disposal off-site prior to direct placement of granular base will be made under Section 31 24 13S – 1.8.10. |
| 2.0 | PRODUCTS | | |
| 2.1 | Granular Base | Add 2.1.1.3 | 25 mm minus crushed gravel conforming to the gradation specifications under Section 31 05 17S – 2.10.3. |
| 3.0 | EXECUTION | | |
| 3.5 | Proof Rolling | Delete 3.5.1 and replace with the following | For proof rolling, use fully loaded single axle, to 80 KN (18, 000 lb) minimum, dump truck. |
| | | Add 3.5.7 | <p>Prior to paving with asphalt concrete, the base surface shall be checked by the <i>Contract Administrator</i> and the City, for deflections utilizing a Benkelman Beam, in order to insure that the final rebound requirements can be obtained with the asphalt pavement. In the event that such deflection is in excess of those required to produce the final standards, then the base shall be adequately strengthened by additional gravel or asphalt concrete to insure that final deflections as follows are not exceeded.</p> <p>The Benkelman spring rebound value of the completed pavement surface shall not at any point exceed 0.75 mm for arterial industrial roads and lanes, 1.15 mm for collector roads, and 1.5 mm for local roads and lanes as determined in the procedures outlined in the Transportation Association of Canada publication “Pavement Management Guide.”</p> |

END OF SECTION

ASPHALT TACK COAT

- | | | | |
|----------------------|--------------------------------|---------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.4 | Measurement and Payment | Delete 1.5.1 and replace with the following | Payment for asphalt tack coat will be incidental for all portions of existing pavement to be tack coated in preparation for placement of hot mix asphaltic concrete |
| | | Delete 1.5.2 and replace with the following | Pavement surface cleaning, as per section 32 01 11, and all other work incidental to the application of tack coat is deemed to be incidental to placement of hot mix asphaltic concrete. |
| 3.0 EXECUTION | | | |
| 3.2 | Application | Add to 3.2.3 | Asphalt tack coat to be applied using a truck mounted spray bar unless otherwise approved by the <i>Contract Administrator</i> and the City. Contractor shall demonstrate, to the <i>Contract Administrator</i> and the City, prior to application that all spray nozzles are operational and providing a consistent application. |

END OF SECTION

1.0 GENERAL

1.5 Measurement and Payment

Delete 1.5.1 and replace with the following

Payment for asphaltic concrete paving includes all construction joint preparation, asphaltic surface milling to tie into existing asphalt, saw cutting, surface cleaning, trackless tack coat, reshaping granular base, supply and placing of the asphaltic concrete, compaction and cleaning frames, covers and lids of castings affected and taped temporary pavement markings.

Measurement for asphaltic concrete paving for the specified design mixes will be made at the respective unit prices bid in the Schedule of Quantities and Prices and incorporated into Work will be asphalt concrete actually based on weigh tickets provided to the Contract Administrator as loads are delivered.

The contractor will not receive any additional compensation above the respective unit prices bid in the Schedule of Quantities and Prices for Hand Work, Special Equipment & Machinery to complete the Hot Mix Asphaltic Paving Work as shown on the Contract Drawings or as directed by the Contract Administrator.

For measurement and payment purposes, Contract Administrator may calculate payment on actual area paved to the thickness specified in in the Schedule of Quantities and Prices and as shown on the Contract Drawings.

Delete 1.5.3 and replace with the following

Payment for asphaltic concrete sidewalks, pathways, driveways, and infill strips paving includes all construction joint preparation, saw cutting, supply and placing of the asphaltic concrete, compaction and cleaning frames, covers and lids of castings affected.

Measurement for asphaltic concrete paving for the specified design mixes for will be made at the respective unit prices bid in the Schedule of Quantities and Prices and incorporated into Work will be asphalt concrete actually based on weigh tickets provided to the Contract Administrator as loads are delivered.

Payment for this item includes all applicable materials and work described in 1.5.1.

Add 1.5.9 as follows

Payment for centerline rumble strips include all labor, material and equipments.

The Contractor is responsible for the protection of the new placed asphalt and markings.

1.6 Inspection and Testing

Add 1.6.3

Test cores will be taken by the *Contract Administrator* in the areas of new paving and will include cores along construction joints to ensure compliance with the required design and compaction.

2.0 PRODUCTS

2.1 Materials

Add 2.1.2.1

Usage of recycled asphalt shingles will not be permitted.

Add 2.1.2.2

Usage of softening agents, rejuvenators, or recycling agents will not be permitted.

2.2 Mix Design

Delete 2.2.2 and replace with the following

Mix may contain up to a maximum of 15 % by mass of RAP for Upper Course Asphalt and 20 % by mass of RAP for Lower Course Asphalt without a special mix design. The *Contract Administrator* and the

| | | | |
|-----|-------------|------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | | City may approve higher proportion of RAP if <i>Contractor</i> demonstrates ability to produce mix meeting requirements of the specification. |
| | | Delete 2.2.3.2 Marshall Stability and replace with the following | Marshall Stability at 60°C for both lower and upper courses to be 10 KN min. |
| 3.0 | EXECUTION | | |
| 3.3 | Preparation | Delete 3.3.3 and replace with the following | <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. Utility adjustment within the paved surface will be considered incidental to the <i>Work</i> unless otherwise noted in the <i>Contract Documents</i>.</p> <p>The <i>Contractor</i> should note that certain utility owners may decide to complete their own adjustments. The <i>Contractor</i> will be required to cooperate with any utility company providing their own adjustments.</p> <p>The <i>Contractor</i> shall be responsible to contact the appropriate utility company with in minimum of seventy-two (72) hours of the work. No adjustment shall be made without the written approval of the utility company.</p> <p><u>All manholes must be vertically adjusted a minimum of twenty-four (24) hours prior to paving.</u> The use of riser rings for adjusting manhole frames and value boxes will not be permitted.</p> |
| 3.7 | Joints | Delete 3.7.5 and replace with the following | Construct butt joints at locations as shown on the <i>Contract Drawing</i> and as directed in the field by the <i>Contract Administrator</i> and the City. |

END OF SECTION

PAINTED PAVEMENT MARKINGS

1.0 GENERAL

1.2 Scope

Delete 1.2.1 and replace with the following

Pavement Markings: Miscellaneous taped temporary and permanent pavement paint markings including pedestrian crosswalk, merge and diverge markings, stop lines, solid and broken line road lane markings including edge lines of merge and diverge markings, bike symbols, etc. to be provided as shown on the *Contract Drawing*.

1.5 Measurement and Payment

Delete 1.5.2 and replace with the following

All permanent markings shall be marked with extruded thermoplastic road markings as specified under Section 32 17 23S, 2.1 Materials, unless shown otherwise in the Schedule of Quantities and Prices.

Delete 1.5.3 and replace with the following

The lump sum payment for permanent thermoplastic pavement markings covers supplying all materials and completing all the permanent thermoplastic pavement markings including the MMA (Methyl Methacrylate) necessary to provide markings as shown on the Contract Drawings and as described in the Schedule of Quantities and Prices. Shall include all eradication of existing lines as required.

NOTE: PAYMENT FOR PERMANENT THERMOPLASTIC PAVEMENT MARKINGS WILL NOT BE MADE UNTIL ALL TEMPORARY PAVEMENT MARKINGS AND REFLECTIVE DEVICES HAVE BEEN REMOVED.

Delete 1.5.4 and replace with the following

Payment for signage includes all sign poles, bases, sleeves, sign, relocations and sign installations (complete). The City will supply all sign tabs as required.

1. Installation of each new sign pole, cap, sleeve and trapezoidal base includes all costs to supply all materials, labour and equipment and incidentals necessary to the sign structure as shown on the Contract Drawings and as directed by the Contract Administrator.

2. Installation of each sign on a lamp standard pole or sign pole includes sign mount clamps and all costs to supply all materials, labour and equipment and incidentals necessary to install each sign as directed by the Contract Administrator.

Add 1.5.5

Payment includes all materials, labour and equipment, and incidentals necessary to remove and dispose offsite existing signs, sign pole, post, base, sleeve and all parts as shown on the Contract Drawings and as directed by the Contract Administrator.

