



REQUEST FOR QUOTATIONS

Title: 156 Street Paving and Road Base Improvement

Reference No.: 1220-040-2022-096

MINOR WORKS

(Construction Services)

Issue Date: October 7, 2022

REQUEST FOR QUOTATIONS

TABLE OF CONTENTS

1. INTRODUCTION.....	3
2. ADDRESS FOR DELIVERY.....	3
3. DATE	3
4. INQUIRIES.....	3
5. ADDENDA	4
6. NO CONTRACT	4
7. ACCEPTANCE.....	4
8. CONTRACTOR'S EXPENSES.....	4
9. CONTRACTOR'S QUALIFICATIONS	4
10. CONFLICT OF INTEREST	4
11. SOLICITATION OF COUNCIL MEMBERS, CITY STAFF AND CITY CONSULTANTS.....	5
12. CONFIDENTIALITY	5
13. SIGNATURE	5
14. MULTIPLE CONTRACTORS	5
Schedule A – Scope of Work	6
Schedule B – Sample Contract	9
Schedule B – Appendix 1 Special Provisions	29
Schedule B – Appendix 2 Contract Drawings	39
Schedule B – Appendix 3 Schedule of Quantities and Prices	41
Schedule B – Appendix 4 Construction Schedule.....	41
Schedule B – Appendix 5 Key Personnel, Subcontractors and Material Suppliers.....	41
Schedule B – Appendix 6 Prime Contractor Designation	41
Schedule B – Appendix 7 Contractor Health & Safety Expectations (Responsibility of Contractor(s))	41
Schedule C – Form of Quotation.....	42
Attachments:	
1. City of Surrey, Project Completion Deliverables Worksheet	49
2. Prime Contractor Designation – Letter of Understanding.....	50
3. Contractor Health & Safety Expectations (Responsibility of Contractor(s)).....	51
4. Geotechnical Report – Thurber Engineering Ltd., Pavement Deterioration Near 6177 – 156 Street, Surrey, B.C. Geotechnical Assessment and Recommendations for Repair, November 16, 2021	55

REQUEST FOR QUOTATIONS

1. INTRODUCTION

The City of Surrey (the “**City**”) invites contractors to provide a quotation on the form attached as Schedule C - Quotation (the “**Quotation**”) for the supply of the goods (if any) and services described in Schedule A – Scope of Work (the “**Work**”). The description of the Work sets out the minimum requirements of the City. A person that submits a Quotation (the “**Contractor**”) should prepare a Quotation that meets the minimum requirements, and may as it may choose, in addition, also include goods, services or terms that exceed the minimum requirements.

2. ADDRESS FOR DELIVERY

The Contractor should submit the Quotation **electronically** in a single pdf file which must be delivered by email at: purchasing@surrey.ca

Confirmation of receipt of emails will be issued. Quotations that cannot be opened or viewed may be rejected. A Contractor bears all risk that the City’s receiving computer equipment functions properly so that City receives the Quotation.

Note: The maximum file size the City can receive is 10Mb. If sending large email attachments, Contractors should phone [604-590-7274] to confirm receipt.

3. DATE

The City would prefer to receive Quotations on or before **October 25, 2022** (the “**Date**”).

4. INQUIRIES

All inquiries related to this Request for Quotations (“**RFQ**”) should be directed in writing to the person named below (the “**City Representative**”). Information obtained from any person or source other than the City Representative may not be relied upon

Name: Sunny Kaila, Manager, Procurement Services

Email: purchasing@surrey.ca

Reference #: 1220-040-2022-096

Inquiries should be made no later than seven (7) business days before Date. The City reserves the right not to respond to inquiries made within seven (7) business days of the Date. Inquiries and responses will be recorded and may be distributed to all Contractors at the discretion of the City.

Contractors finding discrepancies or omissions in the Contract or RFQ or having doubts as to the meaning or intent of any provision, should immediately notify the City Representative. If the City determines that an amendment is required to this RFQ, the City Representative will issue an addendum in accordance with Section 5. No oral conversation will affect or modify the terms of this RFQ or may be relied upon by any Contractor.

5. ADDENDA

If the City determines that an amendment is required to this RFQ, the City Representative will issue a written addendum by posting it on the BC Bid website at www.bcbid.gov.bc.ca and the City website at www.surrey.ca (collectively, the “Websites”), and upon posting, any addenda will form a part of this RFQ. It is the responsibility of Contractors to check the Websites for addenda. The only way this RFQ may be added to, or amended in any way, is by a formal written addendum. No other communication, whether written or oral, from any person will affect or modify the terms of this RFQ or may be relied upon by any Contractor. By delivery of a Quotation the Contractor is deemed to have received, accepted and understood the entire RFQ, including any and all addenda.

6. NO CONTRACT

This RFQ is simply an invitation for quotations (including prices and terms) for the convenience of all parties. It is not a tender and no obligations of any kind will arise from this RFQ or the submission of Quotations. The City may negotiate changes to any terms of a Quotation, including terms in Schedules A and B and including prices, and may negotiate with one or more Contractors or may at any time invite or permit the submission of quotations (including prices and terms) from other parties who have not submitted Quotations.

7. ACCEPTANCE

A Quotation will be an offer to the City which the City may accept at any time by signing the copy of the Quotation and delivering it to the Contractor. A Quotation is not accepted by the City unless and until both the authorized signatory of the Contractor and the authorized signatory of the City have signed. Delivery of the signed Contract by the City may be by fax, pdf e-mail or hard copy. In that event, the contract will be comprised of the documents included in the definition of Contract in Schedule B.

8. CONTRACTOR'S EXPENSES

Contractors are solely responsible for their own expenses in preparing and submitting Quotations, and for any meetings, negotiations or discussions with the City or its representatives and consultants, relating to or arising from the RFQ. The City will not be liable to any Contractor for any claims, whether for costs, expenses, losses or damages, or loss of anticipated profits, incurred by the Contractor in preparing and submitting a Quotation, or participating in negotiations for a contract, or other activity related to or arising out of this RFQ.

9. CONTRACTOR'S QUALIFICATIONS

By submitting a Quotation, a Contractor represents that it has the expertise, qualifications, resources, and relevant experience with the requirements of the Work.

10. CONFLICT OF INTEREST

A Contractor should disclose in its Quotation any actual or potential conflicts of interest and existing business relationships it may have with the City, its elected or appointed officials or employees. The City may rely on such disclosure.

11. SOLICITATION OF COUNCIL MEMBERS, CITY STAFF AND CITY CONSULTANTS

Contractors and their agents will not contact any member of the City Council, City staff or City consultants with respect to this RFQ, other than the City Representative named in section 4, at any time prior to the award of a contract or the cancellation of this RFQ and which could be viewed as one Contractor attempting to seek an unfair advantage over other Contractors.

12. CONFIDENTIALITY

All Quotations become the property of the City and will not be returned to the Contractor. All Quotations will be held in confidence by the City unless otherwise required by law. Contractors should be aware the City is a “public body” defined by and subject to the *Freedom of Information and Protection of Privacy Act* of British Columbia.

13. SIGNATURE

The legal name of the person or firm submitting the Quotation should be inserted in the Quotation. The Quotation should be signed by a person authorized to sign on behalf of the Contractor and include the following:

- (a) If the Contractor is a corporation then the full name of the corporation should be included, together with the names of authorized signatories. The Quotation should be executed by all of the authorized signatories or by one or more of them provided that a copy of the corporate resolution authorizing those persons to execute the Quotation on behalf of the corporation is submitted;
- (b) If the Contractor is a partnership or joint venture then the name of the partnership or joint venture and the name of each partner or joint venturer should be included, and each partner or joint venturer should sign personally (or, if one or more person(s) have signing authority for the partnership or joint venture, the partnership or joint venture should provide evidence to the satisfaction of the City that the person(s) signing have signing authority for the partnership or joint venture). If a partner or joint venturer is a corporation then such corporation should sign as indicated in subsection (a) above; or
- (c) If the Contractor is an individual, including a sole proprietorship, the name of the individual should be included.

14. MULTIPLE CONTRACTORS

The City reserves the right and discretion to divide up the Services, by any basis as the City may decide, and to select one or more Contractors to enter into discussions with the City for one or more agreements to supply a portion or portions of the Services. If the City exercises its discretion to divide up the Goods, the City will do so reasonably having regard for the RFQ and the basis of Quotations.

SCHEDULE A – SCOPE OF WORK

PROJECT TITLE: 156 Street Paving and Road Base Improvement

PROJECT No.: 1220-040-2022-096

1. DESCRIPTION OF SCOPE OF WORK

The Work covered under this project consists of the furnishing of all superintendence, overhead, labour, materials, tools, equipment, insurance, fuel, transportation and all things necessary for and incidental to the satisfactory performance and completion of construction and improvements of 156 Street Paving and Road Base Improvements, located at 6177 156 Street, Surrey, British Columbia (the “**Place of Work**”) in strict accordance with the Specifications and accompanying Drawings and subject to all terms and conditions of the Contract.

The general component of the Work includes two phases:

Scope - Phase 1

- Pre-construction meeting on site with Project Manager
- Supply & Coordinate with environmental consultant to manage implications with adjacent ditches.
- Liaise with property owners affected by project scope
- Saw cut existing road surface, excavate 1.2m relative to final grade.
- The subgrade should be reviewed and approved by the Consultant prior to placement of the pumice.
- Supply & Install geo-textile wrapped red pumice (Tephralite) in 150mm to 300mm lifts
- Pumice shall be wrapped in nonwoven geotextile such as Nilex 4553 or approved equivalent.
- Minimum overlap between sheets of nonwoven geotextile is 500mm.
- Each lift shall be compacted with a minimum of 8 passes from a Cat CB14 smooth double drum steel roller or equivalent imposing static contact force of about 1,000 kg/m width of each roller face. Vibratory compaction is not permitted to reduce the pulverization of the aggregates.
- Re-construct Road structure per Thurber DWG 33050-1
- Coordinate with Property Owner of 6177 156 ST
- Supply and coordinate environmental consultant to observe works related to adjacent ditches.
- Supply and install 0.3m of granular cover over Pumice in the ditch. Existing pavement gravels could be salvaged and used for this.
- road booking and application for applicable permits

Scope - Phase 2

- The pumice acceptance should be reviewed and approved by the Consultant prior to placement of the pavement/road structure.

- Supply & Coordinate with environmental consultant to manage implications with adjacent ditches.
- Liaise with the property owners affected by the project scope.
- Re-construct Road structure per Thurber DWG 33050-1
- Provision of road base materials
- 200 mm Crushed Granular Sub-base (CGSB) or Select Granular Sub-base (SGSB), salvaged gravels from the existing pavement may also be used
- 100 mm Crushed Granular Base (CGB)
- 100 mm Hot Mix Asphalt, Upper Course #2 (HMA)
- The material used in the pavement section should conform to the requirements of the Master Municipal Construction Document (MMCD), Volume 2, 2009 Edition.
- The subbase layer should extend a minimum of 0.5 m beyond the edge of pavement. Base and subbase should be compacted to a minimum of 95% Modified Proctor Maximum Dry Density (MPMDD) in loose lifts not to exceed 300 mm thickness. Density testing should be completed to determine if the specified density is achieved.

The detailed scope of Work is as described in the Special Provisions (Schedule B – Appendix 1) and Contract Drawings (Schedule B – Appendix 2).

Where a project specification does not exist, the default project specification shall adhere to MMCD specifications (excluding measurement and payment descriptions). The City has project specifications to MMCD which included herein. These project specifications shall take precedence over the basic MMCD specifications.

The lack of and/or omission of detailed specifications does not minimize the acceptable levels of service and only the best commercial practices are acceptable.

Contractor to comply with all BC Plumbing Code, BC Fire Marshal, BC Workers' Compensation Board, National Building Code of Canada, BC Boiler Inspector, BC Electrical Inspector, National Fire Protection Association, and any other authorities having local jurisdiction. Failure to abide by these rules and regulations will result in being immediately escorted from the work site.

General Requirements

All work shall conform to the Master Municipal Construction Documents (MMCD) Volume II, City of Surrey Supplementary Master Municipal Construction Documents: Supplementary Specifications and Supplementary Standard Drawing, 2020 including in the City of Surrey Design Criteria Manual. All materials incorporated into the work shall conform to this Contract, to the City of Surrey's Engineering Standards and to the latest edition of the appropriate specifications of the American Society for Testing and Materials (hereinafter abbreviated as ASTM) or to other standards expressly specified. All provisions in the ASTM and other standards specifications specified regarding materials, workmanship, finish, inspection, and rejection are hereby made part of the specifications as far as they are applicable and not inconsistent with the specifications.

Materials incorporated in the work, which are not specifically covered in the specifications, shall be of satisfactory quality and acceptable to the Consultant and to the owners of the applicable utilities.

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**SCHEDULE B
SAMPLE – CONSTRUCTION CONTRACT**

Title: 156 Street Paving and Road Base Improvement

Contract No.: 1220-040-2022-096

THIS AGREEMENT dated the _____ day of _____, 2022.

BETWEEN:

CITY OF SURREY
13450 – 104th Avenue
Surrey, B.C., V3T 1V8, Canada

(the "City")

OF THE FIRST PART

AND:

(Full legal name and address of Contractor)

(the "Contractor")

OF THE SECOND PART

WHEREAS the Contractor wishes to undertake the following project for the benefit of the City:

156 Street Paving and Road Base Improvement

NOW THEREFORE THIS CONTRACT WITNESSETH that in consideration of the premises and payment of One (\$1.00) Dollar and other good and valuable consideration paid by each of the parties to each other (the receipt and sufficiency of which each party hereby acknowledges), the parties hereby covenant and agree with each other as follows:

1. DEFINITIONS

1.1 For the purposes of this Contract, the following terms shall have the meanings set forth below:

- (a) **"Certification of Completion"** means a certificate issued indicating that Substantial Performance of the Work has been achieved;
- (b) **"Certificate of Total Performance"** means a certificate issued indicating that the Work has been achieved;
- (c) **"Change"** means an addition to, deletion from or alteration of the Work;

- (d) **“Change Order”** means a Change is approved, the Consultant shall issue a written approval, setting out a description of the Work covered by the Change, the price or method of valuation for the Work, the change in the Contract Price and adjustment, if any, to the Contract Time. The value of the Work performed in a Change shall be included for payment with the certificates for payment;
- (e) **“City”** means the City of Surrey;
- (f) **“Consultant”** is the person or entity engaged by the City and identified as such in the Contract. The Consultant is the Architect, the Engineer or entity licensed to practice in the province of British Columbia. The term Consultant means the Consultant or the Consultant’s authorized representative;
- (g) **“Construction Schedule”** means a construction schedule indicating the planned start and completion dates of the major activities of the Work as set out in **Appendix []**, a future Appendix;
- (h) **“Contract”** means this Contract as set out and described in the Contract Documents;
- (i) **“Contract Administrator”** means the person, firm or corporation appointed by the City and identified by the City in writing to the Contractor. The Contract Administrator may be the City’s Engineer, other employee, or officer, or may be an outside consultant;
- (j) **“Contract Documents”** means this Contract including all schedules and appendices, construction standards, specifications and drawings;
- (k) **“Contract Drawings”** means the graphic and pictorial portions of the Contract Documents, wherever located and whenever issued, showing the design, location and dimensions of the Work, generally including plans, elevations, sections, details and diagrams;
- (l) **“Contract Price”** means the price of the Work as set out Section 4.1 of this Contract;
- (m) **“Contract Time”** means the period of time for the completion of the Work as provided by the Contract Documents;
- (n) **“Contractor”** means the person, firm or corporation identified as such in this Contract and includes the Contractor’s authorized representative as designated to the City in writing;
- (o) **“Extra Work”** has the meaning set out in Section 33;
- (p) **“Milestone Date”** means any date specified in the Contract Documents for completion of the Work, or portion of the Work, including the dates of Substantial Performance or Total Performance;
- (q) **“Overhead”** means all costs associated with management, supervision, insurance, as-built preparation and warranty, administration and supervision at

the Place of Work (including the provision of and maintaining office coordination, office costs, supervision, site trailer, telephone service, and long-distance charges) courier, permits, insurance and small tools and general office supplies as required for the performance of the Work.”

