REGIONAL DISTRICT
of Fraser-Fort George

REQUEST FOR PROPOSALS
ES-20-06

Engineering Consulting Services for Redesign of Cummings Road Regional Transfer Station

Date Issued:	February 25, 2020
Closing Location:	Regional District Office 3rd Floor, 155 George Street, Prince George, BC V2L 1P8
Closing Date and Time:	**March 23, 2020** **2:00 pm (Pacific Standard Time)** Submissions will be opened publicly at 2:15 pm
Inquiries:	Email Anson Hardjojo at anson.hardjojo@rdffg.bc.ca
Note:	Late submissions will not be considered

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1.0 INTRODUCTION AND BACKGROUND

1.1 Overview

The Cummings Road Regional Transfer Station is located southeast of Prince George in Electoral Area D (Area "D"). Area D is home to 4,278 residents in an area of approximately 655 square kilometers. The existing Cummings Road Regional Transfer Station (the "Site") is located adjacent to Alpine Drive, on District Lot 9095. The Site is owned by the Regional District of Fraser-Fort George ("RDFFG") and is zoned for Public Development (P1).

The Site is currently serviced with 40 cubic yard roll-off bins supplied by a local contractor. The transfer station is intended to serve the surrounding area in Electoral Area D including the Buckhorn Community. The transfer station service area population is estimated to be over 4,000 with population growth in the area trending upwards at about 2% per year.

Materials received and handled separately at the Site include household waste, multi-material recycling (containers and cartons, and mixed paper), non-refrigeration appliances, tires, scrap metal, as well as small loads of demolition, land clearing and construction waste (DLC).

1.2 Preliminary Design and Detailed Design for the Cummings Road Regional Transfer Station

The Cummings Road Regional Transfer Station has outgrown the current design and requires upgrades and expansion to improve waste diversion opportunities for rural residents and improve site safety for customers, haulers and onsite staff.

The design plan for the Site will need to consider continued use of the existing transfer station operation while the new upgraded facility is constructed.

The new facility plan should address the following:

- Efficient and safe customer and transfer vehicle routing;
- On-site container storage capacity for waste, metals, DLC waste for current and future waste quantities;
- Efficient container handling;
- Wildlife deterrent measures;
- Provisions for expanding waste diversion opportunities;
- Safe access to Alpine Drive for departing vehicles; and
- Gate with swipe card and coin system.

The Site will also need to consider additional waste quantities received from the Buckhorn area.

The following documents have been identified as relevant to this project:

1. 2015 Regional Solid Waste Management Plan (RDFFG, 2016)
   http://www.rdffg.bc.ca/uploads/reports/Solid-Waste/RSWMP2015.pdf

2. Bylaw No. 3121, 2019, Schedule "A" Facility Classes (RDFFG, 2019)
   Attached in Appendix 5

3. Conceptual Design Plan for Cummings Road Regional Transfer Station (Tetra Tech, 2019)
   Attached in Appendix 3

4. Cummings Road Regional Transfer Station site pamphlet
   Attached in Appendix 4

The following documents will be made available to the successful proponent once the contract is awarded:

1. Cummings Road Regional Transfer Station Residential Traffic Count, 2015 to 2019.

2. Cummings Road Regional Transfer Station Refuse, Metals & DLC Load Counts and Weights, Tires & Recyclables from MMR, 2015 to 2019.

2.0 INVITATION AND INSTRUCTIONS

The Regional District of Fraser-Fort George invites proposals for engineering services from qualified firms to undertake the preliminary design and detailed design for Cummings Road Regional Transfer Station. The preliminary design of the transfer station facility will be made available for public consultation. The detailed design will include all required testing, permits, detailed design drawings, specifications, preparing the construction tender package, administrative and technical support throughout the tender and construction processes. Construction supervision and inspections are included in the work as well as preparing a Master Plan for the overall solid waste facility.

2.1 Request for Proposals ("RFP") Documents:

RFP Documents may be obtained on, or after, Tuesday, February 25, 2020

a) in a PDF (Public Document Format) file format from the Regional District's website at www.rdffg.bc.ca , or

b) on the BCBid website @ www.bcbid.gov.bc.ca, or

c) in hard copy from the Regional District Service Centre, 155 George Street, Prince George, BC between 8:00 a.m. and 5:00 p.m., Monday to Friday, excluding statutory holidays. The cost for each hard copy Request for Proposal package is ten dollars ($10) (taxes included) and is non-refundable.

All subsequent information regarding this RFP, including amendments, addenda and answers to questions will also be available as above.

It is the sole responsibility of the proponent to ascertain that they have received a full set of the RFP documents. Upon submission of their proposal, the proponent will be deemed conclusively to have been in possession of a full set of the RFP documents.

The lowest or any proposal will not necessarily be accepted. The Regional District of Fraser-Fort George reserves the right to accept or reject any or all proposals. Facsimile proposals and electronic proposals will NOT be accepted.

2.2 Proposal Submissions and Closing Date

Proponents will complete and submit three (3) copies of their proposal, formatted as described in Section 4.0. PROPOSAL FORMAT, in a **sealed envelope.**

Sealed proposals will be received by the General Manager of Financial Services, on the 3rd floor at the Regional District of Fraser-Fort George, up **to 2:00 p.m. local time on** Monday, March 23, 2020.

Proposals submitted by fax, electronically, or not in the original Regional District format will **NOT** be accepted. Any proposal received after the closing date and time (2:00 p.m., Monday, March 23, 2020) will be considered disqualified and will be returned to the proponent.

The following information **must be written on the outside of the sealed envelope containing the proposal submission, as well as the outside of the courier envelope (if sending by courier):**

1. Attention: General Manager of Financial Services
   Regional District of Fraser-Fort George
   3rd Floor, 155 George Street
   Prince George, BC V2L 1P8

2. Request for Proposals, ES-20-06
   Engineering Consulting Services for Redesign of
   Cummings Road Regional Transfer Station

3. Responding Proponent's name and address.

To be considered, proposals must be signed by an authorized signatory of the proponent. By signing the proposal, the proponent is bound to statements made in response to this RFP. Any proposal received by the Regional District that is unsigned will be rejected.

Proposals not submitted in strict accordance with these instructions or not complying with the requirements in this RFP may be rejected.

The Regional District will not be responsible for any costs incurred by proponents as a result of the preparation or submission of a proposal pertaining to this RFP. The accuracy and completeness of the proposal is the proponent's responsibility. Should errors be discovered, they will be corrected by the proponent at their expense.

The Regional District reserves the right to negotiate with any proponent at its discretion. The proponents will be competent and capable of performing the work. The proponent may be required to provide evidence of previous experience and financial responsibility before a contract is awarded.

2.3 Errors, Omissions, Clarifications

All technical questions and requests for clarification relating to the RFP process, and/or identification of any errors or omissions in the RFP documents, shall be made by email to: Anson Hardjojo, Solid Waste and Waste Diversion Coordinator, anson.hardjojo@rdffg.bc.ca.

All administrative questions relating to this project will be directed to the Project Administrator: Mrs. Petra Wildauer, General Manager of Environmental Services, pwildauer@rdffg.bc.ca.

NOTE: the last day that requests for clarification or inquiries may be made is **Monday, March 16, 2020** in order that addenda if necessary, are issued in time for all proponents to complete their proposal submission and have it delivered to the Regional District office prior to the closing time and date of the RFP.

2.4 Acknowledgement Letter

Upon receipt of this RFP, a potential proponent will sign the Acknowledgement Letter (page 14) and email or fax the signed Acknowledgement Letter to the attention of Anson Hardjojo, Regional District of Fraser-Fort George at anson.hardjojo@rdffg.bc.ca. A proponent who signs and returns the Acknowledgement Letter is not obligated to submit a proposal. Any work done after discovery of discrepancies, errors or omissions will be done at the Proponent's risk.

Any proponent who does not submit the Acknowledgement Letter will not be sent any amendments or addenda and may be disqualified.

2.5 Regional District's Right to Reject Proposals

The Regional District reserves the right, in its sole discretion, to waive informalities in proposals, reject any and all proposals, or accept the proposal deemed most favourable in the interests of the Regional District. The lowest, or any proposal, will not necessarily be awarded.
If a proposal contains a defect or fails in some way to comply with the requirements of this RFP, which, in the sole discretion of the Regional District, is not material, the Regional District may waive the defect or accept the proposal.

The Regional District reserves the right to reject a proposal based on potential or perceived conflict of interest.

The Regional District reserves the discretion to reject any proposal where:

a) one or more of the directors, officers, principals, partners, senior management employees, shareholders or owners of the proponent, is an officer, employee or director of the Regional District, or is a member of the immediate family of an officer, employee or director of the Regional District; or

b) in the case of a proposal submitted by a proponent who is an individual person, where that individual is an officer, employee or director of the Regional District, or is a member of the immediate family of an officer, employee or director of the Regional District.

When submitting a proposal, the proponent is required to complete a Conflict of Interest Disclosure Statement (page 16).

The Regional District reserves the right to reject any proposal submitted by a proponent who is, or whose principals are, at the time of proposal, engaged in a lawsuit against the Regional District in relation to work similar to that being proposed.

2.6 Claim for Compensation

No proponent shall have any claim for compensation of any kind whatsoever as a result of participating in this RFP.

In the event that the previous paragraph is found to be invalid by a court of competent jurisdiction, then this paragraph will apply. By submitting a proposal, a proponent agrees that they will not claim damages in excess of an amount equivalent to the reasonable costs incurred by the proponent in preparing their proposal for matters relating to this RFP or in respect of the competitive proposal process, and the proponent, by submitting a proposal, waives any claim for loss of profits if a contract is not entered into with the proponent.

3.0 PURPOSE

The Cummings Road Regional Transfer Station is a solid waste and recycling facility located just outside the boundaries of the City of Prince George. The rural transfer station forms an essential part of the Regional District's solid waste facility network and the Regional District is committed to providing safe and efficient solid waste services. To continue to provide excellent service delivery, the Site requires a redesign to address safety concerns, accommodate more efficient traffic management and to maximize waste diversion opportunities. The transfer station is intended to serve the rural community in Electoral Area D, including the Buckhorn, Red Rock and Cummings Road communities. The Cummings Road Regional Transfer Station has outgrown current design and requires upgrades and expansion to improve waste diversion opportunities for rural residents in a safe and efficient manner.

The redesign of the Cummings Road Regional Transfer Station will have the following design goals:

- Provide wildlife deterrence;
- Improve traffic routing for customer vehicles and hauling trucks;
- Provide adequate space to reduce bottlenecks to improve public service and safety;

- Increase storage for waste and recyclable materials to accommodate growth of waste volumes;
- Separation of customers and hauling trucks to prevent potential vehicle incidents;
- Develop a Z-shape retaining wall design for more efficient container handling and more effective use of space; and
- Include provisions for expanding waste diversion opportunities.

4.0 PROPOSAL FORMAT

Proponents are asked to respond in a similar manner. The following format and sequence should be used in order to provide consistency in proponent response and to ensure each proposal receives full and complete consideration. All pages should be consecutively numbered.

a) Title Page – including Request for Proposal title and number, proponent's name and address, telephone number, fax number, email address and contract representative.

b) One page letter of introduction signed by the person or persons authorized to sign on behalf of the proponent which will bind the proponent to statements made in the proposal.

c) Table of Contents including page numbers.

d) An Executive Summary of the key features of the proposal.

e) The body of the proposal, including the Financial Proposal, i.e. the "Proponent's Response".

f) Completed List of Subcontractors

g) Additional information that a proponent may choose to provide.

h) Goods and Services Tax Information form, page 15.

i) Conflict of Interest Disclosure Statement on page 16.

j) All amendments and addenda, if any, issued for this RFP. Each amendment and addendum must be signed by the proponent and included with the proposal and will form part of the proposal and contract documents.

5.0 PROPOSAL EVALUATION

The contract award will be based on the professional qualifications, experience, local knowledge, work plan methodology and schedule, price, and quality of proposal.

The proposal submission should be clear, concise and complete. The Regional District shall be the sole judge of a proposal and its decision shall be final.

Evaluation Criteria:

The following criteria will be used by Regional District staff to evaluate proposals received:

a. *Consultant's Qualifications and Experience* *30 points*

The length and quality of experience of
- the person named in the proposal as the consultant's project manager,
- the consulting firm doing similar projects, and
- the team assigned by the consulting firm to work on this project.

b. *Methodology* *35 points*

This includes the evaluation of
- thoroughness of the project approach reflected in the work plan and project schedule,
- level of effort reflected in total work hours of the team assigned to complete the project, and
- timing of project tasks outlined in the project schedule.

c. *Project Budget* *25 points*

This includes the amount of detail given to project relevant line items and the overall proposed project costs.

d. *Quality of Proposal, including format* *10 points*

Total 100 points

6.0 CONTRACT

6.1 Sample Service Agreement

The form of contract will be similar in form to the sample SERVICE AGREEMENT and will include this RFP, Proponent's Financial Proposal, all appendices, amendments and addenda, as well as the successful proponent's submission.

6.2 Award of Contract

A contract for ES-20-06 (the "Contract") is expected to be awarded to the successful proponent (the "Consultant") on April 16, 2020. All proponents will be advised, in writing, as to the awarding of the Contract.

The Regional District, in its sole judgment, may delay the Award of Contract date as deemed appropriate by the Regional District.

6.3 Contract Duration

This Contract will commence on May 1, 2020, with the Regional District's acceptance of the successful proponent's proposal, and conclude October 31, 2020, with the submission of final reports and drawings. A possible extension of this contract may be considered if agreeable to both parties. The Regional District retains the right of approval or rejection of any contract extension.

7.0 INSURANCE, WORKSAFEBC, INDEMNITY

7.1 Insurance

The Consultant shall, without limiting its obligations or liabilities, and at its own expense, provide and maintain throughout the Contract term, the following insurances with insurers licenced in the Province of British Columbia, in forms acceptable to the Regional District. All required insurance (except automobile insurance on vehicles owned by the Consultant) shall be endorsed to show the Regional District as additional insured and provide the Regional District with thirty (30) days' advance written notice of cancellation or material change. The Consultant will provide the Regional District with evidence of the required insurance, in a form acceptable to the Regional District, upon notification of award and prior to the execution and delivery of the Contract:

i. Commercial General Liability (CGL) in an amount not less than $5,000,000 inclusive per occurrence insuring against bodily injury and property damage and including liability assumed under the Contract. The Regional District is to be added as an additional insured. Such CGL coverage shall include the following liability extensions: Contingent Employers Liability, Broad Form Products & Completed Operations, Personal Injury, Blanket Contractual, and Cross Liability.

ii. Where the Consultant requires the use of automobiles to undertake the work of the Contract, the Consultant will have the following:

   a. Automobile Liability on all vehicles owned, operated, or licenced in the name of the Consultant in an amount not less than $2,000,000 per occurrence.

b. Non-owned Automobile Liability insurance in an amount not less $2,000,000 per occurrence.