2.0 PRODUCTS

2.1 Materials

Delete 2.1.1 and replace with the following

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

Delete 2.1.6 and replace with the following

Pavement Markings:

Delete 2.1.7 and replace with the following

Thermoplastic material

.1 Material composition shall be at the discretion of the manufacturer subject to the approval of the Contract

Administrator and the City. Each formulation shall be identified by a code number.

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

3.0 EXECUTION

3.3 Application

Add to 3.3.1.3

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

Delete 3.3.3.3 and replace with the following

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

END OF SECTION

1.0 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 and imported top soil that is free from any noxious weeds, fungal growth, mushroom, and any contaminants. 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 <i>Contract Administrator</i> and the City submit up to two (2) additional samples, at intervals outlined by the <i>Contract Administrator</i> and the City, of <i>Growing Medium</i> 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 <i>Contract Administrator</i> and the City for review. |
| | | .7 | The <i>Contractor</i> is responsible for soil analysis and requirements for amendments to supply <i>Growing Medium</i> as specified. Failure to satisfy these contractual requirements could result in the <i>Contractor</i> being required to remove unacceptable <i>Growing Medium</i> at their expense. |
| | | .8 | Notify the Contract Administrator at least forty-eight (48) hours prior to <i>Growing Medium</i> 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 <i>Growing Medium</i> in an excessively wet, extremely dry, frozen condition or in any manner in which structure may be adversely affected. <i>Growing Medium</i> whose structure has been damaged by handling under these conditions shall be rejected and shall be replaced by the <i>Contractor</i> 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 <i>Growing Medium</i> and amendments from windblown soil particles, weed seeds and from insects. Contamination of the <i>Growing Medium</i> and amendments may result in their rejection for use. |
| | | | .4 Store fertilizer and chemical amendments in the manufacturer's original containers. |
| | | | .5 All <i>Growing Medium</i> shall be delivered to site <u>premixed</u> from a recognized <i>Growing Medium</i> source ensuring consistency throughout the mix. |
| 2.0 | PRODUCTS | Delete 2.0 and replace with the following | |
| 2.1 | Materials | | .1 <i>Growing Medium</i> 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 <i>Growing Medium</i> 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 Different Applications

| Properties | Low Traffic Lawn Areas, Trees and Large Shrubs | High Traffic Lawn Areas | Planting Areas, Planters 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 mixture | Percentage of |
| 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 designed 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.
- .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.

- .8 Mixing of structural soil:
Blend as per following ratios:
 - .1 5 metric tones (MT) of aggregate
 - .2 1 cubic meter of growing media
 - .3 2 kg soil stabilizer
- .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.

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 *Owner*.

Delete 3.2.5 and replace with the following

Course cultivate entire area which is to receive *Growing Medium* 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 *Contract Administrator* 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

Growing Medium shall be imported and stockpiled on site in a location approved by the *Contract Administrator* and the City.

- .1 Carry out stock piling operation such that the *Growing Medium* structure is not compromised through compaction, vibration or other actions.
- .2 Stock piled *Growing Medium* shall be protected from rain, drying and contaminants.
- .3 *Growing Medium* 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 contaminates shall be grounds for rejection of *Growing Medium* and replacement at no cost to the *Owner*.

3.4 Placing Growing Medium

Delete 3.4.2 and replace with the following

Place *Growing Medium* 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 *Sub Grade* where planting is indicated free of any standing water.

| | | | |
|------|----------------------|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | Delete 3.4.5 and replace with the following | <p>Minimum depths after settlement and 80% compaction:</p> <ul style="list-style-type: none"> .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 | <p>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.</p> |
| 3.5 | Applying Fertilizers | Delete 3.5 and replace with the following | <ul style="list-style-type: none"> .1 Addition of amendment components shall be at the rates indicated in the <i>Growing Medium</i> analysis recommendations via the following methods: <ul style="list-style-type: none"> .1 Lime: Applied with mechanical spreaders over entire planting areas and contained planters. <ul style="list-style-type: none"> .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 | <p>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.</p> |
| | | Add 3.6.3 | <p><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.</p> |
| 3.9 | Clean-up | Delete 3.9 and add the following | <ul style="list-style-type: none"> .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 | <ul style="list-style-type: none"> .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 | <ul style="list-style-type: none"> .1 Refer to 2.9 in this specification and as shown on the Contract Drawings. |

END OF SECTION

PIPE CULVERTS

- 1.5 **Measurement and** Delete 1.5.2 and
 Payment replace with the
 following

Payment for pipe culvert includes saw cutting pavement where necessary, excavation, disposal of surplus excavated material, supply of all pipe, fittings, couplers and related materials, cleaning, all surface restoration, tie-ins and all other work and material necessary to complete the installation as shown on the Contract Documents and specified under this Section.

Pipe bedding shall be 19 mm clear crushed rock or as approved by the *Contract Administrator* and the City.

Payment for 19mm clear crushed and road mulch, for bedding and import backfill, will be incidental.

Measurement for pipe culverts will be made horizontally from end to end of the culvert after the work has been completed.

END OF SECTION

1.0 GENERAL

1.1 Related Work

Add 1.1.6

Hot Mix Asphalt Concrete
Pavement Section 32 12 16

Add 1.1.7

Portland Cement Concrete
Paving Section 32 13 13

**1.5 Measurement and
Payment**

Delete 1.5.2 and
replace with the
following

Catchbasin and lawn basin Installation will be defined as supplying and installing a new catch basin or lawn basin for each type specified and setting to the finished grade. Payment includes excavation, disposal of surplus excavated material, supply of all units, cast-in-place concrete, 19mm clear crushed, backfill, pipes, fittings and related materials together with all labour, materials and equipment required. Catch basin and lawn basin lead work is considered incidental to payment for catch basin and lawn basin installation.

Delete 1.5.3 and
replace with the
following

Adjustment & Replacements of tops of existing units will be measured in units adjusted as defined below and paid for under their respective Items in the Schedule of Quantities.

No payment will be made under these items for cleaning Valve Boxes, Monument Boxes, Frames, Covers and Lids of Castings as part of the operation for asphaltic concrete paving.

No Payment will be made for Monument Boxes, Lawn Drains, Cleanouts and Inspection Chambers, these adjustments will be treated as incidental work.

All manholes & valve boxes must be vertically adjusted a minimum of twenty-four (24) hours prior to paving.

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

.1 Manhole frames and lids replacement & adjustment will be defined as supplying and installing a new manhole frame and lid and setting to the finished grade. Replacements shall include jackhammering, removal and disposal of the existing frame and lid, replacement, removal or addition of concrete brick (maximum of 3 or minimum of 1) or precast concrete riser rings, cement mortar, supply and installation of new manhole frame and lid set to finish grade, temporary asphalt ramping or patching and all other incidental work.

Unit Price for adjustments to each manhole includes adjusting manholes to the asphalt base lift and then to the asphalt final lift (finish grade) – No additional payment will be made for adjusting manholes.

.2 Water Valve Box replacements will be defined as supplying and installing a new Nelson Style Water Valve Box frame & lid and setting to the finished grade, temporary asphalt ramping or patching. Replacements shall include jackhammering, removal and disposal of the existing frame and lid and all other incidental work.

.3 Catchbasins frame and grate replacement will be defined as setting as supplying and installing a new catchbasin frame & lid to the correct elevation. Payment includes excavation, disposal,

jackhammering, removal of the existing grating and frame and all other incidental work, removal of concrete bricks, removal or addition of precast concrete riser rings, cement mortar, disposal of surplus excavated material, cast-in-place concrete, grouting, pipes, fittings and related materials together with all labour, materials and equipment required. Catch basin lead work is considered to be incidental to payment for catch basin lead work described in other sections

Adjustment ONLY will be defined as re-using the frames, lids, grates, or valve boxes to complete the Work as described above.