- (r) **“Payment Certifier”** is the person or entity identified as such in the Contract responsible for the issuance of certificates of payment;
- (s) **“Place of Work”** means the designated site or location where the Work products are to be finally or permanently constructed or installed;
- (t) **“Project Manager”** is the person or entity engaged by the City and identified as such in the Contract;
- (u) **“Substantial Performance”** means the stage of completion when:
 - (a) all Work, as certified by the Contract Administrator, is capable of completion or correction at a cost of not more than:
 - (i) 3% of the first \$500,000 of the Contract Price;
 - (ii) 2% of the next \$500,000 of the Contract price; and
 - (iii) 1% of the balance of the Contract Price, and
 - (b) the Work, or a substantial part of it, is ready for use or is being used for the purpose intended.
- (v) **“Total Performance”** means when all Work, including all deficiencies but excluding any correction of completed Work that appears during the on-going warranty or guarantee obligations as provided in the Contract Documents, as certified by the Contract Administrator; and
- (w) **“Work”** means and includes anything and everything required to be done for the fulfillment and completion of this Contract.

2. THE WORK – START/COMPLETION DATES

- 2.1 The Contractor will perform all Work and provide all labour, equipment and material and do all things strictly as required by the Contract Documents.
- 2.2 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 **ten (10) days** from the Notice to Proceed date subject to the provision of the Contract Documents for adjustments to the Contract Time.
- 2.3 Time shall be of the essence of the Contract.

3. CONTRACT DOCUMENTS

- 3.1 All of the Contract Documents shall constitute the entire Contract between the City and the Contractor.

- 3.2 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.
- 3.3 If there is any inconsistency or conflict between the provisions of the Contract Documents, then the Contract Documents shall govern and take precedence in the following order with this Contract taking precedence over all other Contract Documents:
- (a) Contract;
 - (b) **Addenda (if any);**
 - (c) Departmental Construction Standards (if any);
 - (d) Specifications;
 - (e) Drawings; and
 - (f) all other Contract Documents.

4. CONTRACT PRICE

- 4.1 The Contract Price for the Work shall be the sum of _____ Dollars and _____ Cents (\$ _____), plus goods and services tax in the amount of _____ Dollars and _____ Cents (\$ _____), for a total Contract Price of _____ Dollars and _____ Cents (\$ _____) in Canadian funds (the "Contract Price") plus any adjustments approved by the City, including any payments owing on account of Change Orders and agreed to Extra Work, approved in accordance with the provisions of the Contract Documents.
- 4.2 For greater certainty, 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, even if the Contract Documents does not specifically mention such items. The Contract Price is a firm fixed price.

5. HOLDBACKS

- 5.1 The City shall hold back 10%, or other percentage as required by the *Builders Lien Act*, SBC 1997, c. 45, as amended (the "*Builders Lien Act*"), of any amounts due to the Contractor as a builders lien holdback.
- 5.2 In addition to other holdbacks as provided by the Contract Documents, when considering Substantial Performance, the City may hold back from payments otherwise due to the Contractor 200% of a reasonable estimate, as determined by the City's Representative, on account of deficient or Defective Work already paid for. This holdback may be held, without interest, until such deficiency or defect is remedied. The items of defect or deficiency and the amounts of related holdback shall be listed separately on the invoice.
- 5.3 If after Substantial Performance is achieved the Contractor is unable to complete any of the Work because of climatic or other conditions beyond the Contractor's reasonable control, then the City may hold back from payments otherwise due to the Contractor the amount as estimated by the Consultant in consultation with the Contractor by which the cost to have others complete the Work exceeds the estimated Contract Price for such Work.

5.4 The City may, in addition to other holdbacks as provided by the Contract Documents, hold back an amount equal to any lien which has been filed with respect to the Work, plus 15% as security for costs. The City may, at its option, after five (5) days written notice to the Contractor, pay such amount into court to discharge the lien. If the lien is discharged without payment of the holdback into court, then the City shall pay such holdback to the Contractor, without interest.

5.5 **Holdback period of 55 days will follow the date of substantial performance.** The City will perform a court registry search on the 46th day, on a best effort basis.

6. INVOICING AND PAYMENT

6.1 Subject to applicable legislation, including without limitation the holdbacks referred to in above, and the provisions of the Contract Documents, the City shall make payments to the Contractor thirty (30) days after receipt of any invoice from the Contractor.

6.2 The Contractor shall submit invoice(s) for payment to the City, based on the completion of each phase of the Work. Any and all Extra Work as approved by the City, should be clearly identified and quantified on a separate invoice(s).

6.3 The invoice(s) submitted for the completion of each project phase shall be clearly itemized to the details of the phase completed or the amount of Work performed, the billing rates, show an invoice number, contractor's name, address, telephone number, reference the City's purchase order number or name and location of employee, and in an itemized manner the amount due for each phase completed, tax (if any) and a grand total. The grand total will be subject to holdbacks.

6.4 The payment by the City of any monthly or other payment shall not bind the City with respect to any subsequent payment or the final progress payment, but shall be taken as approximate only, and shall not mean, or be construed to mean, that the City has accepted Work that is not in accordance with the requirements of the Contract Documents, or that the Contractor is in any manner released from its obligation to comply with the Contract Documents.

6.5 For earlier payment, the Contractor can offer a cash discount.

6.6 Payments to Contractors can be made through Electronic Funds Transfer (EFT), directly into the Contractor's bank account. An EFT application form can be provided to the successful Contractor for completion.

Invoices should be sent electronically to: surreyinvoices@surrey.ca

6.7 The City shall not be liable for interest or overdue charges on any invoice.

6.8 Unless otherwise provided, all dollar amounts referred to in this Contract are in lawful money of Canada.

6.9 If the Contractor is a non-resident of Canada and does not provide to the City a waiver of regulation letter, the City will withhold and remit to the appropriate governmental authority the greater of:

(a) 15% of each payment due to the Contractor; or

(b) the amount required under applicable tax legislation.

7. PERFORMANCE OF THE WORK

7.1 The Contractor will perform and provide all labour, services and other acts, and provide all equipment, machinery, water, heat, power, and facilities required for performance of the Work.

7.2 The Contractor will not proceed with any work that is not part of the Work, except in accordance with the Contract.

7.3 The Contractor will apply for and pay for all necessary permits and licenses and pay all fees required for the performance of the Work.

7.4 Pandemic Restrictions

The parties acknowledge that this Agreement has been entered into during the on-going COVID-19 pandemic (the “**Pandemic**”). The Contractor advises that it is able to proceed with providing the Goods and performance of the Services under the Pandemic conditions and restrictions (collectively the “**Pandemic Restrictions**”) as they exist as of the date of this Agreement. The parties acknowledge that Pandemic Conditions may change so as to cause unavoidable interruptions or interference to the Contractor’s performance of the Goods and Services. The parties confirm:

(a) notwithstanding the known existence of the Pandemic, Section 7.4 will apply to new Pandemic Restrictions, which arise after the date of this Agreement, whether anticipated or not, which reasonably interfere with the Contractor’s performance of the Services, such that upon the Contractor giving required notice shall be entitled to an extension of the time to provide the Goods and perform the Services, but shall not be entitled to reimbursement of any costs;

(b) notwithstanding any such new Pandemic Restrictions, the Agreement will remain valid and in force, subject to the terms of the Agreement including, without limitation Section 23 (Workers’ Compensation Board and Occupational Health and Safety); and

(c) if new Pandemic Restrictions occur that cause or threaten interruption of the Goods and Services the Contractor will give the City immediate notice, and a written plan of the interim steps the Contractor will take, if any, during the interruption of the Goods and Services, and when Pandemic Restrictions permit, provide the City with a written plan for the resumption of the Goods and Services.

8. CHANGES

8.1 The City may, without invalidating the Contract, change the Work by adding to or deducting from the Work in which event the Construction Schedule will be adjusted.

8.2 The Contractor will not proceed with any Change without a written Change Order signed by the City.

- 8.3 The Contractor's Overhead and profit will not be allowed on Change Orders paid for from allowances specified in the Contract.
- 8.4 The value of a change in the Work shall be determined by one or more of the following methods:
- (a) by estimate and acceptance in a lump sum; or
 - (b) by unit prices as set out in the Contract, or subsequently agreed upon; or
 - (c) by actual cost and an allowance for Overhead and profit as follows:
 - 1. Contractor's Overhead and profit on expenditures from cash allowances, shall be included in the Contract Price, except the Contractor is entitled to additional Overhead and profit only on the portion of the change greater than the cash allowance. If the change is less than the cash allowance the Contract Price shall be decreased by the amount of the change without adjustment for the Contractor's Overhead and profit;
 - 2. for changes in the Work not covered by cash allowances:
 - (i) if there is no increase or decrease in the Contract Price the Contractor is not entitled to any Overhead and profit on the change,
 - (ii) if the Contract Price is increased, the Contractor is entitled to an additional:
 - .1 10% Overhead and profit on Work performed directly by the Contractor, and
 - .2 5% on Work performed by the Subcontractor, only on the portion of the increase in the Contract Price, and
 - .3 0% on design services and work performed by the Contractor's consultants;
 - (iii) if the Contract Price is decreased by the change the Contractor is not entitled to Overhead and profit on the reduction in the Contract Price;
 - 3. the Subcontractor or the sub-subcontractor Overhead and profit shall be 5% of the actual cost of all Subcontractor's or sub-subcontractor's changes in the Work; and
 - 4. where the change involves the substitution of one type of Work and/or Product for another the actual cost of the change, shall be the net difference in the actual cost without any entitlement to Overhead and profit."

9. SITE CONDITIONS

- 9.1 The Contractor acknowledges and agrees that:
- (a) it has had the opportunity to undertake additional examinations or subsurface investigations, or both, of the Place of Work, including any buildings or structures involved with the Work, in order to satisfy itself as to site conditions, including subsurface conditions and the impact they could have on the Work and the Contract; and
 - (b) it is not entitled to any adjustment in the Contract, or to any other remuneration or damages whatsoever, in any way connected with the site conditions at the Place of Work, including subsurface conditions.

10. DOCUMENTS

- 10.1 The Contractor will keep one copy of the Contract, including the schedules and all Drawings, specifications and shop drawings, at the Place of Work in good order and available for review by the City's Representative, and deliver a complete set to the City upon Substantial Performance of the Work.

10.2 The Contractor agrees that the City is hereby granted an unconditional and irrevocable perpetual license to reproduce and use, in whole or in part, and for any purpose or other project or work the City desires, all matters contained in or set out in the Contract including all drawings and specifications and all models furnished by the Contractor, and the Contractor agrees that the license granted by this section comprises the copyright, industrial design, trademark and all other intellectual property therein.

11. TIME

11.1 The Contractor will proceed diligently and complete the Work in a good and workmanlike manner and strictly in accordance with the Construction Schedule.

11.2 If the Contractor is delayed in the performance of the Work by any act or neglect of the City, the Construction Schedule will be extended for such time as may be agreed by the City and the Contractor, acting reasonably.

11.3 The Contractor will, as required by the City, provide or up-date the Construction Schedule, showing the anticipated start and completion dates and durations of the major elements of the Work. Failure or refusal to provide a Construction Schedule or up-date will be a default.

11.4 Time is of the essence of the Contract.

12. TAXES AND DUTIES

12.1 The Contractor will pay all taxes, custom duties and other charges relating to the Work, and the supply and installation of all materials and equipment included in the Work.

12.2 Where an exemption of taxes, custom duties or other charges is applicable to the Contract by way of the Contractor filing claims for, or cooperating fully with the City and the proper authorities in seeking to obtain such refunds, the Contractor will make such applications and provide such cooperation. Refunds that are properly due to the City and have been recovered by the Contractor will be promptly refunded to the City.

13. BUILDER'S LIENS

13.1 The Contractor will immediately take steps to keep the Place of Work free of any builder's liens and certificates of pending litigation and the Contractor will defend and indemnify the City from any builder's lien or certificate of pending litigation filed as a result of the Work. The Contractor will pay all costs and expenses including actual legal costs incurred by the City as a result of any builder's lien or certificate of pending litigation related to the Work.

14. CITY DIRECTIONS

14.1 The Contractor will in all respects complete the Work in accordance with the City's requirements and standards and to the satisfaction of the City.

14.2 The City's Representative may at any time and from time to time inspect the Work.

- 14.3 The Contractor will comply with all directions from the City relating to the coordination of the Work with the activities of the City or with other contractors hired by the City, should there be any.
- 14.4 The Contractor will have total control of the Work and will be solely responsible for ensuring the Work is in accordance with the requirements of the Contract.

15. INSPECTIONS

- 15.1 The Contractor will retain one or more independent contractors with the relevant professional education, skill and experience, to carry out and report upon all testing and other inspection activities necessary to confirm the Work is in accordance with the requirements of the Contract. The Contractor will promptly provide copies of such reports to the City's Representative.
- 15.2 If Work is designated for tests, inspections or approvals by authorized agencies, the Contractor will give the City's Representative reasonable notice of when the Work will be ready for review and inspection.

16. USE OF PLACE OF WORK

- 16.1 The Contractor will confine its tools, machinery, equipment and materials to limits as may be established by the City's Representative, acting reasonably.
- 16.2 The Contractor will maintain the Place of Work in a tidy condition and free from the accumulation of waste products and debris, other than that caused by the City, other contractors or their employees.
- 16.3 Prior to application for the Certificate of Total Performance, the Contractor will remove all surplus products, tools, machinery and equipment, and any waste and debris, and leave the Place of Work clean and suitable for occupancy by the City.
- 16.4 The Contractor will not have exclusive use of the Place of Work, and will undertake the Work in cooperation with the City, and other users of the Place of Work as the City may permit or direct.
- 16.5 The Contractor will protect the property adjacent to the Place of Work from damage and will hold the City harmless from any claims which may arise as a result of the Contractor's operations under the Contract, or from failure to provide such protection, or both.
- 16.6 The Contractor will protect the Work, the Place of Work, the City's property from damage and will be responsible for any damage which may arise as a result of operations under the Contract, except damage which occurs as a result of actions of the City.
- 16.7 Should any damage occur to the Work, the Place of Work, or the City's property, or all of the aforementioned, for which the Contractor is responsible, the Contractor will:
- (a) make good such damage to the Work, and
 - (b) if the City so directs, make good such damage to the City's property,

and the Construction Schedule will be extended for such time as may be agreed by the City and the Contractor, acting reasonably.

16.8 The City may take possession of and use any completed portion of the Work regardless of the time for completion of the Work. Such possession or use will not be construed as final acceptance of the Work or portion.

17. PERSONNEL

17.1 Superintendent: The Contractor shall employ a competent senior representative at the Place of Work (the “**Superintendent**”) who shall have the responsibility to ensure that the Work is performed in compliance with the Contract Documents. The Contractor shall also employ necessary assistants for the Superintendent and the Superintendent and assistants shall be in attendance at the Place of Work while Work is being performed.

17.2 The Superintendent shall represent the Contractor at the Place of Work and instruction given to the Superintendent by the Consultant shall be held to have been given to the Contractor.

17.3 If the competence or performance of the Superintendent is not satisfactory to the Consultant then, on written request from the Consultant, the Contractor shall provide a satisfactory replacement. The Contractor shall not change the Superintendent without the consent of the Consultant, such consent not to be unreasonably withheld.

17.4 Workers: The Contractor shall maintain good order and discipline among the Contractor’s employees and the subcontractors engaged in the Work. The Contractor shall not employ, or permit subcontractors to employ, workers who are not skilled in the assigned task. The Contractor shall employ sufficient workers to perform the Work in compliance with the Construction Schedule.

18. APPLICABLE CODES, REGULATIONS AND POLICIES

18.1 The Contractor will perform the Work in full compliance with all applicable federal, provincial and municipal enactments, codes and regulations.

18.2 The Contractor shall comply with all applicable policies, procedures and instructions provided by the City.

19. CONTRACTOR’S WARRANTY

19.1 The Contractor represents, warrants and guarantees to the City that:

- (a) the Work will, in all respects, be constructed in a good and workmanlike manner;
- (b) the Work will be constructed in accordance with all applicable laws in effect at the date of the Contract and in accordance with the best current and prevailing industry practices;
- (c) the Work will be supplied, procured, fabricated, installed, constructed and completed in accordance with all requirements of the Contract;
- (d) all Work will be free from defects or deficiencies arising from faulty construction, faulty material, faulty equipment, faulty installation or faulty workmanship;
- (e) the Work as constructed will be fit for the purpose intended;
- (f) title to all Work and all parts thereof shall be free and clear of all liens, charges, encumbrances and adverse claims whatsoever; and

- (g) no part of the Work shall constitute an infringement of any patent, trademark, copyright or other proprietary interest.
- 19.2 The Contractor agrees to correct any deficiency in the Work arising from faulty construction, faulty material, faulty equipment, faulty installation or faulty workmanship, which appear:
- (a) in the case of any roof, in the period of five (5) years after Substantial Performance of the Work;
 - (b) for other Work, excluding Work covered by a warranty greater than twelve (12) months, in the period of twelve (12) months after the date of Substantial Performance of the Work; and
 - (c) for other Work in the period of any warranties.
- 19.3 The Contractor shall undertake all repairs or replacements at times that will minimize interference with the City's operations.
- 19.4 Nothing contained herein limits the rights of the City in relation to recovery for latent deficiencies in the Work or otherwise limits the rights of the City at law or in equity.
- 19.5 The Contractor shall not be relieved of its warranty obligations by reason of inspection, testing or acceptance of the Work or any portion thereof, or the issuance of a Certification of Completion, or a Certificate of Total Performance, or payment to the Contractor of any money under the Contract.