The Consultant shall ensure that all sub-contractors forming from this Contract meet the insurance requirements outlined above.

It is the sole responsibility of the Consultant to determine if additional limits of liability insurance coverage are required to protect them from risk.

7.2 WorkSafeBC

The Consultant will use due care and take all necessary precautions to assure the protection of persons and property while undertaking the work of the Contract and will comply with the *Workers Compensation Act* of the Province of British Columbia.

Prior to undertaking any of the work of the Contract, the Consultant will provide the Regional District with a Clearance Letter confirming they are in good standing with WorkSafeBC and will pay and keep current all assessments required by WorkSafeBC.

Out of Province Consultants will be compliant with WorkSafeBC's registration requirements pertaining to out of Province firms. Where WorkSafeBC registration requirements allow for a Consultant to be registered with another Province's Worker's Compensation Board, or like organization, the consultant will provide the Regional District with their registration number and written documentation confirming that the Consultant is in good standing with the appropriate Worker's Compensation Board, or like organization. The Consultant will pay and keep current all assessments required to maintain good standing in relation to the Service Agreement amount.

The Consultant will maintain an Occupational Health and Safety Plan (OHSP) and ensure that their employees and sub-contractors are well trained and aware of OHSP.

7.3 Indemnity

Notwithstanding the compliance of the Consultant with all the clauses concerning insurance, the Consultant shall indemnify, protect, and save harmless the Regional District, its officials, officers, employees, volunteers, servants, and agents from and against any and all liabilities, damages, losses, claims, costs, expenses of any kind whatsoever (including legal costs), and actions recoverable by any third party from the Regional District and shall be paid by the Consultant. If the Regional District pays, or is required to pay, any damages, costs, or fees on account of the actions, claims and demands herein recited, or if the property of the Regional District shall be charged in any way as a result of the aforesaid actions, causes of actions, and claims for demands, then the Regional District shall be entitled to recover from the Consultant all such damages, costs, fees or other charges together with any costs or expenses incurred in so doing. The Consultant covenants and agrees that this clause shall survive the termination of the Contract herein granted.

8.0 SCOPE OF WORK

The successful proponent will provide a preliminary and detailed design for the construction of a solid waste transfer station at the existing Cummings Road Regional Transfer Station that will improve site safety traffic flow and waste diversion opportunities. The design should follow similarly to the Conceptual Design Plan. Limitations are given due to the closed landfill area being in close proximity to the transfer station site to the South. No construction or changes will take place near or on the closed landfill area. The successful proponent will provide, but not be limited to, the following:

1. A preliminary design for a transfer station.

   The preliminary design will be made available for public consultation within the community;

2. A detailed design of the transfer station.

   The detailed design shall include all required testing, permits, detailed design drawings, specifications, preparation of the construction tender package, administrative and technical support throughout the tender and construction processes and construction supervision and inspection;

3. Master Plan for the facility.

   The Master Plan shall include an operations and maintenance plan for the layout of the transfer station.

9.0 PROPONENT INFORMATION

9.1 Qualifications and Experience

The successful proponent will have at least five (5) years' experience as a bona fide prime consultant in the business of solid waste management, transfer station site management, and landfill site engineering for local government. Proponents will submit evidence of previous successful performance in comparable work.

Proponents will provide complete information on experience of key personnel to be involved in the project and references from work on similar projects.

Proponents may be required to submit evidence of their resources and their ability to carry out the work in their respective submissions.

9.2 Key Personnel

The successful Proponent will be required to maintain key members of the project team as proposed throughout the term of the contract including but not limited to the team lead, key staff and sub-consultants. Any proposed change to the project team must be agreed upon in writing by the Regional District.

9.3 Professional Responsibility

Only qualified and experienced engineering professionals will be considered for this project. The successful proponent will be expected to provide services in accordance with a standard care, skill, and diligence maintained by a person (or firm) providing Engineering Consulting Services for Redesign of Cummings Road Regional Transfer Station described herein.

10.0 FINANCIAL PROPOSAL

The proponent must specify in the proposal, the fees required to satisfy the terms of reference for the project, the work plan, and methodology. The proponent must clearly identify and detail all costs separately. As well, the various stages of the work plan shall be costed, with taxes and disbursements clearly identified. The fee structure shall be based on milestones and deliverables to the Regional District over the duration of the contract period.

10.1 Terms of Payment

The proponent must specify in the proposal, the terms of payment required for the duration of the project.

10.2 Cost Control

The proponent must provide in the proposal, a description of the cost control measures they will employ to effectively manage the project budget.

10.3 Invoicing and Payment

If a Contract is awarded, invoices should be sent to financialservices@rdffg.bc.ca and should include at a minimum:

a. Purchase Order number (if applicable)
b. Project document name and contract number
c. Regional District contact full name (First and Last)
d. Proponent contact information (name and phone number)
e. GST number
f. WCB number
g. Detailed description of work performed
h. Applicable taxes shown as separate line item
i. Receipts attached for travel expenses
j. Invoices to be submitted monthly

11.0 WORK PLAN AND SCHEDULE

The Regional District requires the project to be completed, constructed and fully operational by September 2021. The successful proponent is expected to schedule a kick-off meeting at most two weeks after the contract is awarded. The kick-off meeting shall provide the Regional District with key milestones including preliminary design completion, detailed design approval, issue of the construction services tender, and final approval of operations and maintenance documents.

A schedule of milestones should accompany the work description showing the expected sequence of tasks and resource requirements for the proponent and the Regional District.

11.1 Time Schedule

The anticipated schedule for the service procurement process is as follows:

Issue RFP	February 25, 2020
Proposal Due Date	March 23, 2020
Contract Award	April 16, 2020
Preliminary Design	June 2020
Detailed Design	October 2020
Tendering of Construction	December 2020
Begin Construction	March 2021
Completion of Construction	September 2021

12.0 DOCUMENTS

The successful proponent will be required to provide all documents related to the project to the Regional District in hard copy and an electronic format. All design drawings will be in an AutoCAD 2007 or higher format. All text documents will be in a Microsoft Word or PDF format.

The successful proponent will be provided with the documents listed under Section 1.2 and is expected to return these documents to the Regional District at the conclusion of the project.

13.0 PROJECT MANAGER

All technical questions concerning this RFP are to be directed to Anson Hardjojo by fax or email.

Anson Hardjojo, Solid Waste and Waste Diversion Coordinator
Regional District of Fraser-Fort George
155 George Street, Prince George BC V2L 1P8
Telephone: 250 960-4400
Fax: (250) 562-8676 Email: anson.hardjojo@rdffg.bc.ca

Administrative questions relating to this project will be directed to Petra Wildauer.

Mrs. Petra Wildauer, General Manager of Environmental Services
Regional District of Fraser-Fort George
155 George Street, Prince George BC V2L 1P8
Telephone: 250 960-4483
Fax: (250) 562-8676 Email: pwildauer@rdffg.bc.ca

14.0 OWNERSHIP OF PROPOSALS AND FREEDOM OF INFORMATION

Proposals will be received and held in confidence by the Regional District, subject to the provisions of the *Freedom of Information and Protection of Privacy Act* and this RFP. Each proposal should clearly identify any information that is considered to be confidential or propriety information. Proponents are responsible to review the *Freedom of Information and Protection of Privacy Act* for further information.

All documents, including proposals, submitted to the Regional District become the property of the Regional District. The Regional District will provide a debriefing for individual proponents at their request subject to the *Freedom of Information and Protection of Privacy Act.*

15.0 CONFIDENTIATLITY

In accordance with the *Freedom of Information and Protection of Privacy Act*, the proponents will treat as confidential and will not, without prior written consent of the Regional District, publish, release, or disclose, or permit to be published, released, or disclosed, any information supplied to, obtained by, or which comes to the knowledge of the proponents as a result of this Contract except insofar as such publication, release or disclosure is necessary to enable the proponent to fulfil their obligation under this Contract, or by the laws of British Columbia.

16.0 RIGHTS OF WAIVER

A waiver, or any breach of provision of this RFP will not constitute or operate as a waiver, or any other breach, of any other provisions, nor will any failure to enforce any provision herein operate as a waiver of such provisions or of any other provisions.

17.0 SEVERABILITY

All articles of the Contract are severable one from the other. Should a court of competent jurisdiction find that any one or more articles herein are void, the validity of the remaining paragraphs hereof will not be affected.

18.0 GOVERNING LAWS

This Contract shall be governed and construed in accordance with the laws of the Province of British Columbia.

19.0 ENTIRE AGREEMENT

The terms and conditions set forth herein constitute the entire understanding and agreement of the Proponent and the Regional District with respect to the Services. All previous proposals, offers, and other communications relative to the provisions of these Services are hereby superseded. The Regional District and the Proponent agree to reference this Contract as governing terms and conditions. Any changes to the terms and conditions set forth herein will be mutually agreed to and will be included, in writing, in a Change of Work Order.

20.0 DISPUTE RESOLUTION

If a claim, dispute, or controversy arises out of or relates to the interpretation, application, enforcement, or performance of Services under this Contract, the Proponent and the Regional District agree first to try in good faith to settle the dispute by negotiations between senior management of the Proponent and the Regional District. If such negotiations are unsuccessful, the Proponent and the Regional District agree to attempt to settle the dispute by arbitration if both parties agree. If the dispute cannot be settled through arbitration, the Proponent and the Regional District may agree to attempt to settle the dispute through good faith mediation. If the dispute cannot be resolved through mediation and unless otherwise mutually agreed, the dispute shall be settled by litigation in an appropriate court in the Province of the Regional District.

21.0 WAIVER OF TERMS AND CONDITIONS

The failure of either the Proponent or the Regional District in any one or more instances to enforce one or more of the terms or conditions of this Contract or to exercise any right or privilege in this Contract or the waiver by the Proponent or the Regional District of any breach of the terms or conditions of this Contract shall not be construed as thereafter waiving any such terms, conditions, rights, or privileges, and the same shall continue and remain in force and effect as if no such failure to enforce had occurred.

ACKNOWLEDGEMENT LETTER

The undersigned has received a full set of RFP ES-20-06
Engineering Consulting Services for Redesign of Cummings Road Regional Transfer Station

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Authorized Signatory Signature	Name of Proponent
Name (Please print)	Address
Title	City, Province, Postal Code
Phone Number	Email
Date	

I/We presently intend ☐ to provide ☐ not to provide a Proposal.

Please return immediately by mail, hand delivery, fax or by email to:

Anson Hardjojo, Solid Waste and Waste Diversion Coordinator
Regional District of Fraser-Fort George
155 George Street
Prince George, BC V2L 1P8

Email: anson.hardjojo@rdffg.bc.ca
Fax Number: 250-562-8676

GOODS AND SERVICES TAX INFORMATION

Supplier: _____
Name

_____
Address

_____
City Province

_____
Postal Code Phone Number

Are you a GST Registrant? Yes _____ No _____

If YES, please indicate your registration number: _____

If NO, Please fill in the following (check appropriate box):

❑ Supplier qualifies as a small supplier under s.148 of the legislation

❑ Other: Specify_____

_____ _____
Authorized Signatory Signature Print Name

_____ _____
Title Date

CONFLICT OF INTEREST DISCLOSURE STATEMENT

PROCUREMENT PROCESS
ES-20-06 Engineering Consulting Service for Redesign of
Cummings Road Regional Transfer Station

Proponent Name:_____

The Proponent, including its officers, employees, and any person or other entity working on behalf of or in conjunction with, the Proponent on this Procurement Process:

- ☐ is free of any conflict of interest that could be perceived to improperly influence the outcome of this procurement process.
- ☐ has not, and will not, participate in any improper procurement practices that can provide the Proponent with an unfair competitive advantage including obtaining and using insider type information to prepare a solicitation offer or participating in bid rigging.
- ☐ has an actual, perceived or potential conflict of interest regarding this procurement process as a result of:

State reason(s) for Conflict of Interest:

_____

_____

_____

_____

By signing below, I certify that all statements made on this form are true and correct to the best of my knowledge.

_____ _____
Print Name of Person Signing Disclosure Authorized Representative of:

_____ _____
Signature of Person Making Disclosure Date Signed

SERVICE AGREEMENT
ES-20-06

Engineering Consulting Services for Redesign of Cummings Road Regional Transfer Station

BETWEEN:

REGIONAL DISTRICT OF FRASER-FORT GEORGE
a local government incorporated pursuant to the *Local Government Act* and having its business office located at:
155 George Street
Prince George BC V2L 1P8

(hereinafter called the "Regional District")

OF THE FIRST PART

AND:

COMPANY
a company duly incorporated under the laws of British Columbia and having a place of business at:
Street Address
City, Province, Postal Code

(hereinafter called the "Consultant")

OF THE SECOND PART

WITNESSETH: That the Consultant and the Regional District undertake and agree as follows:

1. The Consultant will:

   a) Provide all necessary materials, labour, supervision and equipment and perform all work, and fulfil everything as set forth in and in strict accordance with the Service Agreement Documents for the project entitled "Engineering Consulting Services for Redesign of Cummings Road Regional Transfer Station",

   b) Commence to actively proceed with the Work of the Agreement on Friday, May 1, 2020.

2. The Regional District will pay to the Consultant as full compensation for the performance and fulfilment of this Service Agreement, the sum or sums of money specified herein in the manner and at the times specified in the Service Agreement Documents.

3. The General Conditions of Service, Service Agreement and other Securities, General Conditions, Operational Specifications, this RFP, Proponent's proposal submission and all addenda are incorporated herein, to the intent and purpose as though recited in full herein, and the whole will form the Service Agreement and will enure to the benefit of and be binding upon the parties hereto and their successors, executors, administrators, and assigns.

4. No implied agreement of any kind whatsoever, by or on behalf of the Regional District, will arise or be implied from anything contained in this Service Agreement or from any position or situation of the parties at any time, it being understood and agreed that the express contracts, covenants and agreements made herein by the parties hereto are and will be the only contract, covenants and agreements on which any rights against the Regional District may be founded.