2.0 PRODUCTS

2.1 Materials

Add 2.1.7.3

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

Delete 2.1.12 and
replace with the
following

Catchbasin lids manufactured to ASTM C478M

Delete 2.1.16.2

Delete 2.1.17

3.0 EXECUTION

**3.1 Excavation and
Backfill**

Add 3.1.2

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

END OF SECTION

TRAFFIC SIGNALS

| | | | |
|------|--------------------------------|----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.9 | Measurement and Payment | Delete 1.9.2 and replace with the following | <p>The traffic signal lump sum price includes all labour, equipment, and materials to complete the works as shown on the Contract Drawings and as specified in the Contract Documents. This shall consist of all permits and fees for electrical inspections, testing, other costs associated with electrical works undertaken by others, temporary and permanent asphalt restoration within conduit trench as described in the Contract Drawings and as described in these supplementary contract specifications.</p> <p>The <i>installation</i> also includes pickup, delivery and installation of all materials supplied by the City, from the City' works yard, at 500 Mariner Way.</p> |
| | | Add 1.9.4 | Payment for detector loop supply, installation, removal and reinstatement includes all labour, equipment and materials to complete the works as Shown on the Contract Drawings. |
| 3.17 | Detector Loops | Delete 3.17.1 and replace with the following | Detector loops are to be round type or as specified on the <i>Contract Drawing</i> and approved by the City of Coquitlam's Traffic Operations staff. Install in accordance with Standard Detail Drawings E8.1, E8.3 and Coquitlam Standard Detail Drawings SS-E8.2 and SS-E8.4. |
| | | Add 3.17.3 | Loops in adjacent lanes shall be wound in opposite directions, i.e.; clockwise, counter clockwise, clockwise, etc. |
| | | Add 3.17.4 | Detector loops should be installed in the base lift of asphalt, unless otherwise specified by the Contract Administrator. |

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 Control, Vehicle Access and Parking 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. The Road and Sidewalk Closure Permit Request form is attached as Appendix 1 to this document. 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 http://www.coquitlam.ca/city-services/licenses-and-permits/road-and-sidewalk-closure-permit.aspx . 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 Work. .2 The Traffic Management Plan (TMP) will consist of the following components: .1 Identification of risks to traffic during the Work .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) working days after 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 *Traffic Manager* for implementations.
 - .5 The Contractor shall comply with all the requirements of applicable laws, rules, regulations, codes and orders of the municipal and other appropriate authorities concerned with work on streets or highways and shall post proper notices and/or signals, and provide necessary barriers, guards, lights, flagmen or watchmen as may be necessary for proper maintenance of traffic and protection of persons and property from injury or damage. All costs involved in respect to the above requirements will be deemed to be included in the Contract Price.
 - .6 The Contractor shall give due notice to local police and fire departments prior to beginning construction and shall comply in all respects with their requirements.
 - .7 The Contractor, during the progress of the work, shall make adequate provision to accommodate the normal traffic along streets and highways immediately adjacent to or crossing the work so as to cause the minimum of inconvenience to the general public.
 - .8 The Contractor is required to maintain local traffic and driveway access during all stages of construction. This includes 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. 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 ten (10) minutes in duration; for occasional interruption of traffic for construction activities if traffic volumes permit.

- .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
 - 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

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

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.

The Contractor is to provide appropriate signage to warn motorists (e.g reduce speed sign and bump ahead sign).

3.7 Cyclist and Pedestrian
Access

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

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 Minimum of Single Lane Traffic in each direction must be accommodated at all times. If necessary and only at the discretion of the Contract Administrator, Local Traffic Only may also be approved.

.2 A 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 Permit must be held on site by both the Site Superintendent and the person/company responsible for the traffic control implementation.

.3 Total Road Closure Is Not Permitted.

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

- | | |
|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4.2 Lane Closure Restrictions | <p>.1 For each of the road sections affected:</p> <ul style="list-style-type: none">- Road and Sidewalk Closures will be reviewed for appropriateness during the allowable hours of work.- Access to businesses and all properties to be maintained- Sufficient Traffic Control Persons are required for each Road and Sidewalk Closure (or any work activities), <u>including side street intersections</u>, to safely guide traffic through the work site. |
|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

5.0 HOURS OF WORK

- | | |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5.1 Allowable Hours of Work | <p>.1 Refer to Clause 6.2.</p> <p>.2 Some allowances may be made for paving operations, depending on a proposal acceptable to the Contract Administrator.</p> <p>.3 Line Marking work may be performed at night, (21:00 to 05:00). No work is allowed on Sundays without specific written permission from Contract Administrator.</p> |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

- | | |
|-----------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5.2 LIQUIDATED DAMAGES FOR NON-COMPLIANCE TO TIME OF DAY RESTRICTIONS | <p>Lanes must be open to traffic on or before the designated restricted hour. An amount of \$1500.00 per 15minute delay beyond the restricted hours specified in Clause 6.2, unless otherwise approved in writing by Contract Administrator, shall be deducted by the Owner from any monies owing to the Contractor for the work.</p> |
|-----------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

6.0 CONSTRUCTION OPERATIONS

- | | |
|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6.1 Truck Routes | <p>.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.</p> |
| 6.2 Road Specific Considerations | <p>.1 Lougheed Highway and Pitt River Road have significant vehicular traffic volumes. The Contractor shall ensure safe passage of all pedestrians and all types of vehicles. The Traffic Management Plan to follow the table below and must accommodate businesses, school, residences and pedestrian during construction activities. Adjustments to time restrictions might be allowed depending on vehicular volumes and at sole discretion of Contract Administrator.</p> |

***All travel lanes must be open to all traffic outside of Allowable Time.**

| LOCATION | ALLOWABLE TIME (includes set-up and take down) | COMMENTS |
|--------------------------------------------------------|---------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| Lougheed, southbound lanes | 9:00 PM to 6:00 AM | 1 lane on each direction must remain open at these times |
| Lougheed, northbound lanes | 9:30 PM to 6:00 AM | 1 lane on each direction must remain open at these times |
| Lougheed, right turn eastbound towards Pitt River Road | 10:00 PM to 6:00 AM | Approved detour plan is required. Contractor to coordinate with railway company as required. City to pay any CP Railway fee (if needed). |
| Pitt River Road, left turns towards southbound lanes | 9:00 PM to 6:00 AM | 1 lane on each direction must remain open at these times |
| Colony Farm Road, left turns towards westbound lanes | 9:00 PM to 6:00 AM | 1 lane on each direction must remain open at these times |

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

[Coquitlam Traffic Data](#)

- 6.3 Work Stoppage Due to Traffic 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. Contractor is responsible for the costs associated with this work shut-down.
- 6.4 Construction Activity and Signage 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 Changeable Message Sign (CMS) The following locations will require Changeable Message Signs (CMS) for the duration of the work on each street:
1. Eastbound on Lougheed Highway
 2. Westbound on Lougheed Highway
- Exact locations to be discussed at the pre-construction meeting. These signs are required to be in service at least **5 normal work days prior to construction start** to provide advance warning to motorists. CMS must be able to handle minimum of 3 lines per page/screen.
- 6.6 Construction Zone Information Signs
- 1 The Contractor is required to provide, one week prior to start of work, stationary signs at intersections, to inform traffic of existing and anticipated conditions at entry points of the street to be worked on.
- 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.
- Westbound Pitt River Road and Lougheed Highway
 - Northbound Colony Farm Road and Lougheed Highway
 - Southbound Colony Farm Road and Lougheed Highway

Construction Zone Information Signs to follow specifications below:



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, 2019)~~

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

Application Date: _____

City Project Number (if applicable): 74774

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

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

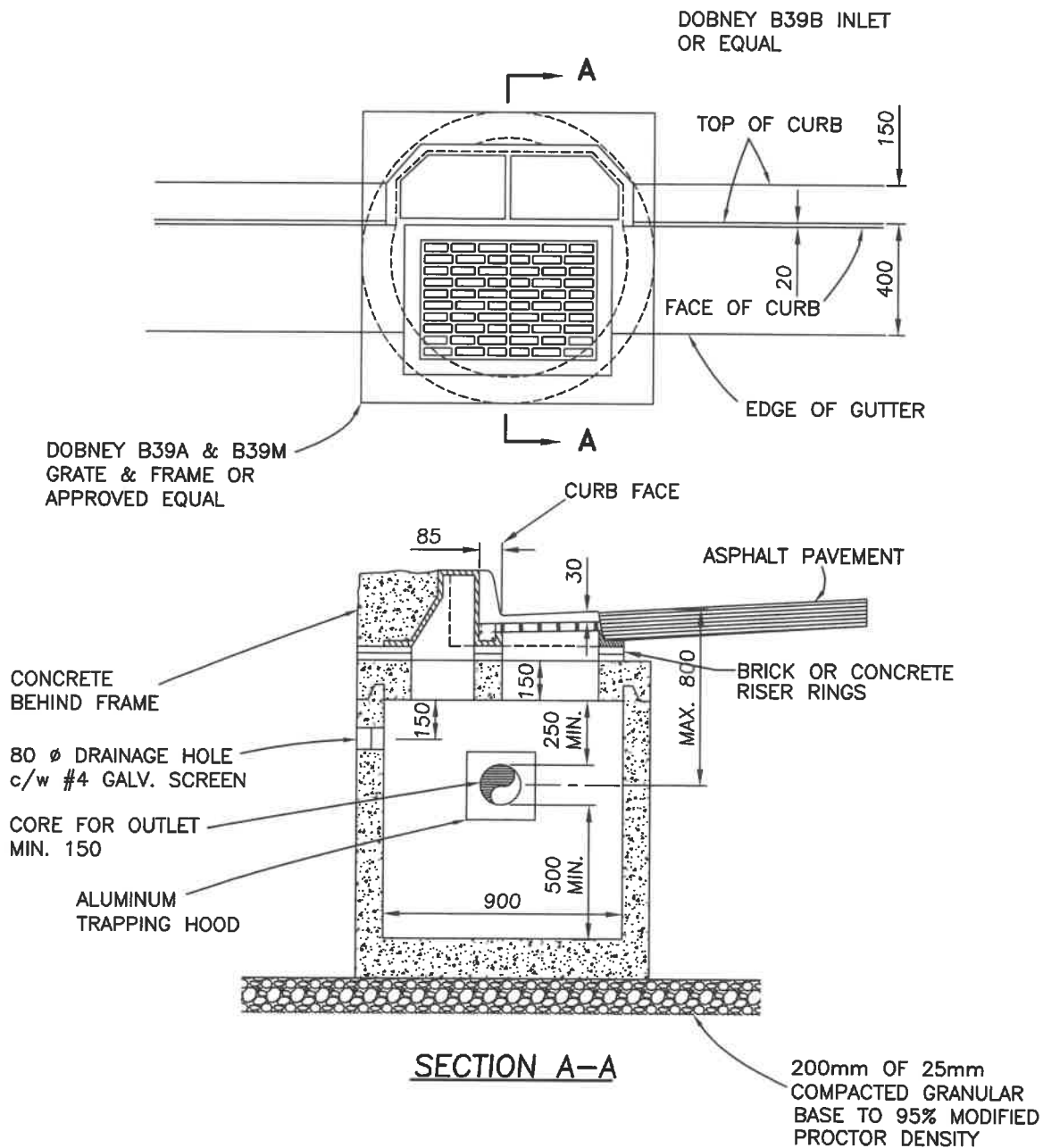
Office Use Only PERMIT STATUS

- ☐ 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

Appendix B - Additional Information



- NOTES:
1. REFER TO CONTRACT DRAWINGS, SECTION 33 44 01 FOR DETAILED SPECIFICATIONS.
 2. PLACE 0.05 cu m DRAIN ROCK ADJACENT TO DRAINAGE HOLE WHEN BACKFILLING.

PLOTTED: 19-Nov-18

SIDE INLET CATCH BASIN ASSEMBLY

DATE: AUGUST/2014
 DRAWN: REY
 SCALE: N.T.S.