20. WAIVERS

- 20.1 The Contractor's application for the Certification of Completion shall constitute a waiver and release by the Contractor of any and all claims arising out of or relating to the Contract to the date of Substantial Performance. This waiver shall include without limitation those that might arise from the negligence or breach of contract by the City, the City's Representative and their respective employees, agents, officers and contractors, but does not include claims made by the Contractor in writing prior to such application in accordance with the provisions of the Contract Documents and delivered to the City's Representative prior to date of Substantial Performance and still unsettled.
- 20.2 The Contractor's application for the Certificate of Total Performance shall constitute a waiver and release by the Contractor of any and all claims arising out of or relating to the Contract that have arisen between the date of Substantial Performance and the date of the Certificate of Total Performance. This waiver shall include those that might arise from the negligence or breach of contract by the City, the City's Representative, and their respective employees, agents, officers and contractors, but does not include claims by the Contractor in writing prior to such application in accordance with the provisions of the Contract Documents and delivered to the City's Representative and still unsettled.

21. SUBSTANTIAL PERFORMANCE

- 21.1 The City or its Consultant will, after receipt of a written application from the Contractor for a Certification of Completion, make an inspection and assessment of the Work and issue a Certification of Completion or if the City decides that Substantial Performance has not been achieved, consult with the Contractor and advise the Contractor of the Work required to achieve Substantial Performance.

- 21.2 Prior to making application for Substantial Performance of the Work, the Contractor shall submit to the Consultant or City the following:
- (a) letters of assurance for professional design and review from those professionals engaged by the Contractor under the provisions of the Contract, including applicable sealed shop drawings;
 - (b) all required manufacturer's inspections, certifications, guarantees, warranties as specified in the Contract Documents;
 - (c) all maintenance manuals, operating instructions, maintenance and operating tools, replacement parts or materials as specified in the Contract Documents;
 - (d) certificates issued by all permit issuing authorities indicating approval of all installations, work and improvements requiring permits;
 - (e) certificates issued by all testing, commissioning, cleaning, inspection authorities and associations as applicable or specified in the Contract Documents; and
 - (f) all required record Drawings and as built and as-installed documents in the form specified in the Contract Documents, including the as-built Drawings.

If it is impracticable, with reasonable diligence and attention, for the Contractor to have obtained one or more of the items listed above prior to making application for Substantial Performance of the Work, then delivery of such items may be deferred until the date that is 30 days following Substantial Performance of the Work.

- 21.3 Together with its request or application for the Certificate of Completion of the Work, the Contractor shall provide to the Consultant and the City the following:
- (a) a sworn declaration in a form acceptable to the Consultant that all amounts relating to the Work, due and owing as of the end of the month covered by the invoice to third parties including all subcontractors and suppliers, have been paid;
 - (b) a current clearance letter from Workers' Compensation Board confirming that the Contractor is in good standing with and that all required remittances and assessments have been made to the Workers' Compensation Board;
 - (c) a statement compiling and reconciling all Change Orders and Change Directives; and
 - (d) any other documents to be submitted by the Contractor as specified in the Contract Documents or reasonably required by the Consultant or the City.

21.4 The City shall pay any builder's lien holdback as required by the *Builders Lien Act*, or on such other date as required by law, but the City may hold back the amounts for any deficiencies or filed builder's liens.

21.5 The City shall be the payment certifier responsible for payment certification for the Contractor under the *Builders Lien Act*. The Contractor shall be the person responsible for payment certification for all subcontractors, including the subcontractors, as required under the *Builders Lien Act*.

22. TOTAL PERFORMANCE

- 22.1 Before applying for a Certificate of Total Performance, the Contractor will provide to the City the following:
- (a) complete sets of digital drawings and specifications, in reproducible form, showing the as-built Work;

- (b) complete sets of maintenance manuals for any and all equipment comprised in the Work; and
- (c) the results of quality control testing by the Contractor.

22.2 The Contractor may apply for a Certificate of Total Performance and the procedure and requirements for the issuance of the Certificate of Total Performance shall include the provision by the Contractor of the sworn declaration and Workers' Compensation Board compliance documentation.

23. WORKERS' COMPENSATION BOARD AND OCCUPATIONAL HEALTH AND SAFETY

23.1 The Contractor agrees that it shall, at its own expense, procure and carry, or cause to be procured, carried and paid for, full Workers' Compensation Board coverage for itself and all workers, employees, servants and others engaged in the supply of the Goods and Services. The Contractor agrees that the City has the unfettered right to set off the amount of the unpaid premiums and assessments for the Workers' Compensation Board coverage against any monies owing by the City to the Contractor. The City will have the right to withhold payment under this Contract until the Workers' Compensation Board premiums, assessments or penalties in respect of the Goods and Services have been paid in full.

23.2 The Contractor will provide the City with the Contractor's Workers' Compensation Board registration number and a letter from the Workers' Compensation Board confirming that the Contractor is registered in good standing with the Workers' Compensation Board and that all assessments have been paid to the date thereof prior to the City having any obligations to pay monies under this Contract.

23.3 The Contractor agrees that it is the prime contractor for the Work as defined in the *Workers Compensation Act, R.S.B.C. 2019, c.1*, as amended. The Contractor will have a safety program in place that meets the requirements of the Workers' Compensation Board Occupational Health and Safety Regulation and the *Workers Compensation Act*. As prime contractor, the Contractor will be responsible for appointing a qualified coordinator for insuring the health and safety activities for the location of the Services. That person will be the person so identified in Schedule B of this Contract, and the Contractor will advise the City immediately in writing if the name or contact number of the qualified coordinator changes.

23.4 Without limiting the generality of any other indemnities granted by the Contractor in this Contract, the Contractor shall indemnify and save harmless the Indemnitees from and against all claims, demands, causes of action, suits, losses, damages, costs, liabilities, expenses, judgements, penalties and proceedings (including all actual legal costs) which any of the Indemnitees incur, suffer or are put to arising out of or in any way related to unpaid Workers' Compensation Board assessments owing from any person or corporation engaged in the performance of this Contract or arising out of or in any way related to the failure to observe safety rules, regulations and practices of the Workers' Compensation Board, including penalties levied by the Workers' Compensation Board.

23.5 The Contractor will ensure compliance with and conform to all health and safety laws, by-laws or regulations of the Province of British Columbia, including without limitation the *Workers Compensations Act* and Regulations pursuant thereto.

- 23.6 The City may, on twenty-four (24) hours written notice to the Contractor, install devices or rectify any conditions creating an immediate hazard existing that would be likely to result in injury to any person. However, in no case will the City be responsible to ascertaining or discovering, through inspections or review of the operations of the Contractor or otherwise, any deficiency or immediate hazard.
- 23.7 The Contractor understands and undertakes to comply with all Workers' Compensation Board Occupational Health and Safety Regulations for hazardous materials and substances, and in particular with the "Workplace Hazardous Materials Information System (WHMIS)" Regulations. All "Material Safety Data Sheets (MSDS)" shall be shipped along with the Goods and any future MSDS updates will be forwarded.

24. INSURANCE

- 24.1 The Contractor will obtain and carry, in forms and with insurers satisfactory to the City:
- (a) commercial general liability insurance in a wrap up form with a limit of five million (\$5,000,000) dollars inclusive per occurrence for bodily injury, death and damage to property;
 - (b) the insurance shall include the Contractor, the City, the project manager, all contractors, subcontractors, suppliers and tradesmen contributing to the Work;
 - (c) the insurance shall preclude subrogation claims by the insurer against anyone insured hereunder;
 - (d) the insurance shall include coverage for:
 - broad form products and completed operations,
 - City's and contractor's protective liability,
 - contractor's contingent liability,
 - blanket written contractual,
 - contingent employer's liability,
 - personal injury liability,
 - non-owned automobile,
 - cross liability,
 - employees as additional insured's, and
 - broad form property damage;

and where such further risk exists:

- shoring, blasting, excavating, underpinning, demolition, removal, pile-driving and caisson work, work below ground surface, tunnelling and grading, as applicable, and
 - operation of attached machinery.
- (e) product and completed operations liability insurance, to remain in full force and effect for a period of not less than twelve (12) months following completion of the Work;
 - (f) professional errors and omissions insurance in an amount not less two million (\$2,000,000) dollars insuring all professionals providing the Services from liability resulting from errors or omissions in the performance of the Services, with a 12-month maintenance period, for the Contractor's professional contractors and sub-contractors;
 - (g) course of construction insurance against "all risks" of physical loss or damage, and shall extend to cover all materials, property, structures and equipment while in transit or storage and during construction, erection, installation and testing, but such

insurance shall not include coverage for the Contractor's equipment of any description. Such insurance shall be maintained until Substantial Performance of the Work;

- (h) Automobile Liability insurance on all vehicles owned, operated or licensed in the name of the Contractor in an amount not less than less three million (\$3,000,000 dollars);
- (i) the insurance shall include as an insured, each contractor and subcontractor, project manager, architect and engineer who is engaged in the Work; and
- (j) the insurance will contain a waiver of the insurer's rights of subrogation against all insured except where a loss is deemed to have been caused by or resulting from any error in design or any other professional error or omission.

24.2 The Contractor will provide proof of the required insurance coverage prior to commencing the Work. Such proof will be in the form of a City of Surrey certificate of insurance.

24.3 The Contractor acknowledges that any requirement or advice by the City as to the amount of coverage under any policy of insurance will not constitute a representation by the City that the amount required is adequate and the Contractor acknowledges and agrees that it is solely responsible for obtaining and maintaining policies of insurance in adequate amounts.

24.4 If requested to do so, the Contractor will provide the City with a copy of insurance policies relating to the Work.

25. INDEMNIFICATION

25.1 The Contractor shall indemnify and hold harmless the City, its elected officials, its officers, agents and employees (collectively the "Indemnitees") from and against claims, demands, losses, costs, damages, actions, suits or proceedings by third parties that arise out of, or are attributable to, any act or omission or alleged act or omission of the Contractor, the Contractor's agents, employees or subcontractors or suppliers in performance of the Contract.

25.2 The City shall indemnify and hold harmless the Contractor, its agents and employees from and against claims, demands, losses, costs, damages, actions, suits, or proceedings arising out of or which are attributable to a lack of or defect in title or an alleged lack of or defect in title to the Place of Work.

26. DEFECTIVE WORK

26.1 Work that is defective ("Defective Work"), whether the result of poor design, poor workmanship, use of defective materials or damage through carelessness or other acts, and whether incorporated in the Work or not, which has been rejected by the City as failing to conform to the Contract will be removed promptly by the Contractor and replaced and re-executed promptly and properly at the Contractor's expense.

27. DEFAULT

27.1 If the Contractor:

- (a) is adjudged bankrupt, makes a general assignment for the benefit of creditors, or a receiver is appointed on account of its insolvency;
- (b) fails to supply competent supervision, properly skilled workers or proper materials;

- (c) fails to make prompt payment to its contractors, suppliers or workers;
- (d) fails to observe, or breaches the provisions of the Contract;
- (e) fails to remove and replace Defective Work;
- (f) abandons the Work; or
- (g) fails to adhere to the Construction Schedule;

the Contractor is in default of the Contract and the City may give the Contractor written notice to remedy such default. If the Contractor does not commence correction of such default within five (5) business days of receiving such notice and diligently pursue correction of such default, the City may suspend the Work or terminate the Contract, without prejudice to any other right or remedy the City may have.

27.2 The parties agree that if the City terminates the Contract under the conditions set out above, the City shall pay the Contractor:

- (a) for all Work performed, plus reimbursement for expenditures made on account of the remaining Work, but shall not pay for profit and Overhead on account of the remaining Work or any additional costs incurred because of the termination.

27.3 If the City terminates the Contract, the City may:

- (a) take possession of the Work and materials, and utilize the Contractor's machinery and equipment at the Place of Work to the extent third party rights are not impaired, and bring the Work to completion by whatever method the City may deem expedient; and
- (b) upon completion of the Work, charge the Contractor the full cost of completing the Work, as certified by the Consultant, including remedying any deficiencies in the Work.

28. CORRECTION BY CITY

28.1 In addition to the right of termination, if the Contractor fails to comply with a provision of the Contract, including failure to remove and replace Defective Work, the City may, without prejudice to any other remedy it may have, correct such default and charge the Contractor the full cost of correcting the default.

29. DISPUTE RESOLUTION

29.1 The parties will make reasonable efforts to resolve any dispute, claim, or controversy arising out of this Contract or related to this Contract ("Dispute") using the dispute resolution procedures set out in this section.

Negotiation

The parties will make reasonable efforts to resolve any Dispute by amicable negotiations and will provide frank, candid and timely disclosure of all relevant facts, information and documents to facilitate negotiations.

Mediation

If all or any portion of a Dispute cannot be resolved by good faith negotiations within 30 days, either party may by notice to the other party refer the matter to mediation. Within 7 days of delivery of the notice, the parties will mutually appoint a mediator. If the parties fail

to agree on the appointment of the mediator, then either party may apply to the British Columbia International Commercial Arbitration Centre for appointment of a mediator. The parties will continue to negotiate in good faith to resolve the Dispute with the assistance of the mediator. The place of mediation will be Surrey, British Columbia. Each party will equally bear the costs of the mediator and other out-of-pocket costs, and each party will bear its own costs of participating in the mediation.

Litigation

If within 90 days of the request for mediation the Dispute is not settled, or if the mediator advises that there is no reasonable possibility of the parties reaching a negotiated resolution, then either party may without further notice commence litigation.

30. ASSIGNMENT AND SUBCONTRACTS

- 30.1 The Contractor agrees to preserve and protect the rights of the parties under the Contract with respect to Work to be performed under subcontract and to:
- (a) enter into contracts or written agreements with subcontractors to require them to perform their work in accordance with and subject to the terms and conditions of the Contract Documents; and
 - (b) be as fully responsible to the City for acts and omissions of subcontractors and of persons directly or indirectly employed by them as for acts and omissions of persons directly employed by them. The Contractor agrees that he will incorporate the terms and conditions of the Contract Documents into all subcontract agreements entered into with subcontractors.
- 30.2 The Contractor agrees to employ those subcontractors proposed by in writing and accepted by the City at the signing of the Contract. The Contractor shall not, without the written consent of the City, change a subcontractor who has been engaged in accordance with the Contract.
- 30.3 The City may, for reasonable cause, object to the use of a proposed subcontractor and require the Contractor to employ one of the other subcontract tenderers.
- 30.4 In the event that the City requires a Change from a proposed subcontractor, the Contract Price shall be adjusted by the difference in cost and mark-up occasioned by such required Change.
- 30.5 The Contractor shall not be required to employ as a subcontractor a person or firm to whom he may reasonably object.
- 30.6 The Contractor may, upon reasonable request and at its discretion, provide to a subcontractor information as to the percentage or quantity of the subcontractor's work which has been certified for payment.
- 30.7 Nothing contained in the Contract Documents shall create a contractual relationship between a subcontractor and the City.

31. NOTICES

31.1 Any notice, report or other document that either party may be required or may wish to give to the other should be in writing, unless otherwise provided for, and will be deemed to be validly given to and received by the addressee, if delivered personally, on the date of such personal delivery, if delivered by facsimile, on transmission, or it by mail, five calendar days after posting. The addresses for delivery will be as follows:

(a) The City:
City of Surrey – Engineering Operations
13450 – 104 Avenue
Surrey, B.C., Canada, V3T 1V8

Attention: Tina Oakley
Engineering Assistant 3

Business Fax: <<Insert>>
Business Email: <<Insert>>

(b) The Contractor: [Insert full legal name and business address]

Attention: [Insert Contractor contact name]
[Insert title]

Business Fax: <<Insert>>
Business Email: <<Insert>>

(c) The Consultant: Thurber Engineering Ltd.,
#900 – 1281 West Georgia Street
Vancouver, British Columbia V6E 3J7

Attention: Bryant Ward
Geotechnical Engineer

Business Fax: <<Insert>>
Business Email: <<Insert>>

32. FORCE MAJEURE

32.1 Each party will be excused from performance under this Contract for any period and to the extent that it is prevented from or delayed in performing any obligations pursuant to this Contract, in whole or in part, by any Force Majeure Event. The affected party may invoke this section by promptly notifying the other party in writing of the nature and estimated duration of the suspension of the party's performance. In such event, the affected party will be excused from further performance of obligations so affected for so long as such Force Majeure Event prevails and such party continues to use its best efforts to recommence performance whenever and to whatever extent possible without delay (except that a party is not required by this Section to compromise its position with respect to or settle any labour dispute in order to satisfy its obligations hereunder). For the avoidance of doubt, nothing in

this Section will affect the City's right to terminate this Contract for convenience as provided in Section 27.