5. Subject to Section 3, this Agreement will supersede all communications, negotiations, and agreements, either written or verbal, made between the parties hereto in respect of matters pertaining to this Agreement prior to the execution and delivery hereof.

6. All communications in writing between the parties will be deemed to have been received by the addressee if delivered to the individual, or to a member of a firm, or to the General Manager of Environmental Services of the Regional District for whom they are intended, or if sent by registered mail as follows:

   The Consultant at _____.
   (Address)

   The Regional District of Fraser-Fort George at 155 George Street, Prince George, BC V2L 1P8.

IN WITNESS WHEREOF the parties have duly executed this Agreement.

SIGNED ON BEHALF OF THE)
REGIONAL DISTRICT OF)
FRASER-FORT GEORGE)
)
)
)
)
)
_____) _____
Chair) Date
)
)
)
_____) _____
GM of Legislative and Corporate Services) Date

SIGNED ON BEHALF OF)
CONSULTANT)
)
)
)
)
_____) _____
Authorized Signatory Signature) Date
)

_____)
(Name and Title) (Please print))
)

APPENDICES

Appendix 1 - Cummings Road Regional Transfer Station Location Map

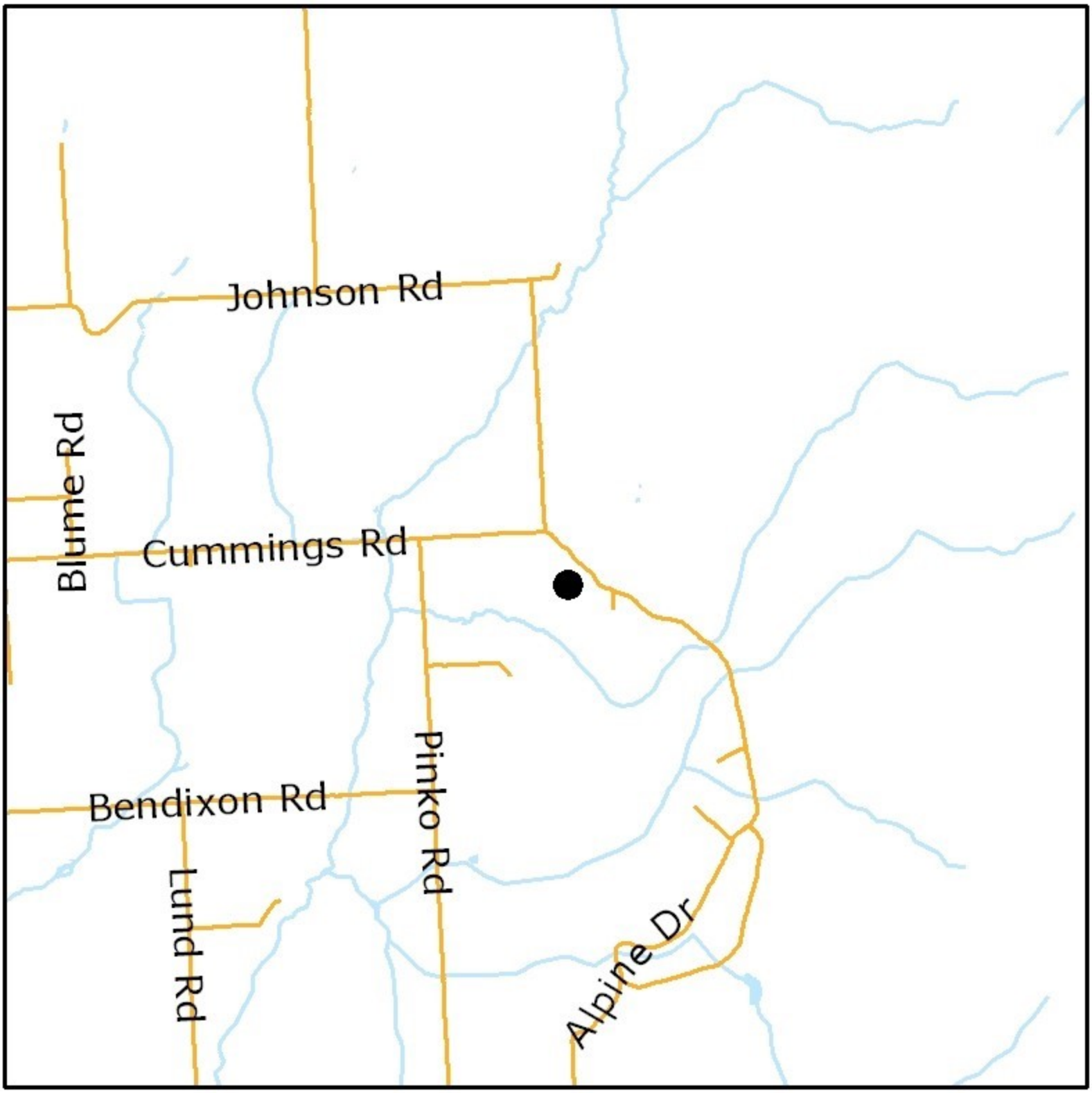
Appendix 2 - Cummings Road Regional Transfer Station Site Plan

Appendix 3 - Cummings Road Regional Transfer Station Conceptual Design Plan

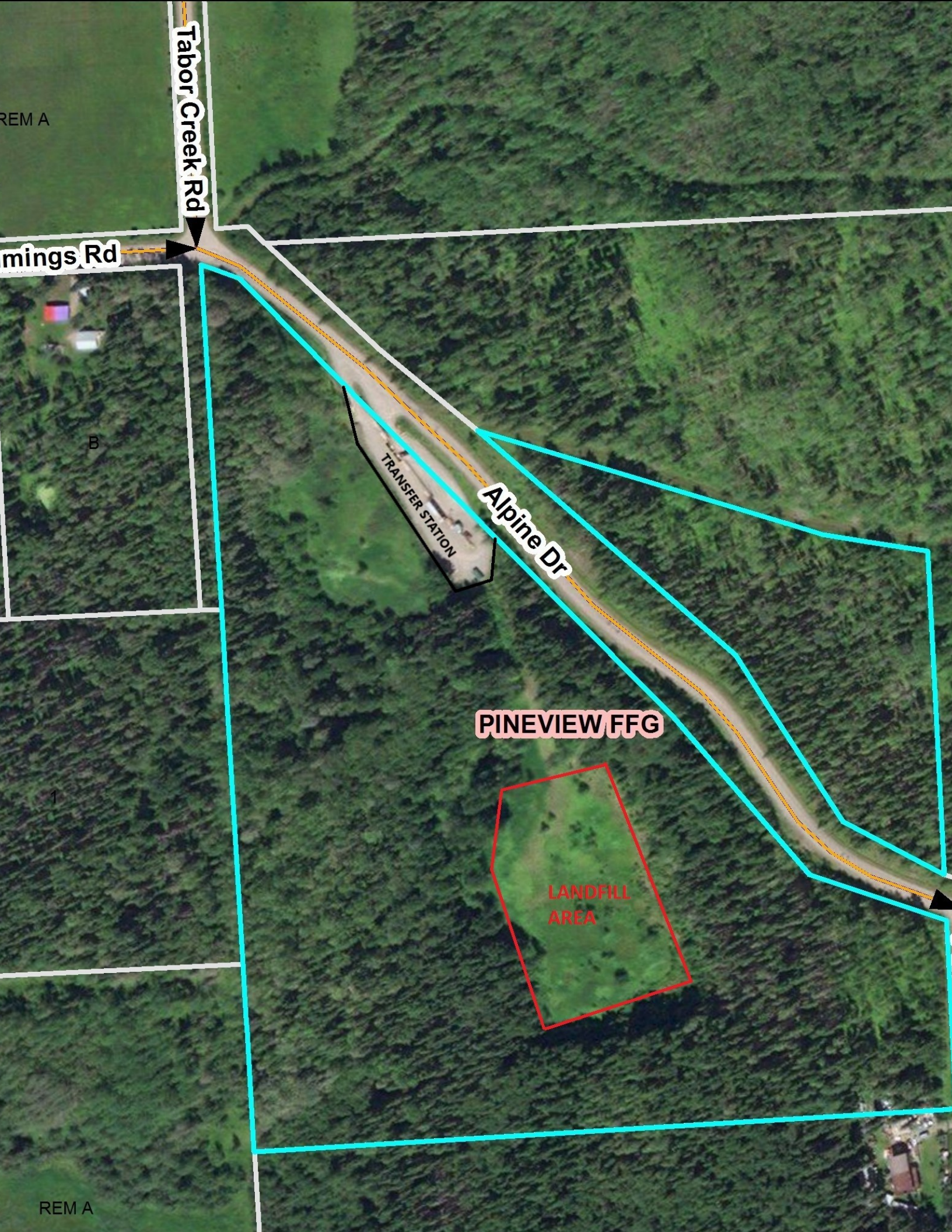
Appendix 4 - Cummings Road Regional Transfer Station Site Pamphlet

Appendix 5 – Bylaw No. 3121, 2019, Schedule “A” Facility Classes

APPENDIX 1 - CUMMINGS ROAD REGIONAL TRANSFER STATION LOCATION MAP


Johnson Rd
Blume Rd
Cummings Rd
Bendixon Rd
Pinko Rd
Lund Rd
Alpine Dr

APPENDIX 2 - CUMMINGS ROAD REGIONAL TRANSFER STATION SITE PLAN


Tabor Creek Rd
mings Rd
REM A
B
1
REM A
TRANSFER STATION
Alpine Dr
PINEVIEW FFG
LANDFILL
AREA

APPENDIX 3 – CUMMINGS ROAD REGIONALTRANSFER STATION CONCEPTUAL DESIGN PLAN

TETRA TECH

Conceptual Design Plan for Cummings Road Regional Transfer Station

PRESENTED TO

Regional District of Fraser-Fort George

JANUARY 21, 2019
ISSUED FOR USE
FILE: 704-SWM.SWOP04042-02

Tetra Tech Canada Inc.
14940 - 123 Avenue
Edmonton, AB T5V 1B4 CANADA
Tel 780.451.2121 Fax 780.454.5688

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ACRONYMS & ABBREVIATIONS

Acronyms/Abbreviations	Definition
DLC	Demolition, land clearing and construction waste
EPR	Extended Producer Responsibility
P1	Public Development
RDFFG	Regional District of Fraser Fort George
RSWMP	Regional Solid Waste Management Plan
t/p/y	Tonnes of waste per person per year
Tetra Tech	Tetra Tech Canada Inc.

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This report and its contents are intended for the sole use of the Regional District of Fraser-Fort George and their agents. Tetra Tech Canada Inc. (Tetra Tech) does not accept any responsibility for the accuracy of any of the data, the analysis, or the recommendations contained or referenced in the report when the report is used or relied upon by any Party other than the Regional District of Fraser-Fort George, or for any Project other than the proposed development at the subject site. Any such unauthorized use of this report is at the sole risk of the user. Use of this document is subject to the Limitations on the Use of this Document attached in the Appendix or Contractual Terms and Conditions executed by both parties.

1.0 INTRODUCTION

Tetra Tech Canada Inc. (Tetra Tech) is pleased to submit the following Conceptual Design Plan to the Regional District of Fraser-Fort George (RDFFG) in support of the re-development of the Cummings Road Regional Transfer Station. Tetra Tech has prepared this summary document for the RDFFG to present an overview of the proposed re-development of the transfer station facility, including footprint, preliminary conceptual layout, conceptual design capacity, and associated facility infrastructure.

2.0 BACKGROUND

The Cummings Road Regional Transfer Station is located southeast of Prince George in Electoral Area D. Area D is home to 4,278 residents in an area of approximately 655 square kilometres. The existing Cummings Road Regional Transfer Station is located adjacent to Alpine Drive, on District Lot 9095. The site is owned by the RDFFG and is zoned for Public Development (P1).

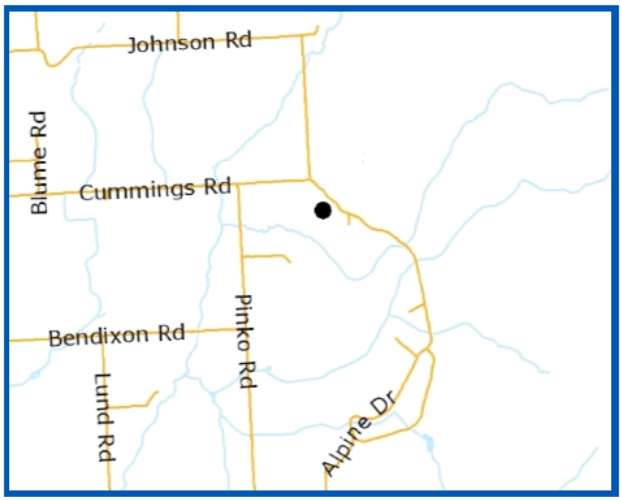

Image 1: Site Location

The site is currently serviced with 40 cubic yard roll-off bins supplied by a local contractor. The transfer station is intended to serve the surrounding area in Electoral Area D including the Buckhorn Community. The transfer station service area population is estimated to be over 4,000 with population growth in the area trending upwards at about 2% per year.

Materials received and handled separately at the site include household waste, multi-material recycling (containers and cartons, and mixed paper), non-refrigeration appliances, tires, and scrap metal, as well as demolition, land clearing and construction waste (DLC).

A site visit was conducted by Tetra Tech on October 1, 2018 and through discussions with RDFFG staff, it is evident that the Cummings Road Regional Transfer Station is no longer able to efficiently, effectively and safely manage customer traffic and waste volumes due to site constraints. At the time the site was first developed, it was likely adequate for the area, but with increasing residential development and resulting population growth in Electoral Area D, the site is now undersized. For these reasons, the RDFFG needs to re-develop the site and to maximize waste diversion opportunities and to improve and enhance public service and safety.

The re-development plan for the site will need to consider continued use of the existing transfer station operation while the new upgraded facility is constructed.

The new facility plan should address the following:

- Efficient and safe customer and transfer vehicle routing;
- On-site container storage capacity for waste, metals, DLC waste for current and future waste quantities;
- Efficient container handling;
- Wildlife deterrent measures;

- Provisions for expanding waste diversion opportunities; and
- Safe access to Alpine Drive for departing vehicles.

The Cumming Road facility will also need to consider additional waste quantities received from the Buckhorn area.