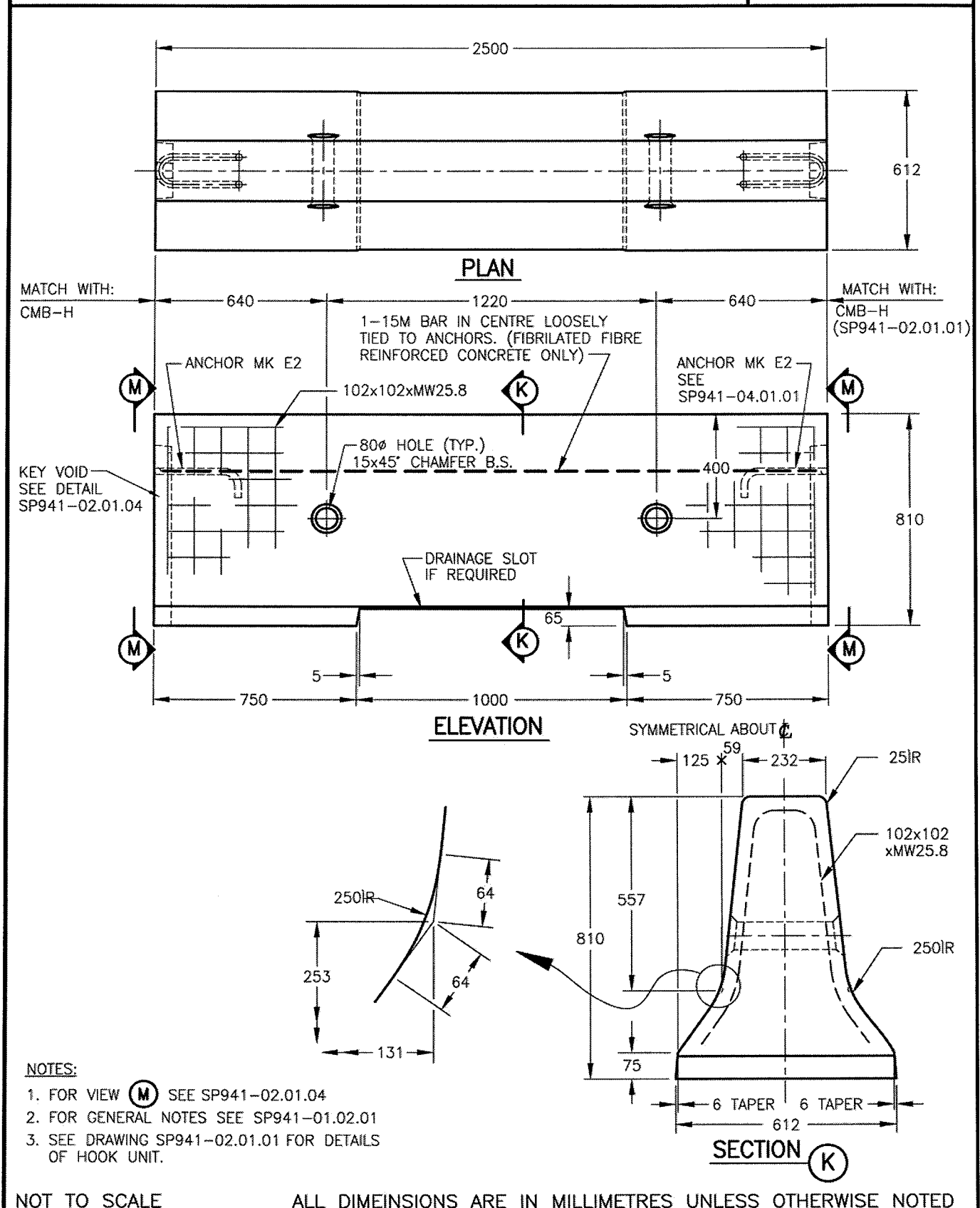
DRAWING NUMBER:
 COQ-S11A

SECTION 941

PRECAST REINFORCED CONCRETE BARRIERS

PRECAST CONCRETE MEDIAN BARRIER 810 mm – CMB-E

SP941-02.01.02

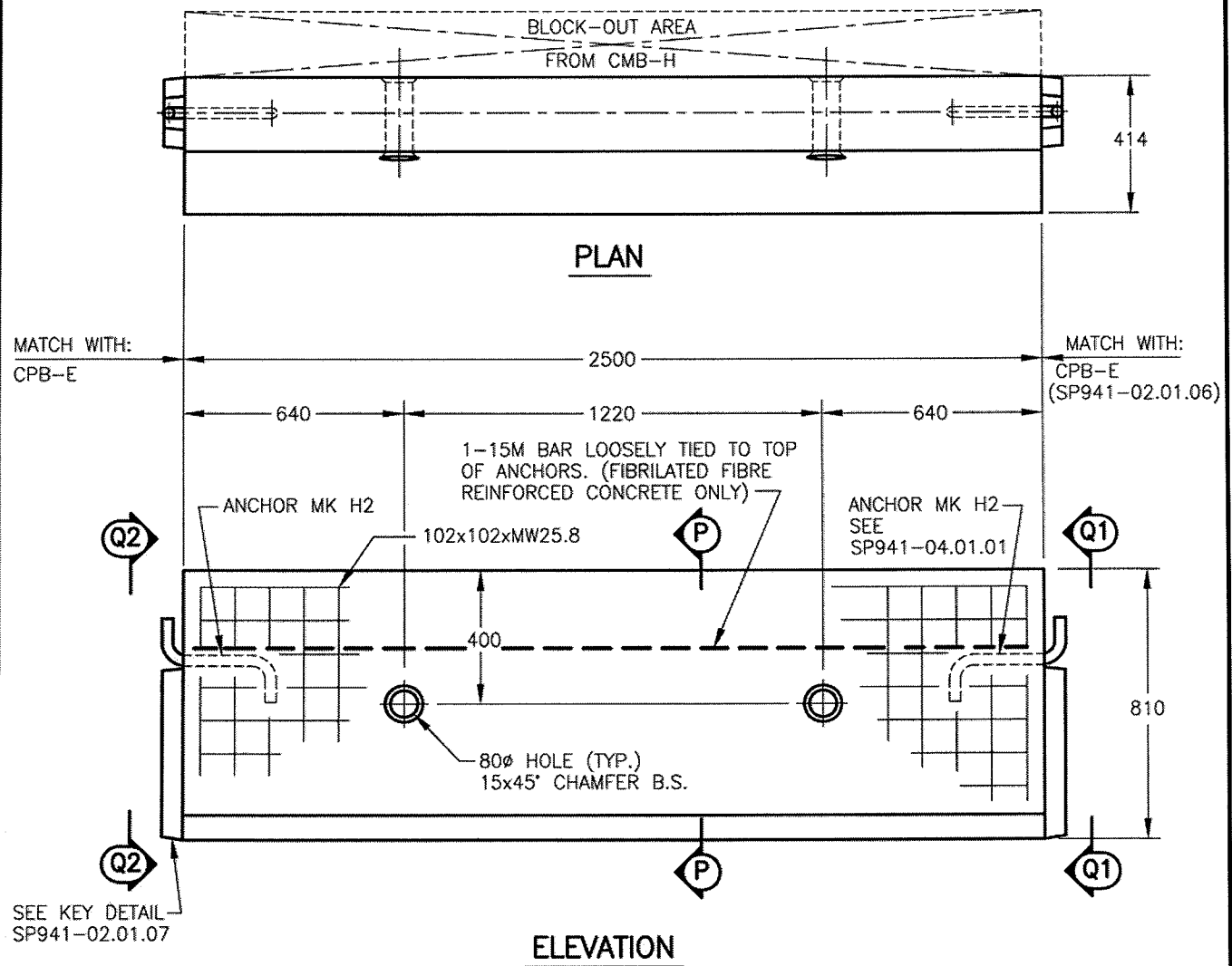


SECTION 941

PRECAST REINFORCED CONCRETE BARRIERS

PRECAST CONCRETE PIER BARRIER 810 mm - CPB-H

SP941-02.01.05

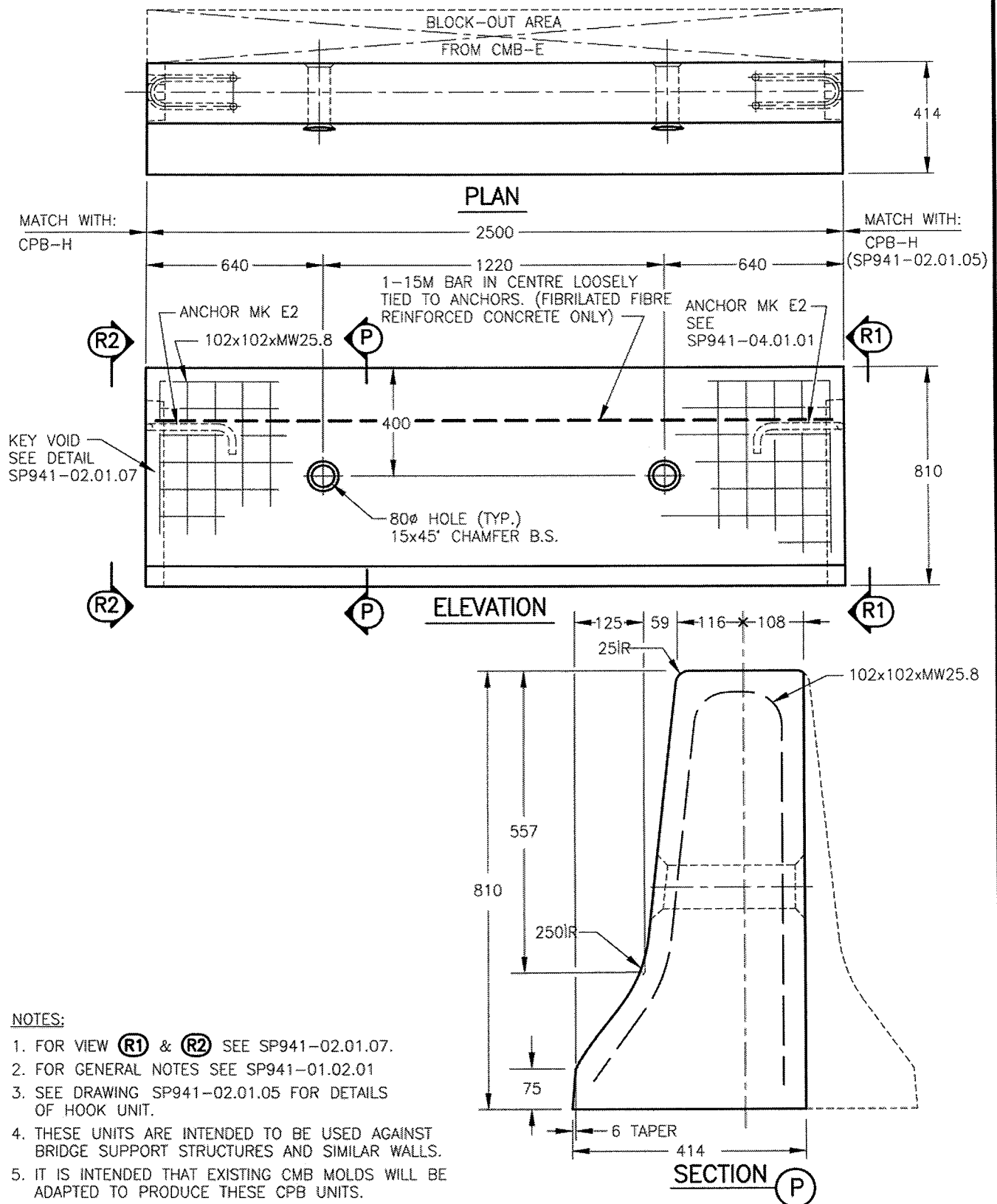


SECTION 941

PRECAST REINFORCED CONCRETE BARRIERS

PRECAST CONCRETE PIER BARRIER
810 mm – CPB-E

SP941-02.01.06



NOT TO SCALE

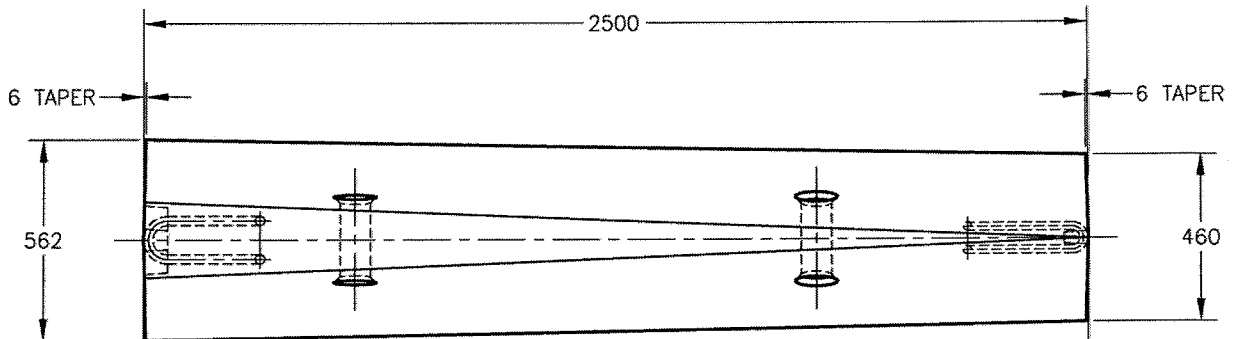
ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE NOTED

SECTION 941