- 32.2 For the purposes of this Contract, "Force Majeure Event" will mean the occurrence of an event or circumstance beyond the reasonable control of a party, provided that (i) the non-performing party is without fault in causing or preventing such occurrence and (ii) such occurrence cannot be circumvented through the use of commercially reasonable alternative sources, workaround plans or other means. Force Majeure Events will include acts of federal, provincial, local or foreign governmental authorities or courts, war or insurrection, civil commotion, catastrophic events, including without limitation earthquakes, catastrophic weather conditions, pandemics, fires, floods, storms or other elements of nature or acts of God, and labour disturbances that affect the party claiming force majeure.

33. EXTRA WORK

- 33.1 The City may invite the Contractor to perform Extra Work as part of this Contract by issuing a Contemplated Change Order for the Extra Work.
- 33.2 It is a condition of a Contract that the City is not obligated at any time to make a request to the Contractor to perform Extra Work. The City reserves the right to retain the services of other independent contractor(s) or utilize its own employees to perform any Extra Work that is required to be performed and the Contractor and its subcontractors, if any, shall cooperate fully with other independent contractor(s) retained by the City to perform and/or complete any Extra Work and shall so carry on their work that other cooperating contractors shall not be hindered, delayed, or interfered with in the progress of their work, and so that all of such work shall be finished and complete of its kind.
- 33.3 The Contractor is under no obligation to accept an invitation to perform Extra Work and the City is under no obligation to offer work that might be undertaken by the Contractor as Extra Work.
- 33.4 If the City issues a Contemplated Change Order for Extra Work, the Contractor shall promptly either decline the opportunity to perform the Extra Work, or respond with a Quotation.
- 33.5 The City is under no obligation to accept the Contractor's Quotation for Extra Work and may elect to have the Extra Work performed by others.
- 33.6 In no event shall the Contractor proceed with any work that the Contractor intends or expects to be treated as Extra Work without first receiving a written Change Order approving the work as Extra Work.

34. GENERAL

- 34.1 The Contract contains the entire agreement between the City and the Contractor and may not be amended except in writing and signed by both parties.
- 34.2 All schedules and appendices attached to the Contract will be read and construed as forming part of the Contract.

- 34.3 The Contract will be interpreted in accordance with the laws of the Province of British Columbia.
- 34.4 The headings are included in the Contract for convenience only and will not be referred to in interpreting the Contract.
- 34.5 No consent or waiver by either party to or of any breach or default by the other under the Contract will be effective unless in writing, nor will such consent or waiver be relied on as consent to or waiver of any other breach or default of the same or any other obligation.
- 34.6 Each party will, at its own expense, execute and deliver all such further agreements and documents and do such acts and things as may be reasonably required to give effect to the Contract.

IN WITNESS WHEREOF the parties hereto have executed the Contract on the day and year first above written.

CITY OF SURREY

by its authorized signatory(ies):

Insert Name of Person Signing

Insert Name of Person Signing

Insert Title of Person Signing

Insert Title of Person Signing

<<INSERT FULL LEGAL NAME OF CONTRACTOR>>

by its authorized signatory(ies):

Insert Name of Person Signing

Insert Name of Person Signing

Insert Title of Person Signing

Insert Title of Person Signing

SCHEDULE B – APPENDIX 1 SPECIAL PROVISIONS

S.P.1 Definitions

In these Special Provisions, unless the context otherwise requires,

“Section” means section of the Specifications or the Conditions of Contract.

“Item” means item of Fees and Payments – Schedule C – Form of Quotation.

S.P.2 Scope of Work

The scope of Work covered under this project consists of the furnishing of all superintendence, overhead, skilled labour, materials, tools, equipment, insurance, fuel, transportation and all things necessary for and incidental to the satisfactory performance and completion of construction and improvements of 156 Street Paving and Road Base Improvements, located at 6177 156 Street, Surrey, British Columbia (the “**Place of Work**”) in strict accordance with the Specifications and accompanying Drawings and subject to all terms and conditions of the Contract.

The general component of the Work includes two phases:

Scope - Phase 1

- Pre-construction meeting on site with Project Manager
- Supply & Coordinate with environmental consultant to manage implications with adjacent ditches.
- Liaise with property owners affected by project scope

- Saw cut existing road surface, excavate 1.2m relative to final grade.
- The subgrade should be reviewed and approved by the Consultant prior to placement of the pumice.
- Supply & Install geo-textile wrapped red pumice (Tephralite) in 150mm to 300mm lifts
- Pumice shall be wrapped in nonwoven geotextile such as Nilex 4553 or approved equivalent.
- Minimum overlap between sheets of nonwoven geotextile is 500mm.
- Each lift shall be compacted with a minimum of 8 passes from a Cat CB14 smooth double drum steel roller or equivalent imposing static contact force of about 1,000 kg/m width of each roller face. Vibratory compaction is not permitted to reduce the pulverization of the aggregates.
- Re-construct Road structure per Thurber DWG 33050-1
- Coordinate with Property Owner of 6177 156 ST
- Supply and coordinate environmental consultant to observe works related to adjacent ditches.
- Supply and install 0.3m of granular cover over Pumice in the ditch. Existing pavement gravels could be salvaged and used for this.
- road booking and application for applicable permits

Scope - Phase 2

- The pumice acceptance should be reviewed and approved by Thurber prior to placement of the pavement/road structure.
- Supply & Coordinate with environmental consultant to manage implications with adjacent ditches.
- Liaise with the property owners affected by the project scope.
- Re-construct Road structure per Thurber DWG 33050-1
- Provision of road base materials
- 200 mm Crushed Granular Sub-base (CGSB) or Select Granular Sub-base (SGSB), salvaged gravels from the existing pavement may also be used
- 100 mm Crushed Granular Base (CGB)
- 100 mm Hot Mix Asphalt, Upper Course #2 (HMA)
- The material used in the pavement section should conform to the requirements of the Master Municipal Construction Document (MMCD), Volume 2, 2009 Edition.
- The subbase layer should extend a minimum of 0.5 m beyond the edge of pavement. Base and subbase should be compacted to a minimum of 95% Modified Proctor Maximum Dry Density (MPMDD) in loose lifts not to exceed 300 mm thickness. Density testing should be completed to determine if the specified density is achieved.

The detailed scope of Work is as described in the Special Provisions (Schedule B – Appendix 1) and Contract Drawings (Schedule B – Appendix 2).

Where a project specification does not exist, the default project specification shall adhere to MMCD specifications (excluding measurement and payment descriptions). The City has project specifications to MMCD which included herein. These project specifications shall take precedence over the basic MMCD specifications.

The lack of and/or omission of detailed specifications does not minimize the acceptable levels of service and only the best commercial practices are acceptable.

Contractor to comply with all BC Plumbing Code, BC Fire Marshal, BC Workers' Compensation Board, National Building Code of Canada, BC Boiler Inspector, BC Electrical Inspector, National Fire Protection Association, and any other authorities having local jurisdiction. Failure to abide by these rules and regulations will result in being immediately escorted from the work site.

General Requirements

All work shall conform to the Master Municipal Construction Documents (MMCD) Volume II, City of Surrey Supplementary Master Municipal Construction Documents: Supplementary Specifications and Supplementary Standard Drawing, 2020 including in the City of Surrey Design Criteria Manual. All materials incorporated into the work shall conform to this Contract, to the City of Surrey's Engineering Standards and to the latest edition of the appropriate specifications of the American Society for Testing and Materials (hereinafter abbreviated as ASTM) or to other standards expressly specified. All provisions in the ASTM and other standards specifications specified regarding materials,

workmanship, finish, inspection, and rejection are hereby made part of the specifications as far as they are applicable and not inconsistent with the specifications.

Materials incorporated in the work, which are not specifically covered in the specifications, shall be of satisfactory quality and acceptable to the Consultant and to the owners of the applicable utilities.

S.P.3 Liquidated Damages For Late Completion

If the Contractor fails to meet the Milestone Date for Substantial Performance, or any other specified Milestone Date, as set out in Schedule C - Form of Quotation, as may be adjusted pursuant to the provisions of the Contract Documents, then the City may deduct from any monies owing to the Contractor for the Work:

- (1) as a genuine pre-estimate for the City's increased costs for the Contract Administrator and their field representative caused by such delay an amount of \$100.00 per calendar day, or pro rata portion, for:
 - a. each day that the Work, or portion of Work, was completed after the specified Milestone Date for that applicable Work, or portion of Work; and
 - b. each day that actual Substantial Performance is achieved after the Substantial Performance Milestone Date; plus.
- (2) all direct out of pocket costs, such as, but not limited to: the City's own staff costs; costs for safety, security, or equipment rental required; and costs for temporary surface restoration and increased temporary maintenance which may be reasonably incurred by the City as direct result of such delay; plus
- (3) any loss to the City of third-party funding which the City was to receive if the Work, or a particular portion thereof, was not completed before a Milestone Date.

If the monies owing to the Contractor are less than the total amount owing by the Contractor to the City under (1), (2) or (3) then any shortfall shall immediately, upon written notice from the City, and upon Substantial Performance, be due and owing by the Contractor to the City.

S.P.4 Consultant

The Consultant Thurber Engineering Ltd., #900 – 1281 West Georgia Street Vancouver, British Columbia V6E 3J7. Telephone: _____ Fax: _____ E-mail: _____, represented by: Bryan Ward, will be the City's representative during the performance of the Work until the Work is complete. The Consultant will advise and consult with the City. The City's instruction(s) to the Contractor may be forwarded through the Consultant.

The Consultant may periodically visit the Work site(s) to become familiar with the progress of the Work, the quality of the Work being provided and to determine if the Work is proceeding in accordance with the Contract Documents.

S.P.5 Payment Certifier

The Payment Certifier is the City of Surrey Engineering Operations Telephone: 604-598-5788 Fax: 604-591-7836 E-mail: toakley@surrey.ca, represented by: Engineering Assistant, Tina Oakey.

S.P.6 Project Manager

The Project Manager City of Surrey Engineering Operations, 13450 – 104 Avenue Surrey, B.C., Canada, V3T 1V8. Telephone: 604-598-5778 E-mail: toakley@surrey.ca, represented by: Tina Oakley, Engineering Assistant 3.

S.P.7 Schedule of Quantities and Prices

This Contract is a combination of unit prices and lump sums.

Any Work item that is not implicitly described, or inferred, as being included in any regular item or optional item in the Schedule of Prices shall be included in the lump sum price proposed for 'Miscellaneous Work'.

For unit price items, the number of units for each item (i.e., quantities) as listed in the Schedule of Prices has been estimated. Actual quantities will vary. Payment will be made based on the measurement of the actual quantity of Work incorporated into the Contract.

The unit prices for each item will be applicable regardless of the variation in the actual quantity as compared to the estimated quantity. No adjustment to the unit price will be considered as a result of such variation.

S.P.8 Coordination

The Contractor will be responsible for coordinating with other contractors City forces, outside agencies and others as required throughout the Contract. While it is not an all-inclusive list of potential coordination requirements, the following list of known activities that the Contractor should be aware of when planning for coordination:

Other contractors

The Contractor will be required to coordinate their schedule and work program with the following construction activities, which will be tendered to other contractors by the City and will be construction concurrent with the Contract.

"NONE"

S.P.9 Availability of Place of Work

The Place of Work is available for the immediate commencement of the Work. The anticipated start date is October 31, 2022. The Contractor will schedule the Work accordingly.

S.P.10 Quality Assurance

The Work shall be performed by a Contractor experienced in in road reconstruction and lightweight fill placement or similar nature and scope. Subject to approval of the City, the Contractor may subcontract any work to be performed under this Contract. However, the election to subcontract work shall not relieve the Contractor from responsibility or liability which it has assumed under this Contract and the Contractor shall remain liable to the same extent that its liability would attach, as if the Work had been performed by the Contractor's own employees.

All materials and hardware to be supplied by the Contractor, which are not specifically described herein, shall be of suitable construction, composition and quality to achieve their intended function.

S.P.11 Job Conditions

The Contractor shall be familiar with the project location and how the existing conditions will affect their work. This is so that no misunderstanding may arise afterwards as to the character or as to the extent of the work to be done; likewise, in order to advise and acquaint themselves with all precautions to be taken in order to avoid injury to person or property of another. No additional compensation will be granted because of any unusual difficulties or City's special requests that may be encountered in the execution of any portion of the work.

S.P.12 Environmental Protection

The Contractor warrants that it will not produce or discharge in any manner or form, directly or indirectly, chemicals or toxic substances into the environment and that all equipment used will not pose a hazard to, or harm or adversely affect anyone coming into contact with it and covenants and agrees to provide the City with an environmental plan (where applicable), acceptable to the City, which plan shall outline the procedures to be followed by the Contractor to prevent the production or discharge of chemicals or toxic substances into the environment and the actions to be taken should the discharge occur.

The Contractor will be responsible to take all necessary measures to comply with the requirements of the Federal and Provincial environmental protection agencies, City by-laws, the *Waste Management Act*, R.S.B.C. 1996, c. 482, as amended and any other applicable acts and regulations in respect to air, earth and water pollutants.

The Contractor will report to the City immediately if any hazardous or toxic materials are found or discovered. Such materials are to be left untouched and the area is to be marked and cordoned off to prevent any access to the workers and the public.

The Contractor will be responsible to establish and submit a waste disposal plan to the City for review prior to commencing the Work.

S.P.13 Safety

The Contractor shall be solely responsible for construction safety at the Place of Work as and to the extent required by applicable construction safety legislation, regulations and

codes, including *Workers Compensation Act* and applicable regulations, and by good construction practice.

Safety – Fall Protection - The Contractor and any trade contractor shall include for all fall protection equipment and requirements necessary to complete scope of Work in a safe manner and in compliance with the site safety plan, which includes: Fall protection must be worn when working at a height over 6 ft. or as the hazards present necessity.

Safety – On-Site Hazards and Utilities Present – Before commencing any Work at the Place of Work, the Contractor is to make themselves aware of any and all on-site hazards including but not limited to underground and overhead utilities near to the Work area and to take every precaution necessary to eliminate any risk that may exist. If an on-site hazard exists that is causing or may cause injury to any person(s), the Contractor is to take immediate action to mitigate risk and damage, and then notify the City and the City's consultant (if any).

S.P.14 Traffic Management and Notices to Residents

The Contractor shall comply with all the requirements of applicable laws, rules, regulations, codes and orders of the City 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 Total Quotation Price.

The Contractor to always ensure the safety of the public (vehicular and pedestrian traffic) and its employees while performing these services. The Contractor to be responsible at their expense, where necessary for all temporary traffic marking, signing, flagging and control while performing work covered by this agreement. In general, the following procedures must be followed.

The Contractor is responsible, when applicable, to book the road when required.

These are specified in accordance with the Province of British Columbia, Ministry of Transportation & Highways' the Traffic Control Manual for Work on Roadways, Field, and Office Edition, (2020 Update).

Please visit <https://www2.gov.bc.ca/gov/content/transportation/transportation-infrastructure/engineering-standards-guidelines/traffic-engineering-safety/trafficmanagementmanual/2020trafficmanagementmanual> for the latest updates.

Additional services to ensure safety may be required at the discretion of the Engineer or designate. The Contractor to provide such additional services as directed at no extra costs.

Contractor shall hand deliver notices to all residents affected by the works a minimum of 2 days prior to commencing work.

S.P.15 Construction Access and Traffic Maintenance

The designated access to and from the construction site must be approved by the City. All construction traffic must use the designated access including heavy equipment, trucks and workers' personal vehicles.

Construction access to the Place of Work areas within existing building for workers and delivery of materials shall be designated by the City. No other existing exits or entrances shall be used by workers for access or for delivery of materials.

The Contractor shall conduct construction operations with minimum interference to adjacent roadways, sidewalks and access facilities in general and shall keep such areas free from materials, debris and equipment at all times. The Contractor shall not close or obstruct existing roadways, sidewalks, parking areas or delivery points and shall not place or store materials or park cars on same.

The Contractor shall cooperate in all ways with the City in all matters concerning necessary interference with normal operation of the Place of Work. Minimizing disruption of normal facility/site operation and vehicular movements at the Place of Work is an essential requirement of the Contract.