2.1 Waste Generation

The total annual waste quantities (for each material) per capita generation for Cummings Road and Buckhorn Regional Transfer Station Sites were calculated using the following data:

- The 2017 values for the volume of materials handled through both regional transfer stations; and
- The 2016 Canadian Census population statistics for Electoral Area D (population of 4278).

Note that metals, DLC, and recyclables are only accepted at the Cummings Road Regional Transfer Station, and not at the Buckhorn Regional Transfer Station.

Table 2-1: Current Volume of Material Handled (2017) and Annual Waste Quantities for Cummings Road and Buckhorn Regional Transfer Stations Combined

	Annual Totals (tonnes)		Total Quantity (tonnes)	Per Capita Generation (t/p/y)[1]
	Cummings Road	Buckhorn		
Refuse	820.77	263.78	1,084.55	0.25
Metals	98.78	N/A	98.78	0.023
DLC	590.25	N/A	590.25	0.15
Recycling	47.25	N/A	47.25	0.01

2.2 Regional Solid Waste Management Plan

The Regional Solid Waste Management Plan (RSWMP), updated in 2015, outlines the RDFFG's goals for the period from 2015 – 2025 (Maura Walker 2015). The RSWMP included the following observations regarding transfer stations within the region:

- In the RDFFG, all residual waste is delivered to RDFFG transfer stations or regional landfills. RDFFG transfer stations produce 8% of the landfilled waste in the region;
- There are 17 transfer stations that receive waste from rural communities throughout the RDFFG; and
- There are two other transfer stations located in Prince George: one providing a waste disposal option for residents, and one which provides a dedicated waste diversion site for residents.

All RDFFG transfer stations are grouped into service level classifications. Transfer stations with great solid waste and recycling options are the full service and mid-level transfer stations. The Cummings Road Regional Transfer Station is a mid-level transfer station.

[1]The units stand for tonnes of waste generated per person per year

Two other transfer station classifications are basic plus and basic. Basic plus transfer stations, such as the Buckhorn Regional Transfer Station, provide solid waste service and a multi-material recycling bin only. Appendix A[2] provides the facility classes for all of the RDFFG transfer stations.

For waste diversion purposes, there are 13 transfer stations and two landfills that have the provision of multi-material recycling bins for residential packaging and paper. These residential recycling services currently do not receive funding through designated Extended Producer Responsibility (EPR) organisations such as Recycle BC.

The transfer stations are considered to be a key component of the RDFFG Solid Waste Management Plan for increasing waste diversion. Upgrading the Cummings Road Regional Transfer Station site will provide provisions for additional waste diversion opportunities for the residents of Electoral Area D to achieve RDFFG waste diversion goals.

The re-development and amalgamation of the Cummings Road Regional Transfer Station will improve the capacity and allow more accommodation for other EPR products, thus upgrading the facility class of the Cummings Road Regional Transfer Station to become a Full Service Transfer Stations.

2.3 Existing Cummings Road Regional Transfer Station

2.3.1 Site Description

The property utilizes approximately 3,780 square metres (0.378 hectares or 0.934 acres) of the site for the transfer station. The area was previously used as a landfill site. The main disposal site was approximately 100 metres south of the existing transfer station and it is thought that construction waste has been disposed in the area directly west of the current site. The land surface falls off sharply towards the west of the existing transfer station.

Image 2: Cummings Road Regional Transfer Station Property

2.3.2 Waste Shed Area and Site Users

The existing transfer station is intended to serve the surrounding area in Electoral Area D including the Cummings Road and Buckhorn Communities. The transfer station service area population is estimated to be over 4,000 with population growth in the area trending upwards.

Site users are primarily rural residents from the surrounding area, although it is expected users from outside the area periodically use the site. No commercial loads (loads larger than a pickup truck) are accepted at the existing transfer station. Commercial loads are directed to the Foothills Boulevard Regional Landfill.

Containers and cartons are collected in multi-material roll-off containers. Customers access the recycling container from ground level.

Image 3: Lower Entrance, Cummings Road Regional Transfer Station

[2] Bylaw No. 3023, 2016

2.3.3 Description (Site Layout and Infrastructure)

The current site includes two gates for customers to enter and exit the site. Hauling trucks use only the lower gate.

The current infrastructure includes:

- Two (2) 40-yard bins for refuse placed below a metal canopy structure;
- One (1) 40-yard bin for DLC waste;
- One (1) 40-yard bin for metals;
- One (1) multi-material recycling (containers and cartons, and mixed paper) container on the upper ramp; and
- Tires are deposited at the south end of the site in an unconfined area.

Image 4: Tilt-Frame Truck Bin Lift Cummings Road Regional Transfer Station

Image 5: Refuse Bins & Canopy, Cummings Road Regional Transfer Station

2.3.4 Hours of Operation

The current station has traditionally operated approximately 36 hours per week as summarized below:

- 7:00 a.m. to 1:00 p.m. – Monday and Thursday;
- Closed – Tuesday and Wednesday; and
- 9:00 a.m. to 5:00 p.m. – Friday, Saturday, and Sunday.

2.3.5 Security

The site is fenced only along Alpine Drive and gated at the site entrances. Gates are locked to prevent access when the attendant is not on site. The site is supervised during operating hours.

2.3.6 Waste Accepted

Materials currently received and handled separately at the site include:

- Household waste;
- Containers and cartons, and mixed paper for recycling;

- Non-refrigeration appliances;
- Tires;
- Scrap metal; and
- DLC waste.

Site users can take tires, scrap metal, refrigeration appliances, and other bulky materials to the Foothills Boulevard Regional Landfill.

2.3.7 Operational and Environmental Observations

At the time of the aforementioned October 1, 2018 site visit, the following observations and findings were made:

- Traffic flow:
  - Site layout and space restrictions on ramp area results in bottleneck during periods of high traffic volume; and
  - Site users exit the site through the lower ramp area where hauling trucks operate and poses risks of vehicle incidents.
- Entrance:
  - Entrance is narrow;
  - Exit to Alpine Drive is not perpendicular, hence posing a safety issue turning onto the public road; and
  - 2-way traffic through gates causing bottlenecks can be an issue at times.
- Signs:
  - Entrance signs posted are informative; and
  - Potential to improve information signs for containers and traffic.
- Retaining wall:
  - The ramp retaining wall is a composite construction of both a cast-in-place concrete wall and interlocking pre-cast concrete “lock block” wall; and
  - The retaining wall is a straight wall design, resulting is inefficient for management of the 40-yard containers (requires bins to be pulled in opposite directions and limits number of bins that can be placed).
- Site roads:
  - Road surface is gravel.
- Attendant’s office:
  - An attendant office is located on the upper level of the transfer station site;
  - The office was not being used at the time of the site visit;
  - Office location may not be in an optimal location; and

- The attendant's office could be relocated to be used with the re-designed transfer station but would need to be further inspected.

Image 6: Narrow Customer Ramp, Cummings Road Regional Transfer Station

Image 7: Unconfined Tire Storage, Cummings Road Regional Transfer Station

2.3.8 Safety Issues

Tetra Tech staff observations have identified the following safety concerns at the current Cummings Road Regional Transfer Station:

- Wildlife issues are apparent based on the following:
  - Observation of bear droppings at the time of the site visit;
  - Site attendant observation of bears in the area; and
  - The site attendant stating that bears have been in the refuse bins.
- A narrow road and parking area on the customer level that:
  - Poses risk for vehicular and customer accidents;
  - Results in bottlenecks for efficient traffic flow; and
  - Customers were observed unloading from small trailers into roll-off containers from the side rather than rear of vehicles because of limited room to maneuver vehicles to back up to unload.
- Fall protection barriers are present, but should be upgraded to conform to current safety standards;
- The cast-on-place concrete retaining wall section is leaning out slightly but is thought to be stable; and
- Interlocking concrete lock block wall sections appear to be stable.

3.0 TRANSFER STATION DEVELOPMENT CRITERIA

It is necessary for the RDFFG to re-develop the Cummings Road Regional Transfer Station to address the concerns stated in Section 2.0. Design goals include the following:

- Provide wildlife deterrence;
- Improve traffic routing for customer vehicles and hauling trucks;

- Provide adequate space to reduce bottlenecks to improve public service and safety;
- Increase storage for waste and recyclable materials to accommodate growth of waste volumes
- Separation of customers and hauling trucks to prevent potential vehicle incidents;
- Develop a Z-shape retaining wall design for more efficient container handling and more effective use of space; and
- Include provisions for expanding waste diversion opportunities.

3.1 Transfer Capacity Requirements

3.1.1 Customer Traffic Volume

The RDFFG provided 2017 monthly totals for customer traffic volumes including daily peak traffic volumes. The average daily traffic volumes were calculated for each month based on the number of days the site was open in each month. Traffic volumes at the Cummings Road site are higher than typical rural transfer stations and is more reflective of traffic volumes at an urban facility. This higher traffic volume can be attributed to a growth in the rural population in the area.

A peaking factor[3] for each month was calculated by dividing the peak daily traffic volume by average daily traffic volumes. An average peaking factor of 1.8 was calculated and was used to estimate the peak daily transfer loads. The peaking factor was applied to each material type currently handled at the transfer station.

Calculations and graphs are provided in Appendix B.

3.1.2 Projected Refuse, Metals, DLC and Recycle Loads

The initial set up for all four materials follows the same method. Using the current population and assuming a growth rate of 2%, the annual estimated population is calculated over a 20-year period. Using the waste generation rate presented in Table 2-1 (Section 2.1) and the annual estimated population, the tonnes of material for each year is calculated. Average load weights (tonnes) are assumed for each material based on historical data provided by the RDFFG and typical average load weights from similar transfer stations. Using the estimated tonnes and the average load weight, the number of loads per year and the loads per week are calculated. Using the loads per week and a typical 5-day week, the average loads per day is calculated. Using the average peaking factor of 1.8 and average loads per week, the peak loads per week are calculated. Similarly, peak loads per day are calculated using the assumed 5-day week. Using the peak loads per day, the recommendations based on the number of containers for each material were developed and presented in Table 3-1.

[3] The peaking factor is the peak number of customers in a day over the average daily number of customers.

Table 3-1: Summary of Recommended Number of Containers for Each Material

Material Type	Average Container Load (tonnes)	Average Loads/Day 2018	Average Loads/Day 2038	Recommended Number of Containers
Refuse	3	1.4	2.0	4
Metals	2.5	0.2	0.2	2
DLC	3	0.8	1.1	1
Recycling	0.4	0.5	0.7	1

It is noted that the projected loads for refuse, metals, DLC recycling are derived from current numbers provided by the RDFFG. The calculations provide an estimate of how many bins are needed for each material and summarized in Table 3-1.

In addition to the above, space for additional containers for recycling is provided near the site entrance. The concept design provides for up to five containers for waste diversion programs. With enhanced waste diversion, it can be anticipated refuse volumes could be reduced. In that case, containers could be re-allocated to other materials to suit the facility at that time. This design allows the RDFFG to expand waste diversion activities at the facility, helping the RDFFG achieve the waste diversion goals outlined in the RSWMP.

Table 1, as presented at the end of the text, provides a summary for the projected loads for refuse, metals, DLC, and recycling. Appendix C provides the detailed calculation tables used to present the summarised Table 1.

4.0 DESIGN CONCEPT

A conceptual layout for the proposed re-developed transfer station is provided on Figure 1[4]. This proposed concept design layout was deliberated by taking into account site constraints such as topography and current development. As illustrated, the proposed re-development of the Cummings Road Regional Transfer Station includes the following:

- Regrading (soil excavation and fill) of the new extension of the transfer station area to provide more space for customers and a designated hauling truck pick-up area (estimated approximately 2 m fill);
- One-way routing of customers through the site and separation of hauling vehicles from customers;
- Construction of surface gravel over the entire transfer station area to provide proper traffic access to various parts of the transfer station;
- Construction of an area near the site entrance with space for five recycling containers; and
- Construction of a 2.4 metre high interlocking concrete block wall for seven 40-yard roll-off containers, each with concrete pads for container bases.

With the design concept presented, the number of customers that can be served were calculate based on 2 vehicles using a container and assuming a 20-minute unloading time.

[4] Figures 2, 3 and 4 all have the same layout as Figure 1 but have different components which cause a variation in the capital cost estimate (as explained in Section 5.0).

Table 4-1: Potential Number of Customers Served during 1-Hour and 8-Hour Periods

Material Type	Number of Containers	1-Hour Period	8-Hour Period
Refuse	4	24	192
DLC	2	12	96
Metals	1	6	48
Recycling	1	6	48

4.1 Transfer Station Upgrade Benefits

The re-development of the Cummings Road Regional Transfer Station will provide the following benefits:

- More space and capacity for both customers and hauling trucks;
- Increases the number of containers for materials handled at the site;
- Increase potential for additional waste diversion opportunities with space provided for recycling bins;
- Additional staff to provide customer service to assist with increasing waste diversion at the facility;
- Provides opportunity to dedicate roll-off containers to specific materials;
- Allows flexibility to reallocate containers as material quantities change with enhanced waste diversion programs;
- Improved wildlife control;
- Improved general site safety;
- More efficient loading of the containers; and
- The customer exit proposed is perpendicular to Alpine drive providing a safer entrance onto the public road, therefore safer entry into and from road.

4.2 General Site Works

The reconfiguration of the facility's entrance as shown on Figure 1 would provide the following:

- Accommodation for two-way traffic;
- Segregated traffic between customers and hauling traffic; and
- Enhanced safety entering and exiting the site.

The redesign of the site arrangement as shown on Figure 1 would provide the following:

- Adequate space for customers to back to the bins;
- Sufficient space for cueing of customers at peak periods; and

- Segregated small vehicle traffic and hauling vehicles.

4.3 Signage

Clear signage similar to the high-quality signs used at the Vanway Regional Transfer Station site will be provided for all storage and transfer areas. Signage will be targeted toward the general public to aid the public in correctly using storage areas.

4.4 Attendance Office

The attendant office should be relocated to a location near the site entrance so that it is placed in a more convenient location for the site attendant.

4.5 Transfer Infrastructure

The area would be comprised of two zones:

- A zone which can accommodate a total of five (5) multi-material recycling bins near the site entrance; and
- A zone for 7-bin precast interlocking concrete block wall structure with gravel surfacing on all publicly accessible areas. The facility concept design includes a total of seven (7) 40 c/y roll-off containers placed on cast-in-place concrete pads:
  - Four (4) bins for household waste;
  - Two (2) bins for DLC; and
  - One (1) bin for bulky metals.