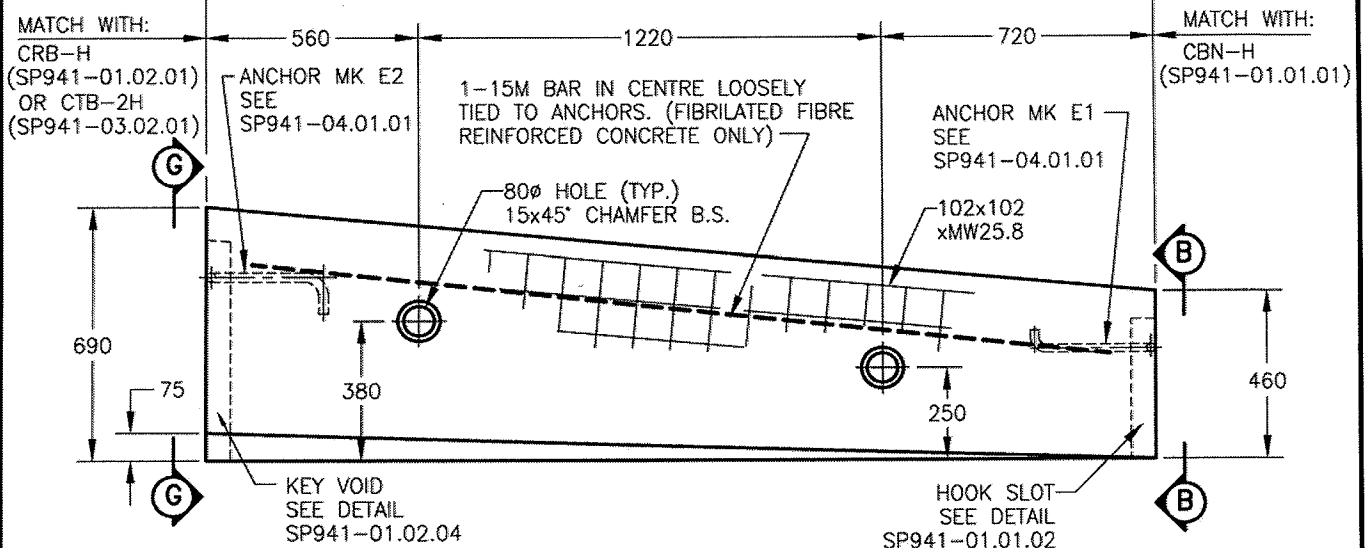
PRECAST REINFORCED CONCRETE BARRIERS

PRECAST CONCRETE TRANSITION BARRIER
690 mm TO 460 mm – CTB-1E

SP941-03.01.01



PLAN



ELEVATION

NOTES:

1. FOR VIEW (B) SEE SP941-01.01.02. FOR VIEW (G) SEE SP941-01.02.04.
2. FOR GENERAL NOTES SEE SP941-01.02.01.
3. SEE DRAWINGS SP941-01.01.01 AND SP941-01.01.02 FOR DETAILS OF 460 mm UNIT AND BULLNOSE.
SEE DRAWING SP941-01.02.01 FOR DETAILS OF 690 mm HOOK UNIT
OR SP941-03.02.01 FOR DETAILS OF 810 TO 690 TRANSITION UNIT.

NOT TO SCALE

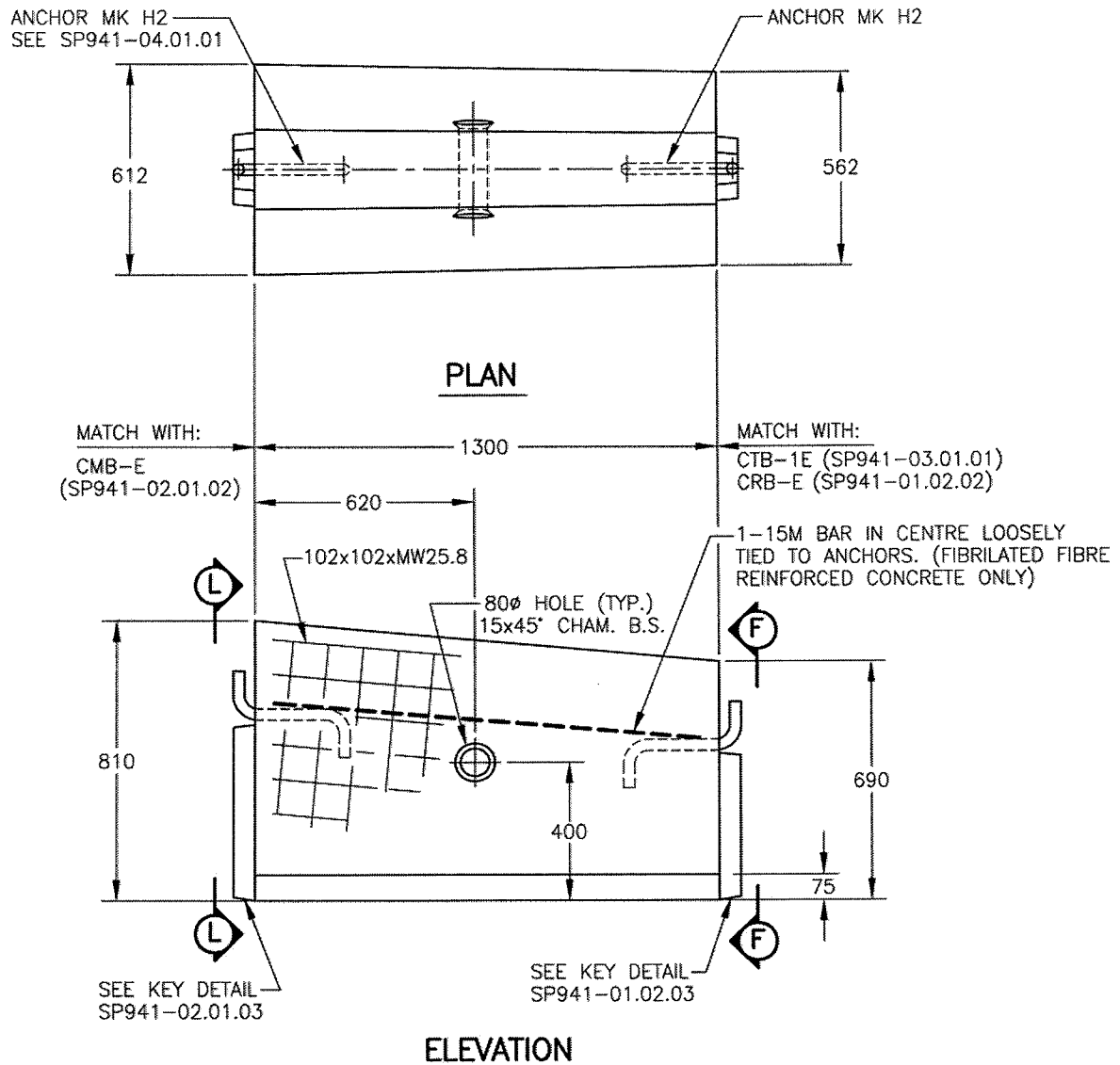
ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE NOTED