The Contractor shall:

- (a) Include project phasing strategies in the Construction Schedule to minimize traffic disruption on the Place of Work.
- (b) Should provide one (1) week minimum notice to the City, previous to any disruption or alteration of access to the Place of Work. The Contractor shall provide all signs, pylons and flag persons necessary to direct vehicular traffic around work in progress.
- (c) The Contractor shall maintain access to existing fire hydrants and Siamese connections and shall keep entrances and exits to existing and adjacent buildings clear at all times.

S.P.16 Proposed Substitutions

Acceptance of material specifications that are an equal or higher level of quality compared to the material specified will not be unreasonably withheld. Quotations for equipment substitutions to be made as separate line items and as additive or deductive alternates to the base equipment bid.

Evaluation of the substitutions to be made solely by the City whose decision shall be final.

S.P.17 Manuals

Installation and Operator's manuals should accompany equipment delivered. Electrical, mechanical, and plumbing booklets should be provided to the City, as per the specifications.

All manual(s) should be furnished prior to payment and delivered to the City. Failure to deliver all manual(s) that are ordered may result in non-payment until all manual(s) are received.

S.P.18 Hours of Work

Refer to the City of Surrey applicable bylaws for acceptable work hours.

No work is to be performed outside of these acceptable work hours without written approval from the City, and with approval by obtaining a noise variance if required.

All work shall conform to local bylaws, including building and parking bylaws and municipal guidelines and regulations. This includes Building Bylaws and Noise Restrictions, which will apply to all work being completed. Where work or the work schedule does not permit compliance with the Bylaws, the Contractor shall request permission from the City for special exemptions from the bylaws. No extra compensation, in any form (e.g., overtime, etc.) will be given without prior written approval from the City.

S.P.19 Damage

The Contractor will be responsible for any and all damages to property or persons and for any losses or costs to repair or remedy the Works as a result of any negligent act or omission, or misconduct in the performance of the Works and its subcontractor's Work and shall indemnify and hold harmless the City, its officers, agents and employees from all suits, claims, actions or damages of any nature whatsoever resulting therefrom unless such loss, damage, injury or loss results from or arises out of the error, omission and/or negligent acts of the City, or its officers, for subsequent correction of any such error, omission and/or negligent acts or of its liability for loss or damage resulting therefrom. Except as to professional liability, these indemnities shall not be limited by the listing of any insurance coverage.

S.P.20 Worksite Conduct

All labourers and workers, while working in and around the 6177 156 Street, Surrey, British Columbia, and the City facilities, shall act in a professional manner. The Contractor is to enforce proper discipline and decorum among all labourers and workers on the worksite and is to control, among other things: 1) noise, including music; 2) the use of offensive language; 3) smoking or drinking of alcoholic beverages on the worksite; 4) physical violence; 5) riding in the passenger elevators; 6) thievery; and 7) the transportation of articles or materials deemed hazardous. If the City determines, in its sole discretion, that any labourer need to be removed due to his or her failure to comply with the terms of this provision, the Contractor will remove such labourers from the worksite immediately.

Alcohol and drugs are not tolerated on this site at any time including anyone deemed to be under the influence shall be escorted off site.

S.P.21 Cleanliness and Disposal of Unwanted Materials

Continuous daily clean up of the work areas shall be performed by the Contractor and trade contractor throughout the performance of the Work and will be undertaken in accordance with the Contractor's waste management plan. Clean up of waste products and debris generated by the Contractor and any trade contractor outside of the building and on the site shall be the responsibility of the Contractor. Should the City be required to clean up the work of the Contractor or trade contractor the cost of such clean up will be recovered from the Contractor.

The Contractor is to dispose of all debris, trash and unsuitable materials collected under this Contract off site. The Contractor is solely responsible for any and all damages done, or regulations violated in the disposal of waste materials and for any other actions, which the Contractor performs.

The Contractor warrants that it will produce or discharge in any manner or form, directly or indirectly, chemicals or toxic substances into the environment and that all equipment used will not pose a hazard to, or harm or adversely affect anyone coming into contact with it and covenants and agrees to provide the City with an environmental plan (where applicable), acceptance to the City, which plan shall outline the procedures to be followed by the Contractor to prevent the production or discharge of chemicals or toxic substances into the environment and the actions to be taken should the discharge occur.

The Contractor is responsible to take all necessary measures to comply with the requirements of the Federal and Provincial environmental protection agencies, City by-laws, the *Waste Management Act*, R.S.B.C. 1996, c. 482, as amended and any other applicable acts and regulations in respect to air, earth and water pollutants.

S.P.22 Accidents; Equipment Safety

Any and all accidents, regardless of how minor, involving another person, private property, or vehicle, shall be reported immediately to the Surrey R.C.M.P. and a report requested. The City shall also be contacted immediately and be provided a copy of any reports.

The Contractor shall assume all responsibility for damages to property or injuries to persons, including accidental death, attorneys fee and costs of defense which may be caused by Contractor's performance of this Contract, whether such performance be by itself, its subcontractor, or anyone directly or indirectly employed by Contractor or its subcontractors and whether such damage shall accrue or be discovered before or after termination of this Contract.

The Contractor's equipment operators shall maintain good safety and driving records, and use extreme caution during the performance of the Work.

S.P.23 Permits and Fees

The Contractor is to secure and pay for any additional permits, and governmental fees, licenses and inspection necessary for proper execution and completion of the Work which is customarily secured after execution of an agreement and which is legally required. The Contractor is to comply with and give notices required by laws applicable to performance of the Work.

S.P.24 Final Completion and Payment

When the Work is finally complete and the Contractor is ready for a final inspection, the Contractor is to notify the City and the Consultant, in writing. Thereupon, the Consultant will perform a final inspection of the Work. If the Consultant confirms that the project is complete including all deficiencies, is in full accordance with this Contract and the Contractor has performed all of its obligations, is hereby entitled to submit for final payment, subject to the *Builders Lien Act*.

S.P.25 Workmanship

- (a) General: Workmanship shall be of best quality, executed by workers experienced and skilled in respective duties for which they are employed. Do not employ any unfit person or anyone unskilled in their respective duties. The City reserves the right to dismiss for site, workers deemed incompetent, careless, insubordinate or otherwise objectionable. Decisions as to quality of fitness of workmanship in cases of dispute rest solely with the City, whose decision shall be final.
- (b) Coordination: Ensure cooperation of workers in laying out work. Maintain efficient and continuous supervision.
- (c) Protection of Work in progress: The Contractor is to adequately protect Work completed or in progress. Work damaged or defaced due to failure in providing such protection is to be removed and replaced, or repaired, as directed by the City at no cost to the City.

Should any dispute arise regarding the quality of the workmanship, materials or products used in the performance of the Work, the final decision regarding the acceptable quality of the workmanship, and fitness of the materials and products rests strictly with the City.

Additionally, all Works required hereunder will be performed as promptly as possible, and in any event within the time stated by the City, and such Work will be subject to approval and acceptance of the City, but such approval and acceptance will not relieve the Contractor from the obligation to correct any incomplete, inaccurate or defective work, all of which shall be promptly remedied by the Contractor on demand, without cost to the City.

S.P. 26 Compliant with COVID 19 Policy

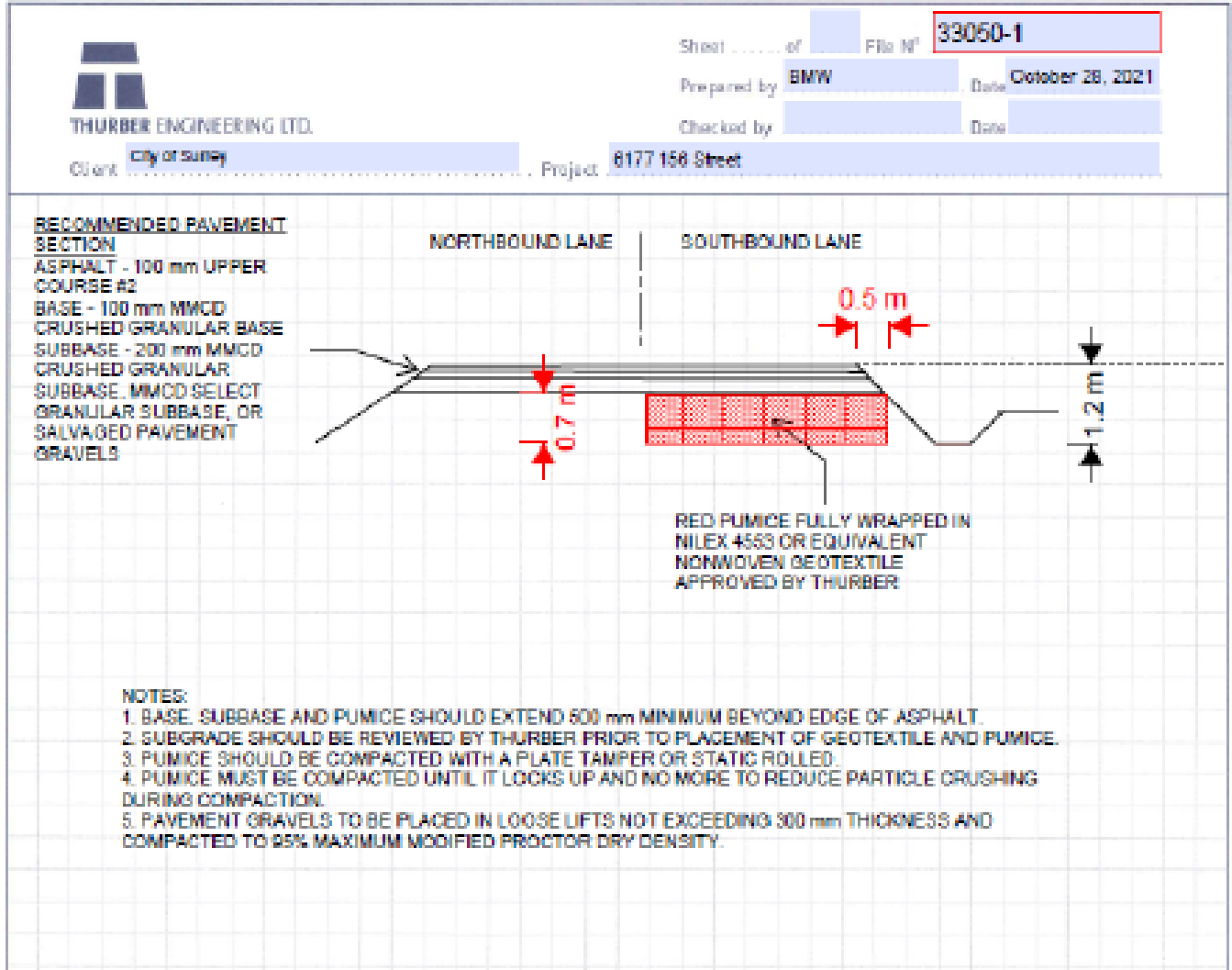
It is a material term of this Contract that the Contractor, and any personnel and subcontractors performing the Work who (a) will enter City facilities or (b) will be in close physical proximity to City staff outdoors, comply with the City's COVID 19 policy(ies) and requirements, including with respect to Contractor's personnel will be fully vaccinated against COVID-19 and require their personnel to provide proof of vaccination status in a form acceptable to the City prior to beginning work each day on-site. The Contractor will immediately remove any personnel or subcontractors who do not meet, maintain or comply with any such policies and requirements.

The personal information collected will be held in confidence by the City and will be used only to monitor compliance with, and to administer, the City's vaccination policies. The City will collect this personal information under s. 26(c) of the *Freedom of Information and Protection of Privacy Act*.

END OF PAGE

**SCHEDULE B - APPENDIX 2
CONTRACT DRAWINGS - (PROJECT)**

The following Contract Drawings are included as part of this RFQ.



Tie into Existing Pavements

The Contractor shall match to the existing asphalt pavement, at the locations indicated shown in the sketch below.

FIGURE 1 - OVERVIEW OF PAVEMENT CONDITION AT 6177 156 STREET



**SCHEDULE B
APPENDICES 3 THROUGH 7**

Information from Schedule C of the RFQ will be inserted at the time of the award of the Contract:

- Appendix 3 Schedule of Quantities and Prices
- Appendix 4 Construction Schedule
- Appendix 5 Key Personnel, Sub-Contractors, and Material Suppliers

The following forms to be included at the time of the award of the contract:

- Appendix 6 Prime Contractor Designation
- Appendix 7 Contractor Health & Safety Expectations (Responsibility of Contractor(s))



SCHEDULE C – FORM OF QUOTATION

RFQ Title: 156 Street Paving and Road Base Improvement

RFQ No: 1220-040-2022-096

CONTRACTOR

Legal Name of Contractor: _____

Contact Person and Title: _____

Business Address: _____

Business Telephone: _____

Business Fax: _____

Business E-Mail Address: _____

TO:

CITY OF SURREY

City Representative: Sunny Kaila, Manager, Procurement Services

Email for PDF Files: purchasing@surrey.ca

1. If this Quotation is accepted by the City, a contract will be created as described in:
 - (a) the Contract;
 - (b) the RFQ; and
 - (c) other terms, if any, that are agreed to by the parties in writing.
2. Capitalized terms used and not defined in this Quotation will have the meanings given to them in the Contract and RFQ. Except as specifically modified by this Quotation, all terms, conditions, representations, warranties and covenants as set out in the Contract and RFQ will remain in full force and effect.
3. I/We have reviewed the sample Contract (Schedule B). If requested by the City, I/we would be prepared to enter into the sample Contract, amended by the following departures (list, if any):

Section

Requested Departure(s) / Alternative(s)

4. The City requires that the successful Contractor have the following in place **before providing the Work:**

- (a) Workers' Compensation Board coverage in good standing and further, if an "Owner Operator" is involved, personal operator protection (P.O.P.) will be provided,
Workers' Compensation Registration Number _____;
- (b) Prime Contractor qualified coordinator is Name: _____
and Contact Number: _____;
- (c) Insurance coverage for the amounts required in the proposed Contract as a minimum, naming the City as additional insured and generally in compliance with the City's sample insurance certificate form available on the City's Website at www.surrey.ca. search [Standard Certificate of Insurance](#);
- (d) City of Surrey or Intermunicipal Business License: Number _____;
- (e) If the Contractor's goods and services are subject to GST, the Contractor's GST Number is _____; and
- (f) If the Contractor is a company, the company name indicated above is registered with the Registrar of Companies in the Province of British Columbia, Canada, Incorporation Number _____.

As of the date of this Quotation, we advise that we have the ability to meet all of the above requirements **except as follows** (list, if any):

Section

Requested Departure(s) / Alternative(s)

5. The Contractor acknowledges that the departures it has requested in Sections 3 and 4 of this Quotation will not form part of the Contract unless and until the City agrees to them in writing by initialing or otherwise specifically consenting in writing to be bound by any of them.

Changes and Additions to Specifications and Scope:

6. In addition to the warranties provided in the Contract, this Quotation includes the

7. I/We have reviewed the RFQ, Schedule A – Scope of Work and Contract Drawings. If requested by the City, I/we would be prepared to meet those requirements, amended by the following departures and additions (list, if any):

Requested Departure(s) / Alternative(s) / Addition(s)

SCHEDULE OF QUANTITIES AND PRICES

8. The Contractor offers to supply to the City of Surrey the Goods and Services for the prices plus applicable taxes as follows:

F.O.B. Destination		Payment Terms: A cash discount of ____% will be allowed if invoices are paid within ____ days, or the ____ day of the month following, or net 30 days, on a best effort basis.			Ship Via:	
DESCRIPTION		Dimensions (L x W) m	Total (m ²)	UNIT PRICE (\$)	AMOUNT (\$)	
PHASE 1						
1.1 Removals (Asphalt & Substructure)						
1.1a	Middle Driveway to South Driveway	27 x 3.25	100	\$	\$	
1.1b	South of Driveway	30 x 3.25	100	\$	\$	
1.1 Sub-Total:					\$	
1.2 Place Geotextile and Lightweight Fill – as specified in Appendix 2						
1.2a	Middle Driveway to South Driveway	27 x 3.25	100	\$	\$	
1.2b	South of Driveway (include embankment fills)	30 x 3.25	100	\$	\$	
1.2 Sub-Total:					\$	
Phase 1 Total (1.1 + 1.2), 200 m² approximately:					\$	
PHASE 2						
2.1 Place MMCD Crushed Granular Base (100mm), Crushed Granular/Select Granular Sub-base (200mm)						
2.1a	Middle Driveway to South Driveway	27 x 3.25	100	\$	\$	
2.1b	South of Driveway (include embankment fills)	30 x 3.25	100	\$	\$	
2.1 Sub-Total:					\$	

2.2 Hot-Mix Pavement (Permanent) Final Lift of Asphalt – Upper Coarse #2 HMA Paving (100mm)					
2.2a	Middle Driveway to South Driveway	27 x 3.25	100	\$	\$
2.2b	South of Driveway	30 x 3.25	100	\$	\$
2.2 Sub-Total:					\$
Phase 2 Total (2.1 + 2.2), 200 m² approximately:					\$
				Project Subtotal (Phase 1 + Phase 2):	\$
				GST (5%):	\$
CURRENCY: Canadian				TOTAL QUOTATION PRICE:	\$

List of Optional Prices:

9. The following is a list of Optional Price(s) to the Work and forms part of this RFQ, upon the acceptance of any or all of the Optional Price(s). The Optional Prices are an addition or a deduction to the Total Quotation Price and do not include GST. DO NOT state a revised Total Quotation Price.