It is recommended that refuse bins are equipped with lids as a wildlife deterrent.

4.6 Internal Control Gate

An internal control gate to separate the recycling area and waste containers can be included. This would be located between the recycling bins and the roll-off bins. Gate control is yet to be determined but could include swipe cards or coin operated access.

4.7 Hauling Truck Access

A separate road access for the tilt-frame roll-off trucks is included in the concept design. This road is on the lower level below the ramp and retaining wall, which allows separation between roll-off trucks and site customers.

5.0 CAPITAL COST ESTIMATES

The estimated costs (Class D) to complete the design, engineering, construction, and construction contract administration for the four proposed concept plans provided in Appendix C are the following:

Concept Plan	Drop Box Containers Equipped with Lids	Steel Structure Canopy over Four Refuse Containers	Gravel Road Surface for Customer Area & Hauling Truck Road	Paved Road Surface for Customer Area Only	Gravel Road Surface for Hauling Truck Road Only	Provisions for Recycling Bins	Cost
A	✓			✓	✓	✓	$1,647,347
B		✓		✓	✓	✓	$2,761,409
C	✓		✓			✓	$1,260,659
D		✓	✓			✓	$2,410,659

Image 8: Steel Structure Canopy Bin Enclosure, Slave Lake, AB

Image 9: Roll-off Containers with Lids, Vanway Regional Transfer Station

It is noted that the operational costs for concept plans which include the steel structure canopies option are anticipated to be more due to additional maintenance costs for overhead doors.

The following section presents a breakdown of assumptions used to calculate preliminary cost estimates for of all four concept plans provided in Appendix C.

5.1 Site Preparations

Clearing and Grubbing

- Area is assumed to be 5,500 m^2.

Topsoil Stripping

- Area is the same as the area used for Clearing and Grubbing; and
- Area is multiplied by a depth of 0.2 m

5.2 Public Drop-Off Area and Road for Trucks

Concrete Bin Pads

- For this design, there will be seven (7) bins that will require a concrete bin pad each.

Excavation

- First area of excavation is where the interlocking concrete block wall will be situated. Assumptions are:
  - Length of wall is approximately 125 metres;
  - Width of excavation is assumed to be 1 metre; and
  - Depth of excavation is assumed to be 0.5 metres.
- Second area of excavation are the concrete bin pad locations. Assumptions are:
  - Seven bin pads;
  - Bin pad dimensions are 2 metres by 6 metres; and
  - Assumed excavated depth is 0.6 metres.

Backfill

- Backfill is assumed to be occurring at the concrete bin pad locations. Assumptions are:
  - Seven bin pads;
  - Bin pad dimensions are 2 metres by 6 metres; and
  - Assumed backfill depth is 1.8 metres.

Interlocking Concrete Blocks

- The number of interlocking concrete blocks were calculated with the following assumptions:
  - Area for one bin will have the following dimensions for interlocking concrete blocks encompassing it: five blocks long by three blocks wide by four blocks high; and
  - Seven bins.

Geogrid for Interlocking Concrete Blocks

- The estimated quantity of geogrid required (pre-geotechnical design estimate) was based on the following assumptions:
  - Three layers of geogrid – staggered in length: 10 metres, 7 metres, and 5 metres; and

- Each interlocking concrete block is 1.5 metres wide, with five interlocking concrete blocks in length (therefore 7.5 metres in total length).

Guardrails

- The conceptual length of wall (and guardrail) is approximately 125 metres.

Wheel Stops

- Conceptual estimate of two wheel stops per bin.

Surface Asphalt (for Concept Plan A and B)

- If Concept Plan A or B is chosen, asphalt surfacing would be placed in the customer area, as indicated in Figure 1 and 2, with an approximate surface area of 5,400 square metres.

Surface Gravel

- The existing gravel will be left undisturbed if Concept Plan C or D is chosen;
- The addition of new gravel will occur in the expanded area designated for the hauling trucks. The haul truck area is approximately 5,500 square meters; and
- Depth of gravel is assumed to be 1 metre.

Fill

- Additional fill will be required to expand the area designated for the hauling trucks. As stated above, the haul truck area is approximately 5,500 square metres; and
- Depth of fill is assumed to be 2 metres.

6.0 NEXT STEPS

The next steps that would need to be taken to undertake the development of the re-designed Cummings Road Regional Transfer Station would be the following:

- Public consultation;
- Site survey;
- Geotechnical investigation;
- Preliminary design;
- Detailed design;
- Specifications;
- Tender and award;
- Construction;
- Commissioning; and
- Operating manual.

7.0 CONCLUSIONS AND RECOMMENDATIONS

To provide convenient solid waste services for disposal and diversion for residents in Electoral Area D, the RDFFG intends to upgrade the current transfer station infrastructure at the Cummings Road Regional Transfer Station. The proposed transfer station plan is designed to mitigate efficiency and safety issues at the current transfer station and will provide an opportunity for the region to better align services with regional goals.

The estimated costs (Class D) to complete the design, engineering, construction, and construction contract administration for all four concept plans are the following:

- Concept Plan A is **$1,647,347**;
- Concept Plan B is **$2,761,409**;
- Concept Plan C is **$1,260,659**; and
- Concept Plan D is **$2,410,659**.

8.0 CLOSURE

We trust this document meets your present requirements. If you have any questions or comments, please contact the undersigned.

Respectfully submitted,
Tetra Tech Canada Inc.

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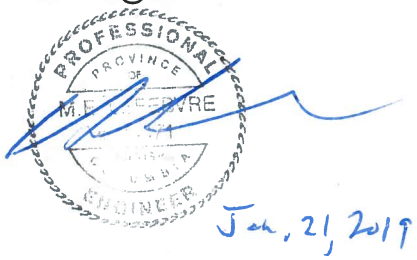

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REFERENCES

Maura Walker & Associates. 2015 Regional Solid Waste Management Plan, Prepared for Regional District of Fraser-Fort George.

Cummings Road Regional Transfer Station Brochure

Buckhorn Regional Transfer Station Brochure

Buckhorn Residential Traffic Count 2015 to 2017

Cummings Rd. Residential Traffic Count 2015 – 2017

Population Data from Census Profile

Number of Loads and Weights for Cummings, Buckhorn, and Vanway

Summary of 2010 TS Efficiency Study for Buckhorn and Cummings Road

Regional District of Fraser Fort George. Bylaw No. 2023, 2016

TABLES

Table 1. Summary of Projected Loads for 2018 and 2038 (Refuse, Metals, DLC, and Recycling)

Material	Year	Annual Estimated population	Annual Growth Rate	T/P/y	Annual Estimated Tonnes	Average Load Weight (Tonnes)	Loads/year	loads/week	Typical Days/week	Avg loads/day	Peaking Factor	Peak TS Loads/Week	Peak TS Loads/Day
Refuse	2018	4278		0.25	1085	3	362	7	5	1.4	1.8	12.5	3
	2038	6357	102%	0.25	1589	3	530	10	5	2.0	1.8	18.3	4
Metals	2018	4278		0.02	99	2.5	40	1	5	0.2	1.8	1.4	0
	2038	6357	102%	0.02	146	2.5	58	1	5	0.2	1.8	2.0	0
DLC	2018	4278		0.14	590	3	197	4	5	0.8	1.8	6.8	1
	2038	6357	102%	0.14	890	3	297	6	5	1.1	1.8	10.3	2
Recycle	2018	4278		0.01	47	0.4	118	2	5	0.5	1.8	4.1	1
	2038	6357	102%	0.01	70	0.4	175	3	5	0.7	1.8	6.1	1

FIGURES

LEGEND:

- MULTI-MATERIAL RECYCLE CONTAINERS
- REFUSE CONTAINERS
- HAULING TRUCK AREA

0 50 m

Scale: 1: 1000

CLIENT

REGIONAL DISTRICT of Fraser-Fort George

TETRA TECH

CUMMINGS ROAD TRANSFER STATION REDESIGN
PRINCE GEORGE, BC

CONCEPTUAL SITE PLAN A

PROJECT NO.	DWN	CKD	REV
SWM.SWOP04042-02	RT/RM	JL	1

OFFICE	DATE
EDM	January 18, 2019

Figure 1

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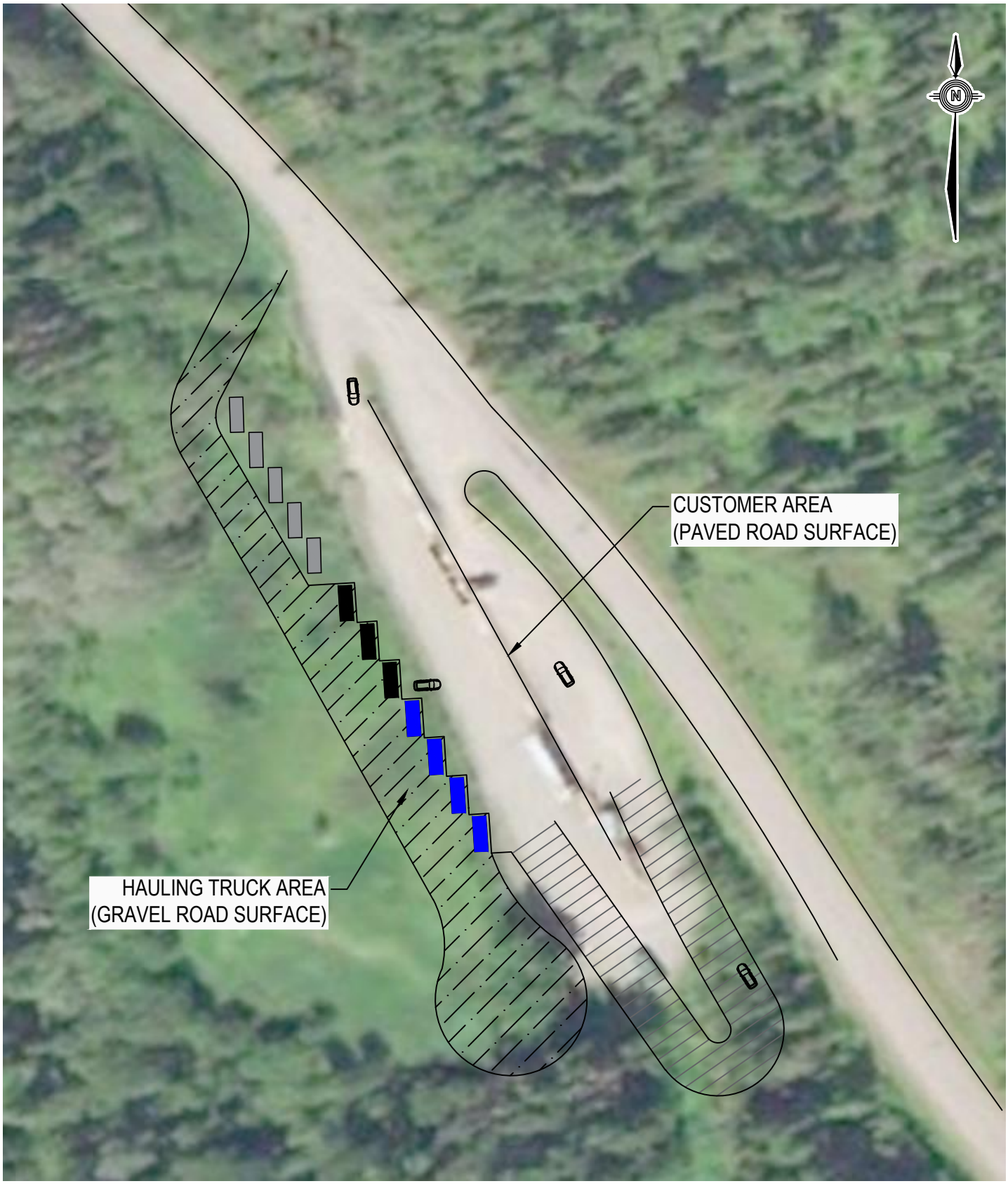

LEGEND:

- MULTI-MATERIAL RECYCLE CONTAINERS
- REFUSE CONTAINERS
- REFUSE CONTAINERS WITH METAL CANOPY STRUCTURES
- HAULING TRUCK AREA

0 50 m

Scale: 1: 1000

CLIENT

REGIONAL DISTRICT of Fraser-Fort George

TETRA TECH

CUMMINGS ROAD TRANSFER STATION REDESIGN
PRINCE GEORGE, BC

CONCEPTUAL SITE PLAN B

PROJECT NO.	DWN	CKD	REV
SWM.SWOP04042-02	RT/RM	JL	1

OFFICE	DATE
EDM	January 18, 2019

Figure 2

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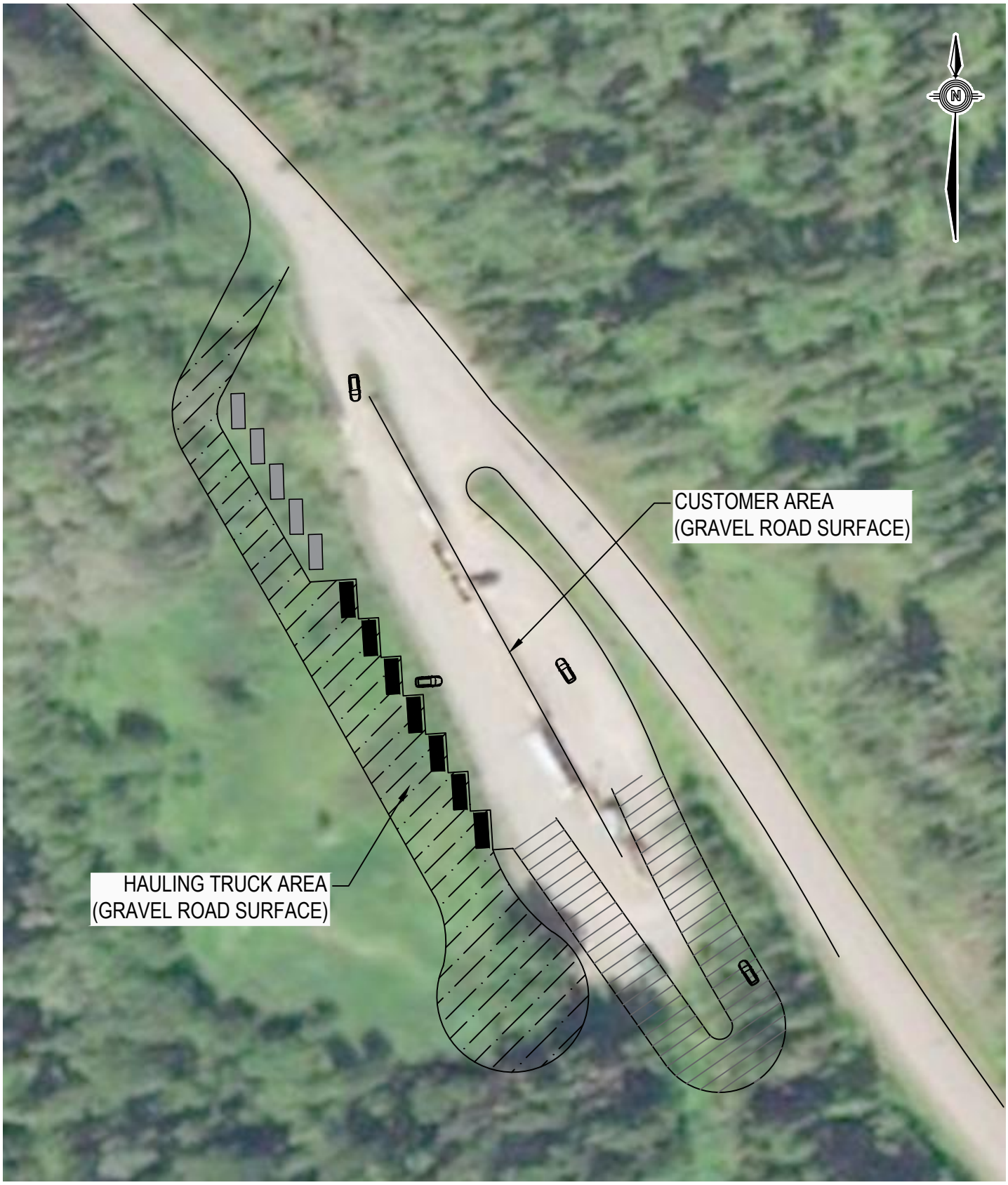