SECTION 941

PRECAST REINFORCED CONCRETE BARRIERS

PRECAST CONCRETE TRANSITION BARRIER 810 mm TO 690 mm – CTB-2H

SP941-03.02.01

**NOTES:**

1. FOR VIEW (F) SEE SP941-01.02.03.
FOR VIEW (L) SEE SP941-02.01.03.
2. FOR GENERAL NOTES SEE SP941-01.02.01.
3. SEE DRAWING SP941-02.01.02 FOR DETAILS OF 810 mm EYE UNIT.
SEE DRAWING SP941-01.02.02 FOR DETAILS OF 690 mm EYE UNIT
OR SP941-03.01.01 FOR DETAILS OF 690 TO 460 TRANSITION UNIT.

NOT TO SCALE

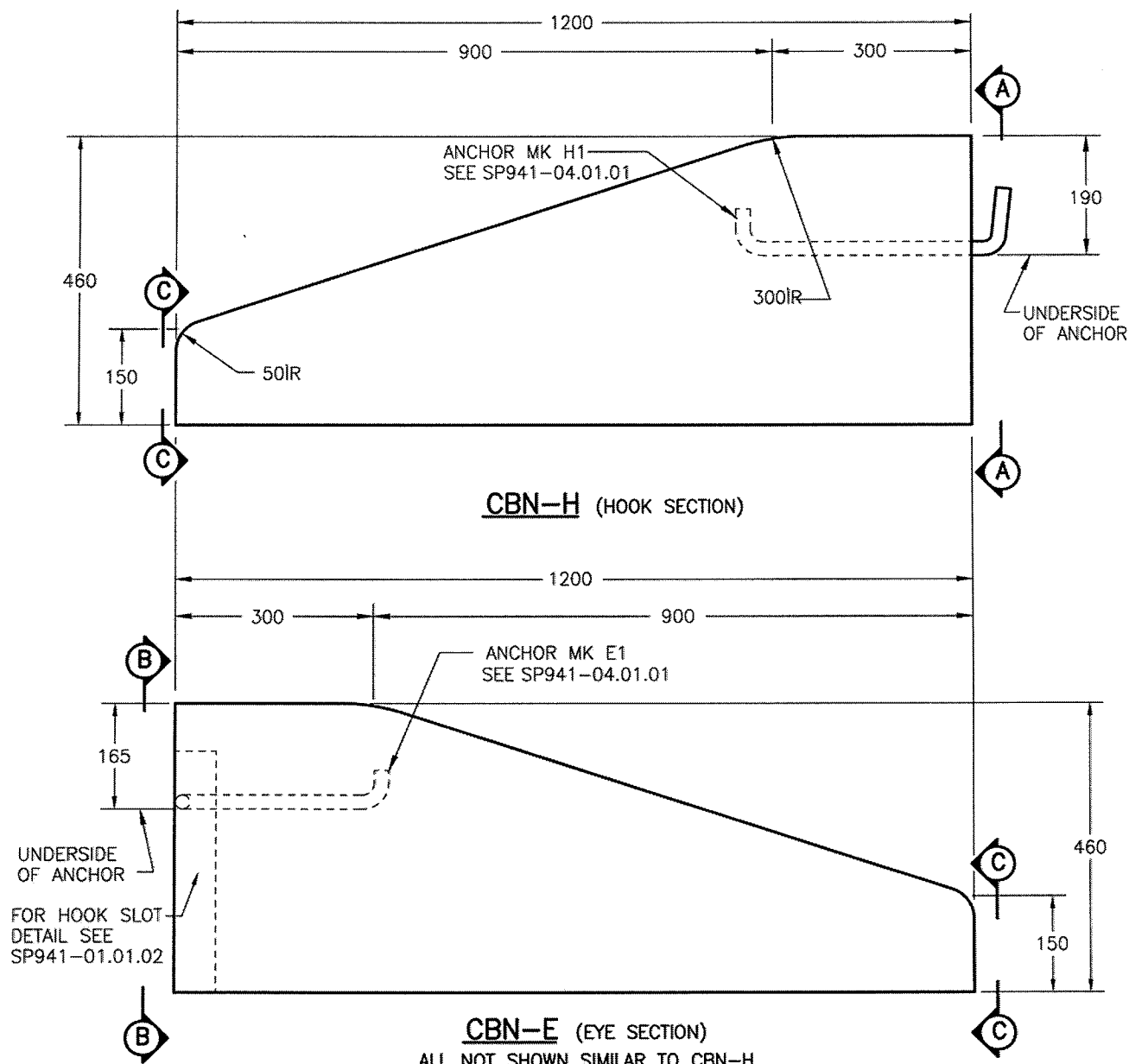
ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE NOTED

SECTION 941

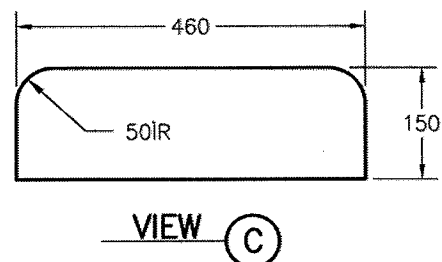
PRECAST REINFORCED CONCRETE BARRIERS

PRECAST CONCRETE BULL-NOSE
460 mm – CBN-H & CBN-E

SP941-01.01.01

ELEVATIONGENERAL NOTES:

1. FOR VIEW (A) & (B) SEE SP941-01.01.02
2. FIBRILATED FIBRE STRAND REINFORCED CONCRETE TO BE USED FOR BULL-NOSE (CBN).
3. FIBRILATED FIBRE STRAND REINFORCED CONCRETE MAY BE SUBSTITUTED FOR STEEL REINFORCED CONCRETE IN LOW BARRIER (CLB-H & E).
4. MATERIALS AND QUALITY OF WORK TO BE IN ACCORDANCE WITH SECTION 941.
5. STANDARD CBN-E MAY BE MANUFACTURED ONLY WITH PRIOR WRITTEN PERMISSION FROM THE HIGHWAY SAFETY BRANCH.