Description of Optional Prices	Addition	Deduction
OP-1.	\$ []	\$ []
OP-2.	\$ []	\$ []

Force Account Labour and Equipment Rates:

10. Contractors should complete the following tables setting out the all-inclusive hourly labour rates including Overhead and profit for approved extras/credits for all applicable categories of labour (use the spaces provided and/or attach additional pages, if necessary):

Table 1 – Hourly Labour Rate Schedule for Services:

Labour Category	Straight Time/hr (Plus GST)	Overtime Rate/hr (Plus GST)
.1 Superintendent	\$	\$
.2 Foreman	\$	\$
.3 Journeyman	\$	\$
.4 Apprentice	\$	\$
.5 Skilled Labourer	\$	\$
.5	\$	\$
.6	\$	\$

Table 2 – Hourly Equipment Rate Schedule:

No.	Equipment Description (<i>State</i>)	Hourly Equipment Rate
		\$
		\$

Preliminary Construction Schedule:

11. Contractors should provide a preliminary construction schedule, with major item descriptions and time:
- (a) City prefers to commence the Work on or before: **October 31, 2022**; and
 - (b) to achieve Substantial Performance of the Work on or before: **10 Days** from the notice to proceed..

Contractor should provide a Microsoft Project (or similar) schedule outlining the Critical Path and should include all major phases of the Work and indicate start and substantial completion dates for each.

ACTIVITY	Time from Notice to Proceed in Days									
	10	20	30	40	50	60	70	80	90	100
	SAMPLE									

Proposed Disposal Site: _____

Key Personnel & Subcontractors:

12. Contractors should provide information on the background and experience of all key personnel proposed for the performance of the Work (use the spaces provided and/or attach additional pages, if necessary):

Name: _____

Experience: _____

Dates: _____

Project Name: _____

Responsibility: _____

Responsibility: _____

13. Contractors should identify subcontractors, if any, the Contractor intends to use for the performance of the Work, describe the portion of the Work proposed to be subcontracted and a description of the relevant experience of the subcontractor, using a format similar to the following:

<i>Subcontractor Services</i>	<i>Subcontractor Name</i>	<i>Years of Working with Contractor</i>	<i>Business Telephone Number and Business Email Address</i>

The City reserves the right of approval for each of the subcontractors and material suppliers. The Contractor will be given the opportunity to substitute an acceptable subcontractor and material supplier, if necessary.

Experience, Reputation and Resources

14. Contractors should provide information on their relevant experience and qualifications for the performance of the Work similar to those required by the Contract (use the spaces provided and/or attach additional pages, if necessary):

15. Contractors should provide references for work performed by your firm of a similar nature and value (name and telephone number). The City's preference is to have a minimum of three references. Previous clients of the Contractor may be contacted at the City's discretion (use the spaces provided and/or attach additional pages, if necessary)

16. I/We the undersigned duly authorized representatives of the Contractor, having received and carefully reviewed the RFQ and the Contract, submit this Quotation in response to the RFQ.

This Quotation is executed by the Contractor this _____ day of _____, 2022.

CONTRACTOR

I/We have the authority to bind the Contractor.

(Legal Name of Contractor)

(Signature of Authorized Signatory)

(Signature of Authorized Signatory)

(Print Name and Position of Authorized Signatory)

(Print Name and Position of Authorized Signatory)

ATTACHMENT 1 - CITY OF SURREY, PROJECT COMPLETION DELIVERABLES WORKSHEET

Project Name: _____

Project Address: _____

Date: _____

End of Project Walk-through: _____

End of Project Walk-through: _____

City Representative: _____

Contractor/Contractor Rep: _____

Department: _____

Company Name: _____

Contact phone number: _____

Contact phone number: _____

Fax number: _____

Fax number: _____

A. BUILDING PERMITS – CLOSED OUT

- Architectural
- Electrical
- Mechanical / Plumbing
- Structural
- Other

B. O&M MANUALS RECEIVED

**Shop Drawings to be included in O&M Manuals*

Architectural

- 1 Electronic (PDF) file
- 2 Hardcopies

Electrical

- 1 Electronic (PDF) file
- 2 Hardcopies

Mechanical

- 1 Electronic (PDF) file
- 2 Hardcopies

Other(s)

- 1 Electronic (PDF) file
- 2 Hardcopies

C. PROJECT CLOSE-OUT

- Project Summary Report
- Substantial Completions
- Deficiencies List
- Transfer of Utilities (Hydro/Teresan)
Notify City of Surrey (604-591-4804)
- Asset Inventory Forms including HVAC
- TCA Cost Summary Finance, & Warranty
Information sheets & Project summary
with graphics
- Final Occupancy Certification
- All documentation/correspondence
pertaining to the project (File Share Device)

D. FALL PROTECTION / RESTRAINT SYSTEM

- Complete
- Wall plaques displayed as required
- 1 (PDF) containing the Fall Protection Safety

System

Signed:

City Representative

Internal Representative

E. AS-BUILT DRAWING SUBMITTALS

Architectural

- 1 Set of AutoCAD As-Built DWG files
- 1 Set of PDF As-Built drawings
- 1 Set of paper construction drawings

Civil

- 1 Set of AutoCAD As-Built DWG files
- 1 Set of PDF As-Built drawings
- 1 Set of paper construction drawings

Electrical

- 1 Set of AutoCAD As-Built DWG files
- 1 Set of PDF As-Built drawings
- 1 Set of paper construction drawings

Fire Protection

- 1 Set of AutoCAD As-Built DWG files
- 1 Set of PDF As-Built drawings
- 1 Set of paper construction drawings

Landscaping

- 1 Set of AutoCAD As-Built DWG files
- 1 Set of PDF As-Built drawings
- 1 Set of paper construction drawings

Mechanical / Plumbing

- 1 Set of AutoCAD As-Built DWG files
- 1 Set of PDF As-Built drawings
- 1 Set of paper construction drawings

Structural

- 1 Set of AutoCAD As-Built DWG files
- 1 Set of PDF As-Built drawings
- 1 Set of paper construction drawings

Other:

- 1 Set of AutoCAD As-Built DWG files
- 1 Set of PDF As-Built drawings
- 1 Set of paper construction drawings

F. FIRE SAFETY PLAN

- Complete
- Wall plaques displayed throughout facility
- 1 Electronic (PDF) file of the fire safety plan
- 2 paper copies of the fire safety plan

Contractor Representative

Fire Chief/ Representative

ATTACHMENT 2

PRIME CONTRACTOR DESIGNATION LETTER OF UNDERSTANDING

As per the requirements of the *Workers' Compensation Act*, R.S.B.C. 2019, Chapter 1, Part 2, Division 4, Section 24 and 25 which states:

Coordination of multiple-employer workplaces

24 *In this section:*

"multiple-employer workplace" means a workplace where workers of 2 or more employers are working at the same time:

"prime contractor" means, in relation to a multiple-employer workplace,

- (1) The prime contractor of a multiple-employer workplace must
 - (a) ensure that the activities of employers, workers and other persons at the workplace relating to occupational health and safety are coordinated, and
 - (b) do everything that is reasonably practicable to establish and maintain a system or process that will ensure compliance with this Part and the regulation in respect to the workplace.
- (2) Each employer of workers at a multiple-employer workplace must give to the prime contractor the name of the person the employer has designated to supervise the employer's workers at that workplace.

By signing this Agreement, the Contractor accepts all responsibilities of a prime contractor as outlined in the *Workers' Compensation Act*, and *WorkSafeBC OH&S Regulation*.

As a Contractor signing this Prime Contractor Designation form with the City of Surrey (the "owner"), you are agreeing that your company, management staff, supervisory staff and workers will comply with the *Workers' Compensation Board (WCB) Occupational Health and Safety Regulation* and the *Workers' Compensation (WC) Act*.

Any WorkSafeBC OH&S violation by the prime contractor may be considered a breach of contract resulting in possible termination or suspension of the agreement and/or any other actions deemed appropriate at the discretion of the City.

Any penalties, sanctions or additional costs levied against the City, as a result of the actions of the prime contractor are the responsibility of the prime contractor.

The Contractor acknowledges having read and understood the information above.

By signing this Prime Contractor Designation form, the Contractor agrees as a representative of the firm noted below, to accept all responsibilities of the prime contractor for this project.

The Contractor understands and accepts the responsibilities of the prime contractor designation in accordance with the *Workers' Compensation Act* while contracted by the City of Surrey for project and will abide by all *Workers' Compensation Board Regulation* requirements.

Project File No.: 1220-040-2022-096

Project Title and Site Location: 156 Street Paving and road Base Improvement

Prime Contractor Name: _____

Prime Contractor Address: _____

Business Telephone/Business Fax Numbers: Phone: _____ Fax: _____

Name of Person in Charge of Project: _____

Name of Person Responsible for Coordinating Health & Safety Activities: _____

Phone: _____

Prime Contractor Signature: _____ Date: _____

Please return a signed copy of this memo to the City of Surrey, Finance Department, Procurement Services Section, 13450 – 104 Avenue, Surrey, British Columbia, V3T 1V8

If you have any questions, please contact the City of Surrey, Manager Occupational Health & Safety at 604-591-4658.

ATTACHMENT 3

CONTRACTOR HEALTH & SAFETY EXPECTATIONS

RESPONSIBILITY OF CONTRACTOR(S)

The City of Surrey strives to maintain a safe work environment for employees and contractors and insists upon the enforcement of safe practices and procedures in all premises and in all work activities. It is essential that all contractors and their employees and sub-contractor(s) perform in the same manner. It is every employers and contractors responsibility to ensure that staff and public are protected from workplace hazards.

As a contractor to the City of Surrey, you are expected to conform to the requirements of the Workers' Compensation Act, the WCB Occupational Health and Safety Regulation and to all federal, provincial and local laws and regulations. The City of Surrey Building Owner, Project Manager, and the Manager, Occupational Health & Safety or designate have the authority to order an unsafe act to cease or to have an unsafe piece of equipment removed from the premises or, in extreme situations, to shut down a job entirely. Any City of Surrey Employee that observes a safety infraction by a contractor performing work for the City of Surrey should bring it to the attention of a manager immediately or Occupational Health & Safety (604-591-4131).

The following information is provided as typical City of Surrey requirements, but does not relieve the contractor from complying with all applicable local, provincial and federal laws, regulations and bylaws.

PERSONNEL

1. You are expected to inform your employees of any potential hazard in the workplace and advise of appropriate action to be taken should a hazard be found or a fire or accident occur.
2. Contractors will restrict persons invited on the premises to employees only. No families or friends are permitted.
3. The contractor will advise the City of any on-site accidents involving the contractor's employees, or injuries to others caused by the contractor's business.

SAFETY MANAGEMENT SYSTEM

1. Contractors will ensure their employees utilize proper safety equipment and clothing as required for job site activities.
2. Contractors must follow and have on site proper written safe work procedures for hazardous work, e.g., Fall protection, confined space entry, hotwork, lockout, excavations and shoring, traffic management, etc.
3. Contractor must Identify workplace risk and implement suitable controls.
4. Contractor must provide safety training and education to staff and have training records available for review.
5. Contractor must have a health & safety program for its workers and sub-contractors
6. Contractor will provide appropriate First-Aid coverage for their workers and subcontractors.
7. Contractor must forward a weekly work task list prior to work commencement.
8. The qualified safety coordinator must participate in the City of Surrey OHS Orientation or attend the Prime Contractor's Orientation.

WORK AREAS –City Facilities

No work by contractors shall occur in any area without prior consent of the City of Surrey Manager, Civic Facilities or his designated representative. Work during normal business hours of the City shall not create undue noise, smells or otherwise unduly disturb the work of City of Surrey staff or the public. If an activity requires that a disturbance is likely, the contractor shall whenever possible only do that work outside normal business hours.

All activities that create a hazard (i.e., work from a ladder, removal of a floor tile, emission of VOC's, etc.) to persons outside the contractor's supervision shall have warning devices, delineation or barriers, sealed spaces, etc. as would normally be required to protect any person from that hazard.

SAFETY ATTITUDE

Your safety record and attitude are important criteria used to judge your qualification for future bidding on solicitations with the City of Surrey.

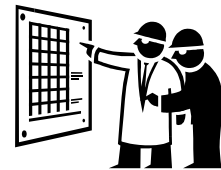
You can help ensure employee safety and your eligibility for future business with the City if you exhibit and practice a "Safe Work - Safe City" attitude.

The City of Surrey is concerned about the health, safety and wellbeing of all employees and contractors. It is essential we maintain a healthy, safe and productive work environment.

All Employees & Contractors:

It is everyone responsibility to:

- ❖ know and comply with WCB regulations and
- ❖ follow established safe work procedures
- ❖ immediately report any work related injury to his/her supervisor; and to the city representative
- ❖ not remain on the work site while his/her ability to work is in any way impaired
- ❖ report unsafe acts and conditions to their supervisor
- ❖ correct unsafe conditions immediately whenever it is possible to do so
- ❖ take reasonable care to protect your health & safety and the health and safety of other persons who may be affected by your act's or omissions at work



An employee must refuse to work if continuing to do so would endanger the health and safety of the employee, fellow employees or others. The worker must immediately report the circumstances of the unsafe condition to his or her supervisor or manager. If the unsafe condition is not remedied or the issue is not resolved the Manager, Occupational Health & Safety must be contacted.

A common sense approach usually resolves the issue.

GENERAL RULES

1. For all secured worksites, contracted workers are required to sign in and sign out each day
2. (Access cards may be issued – a worker may need to provide an Identification document (i.e., Driver's License) in exchange).

3. Personal protective equipment, as determined by the City, through consultation with the Contractors Health and Safety Representatives must be worn when and where required. (Hard Hats, Safety Footwear, Safety Vests and Safety Glasses must be worn on active construction sites. Hearing Protection must be worn when noise levels are above 85dBA.)
4. Horseplay, gambling and the use of alcohol or narcotics will not be tolerated.
5. No Smoking within 7.5M of a City owned buildings door exits, windows and vents.
6. Report **ALL** injuries to your supervisor immediately and notify the City's site representative.
7. Report any unsafe conditions, including someone under the influence or hazards, which may allow an injury to occur to you, a fellow worker, or others on the worksite.
8. Report any property damage, regardless of how minor.
9. Restricted and controlled products will be labeled, used and stored in accordance with the associated regulations, e.g., WHMIS. Follow all procedural instructions when using or handling hazardous materials/controlled products and ensure that all containers of hazardous/controlled product materials are properly labelled and stored in designated areas.
10. Obey all posted signs and notices. Do not venture into areas that you are not authorized to enter.
11. Always use the correct posture when lifting and get assistance if the weight is excessive.
12. Do not work within the limits of approach to high voltage equipment.
13. If working at heights greater than 10 feet a Fall Protection system must be in place. The appropriate Fall Protection equipment must be worn at all times.
14. **Housekeeping** (Orderliness and good housekeeping are basic requirements and must be maintained at all times):
 - a) Aisles are to be kept clear at all times.
 - b) Individual work areas are to be kept clean and tidy.
 - c) All materials, tools, products and equipment are to be kept in their designated areas.
 - d) Liquid spills are to be cleaned up immediately to prevent slips and falls.
 - e) Accumulation of oily rags, combustible refuse or similar fire hazards will not be tolerated.
15. **Fire Prevention:**
 - a) Become familiar with Surroundings and emergency exit.
 - b) Ensure aisles and exits are not blocked at any time.
 - c) Anytime a fire extinguisher is used, report it immediately to your supervisor, so that it can be recharged.
16. **Equipment Operation** (Any equipment, which could create a hazard, must be maintained in good condition):
 - a) Equipment must not be repaired, adjusted or operated unless by a "competent person" who understand the safe operating procedures.
 - b) Always be aware of the use and location of the "EMERGENCY STOP" button, if equipment is so equipped, before using the equipment.
 - c) Loose clothing, jewelry and long hair must be secured to prevent becoming entangled with equipment.