LEGEND:

- MULTI-MATERIAL RECYCLE CONTAINERS
- REFUSE CONTAINERS
- HAULING TRUCK AREA

0 50 m

Scale: 1: 1000

CLIENT

REGIONAL DISTRICT of Fraser-Fort George

TETRA TECH

CUMMINGS ROAD TRANSFER STATION REDESIGN
PRINCE GEORGE, BC

CONCEPTUAL SITE PLAN C

PROJECT NO.	DWN	CKD	REV
SWM.SWOP04042-02	RT/RM	JL	1

OFFICE	DATE
EDM	January 18, 2019

Figure 3

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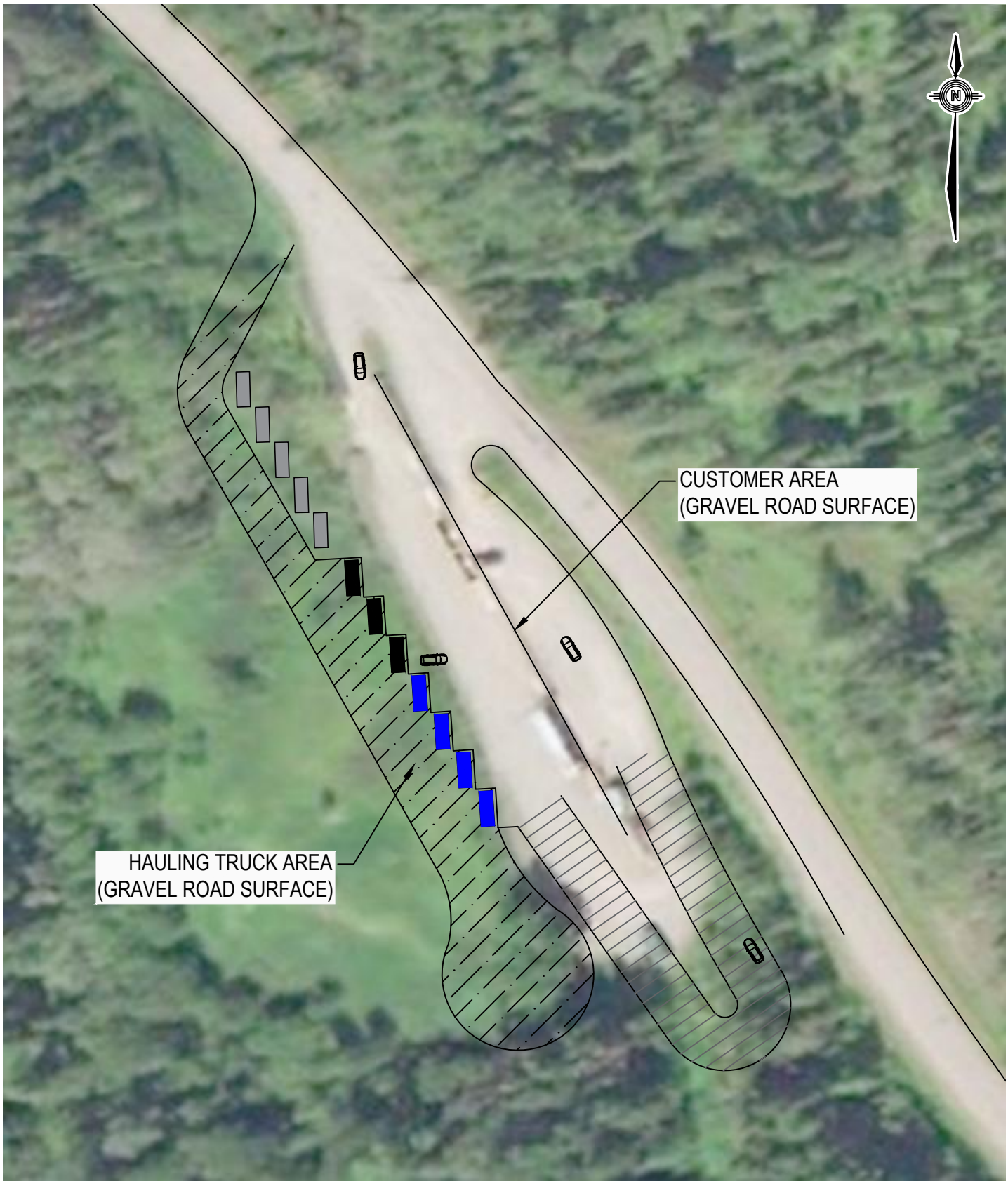

LEGEND:

- MULTI-MATERIAL RECYCLE CONTAINERS
- REFUSE CONTAINERS
- REFUSE CONTAINERS WITH METAL CANOPY STRUCTURES
- HAULING TRUCK AREA

0 50 m

Scale: 1: 1000

CLIENT

REGIONAL DISTRICT of Fraser-Fort George

TETRA TECH

CUMMINGS ROAD TRANSFER STATION REDESIGN
PRINCE GEORGE, BC

CONCEPTUAL SITE PLAN D

PROJECT NO.	DWN	CKD	REV
SWM.SWOP04042-02	RT/RM	JL	1

OFFICE	DATE
EDM	January 18, 2019

Figure 4

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APPENDIX A

BYLAW NO. 3023, 2016

SCHEDULE "A"
FACILITY CLASSES

Class 1 Full Service Scaled Landfills	**Site Location**
Foothills Boulevard Regional Landfill	6595 Foothills Boulevard
Mackenzie Regional Landfill	Dump Road, Mackenzie
Class 2 Select Material Only Landfill	
Legrand Select Landfill	5755 Legrand Road
Class 3 Full Service Transfer Stations	
McBride Regional Transfer Station	500 Northeast Frontage Road
Valemount Regional Transfer Station	980 Highway 5 North
Vanway Regional Transfer Station	6556 Broddy Road
Class 4 Mid-Level Transfer Stations	
Bear Lake Regional Transfer Station	40 Hall Road
Cummings Road Regional Transfer Station	8375 Alpine Drive
Hixon Regional Transfer Station	465 Hixon Creek Road
Quinn Street Regional Recycling Depot	1687 Quinn Street
Shelley Regional Transfer Station	2075 Shelley Road
Class 5- Basic Plus Transfer Stations	
Berman Lake Regional Transfer Station	6665 Norman Lake Road
Buckhorn Regional Transfer Station	5545 Buckhorn Lake Road
Chief Lake Regional Transfer Station	17450 Ness Lake Road
Dunster Regional Transfer Station	7085 Read Road
West Lake Regional Transfer Station	19805 Blackwater Road
Willow River Regional Transfer Station	16205 Upper Fraser Road
Class 6- Basic Transfer Stations	
McLeod Lake Regional Transfer Station	46720 Hart Highway
Miworth Regional Transfer Station	11300 Miworth Road
Summit Lake Regional Transfer Station	7125 Barney Creek Road

REGIONAL DISTRICT
of Fraser-Fort George

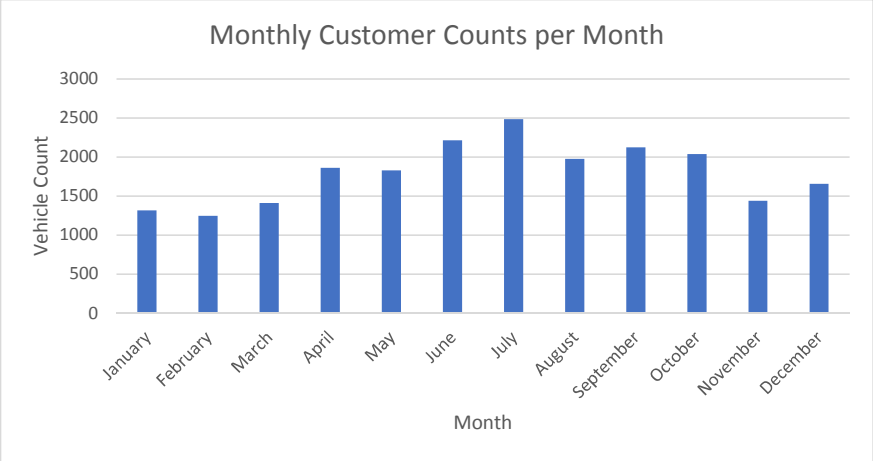
Certified as Schedule "A" to Bylaw No. 3023, 2016

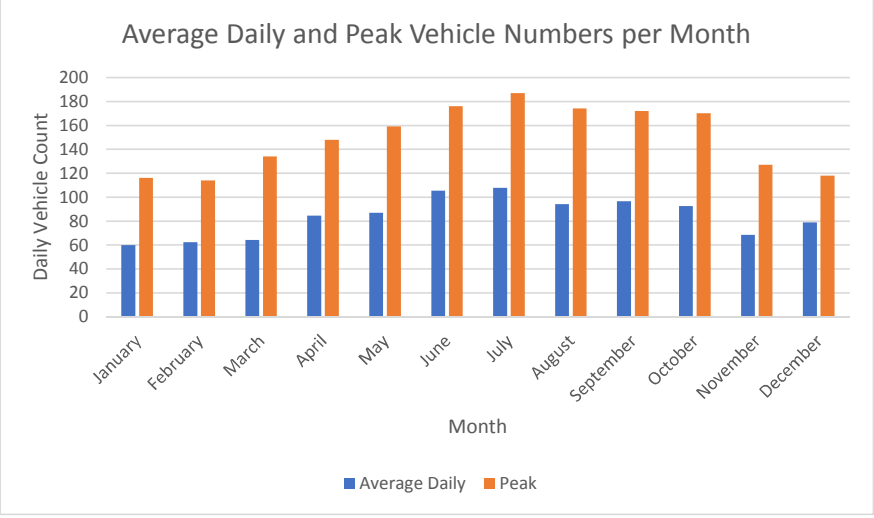
Corporate Officer

APPENDIX B

PEAKING CALCULATIONS

Peaking Calculations Based on 2017 Data					
Month	Total Vehicle Count	Days Open	Average Daily	Peak	Peak Factor
January	1314	22	60	116	1.9
February	1245	20	62	114	1.8
March	1411	22	64	134	2.1
April	1858	22	84	148	1.8
May	1826	21	87	159	1.8
June	2212	21	105	176	1.7
July	2481	23	108	187	1.7
August	1976	21	94	174	1.8
September	2121	22	96	172	1.8
October	2037	22	93	170	1.8
November	1439	21	69	127	1.9
December	1653	21	79	118	1.5
Total Amount of Traffic in 2017:					21573
Average Peaking Factor:					1.8





APPENDIX C

DETAILED PROJECTED LOAD CALCULATIONS FOR REFUSE, METAL, DLC, AND RECYCLE

Projected Refuse Loads from 2018 to 2038

Year	Annual Estimated population	Growth Rate	T/P/y	Annual Estimated Tonnes	Average Load Weight (Tonnes)	Loads/year	loads/week	Typical Days/week	Avg loads/day	Peaking Factor	Peak TS Loads/Week	Peak TS Loads/Day
2018	4278		0.25	1085	3	362	7	5	1.4	1.8	13	3
2019	4364	102%	0.25	1091	3	364	7	5	1.4	1.8	13	3
2020	4451	102%	0.25	1113	3	371	7	5	1.4	1.8	13	3
2021	4540	102%	0.25	1135	3	378	7	5	1.5	1.8	13	3
2022	4631	102%	0.25	1158	3	386	7	5	1.5	1.8	13	3
2023	4723	102%	0.25	1181	3	394	8	5	1.5	1.8	14	3
2024	4818	102%	0.25	1204	3	401	8	5	1.5	1.8	14	3
2025	4914	102%	0.25	1229	3	410	8	5	1.6	1.8	14	3
2026	5012	102%	0.25	1253	3	418	8	5	1.6	1.8	14	3
2027	5113	102%	0.25	1278	3	426	8	5	1.6	1.8	15	3
2028	5215	102%	0.25	1304	3	435	8	5	1.7	1.8	15	3
2029	5319	102%	0.25	1330	3	443	9	5	1.7	1.8	15	3
2030	5426	102%	0.25	1356	3	452	9	5	1.7	1.8	16	3
2031	5534	102%	0.25	1384	3	461	9	5	1.8	1.8	16	3
2032	5645	102%	0.25	1411	3	470	9	5	1.8	1.8	16	3
2033	5758	102%	0.25	1439	3	480	9	5	1.8	1.8	17	3
2034	5873	102%	0.25	1468	3	489	9	5	1.9	1.8	17	3
2035	5990	102%	0.25	1498	3	499	10	5	1.9	1.8	17	3
2036	6110	102%	0.25	1528	3	509	10	5	2.0	1.8	18	4
2037	6232	102%	0.25	1558	3	519	10	5	2.0	1.8	18	4
2038	6357	102%	0.25	1589	3	530	10	5	2.0	1.8	18	4