NOT TO SCALE

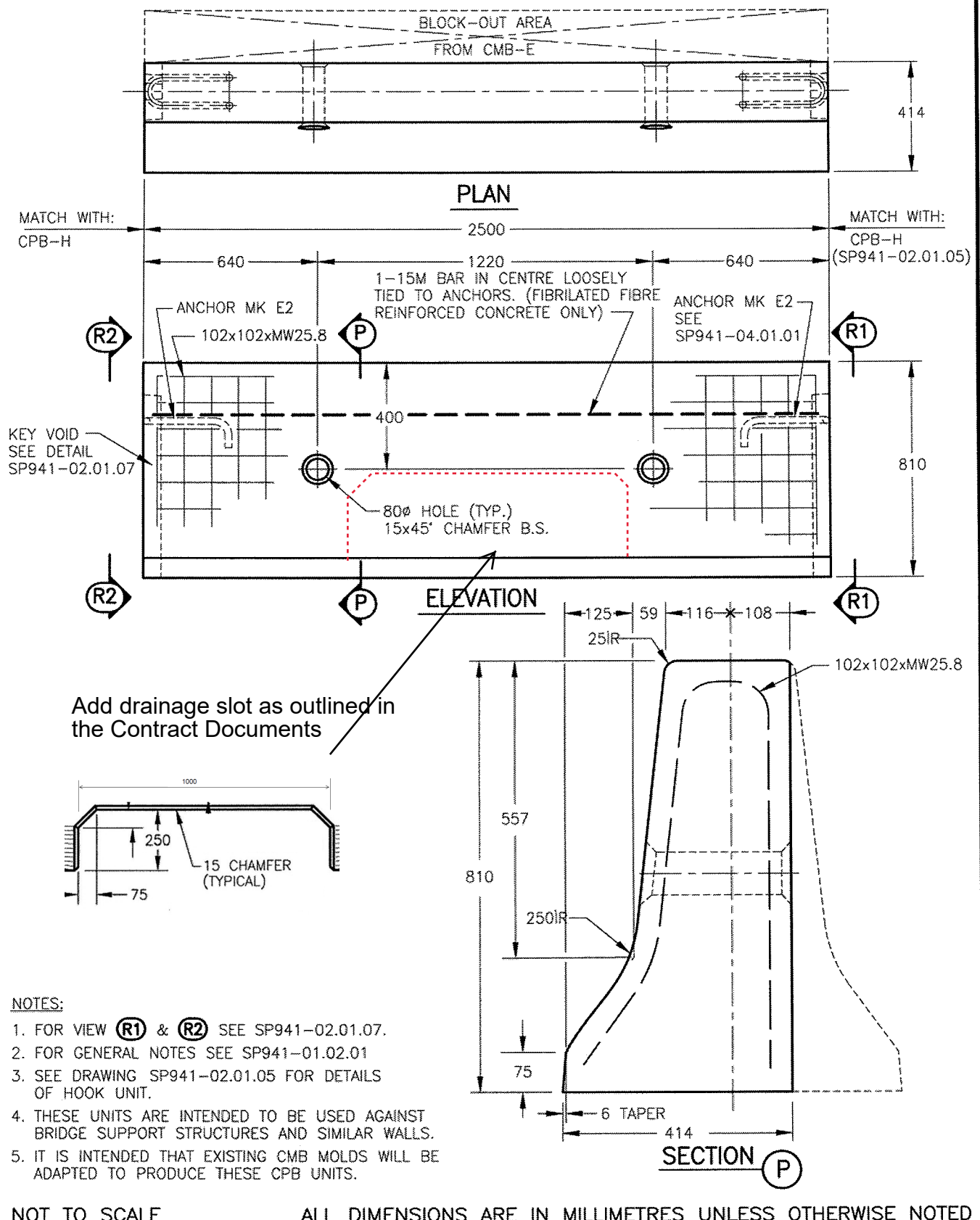
ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE NOTED

SECTION 941

PRECAST REINFORCED CONCRETE BARRIERS

PRECAST CONCRETE PIER BARRIER 810 mm — CPB-E-A

SP941-02.01.06



Redefine the line.

Introducing 3M™ Connected Roads All Weather Elements—
our most efficient optics for liquid pavement markings yet.

Connecting human and machine vision to
help improve road safety.

There's a lot riding on the line: According to the USDOT, 70% of adverse weather-related crashes happen on wet pavement.* At 3M we are passionate about helping you build the safest roads possible, and we won't stop innovating until everyone gets home safely.

3M™ Connected Roads All Weather Elements can help you efficiently build roads that support vehicles with machine vision systems even in rain or other low-visibility conditions. They're compatible with most liquid pavement marking binders and install with double-drop systems.

*Source: DOT/FHWA. Ten-year averages from 2005 to 2014 analyzed by Booz Allen Hamilton, based on NHTSA data. 2005-2014.

Requires

20%
less elements
by weight
than previous generation
3M™ Reflective Elements



Designed for detection.

3M™ Connected Roads All Weather Elements

Addressing visibility, road congestion and crashes is no easy task—especially at night or in the rain. But with the enhanced color and improved* all-weather performance of durable, bright 3M™ Connected Roads All Weather Elements, you can—and at an acceptable cost, too.

It's all made possible by our unique 2.4 (wet) and 1.9 (dry) refractive index bead technology.

*Compared to previous generation 3M™ All Weather Elements and other commercially-available pavement marking optics.



“In nighttime rain conditions, wet retroreflective optics enable detection at longer distances than glass beads on yellow markings.”

Based on testing jointly conducted with Continental Automotive Systems Inc. in December 2017 in Brimley, Michigan, USA. Materials tested included yellow LPM lines in conventional driving zones and nighttime rain with either glass or 3M elements.

Testing for the real world.

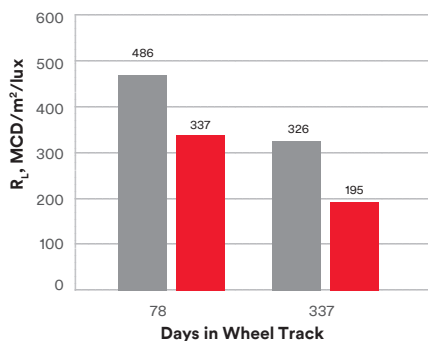
It's impossible to prepare for every scenario—but that doesn't mean we won't try. At 3M, we test our pavement markings using wet-continuous methods, measuring brightness levels in a way that simulates actual weather situations. The result is pavement markings optimized to perform when it matters most: all the time.

| Attributes | Product Selector Guide | | |
|--------------------------------------|------------------------|-------------------------------------------|----------------------------------------------------|
| | Beads and Elements | | |
| | 3M CR AWE | Beads (1.5/1.9 Index) Type I ¹ | Beads (1.5 Index) Type III ² and Larger |
| Dry Retroreflectivity | ✓ | ✓ | ✓ |
| Wet Continuous Retroreflectivity | ✓ | | |
| Dry/Wet Yellow Retroreflective Beads | ✓ | | |
| Improved Whiteness | ✓ | | |
| Designed for Machine Vision | ✓ | | |

¹AASHTO M247 | ²FPO 718.19

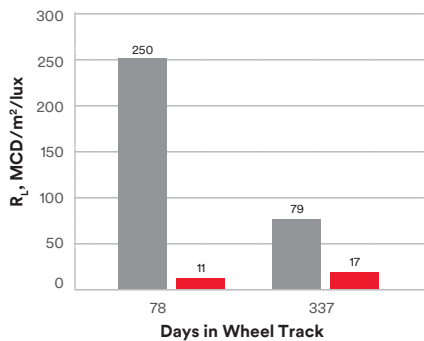
Dry Performance

Initial data taken without blowing off sample



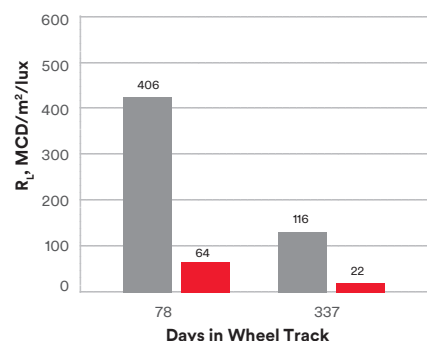
Wet Continuous Performance

as measured by ASTM E2832



Wet Recovery Performance

as measured by ASTM E2177



■ 3M™ Connected Roads All Weather Elements, 70M, 8 g/4 in. Inft, 18/50 1.5 Glass Beads
■ 18/50 1.5 Glass Beads

3M™ Connected Roads All Weather Elements 70M and 1.5 Glass. New Orleans Deck, installed March 2017 in LPM. 78 and 337 days in wheel track.

| Series | Uses elements with the following blend: | Products |
|--------|-------------------------------------------------------------------------------|--------------------------------|
| 50 | about 50% wet 2.4 refractive index beads & 50% dry 1.9 refractive index beads | 50, 51, 50E*, 51E*, 50M*, 51M* |
| 70 | about 80% wet 2.4 refractive index beads & 20% dry 1.9 refractive index beads | 70E*, 71E*, 70M*, 71M* |
| 90 | about 80% wet 2.4 refractive index beads & 20% dry 1.9 refractive index beads | 90, 91 |

*For use with Epoxy (E) or MMA (M) binders



Transportation Safety Division
3M Center, Building 225-4N-14
St. Paul, MN 55144-1000
3M.com/RoadSafety

Redefine the line with evolved pavement marking optics.
See how at 3M.com/ConnectedRoads

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