- d) The Operator must check all safety devices on equipment before operation.
- e) All equipment must be turned off and the appropriate "lock-out" procedure followed, prior to repairs, cleaning, adjustment or lubrication.
- f) Radio/Walkman/I-pod Headphones are not allowed to be worn during regular work operations.
- g) All ladders must be of an approved type and length. Unacceptable ladders must be removed immediately from the premises.
- h) All vehicles and equipment on City property must be kept in safe mechanical condition at all times, and be operated only by persons with a valid driver's license and/or proper training and qualifications.
- i) Contractors will not operate any equipment, valves, switches, etc., which are part of the City's operation, unless specific permission is received from the Department Representative.

17. **Ground Disturbance** –Every time you dig in the ground, with a shovel or mechanized equipment, you run the risk of loss of life or damage to property if you hit any of the many buried cables, conduits, gas or oil pipelines and/or other underground facilities that serve our city, **BC One Call Must be called and a ticket obtained prior to commencing any ground disturbance activities.**

Issued By:	Occupational Health & Safety Section - Contractor Coordination Program
Date:	Revised: January 14, 2014 Original: August 15, 2014
Distributed:	Via Email & Posted on Intranet: January 16, 2015: <u>August 15, 2014</u>

This document does not replace the Workers' Compensation Act or WorkSafeBC OH&S regulation. Each individual Contractor must have specific health and safety safe work rules and procedures that apply to their work tasks. Each Contractor must comply with the Workers' Compensation Act and WorkSafeBC Occupational Health & Safety Regulation and to all federal, provincial and local laws and regulations. If a contractor is unable to comply they must bring this to the attention of their qualified safety representative and to the Prime Contractor safety representative immediately.

Authorized Signature: _____

Name: _____

(Please Print)

Date: _____

**ATTACHMENT 4
Geotechnical Report**



THURBER ENGINEERING LTD.

November 16, 2021

File No.: 33050

City of Surrey
6645 - 148 Street
Surrey, B.C. V3S 3C7

Attention: Adam Quan, Field Supervisor

**PAVEMENT DETERIORATION NEAR 6177 - 156 STREET, SURREY, B.C.
GEOTECHNICAL ASSESSMENT AND RECOMMENDATIONS FOR REPAIR**

Dear Adam:

At the request of City of Surrey, Thurber Engineering Ltd. (Thurber) has completed a geotechnical assessment of the localized depression and pavement failure near 6177 - 156 Street. This report summarizes the findings of our site reconnaissance and provides geotechnical recommendations for repair of the road.

It is a condition of this report that Thurber's performance of its professional services is subject to the attached Statement of Limitations and Conditions.

1. BACKGROUND

We understand that the City of Surrey (City) started receiving complaints in September 2021 about the development of a localized depression in 156 Street in front of the southern and middle driveways providing access to 6177-156 Street. Thurber completed a site reconnaissance on September 30, 2021, in support of the planned repair work. This letter describes our observations and provides geotechnical recommendations for the repairs.

Thurber was involved with similar repairs of Harvie Road near 184 Street where localized depressions had occurred. The depressions were repaired using lightweight fill and we understand that the repaired sections of road have performed well to date.

2. SITE RECONNAISSANCE AND DESKTOP STUDY

2.1 Site Reconnaissance

The site reconnaissance took place on September 30, 2021, between about 0930 and 1015 hours. Thurber Engineering was represented by Bryant Ward, P.Eng., the author of this report. The City was represented by Adam Quan. A selection of annotated photos showing the general condition of the area (Photos 1 through 6) and an annotated sketch describing the condition of the pavement (Figure 1) are attached to this report.

The affected area of 156 Street starts about 30 m north of the railway crossing and extends about 60 m to the north. The southern half of the affected area has extensive longitudinal cracking along the west ditch. The northern half of the affected area (from the south to middle driveway providing access to 6177 – 156 Street) does not have a ditch and has developed a large depression in the southbound (west) lane.

The west ditch is about 1.2 m with the slope cut at about 1H:1V. The east ditch is a similar depth, but flatter at about 1.5H:1V. Water was present at the invert of both ditches about 1.2 m below the road surface. Hand-dug test pits along the west ditch slope indicate that the shoulder is constructed of pit run sand and gravel.

The depression is about 27 m long overall and is entirely within the southbound lane between the middle and south driveways. The settlement is most severe in front of the driveways where the observed differential settlements were about 300 mm at the north end (see Photos 1 and 2) and 200 mm at the south end (see Photos 3 and 4). These differential settlements were sloped at between 5% and 10% into the depression. The surface of the southbound lane within the depression slopes down to the west at about 5%. In addition to the depression, there is some edge cracking at the west shoulder and patched alligator cracking at the centreline.

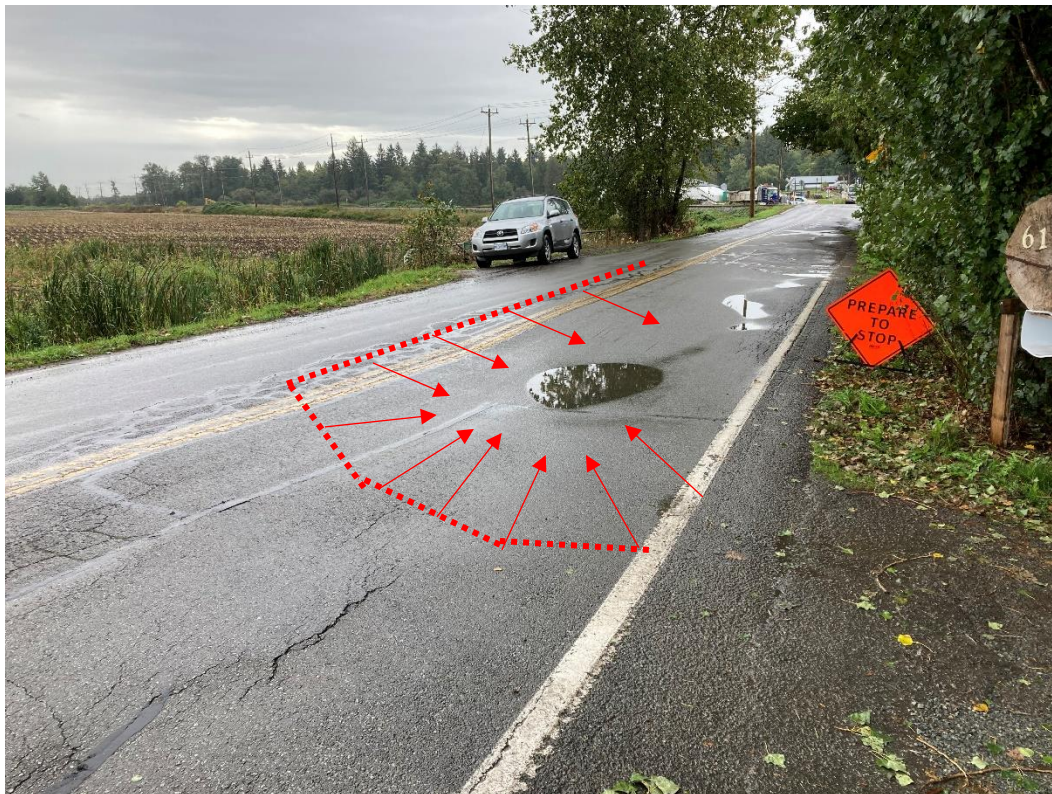


Photo 1 – Looking south at depression in front of middle driveway

The northbound lane appears to be partially affected by the settlement at the north end of the depression (see Photos 1 and 2) but is otherwise in better condition than the southbound lane. The northbound lane generally has minor patched cracking and less severe evidence of settlement or deformations.

Severe pavement cracking was observed south of the depression for a distance of about 30 m towards the railway crossing. The pavement deterioration comprises severe longitudinal edge and outside wheelpath cracking in the southbound lane (see Photos 5 to 6). The failure of the pavement surface resembles the backscarp of a slope failure into the western ditch, although the base of the ditch had not heaved.



Photo 5 – Looking north at longitudinal cracking in SB lane about 35 m north of rail crossing.

During the site reconnaissance, several fully loaded dump trucks were observed travelling southbound. No trucks were observed travelling northbound.



2.2 Desktop Study

Thurber reviewed historic aerial photos from the City of Surrey's online GIS system and Google Street View. Selected images are attached to this report.

The aerial photos show that in 1949, 156 Street south of 64 Avenue only consisted of a single lane which is the current southbound lane. The road was widened to include the northbound lane between 1949 and 1998 (there are no photos between these dates).

The Google Street view photos (Photos 101 to 106) show that the southbound lane of 156 Street has had a history of repair in the area of the pavement deficiencies. Most notably, the western half of the lane was fully re-paved where the north end of the depression is currently located.

The City of Surrey's Traffic Data Hub shows that the average 24-hour vehicle count was 600 in 2014. No percentages of trucks were given in the data.

3. SUBSURFACE CONDITIONS

The surficial geology of the area can be summarized as bog, swamp, and shallow lake deposits. These deposits would typically comprise peat, organic silt or clay-silt that is expected to be highly compressible and have very low strength. Our test hole information at the nearby Hook Brook pump station indicates that the soil conditions generally comprise very soft to soft, highly compressible clay at least 30 m thick. A review of water well information at 64 Avenue and 156 Street indicated that the clay-silt deposit could be up to 90 m thick. Artesian pressures were recorded on one of the well logs.

Given the date of construction, it is possible that the quality of the embankment fill within the southbound portion of the road is less than the quality of the fill within the northbound portion. Although small, hand-dug test pits on the western shoulder indicate that the upper material comprises well-graded sand and gravel, the lower portion of the embankment may have been constructed of deleterious fill (e.g. ditching spoil / scrapings, wood waste, construction debris) and the fill may not have been compacted to modern standards.

4. DISCUSSION

The settlement and pavement failure of 156 Street is inferred to be caused by poor subgrade soils which comprise very soft, compressible clay. The depression occurred at a location where there was no ditch. The longitudinal cracking, which resembles the back scarp of a slope failure, occurred at a location where a ditch was present (i.e. no lateral constraint).

Based on the results of the site reconnaissance and desktop study, we consider the following to be contributory factors to poor performance of the road. It must be noted that as a site investigation was not carried out it is not possible to assess the relative contribution of the causes and contributory factors listed below.



- Variation in embankment thickness and composition:
 - The location of the pavement distress may be the result of variation in the thickness of the embankment and whether the embankment was partially constructed of deleterious or poorly compacted fill.
 - This mechanism could be assessed by drilling test holes through the road embankment.
- Variations in truck traffic
 - Thurber observed several fully-loaded trucks travelling southbound during the site visit.
 - This section of 156 Street is classified as a local road and designed for low traffic volumes.
 - Nearby construction projects could have resulted in high volumes of truck traffic which would accelerate the deterioration of the road.

5. REPAIR RECOMMENDATIONS

We recommend that the depressions and longitudinal cracking in 156 Street be repaired by reconstructing the pavement structure and introducing lightweight fill into the embankment to reduce the risk of long-term settlement and potentially improve the pavement subgrade soils. This is to be done by excavating to a depth of 1.2 m relative to finished final grade. Backfill below the pavement structure should comprise geotextile wrapped red pumice as this will provide a slight unload. We do not consider reconstruction necessary for the northbound lane.

The pumice must extend a minimum of 0.5 m beyond the edge of pavement (refer to attached Dwg. 33050-1) and at least 2 m beyond the maximum extents of the depression along the southbound lane. Pumice will need a minimum of 0.3 m of granular cover in the ditch. The existing pavement gravels could be salvaged and used for this. A sump may be needed to control water inflow into the excavation. This is more likely for repair of the longitudinal cracking as there is the adjacent ditch. A temporary block of the ditch may be needed. The excavation geometry could also be modified in this area to reduce ditch inflow.

Thurber has previously completed compaction trials on pumice sourced from LAVA Inc. and we recommend its use on this project. It has the trade name Tephralite and typically ranges from red to dark vesicular basalt. Where Tephralite is used, we recommend that the material be placed in loose lifts ranging in thickness between 150 mm and 300 mm and compacted by completing a minimum of 8 complete coverage passes using a Cat CB14 smooth double drum steel roller or equivalent imposing static contact force of about 1,000 kg/m width of each roller face. Vibratory compaction with a roller should not be undertaken due to the increased risk of particle crushing. We also recommend that sufficient moisture treatment and/or wetting be provided to aid the compactive effort, if required. The pumice should be wrapped with a nonwoven geotextile such as Nilex 4553 or approved equivalent. The minimum overlap between adjacent sheets is 500 mm.

The City of Surrey Engineering Department Design Criteria Manual indicates that local through roads should be designed for average 24-hour traffic of 3,000 vehicles. This corresponds to an annual equivalent single axle loading (ESAL) of about 15,000, assuming 2% truck traffic. The pavement section recommended for the repair is provided below.



Repair Pavement Section

- 100 mm Hot Mix Asphalt, Upper Course #2 (HMA)
- 100 mm Crushed Granular Base (CGB)
- 200 mm Crushed Granular Sub-base (CGSB) or Select Granular Sub-base (SGSB), salvaged gravels from the existing pavement may also be used

The material used in the pavement section should conform to the requirements of the Master Municipal Construction Document (MMCD), Volume 2, 2009 Edition.

The subgrade should be reviewed and approved by Thurber prior to placement of the pumice. The subbase layer should extend a minimum of 0.5 m beyond the edge of pavement. Base and subbase should be compacted to a minimum of 95% Modified Proctor Maximum Dry Density (MPMDD) in loose lifts not to exceed 300 mm thickness. Density testing should be completed to determine if the specified density is achieved.



6. CLOSURE

We trust this information meets your present needs. If you have any questions, please contact the undersigned at your convenience.

As required by Engineers and Geoscientists British Columbia (EGBC), Thurber's Permit to Practice number is #1001319

Yours truly,
Thurber Engineering Ltd.

David Regehr, P.Eng.
Review Principal

Bryant Ward, P.Eng.
Project Engineer



Marc C. Bossé, M.Sc., P.Eng.
Geotechnical Engineer

Attachments

- Statement of Limitations and Conditions
- Figure 1 – Pavement Condition Sketch
- Photographs 1 through 6: Site Reconnaissance
- Photographs 101 through 106: Google Street view
- Drawing 33050-1 – Road Repair Cross Section



STATEMENT OF LIMITATIONS AND CONDITIONS

1. STANDARD OF CARE

This Report has been prepared in accordance with generally accepted engineering or environmental consulting practices in the applicable jurisdiction. No other warranty, expressed or implied, is intended or made.

2. COMPLETE REPORT

All documents, records, data and files, whether electronic or otherwise, generated as part of this assignment are a part of the Report, which is of a summary nature and is not intended to stand alone without reference to the instructions given to Thurber by the Client, communications between Thurber and the Client, and any other reports, proposals or documents prepared by Thurber for the Client relative to the specific site described herein, all of which together constitute the Report.

IN ORDER TO PROPERLY UNDERSTAND THE SUGGESTIONS, RECOMMENDATIONS AND OPINIONS EXPRESSED HEREIN, REFERENCE MUST BE MADE TO THE WHOLE OF THE REPORT. THURBER IS NOT RESPONSIBLE FOR USE BY ANY PARTY OF PORTIONS OF THE REPORT WITHOUT REFERENCE TO THE WHOLE REPORT.

3. BASIS OF REPORT

The Report has been prepared for the specific site, development, design objectives and purposes that were described to Thurber by the Client. The applicability and reliability of any of the findings, recommendations, suggestions, or opinions expressed in the Report, subject to the limitations provided herein, are only valid to the extent that the Report expressly addresses proposed development, design objectives and purposes, and then only to the extent that there has been no material alteration to or variation from any of the said descriptions provided to Thurber, unless Thurber is specifically requested by the Client to review and revise the Report in light of such alteration or variation.

4. USE OF THE REPORT

The information and opinions expressed in the Report, or any document forming part of the Report, are for the sole benefit of the Client. NO OTHER PARTY MAY USE OR RELY UPON THE REPORT OR ANY PORTION THEREOF WITHOUT THURBER'S WRITTEN CONSENT AND SUCH USE SHALL BE ON SUCH TERMS AND CONDITIONS AS THURBER MAY EXPRESSLY APPROVE. Ownership in and copyright for the contents of the Report belong to Thurber. Any use which a third party makes of the Report, is the sole responsibility of such third party. Thurber accepts no responsibility whatsoever for damages suffered by any third party resulting from use of the Report without Thurber's express written permission.