Projected Metal Loads from 2018 to 2038

Year	Annual Estimated population	Growth Rate	T/P/y	Annual Estimated Tonnes	Average Load Weight (Tonnes)	Loads/year	loads/week	Typical Days/week	Avg loads/day	Peaking Factor	Peak TS Loads/Week	Peak TS Loads/Day
2018	4278		0.023	99	2.5	40	1	5	0.2	1.8	1	0.3
2019	4364	102%	0.023	100	2.5	40	1	5	0.2	1.8	1	0.3
2020	4451	102%	0.023	102	2.5	41	1	5	0.2	1.8	1	0.3
2021	4540	102%	0.023	104	2.5	42	1	5	0.2	1.8	1	0.3
2022	4631	102%	0.023	107	2.5	43	1	5	0.2	1.8	1	0.3
2023	4723	102%	0.023	109	2.5	43	1	5	0.2	1.8	2	0.3
2024	4818	102%	0.023	111	2.5	44	1	5	0.2	1.8	2	0.3
2025	4914	102%	0.023	113	2.5	45	1	5	0.2	1.8	2	0.3
2026	5012	102%	0.023	115	2.5	46	1	5	0.2	1.8	2	0.3
2027	5113	102%	0.023	118	2.5	47	1	5	0.2	1.8	2	0.3
2028	5215	102%	0.023	120	2.5	48	1	5	0.2	1.8	2	0.3
2029	5319	102%	0.023	122	2.5	49	1	5	0.2	1.8	2	0.3
2030	5426	102%	0.023	125	2.5	50	1	5	0.2	1.8	2	0.3
2031	5534	102%	0.023	127	2.5	51	1	5	0.2	1.8	2	0.4
2032	5645	102%	0.023	130	2.5	52	1	5	0.2	1.8	2	0.4
2033	5758	102%	0.023	132	2.5	53	1	5	0.2	1.8	2	0.4
2034	5873	102%	0.023	135	2.5	54	1	5	0.2	1.8	2	0.4
2035	5990	102%	0.023	138	2.5	55	1	5	0.2	1.8	2	0.4
2036	6110	102%	0.023	141	2.5	56	1	5	0.2	1.8	2	0.4
2037	6232	102%	0.023	143	2.5	57	1	5	0.2	1.8	2	0.4
2038	6357	102%	0.023	146	2.5	58	1	5	0.2	1.8	2	0.4

Projected DLC Loads from 2018 to 2038

Year	Annual Estimated population	Growth Rate	T/P/y	Annual Estimated Tonnes	Average Load Weight (Tonnes)	Loads/year	loads/week	Typical Days/week	Avg loads/day	Peaking Factor	Peak TS Loads/Week	Peak TS Loads/Day
2018	4278		0.138	590	3	197	4	5	0.8	1.8	7	1.4
2019	4364	102%	0.140	611	3	204	4	5	0.8	1.8	7	1.4
2020	4451	102%	0.140	623	3	208	4	5	0.8	1.8	7	1.4
2021	4540	102%	0.140	636	3	212	4	5	0.8	1.8	7	1.5
2022	4631	102%	0.140	648	3	216	4	5	0.8	1.8	7	1.5
2023	4723	102%	0.140	661	3	220	4	5	0.8	1.8	8	1.5
2024	4818	102%	0.140	674	3	225	4	5	0.9	1.8	8	1.6
2025	4914	102%	0.140	688	3	229	4	5	0.9	1.8	8	1.6
2026	5012	102%	0.140	702	3	234	4	5	0.9	1.8	8	1.6
2027	5113	102%	0.140	716	3	239	5	5	0.9	1.8	8	1.7
2028	5215	102%	0.140	730	3	243	5	5	0.9	1.8	8	1.7
2029	5319	102%	0.140	745	3	248	5	5	1.0	1.8	9	1.7
2030	5426	102%	0.140	760	3	253	5	5	1.0	1.8	9	1.8
2031	5534	102%	0.140	775	3	258	5	5	1.0	1.8	9	1.8
2032	5645	102%	0.140	790	3	263	5	5	1.0	1.8	9	1.8
2033	5758	102%	0.140	806	3	269	5	5	1.0	1.8	9	1.9
2034	5873	102%	0.140	822	3	274	5	5	1.1	1.8	9	1.9
2035	5990	102%	0.140	839	3	280	5	5	1.1	1.8	10	1.9
2036	6110	102%	0.140	855	3	285	5	5	1.1	1.8	10	2.0
2037	6232	102%	0.140	873	3	291	6	5	1.1	1.8	10	2.0
2038	6357	102%	0.140	890	3	297	6	5	1.1	1.8	10	2.1

Projected Recycle Loads from 2018 to 2038

Year	Annual Estimated population	Growth Rate	T/P/y	Annual Estimated Tonnes	Average Load Weight (Tonnes)	Loads/year	loads/week	Typical Days/week	Avg loads/day	Peaking Factor	Peak TS Loads/Week	Peak TS Loads/Day
2018	4278		0.011	47	0.4	118	2.3	5	0.5	1.8	4.1	0.8
2019	4364	102%	0.011	48	0.4	120	2.3	5	0.5	1.8	4.2	0.8
2020	4451	102%	0.011	49	0.4	122	2.4	5	0.5	1.8	4.2	0.8
2021	4540	102%	0.011	50	0.4	125	2.4	5	0.5	1.8	4.3	0.9
2022	4631	102%	0.011	51	0.4	127	2.4	5	0.5	1.8	4.4	0.9
2023	4723	102%	0.011	52	0.4	130	2.5	5	0.5	1.8	4.5	0.9
2024	4818	102%	0.011	53	0.4	132	2.5	5	0.5	1.8	4.6	0.9
2025	4914	102%	0.011	54	0.4	135	2.6	5	0.5	1.8	4.7	0.9
2026	5012	102%	0.011	55	0.4	138	2.7	5	0.5	1.8	4.8	1.0
2027	5113	102%	0.011	56	0.4	141	2.7	5	0.5	1.8	4.9	1.0
2028	5215	102%	0.011	57	0.4	143	2.8	5	0.6	1.8	5.0	1.0
2029	5319	102%	0.011	59	0.4	146	2.8	5	0.6	1.8	5.1	1.0
2030	5426	102%	0.011	60	0.4	149	2.9	5	0.6	1.8	5.2	1.0
2031	5534	102%	0.011	61	0.4	152	2.9	5	0.6	1.8	5.3	1.1
2032	5645	102%	0.011	62	0.4	155	3.0	5	0.6	1.8	5.4	1.1
2033	5758	102%	0.011	63	0.4	158	3.0	5	0.6	1.8	5.5	1.1
2034	5873	102%	0.011	65	0.4	162	3.1	5	0.6	1.8	5.6	1.1
2035	5990	102%	0.011	66	0.4	165	3.2	5	0.6	1.8	5.7	1.1
2036	6110	102%	0.011	67	0.4	168	3.2	5	0.6	1.8	5.8	1.2
2037	6232	102%	0.011	69	0.4	171	3.3	5	0.7	1.8	5.9	1.2
2038	6357	102%	0.011	70	0.4	175	3.4	5	0.7	1.8	6.1	1.2

APPENDIX D

CAPITAL COST ESTIMATES

Cummings Road - Concept Plan A					
Item	**Description**	**Unit**	**Unit Price**	**Approx. Quantity**	**Total Price**
Admin, Execution and Closeout	Bonds, Insurance, Mobilization, Demobilization, Temporary Controls, and Closeout (15%)				$171,897
Site Preparations	Clearing and Grubbing	m^2	$4	5,500	$22,000
	Topsoil Stripping	m^3	$5	1,100	$5,500
Public Drop-Off Area and Road for Trucks	Excavation	m^3	$9	113	$1,016
	Backfill	m^3	$12	151	$1,814
	Lock Blocks	Unit	$275	230	$63,250
	Geogrid for Lock Blocks	m^2	$10	1,155	$11,550
	Guardrails	L.M	$350	125	$43,750
	Concrete Bin Pads	Unit	$7,000	7	$49,000
	Wheel Stops	Unit	$275	24	$6,600
	Surface Asphalt	m^2	$90	5,400	$486,000
	Surface Gravel	m^3	$70	2,400	$168,000
	Fill	m^3	$25	11,000	$275,000
Security & Other	Signage	L.S	$10,000	1	$10,000
	Gates	Unit	$2,500	1	$2,500
				Subtoal	$1,317,878
				Engineering (10%)	$131,787.76
				Contingency (15%)	$197,681.64
				Total (Excluding GST)	**$1,647,347**

Concept Plan A:
- 40 yd drop box
- 2.4 m lock-block retaining wall
- **drop box containers equipped with lids**
- complete with fall protection
- **paved road surface for customer area**
- **gravel road surface for bin truck roads**
- concrete bin pads

Cummings Road - Concept Plan B					
Item	**Description**	**Unit**	**Unit Price**	**Approx. Quantity**	**Total Price**
Admin, Execution and Closeout	Bonds, Insurance, Mobilization, Demobilization, Temporary Controls, and Closeout (15%)				$288,147
Site Preparations	Clearing and Grubbing	m^2	$4	5,500	$22,000
	Topsoil Stripping	m^3	$5	1,100	$5,500
Public Drop-Off Area and Road for Trucks	Excavation	m^3	$9	113	$1,016
	Backfill	m^3	$12	151	$1,814
	Lock Blocks	Unit	$275	230	$63,250
	Geogrid for Lock Blocks	m^2	$10	1,155	$11,550
	Guardrails	L.M	$350	125	$43,750
	Concrete Bin Pads	Unit	$7,000	7	$49,000
	Steel Structure Canopy	Unit	$200,000	4	$800,000
	Wheel Stops	Unit	$275	24	$6,600
	Surface Asphalt	m^2	$90	5,400	$486,000
	Surface Gravel	m^3	$70	2,400	$168,000
	Fill	m^3	$25	10,000	$250,000
Security & Other	Signage	L.S	$10,000	1	$10,000
	Gates	Unit	$2,500	1	$2,500
				Subtoal	$2,209,128
				Engineering (10%)	$220,912.76
				Contingency (15%)	$331,369.14
				Total (Excluding GST)	**$2,761,409**

Concept Plan B:
- 40 yd drop box
- 2.4 m lock-block retaining wall
- **steel structure canopy over 4 refuse containers**
- complete with fall protection
- **paved road surface for customer area**
- **gravel road surface for bin truck roads**

Cummings Road - Concept Plan C					
Item	**Description**	**Unit**	**Unit Price**	**Approx. Quantity**	**Total Price**
Admin, Execution and Closeout	Bonds, Insurance, Mobilization, Demobilization, Temporary Controls, and Closeout (15%)				$131,547
Site Preparations	Clearing and Grubbing	m^2	$4	5,500	$22,000
	Topsoil Stripping	m^3	$5	1,100	$5,500
Public Drop-Off Area and Road for Trucks	Excavation	m^3	$9	113	$1,016
	Backfill	m^3	$12	151	$1,814
	Lock Blocks	Unit	$275	230	$63,250
	Geogrid for Lock Blocks	m^2	$10	1,155	$11,550
	Guardrails	L.M	$350	125	$43,750
	Concrete Bin Pads	Unit	$7,000	7	$49,000
	Wheel Stops	Unit	$275	24	$6,600
	Surface Gravel	m^3	$70	5,500	$385,000
	Fill	m^3	$25	11,000	$275,000
Security & Other	Signage	L.S	$10,000	1	$10,000
	Gates	Unit	$2,500	1	$2,500
				Subtoal	$1,008,528
				Engineering (10%)	$100,852.76
				Contingency (15%)	$151,279.14
				Total (Excluding GST)	**$1,260,659**

Concept Plan C:
- 40 yd drop box
- 2.4 m lock-block retaining wall
- **drop box containers equipped with lids**
- complete with fall protection
- **gravel road surface for bin truck roads and customer area**
- concrete bin pads

Cummings Road - Concept Plan D					
Item	**Description**	**Unit**	**Unit Price**	**Approx. Quantity**	**Total Price**
Admin, Execution and Closeout	Bonds, Insurance, Mobilization, Demobilization, Temporary Controls, and Closeout (15%)				$251,547
Site Preparations	Clearing and Grubbing	m^2	$4	5,500	$22,000
	Topsoil Stripping	m^3	$5	1,100	$5,500
Public Drop-Off Area and Road for Trucks	Excavation	m^3	$9	113	$1,016
	Backfill	m^3	$12	151	$1,814
	Lock Blocks	Unit	$275	230	$63,250
	Geogrid for Lock Blocks	m^2	$10	1,155	$11,550
	Guardrails	L.M	$350	125	$43,750
	Concrete Bin Pads	Unit	$7,000	7	$49,000
	Steel Structure Canopy	Unit	$200,000	4	$800,000
	Wheel Stops	Unit	$275	24	$6,600
	Surface Gravel	m^3	$70	5,500	$385,000
	Fill	m^3	$25	11,000	$275,000
Security & Other	Signage	L.S	$10,000	1	$10,000
	Gates	Unit	$2,500	1	$2,500
				Subtoal	$1,928,528
				Engineering (10%)	$192,852.76
				Contingency (15%)	$289,279.14
				Total (Excluding GST)	**$2,410,659**

Concept Plan D:
- 40 yd drop box
- 2.4 m lock-block retaining wall
- steel structure canopy over 4 refuse containers
- complete with fall protection
- gravel road surface for bin truck roads and customer area

APPENDIX E

TETRA TECH'S LIMITATIONS ON THE USE OF THIS DOCUMENT

LIMITATIONS ON USE OF THIS DOCUMENT

1.1 USE OF DOCUMENT AND OWNERSHIP

This document pertains to a specific site, a specific development, and a specific scope of work. The document may include plans, drawings, profiles and other supporting documents that collectively constitute the document (the "Professional Document").

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1.2 ALTERNATIVE DOCUMENT FORMAT

Where TETRA TECH submits electronic file and/or hard copy versions of the Professional Document or any drawings or other project-related documents and deliverables (collectively termed TETRA TECH's "Instruments of Professional Service"), only the signed and/or sealed versions shall be considered final. The original signed and/or sealed electronic file and/or hard copy version archived by TETRA TECH shall be deemed to be the original. TETRA TECH will archive a protected digital copy of the original signed and/or sealed version for a period of 10 years.