5. INTERPRETATION OF THE REPORT

- a) Nature and Exactness of Soil and Contaminant Description: Classification and identification of soils, rocks, geological units, contaminant materials and quantities have been based on investigations performed in accordance with the standards set out in Paragraph 1. Classification and identification of these factors are judgmental in nature. Comprehensive sampling and testing programs implemented with the appropriate equipment by experienced personnel may fail to locate some conditions. All investigations utilizing the standards of Paragraph 1 will involve an inherent risk that some conditions will not be detected and all documents or records summarizing such investigations will be based on assumptions of what exists between the actual points sampled. Actual conditions may vary significantly between the points investigated and the Client and all other persons making use of such documents or records with our express written consent should be aware of this risk and the Report is delivered subject to the express condition that such risk is accepted by the Client and such other persons. Some conditions are subject to change over time and those making use of the Report should be aware of this possibility and understand that the Report only presents the conditions at the sampled points at the time of sampling. If special concerns exist, or the Client has special considerations or requirements, the Client should disclose them so that additional or special investigations may be undertaken which would not otherwise be within the scope of investigations made for the purposes of the Report.
- b) Reliance on Provided Information: The evaluation and conclusions contained in the Report have been prepared on the basis of conditions in evidence at the time of site inspections and on the basis of information provided to Thurber. Thurber has relied in good faith upon representations, information and instructions provided by the Client and others concerning the site. Accordingly, Thurber does not accept responsibility for any deficiency, misstatement or inaccuracy contained in the Report as a result of misstatements, omissions, misrepresentations, or fraudulent acts of the Client or other persons providing information relied on by Thurber. Thurber is entitled to rely on such representations, information and instructions and is not required to carry out investigations to determine the truth or accuracy of such representations, information and instructions.
- c) Design Services: The Report may form part of design and construction documents for information purposes even though it may have been issued prior to final design being completed. Thurber should be retained to review final design, project plans and related documents prior to construction to confirm that they are consistent with the intent of the Report. Any differences that may exist between the Report's recommendations and the final design detailed in the contract documents should be reported to Thurber immediately so that Thurber can address potential conflicts.
- d) Construction Services: During construction Thurber should be retained to provide field reviews. Field reviews consist of performing sufficient and timely observations of encountered conditions in order to confirm and document that the site conditions do not materially differ from those interpreted conditions considered in the preparation of the report. Adequate field reviews are necessary for Thurber to provide letters of assurance, in accordance with the requirements of many regulatory authorities.

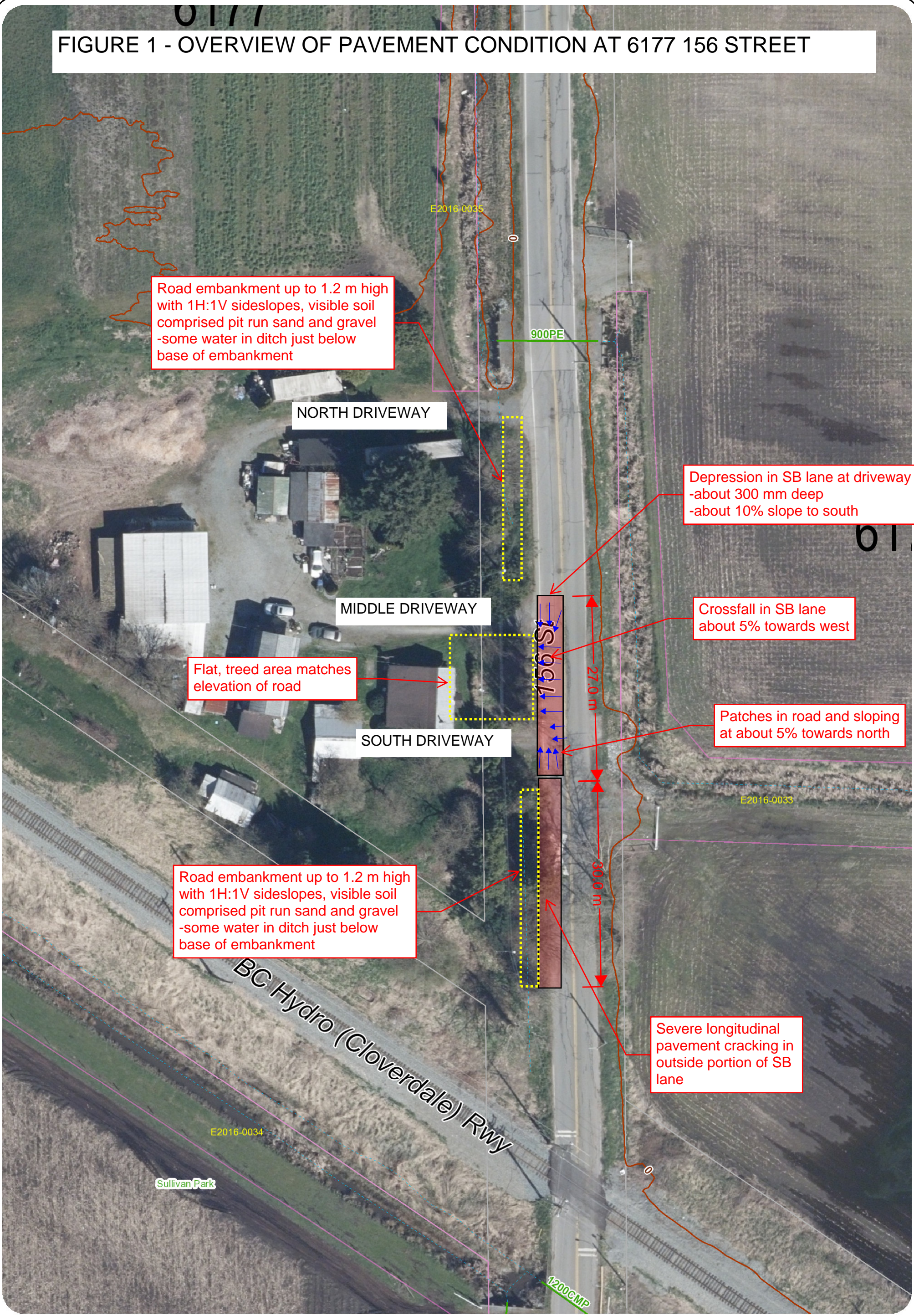
6. RELEASE OF POLLUTANTS OR HAZARDOUS SUBSTANCES

Geotechnical engineering and environmental consulting projects often have the potential to encounter pollutants or hazardous substances and the potential to cause the escape, release or dispersal of those substances. Thurber shall have no liability to the Client under any circumstances, for the escape, release or dispersal of pollutants or hazardous substances, unless such pollutants or hazardous substances have been specifically and accurately identified to Thurber by the Client prior to the commencement of Thurber's professional services.

7. INDEPENDENT JUDGEMENTS OF CLIENT

The information, interpretations and conclusions in the Report are based on Thurber's interpretation of conditions revealed through limited investigation conducted within a defined scope of services. Thurber does not accept responsibility for independent conclusions, interpretations, interpolations and/or decisions of the Client, or others who may come into possession of the Report, or any part thereof, which may be based on information contained in the Report. This restriction of liability includes but is not limited to decisions made to develop, purchase or sell land.

FIGURE 1 - OVERVIEW OF PAVEMENT CONDITION AT 6177 156 STREET



Scale: 1:500



156 Street near 6177 (Middle) Driveway Access

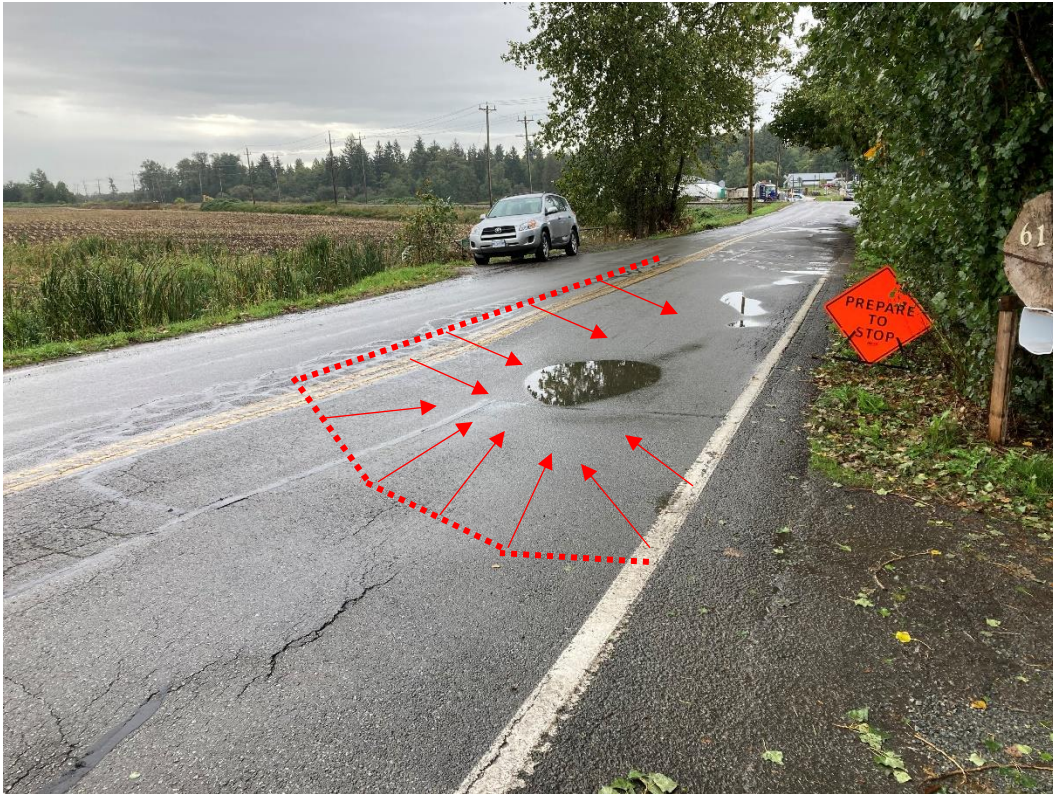


Photo 1 – Looking south at depression in front of middle driveway



Photo 2 – Looking north towards depression in front of middle driveway

156 Street near 6177 (South) Driveway Access



Photo 3 – Looking south at depression in front of south driveway

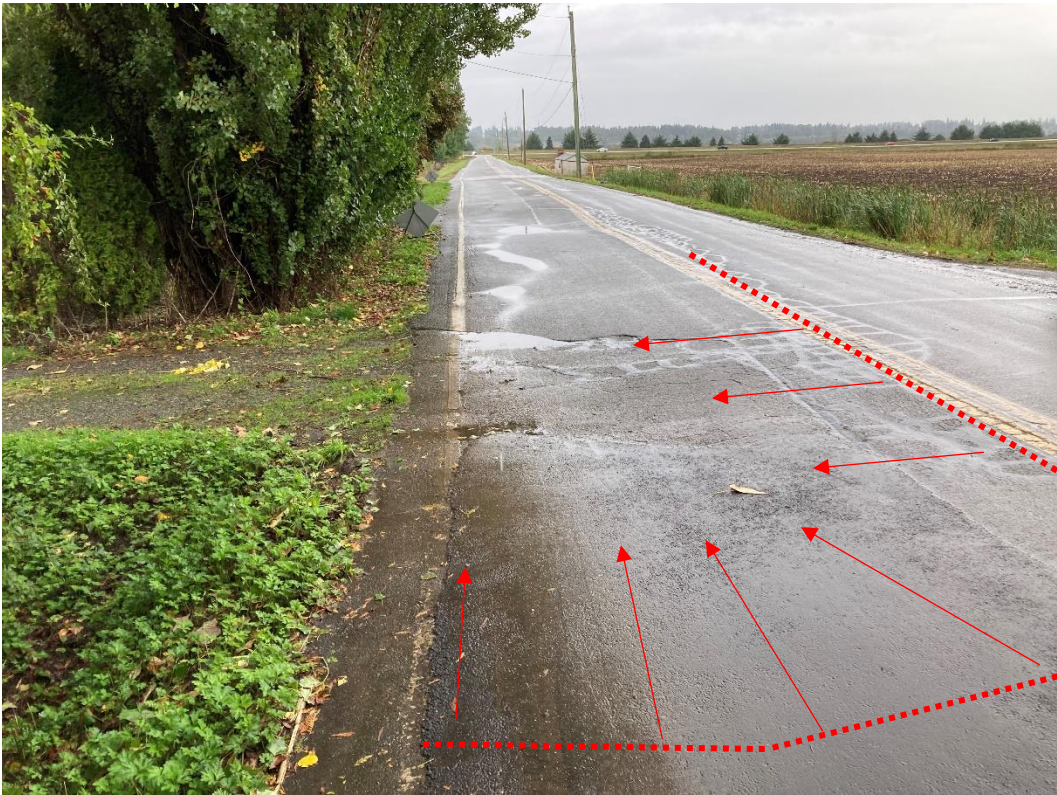


Photo 4 – Looking north at depression in front of south driveway

156 Street Between 6177 (South) Driveway Access and Rail Crossing



Photo 5 – Looking north at longitudinal cracking in SB lane about 35 m north of rail crossing.



Photo 6 – Close up view of longitudinal cracking visible in Photo 5.



Photo 101 – Looking south from just north of the middle driveway:
Google Street view in 2009



Photo 102 – Looking south from just north of middle driveway:
Google Street view in 2015



Photo 103 – Looking south from just north of middle driveway:
Google Street view in 2020



Photo 104 – Looking south at rail crossing:
Google Street view in 2009



Photo 105 – Looking south at rail crossing:
Google Street view in 2015



Photo 106 – Looking south at rail crossing:
Google Street view in 2020



THURBER ENGINEERING LTD.

Sheet of File N°

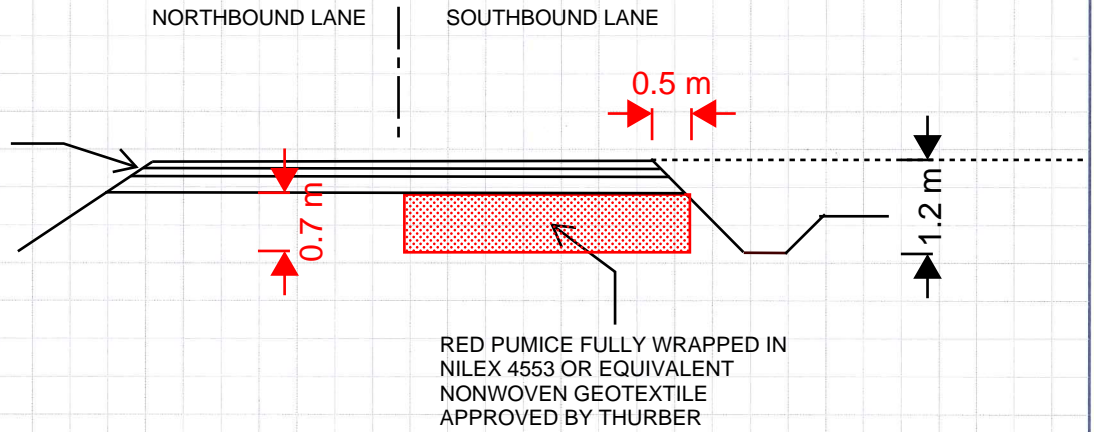
Prepared by Date

Checked by Date

Client Project

RECOMMENDED PAVEMENT

- SECTION
- ASPHALT - 100 mm UPPER COURSE #2
- BASE - 100 mm MMCD CRUSHED GRANULAR BASE
- SUBBASE - 200 mm MMCD CRUSHED GRANULAR SUBBASE, MMCD SELECT GRANULAR SUBBASE, OR SALVAGED PAVEMENT GRAVELS



NOTES:

1. BASE, SUBBASE AND PUMICE SHOULD EXTEND 500 mm MINIMUM BEYOND EDGE OF ASPHALT.
2. SUBGRADE SHOULD BE REVIEWED BY THURBER PRIOR TO PLACEMENT OF GEOTEXTILE AND PUMICE.
3. PUMICE SHOULD BE COMPACTED WITH A PLATE TAMPER OR STATIC ROLLED.
4. PUMICE MUST BE COMPACTED UNTIL IT LOCKS UP AND NO MORE TO REDUCE PARTICLE CRUSHING DURING COMPACTION.
5. PAVEMENT GRAVELS TO BE PLACED IN LOOSE LIFTS NOT EXCEEDING 300 mm THICKNESS AND COMPACTED TO 95% MAXIMUM MODIFIED PROCTOR DRY DENSITY.