Both electronic file and/or hard copy versions of TETRA TECH's Instruments of Professional Service shall not, under any circumstances, be altered by any party except TETRA TECH. TETRA TECH's Instruments of Professional Service will be used only and exactly as submitted by TETRA TECH.

Electronic files submitted by TETRA TECH have been prepared and submitted using specific software and hardware systems. TETRA TECH makes no representation about the compatibility of these files with the Client's current or future software and hardware systems.

1.3 STANDARD OF CARE

Services performed by TETRA TECH for the Professional Document have been conducted in accordance with the Contract, in a manner consistent with the level of skill ordinarily exercised by members of the profession currently practicing under similar conditions in the jurisdiction in which the services are provided. Professional judgment has been applied in developing the conclusions and/or recommendations provided in this Professional Document. No warranty or guarantee, express or implied, is made concerning the test results, comments, recommendations, or any other portion of the Professional Document.

If any error or omission is detected by the Client or an Authorized Party, the error or omission must be immediately brought to the attention of TETRA TECH.

1.4 DISCLOSURE OF INFORMATION BY CLIENT

The Client acknowledges that it has fully cooperated with TETRA TECH with respect to the provision of all available information on the past, present, and proposed conditions on the site, including historical information respecting the use of the site. The Client further acknowledges that in order for TETRA TECH to properly provide the services contracted for in the Contract, TETRA TECH has relied upon the Client with respect to both the full disclosure and accuracy of any such information.

1.5 INFORMATION PROVIDED TO TETRA TECH BY OTHERS

During the performance of the work and the preparation of this Professional Document, TETRA TECH may have relied on information provided by third parties other than the Client.

While TETRA TECH endeavours to verify the accuracy of such information, TETRA TECH accepts no responsibility for the accuracy or the reliability of such information even where inaccurate or unreliable information impacts any recommendations, design or other deliverables and causes the Client or an Authorized Party loss or damage.

1.6 GENERAL LIMITATIONS OF DOCUMENT

This Professional Document is based solely on the conditions presented and the data available to TETRA TECH at the time the data were collected in the field or gathered from available databases.

The Client, and any Authorized Party, acknowledges that the Professional Document is based on limited data and that the conclusions, opinions, and recommendations contained in the Professional Document are the result of the application of professional judgment to such limited data.

The Professional Document is not applicable to any other sites, nor should it be relied upon for types of development other than those to which it refers. Any variation from the site conditions present, or variation in assumed conditions which might form the basis of design or recommendations as outlined in this report, at or on the development proposed as of the date of the Professional Document requires a supplementary exploration, investigation, and assessment.

TETRA TECH is neither qualified to, nor is it making, any recommendations with respect to the purchase, sale, investment or development of the property, the decisions on which are the sole responsibility of the Client.

APPENDIX 4 - CUMMINGS ROAD REGIONAL TRANSFER STATION SITE PAMPHLET

ALTERNATE DISPOSAL SITE

Materials that are **not accepted** at the Cummings Road Regional Transfer Station, but **are accepted** at the Foothills Boulevard Regional Landfill include:

- Antifreeze and antifreeze containers
- Auto hulks/parts
- Batteries (lead acid)
- Bulky materials
- Construction debris (large volumes) (such as concrete, asphalt, roofing materials)
- Dead animals (not cows)
- Drywall
- Furniture and mattresses
- Used oil, oil filters and oil containers
- Ozone depleting substance containing appliances covered by MARR
- Soils
- Tires

PROHIBITED MATERIALS

The following materials **are not** accepted at Regional District Transfer Stations and Landfill facilities:

- Cattle Carcasses
- Chemical Waste
- Explosives
- Fencing Wire
- Fireplace Ashes
- Fuels
- Hazardous Waste
- Ignitable Waste
- Liquids
- Lubricants
- Pesticides
- Refuse (on fire or smoldering)
- Sewage Sludge
- Paints/Solvents
- Radioactive Waste
- Reactive Waste
- Special Waste (Provincial Regulation)
- Steel/Plastic Drums (if not cut, crushed or perforated)

Alternative disposal options are available for these materials. For further information, contact the Regional District Service Centre at 250-960-4400 or 1-800-667-1959 for further information.

HOURS OF OPERATION

Cummings Road Regional Transfer Station	
Year Round	
Monday & Thursday	7 am – 1 pm
Tuesday & Wednesday	Closed
Friday, Saturday & Sunday	9 am – 5 pm
Closed Tuesday & Wednesday	
Open Regular Hours on the following holidays: Easter Monday, Victoria Day, Labour Day and Thanksgiving Day	
This facility is **CLOSED** on all other Holidays:	
New Years' Day	BC Day
Family Day	Remembrance Day
Good Friday	Christmas Day
Canada Day	Boxing Day

Foothills Boulevard Regional Landfill	
Operating Hours:	
Monday to Friday	7 am – 5 pm
Saturday	8 am – 5 pm
Sunday	10 am – 4 pm
Holiday Operating Hours are from 9 am to 5 pm. (Easter Monday, Victoria Day, Labour Day and Thanksgiving Day ONLY).	
This facility is **CLOSED** on all other Holidays:	
New Years' Day	BC Day
Family Day	Remembrance Day
Good Friday	Christmas Day
Canada Day	Boxing Day

When delivering waste to any Regional District facility, please ensure that loads are covered and contained so that material does not blow out onto the roads.

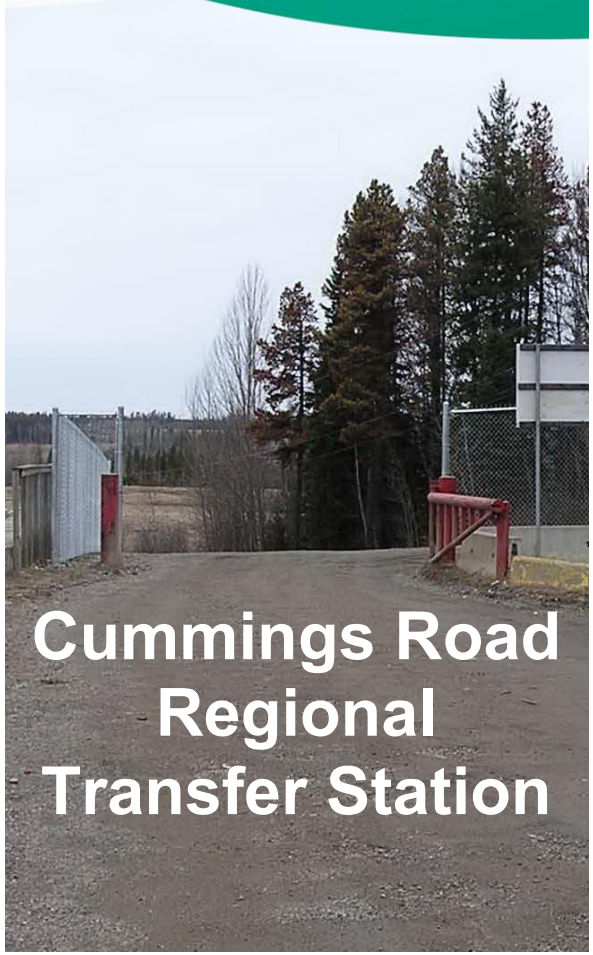
REGIONAL DISTRICT
of Fraser-Fort George

155 George Street, Prince George, BC V2L 1P8
Tel: 250-960-4400 • Toll Free: 1-800-667-1959
Fax: 250-563-7520 • Email: environment@rdffg.bc.ca

www.rdffg.bc.ca

REGIONAL DISTRICT
of Fraser-Fort George

Environmental Services



Cummings Road Regional Transfer Station

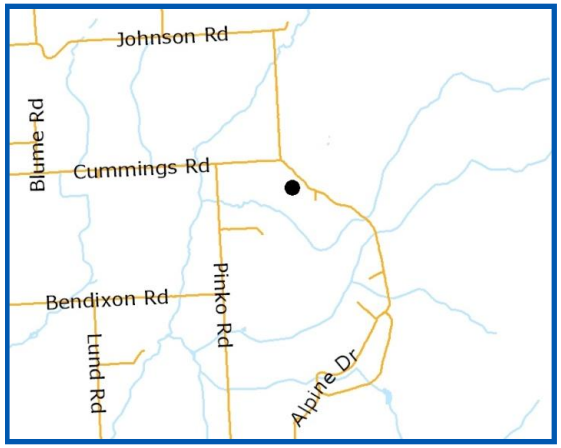
SITE OPERATION

The Cummings Road Regional Transfer Station is operated by the Regional District of Fraser-Fort George and is designed to receive **small loads** of household garbage. The material delivered to this facility will be transferred to the Foothills Boulevard Regional Landfill in Prince George. Commercial and large loads should be delivered to the Foothills Boulevard Regional Landfill in Prince George at West Austin Road and Foothills Boulevard.

When delivering waste to Regional District facilities, please ensure that loads are covered and contained so that material does not blow out onto the roads.

TRANSFER STATION SERVICES

The Cummings Road Regional Transfer Station provides household garbage disposal service by way of the on-site transfer station. All waste is to be deposited into the transfer station bins. The transfer station is designed to receive **bagged household garbage and to accommodate the tipping of garbage cans.** Household garbage is comprised of materials such as food waste, packaging waste, plastics, textiles, and glass. Garbage should be contained in a large garbage bag or a garbage can with a lid for transport to the facility.



MULTI-MATERIAL RECYCLING

A recycle bin is provided at the Cummings Road Regional Transfer Station to receive:

- **Containers and Cartons**
  Plastic containers, steel packaging, aluminum containers and paper packaging containing liquids when sold. Empty and rinse containers - labels are okay, remove caps, pumps & lids, place loose in the bin. Put metal lids inside cans and flatten.

- **Mixed Paper**
  Flattened cardboard, catalogues, glossy flyers, cereal boxes, office paper, kraft grocery bags, envelopes, magazines, newspaper and cardboard egg cartons. ***NO paper that has any plastic, foil, wax or food residue attached to it.***

For a detailed list of accepted materials, please refer to the Regional District Recycling Brochure or visit our website.

ALTERNATE WASTE DISPOSAL OPTIONS

Scrap Metal Recycling

Private scrap metal services are available for commercial generators and for auto hulk disposal. Metal materials accepted at the Cummings Road Regional Transfer Station and the Foothills Boulevard Regional Landfill for recycling include:

- Appliances and parts such as stoves, dishwashers, hot water tanks, washers, dryers and any other **non-refrigeration** type appliance, many of which are part of MARR;
- Bicycle frames and barbeque hulks;
- Metal roofing and siding;
- Lawnmower bodies, snowmobile and motor bike frames (fuel, lubricants and tires must be removed);
- Any steel containers (drums and tanks) must be crushed or perforated to ensure that they contain no liquid or hazardous material. Pressurized containers cannot be recycled.

Tire Recycling

When buying new tires, leave your old ones with the tire retailer and they will ensure that they are recycled. Otherwise, please visit www.tsbc.ca to find your nearest drop-off location. Tires can also be taken to the Foothills Boulevard Regional Landfill. Passenger and Light Truck Tires (PLT <16.5") **off rims** can be disposed of at no charge. Medium truck tires (MT >16.5" and <25.5") and off road tires (ORT >25.5" and/or with a tread width >12") **off rims** can be disposed of at the Foothills Boulevard Regional Landfill for a fee.

Appliances Containing Refrigerant

Fridges, freezers, air conditioners, and dehumidifiers under the Major Appliance Recycling Roundtable Stewardship program are accepted free of charge for recycling at Foothills Boulevard Regional Landfill. For more information on MARR check out their website: https://www.marrbc.ca/

Yard and Garden Waste Recycling

Backyard composting is an effective method for handling your yard and garden waste. Leaves, grass clippings and vegetable clippings can all be composted in your backyard and then added to lawns and gardens.

The Recycling & Environmental Action Planning Society (REAPS) www.reaps.org offers workshops and provides information brochures on home composting. For more information, call REAPS at 250-561-7327.

Yard and garden trimmings (leaves, grass and hedge clippings, plants, flowers, vegetable stalks, shrub and tree branches up to 75 mm (3 inches) in diameter) are accepted at the Shelley Regional Transfer Station and Foothills Boulevard Regional Landfill for inclusion in the centralized composting operation at the Foothills Boulevard Regional Landfill. Weeds, land clearing debris and industrial sources of wood waste are not accepted for composting.

Updated: January 2019

APPENDIX 5 – BYLAW NO. 3121, 2019, SCHEDULE "A"
FACILITY CLASSES

SCHEDULE "A"
FACILITY CLASSES

Class 1 Full Service Scaled Landfills	**Site Location**
Foothills Boulevard Regional Landfill	6595 Foothills Boulevard
Mackenzie Regional Landfill	Dump Road, Mackenzie
Class 2 Select Material Only Landfill	
Legrand Select Landfill	5755 Legrand Road
Class 3 Full Service Transfer Stations	
McBride Regional Transfer Station	500 Northeast Frontage Road
Valemount Regional Transfer Station	980 Highway 5 North
Vanway Regional Transfer Station	6556 Broddy Road
Class 4 Mid-Level Transfer Stations	
Bear Lake Regional Transfer Station	40 Hall Road
Cummings Road Regional Transfer Station	8375 Alpine Drive
Hixon Regional Transfer Station	465 Hixon Creek Road
Quinn Street Regional Recycling Depot	1687 Quinn Street
Shelley Regional Transfer Station	2075 Shelley Road
Class 5- Basic Plus Transfer Stations	
Berman Lake Regional Transfer Station	6665 Norman Lake Road
Buckhorn Regional Transfer Station	5545 Buckhorn Lake Road
Chief Lake Regional Transfer Station	17450 Ness Lake Road
Dunster Regional Transfer Station	7085 Read Road
West Lake Regional Transfer Station	19805 Blackwater Road
Willow River Regional Transfer Station	16205 Upper Fraser Road
Class 6- Basic Transfer Stations	
McLeod Lake Regional Transfer Station	46720 Hart Highway
Miworth Regional Transfer Station	11300 Miworth Road
Summit Lake Regional Transfer Station	7125 Barney Creek Road

REGIONAL DISTRICT
of Fraser-Fort George

Certified as Schedule "A" to Bylaw No. 3121, 2019

GM Legislative and Corporate Services